Document Accession #: 20250131-3009 Filed Date: 01/31/2025

ENVIRONMENTAL ASSESSMENT
FOR
SURRENDER OF HYDROPOWER EXEMPTION AND REMOVAL OF PROJECT FACILITIES

High Falls Hydroelectric Project
FERC Project No. 7987-016

North Carolina

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Administration and Compliance
888 First Street, N.E.
Washington, DC 20426

January 2024

EAXX-019-20-000-1733147608

TABLE OF CONTENTS

APPENDICES

LIST OF ABBBREVIATIONS

Advisory Council	Advisory Council on Historic Preservation
BA	biological assessment
BO	biological opinion
BMPs	best management practices
C.F.R.	Code of Federal Regulations
cfs	cubic feet per second
Commission	Federal Energy Regulatory Commission
Corps	U.S. Army Corps of Engineers
D2SI	Commission's Division of Dam Safety and Inspections
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FWS	U.S. Fish and Wildlife Service
kW	kilowatt
msl	mean seal level
North Carolina WRC	North Carolina Wildlife Resources Commission
North Carolina DEQ	North Carolina Department of Environmental Quality
North Carolina SHPO	North Carolina State Historic Preservation Officer
NEPA	National Environmental Policy Act
National Register	National Register of Historic Places
NMFS	U.S. Department of Commerce, National Oceanic and Atmospheric Administration's National Marine Fisheries Service
NWP	Nationwide Permit
Section 106	Section 106 of the National Historic Preservation Act
WQC	water quality certification

ENVIRONMENTAL ASSESSMENT
High Falls Hydroelectric Project
FERC Project No. 7987-016

1.0 INTRODUCTION

1.	Application:	Surrender of Exemption
2.	Date Filed:	October 5, 2023, supplemented on October 20, 2023, November 3, 2023, and November 13, 2023
3.	Applicant:	UP Property 2, LLC
4.	Water body:	Deep River
5.	County and State:	Moore County, North Carolina
6.	Federal Lands:	The project does not occupy federal lands.

1.1 Background

UP Property 2, LLC (UP Property 2 or exemptee) seeks Commission approval to surrender the High Falls Hydropower Project No. 7987 exemption and remove the High Falls Dam.[1] The project is located on the Deep River in High Falls, Moore County, North Carolina (figure 1).

In 1904, Thomas Woody established the High Falls Manufacturing Company, which included construction of a dam and textile mill. In 1981, the facility as it exists now was built which includes the three turbine and generator system in the powerhouse. The exemption was originally issued to Cook Industries, Inc. and later transferred to Hydrodyne Industries, LLC, which owned and operated the facility until 2018. UP Property 2 purchased the property and dam in 2018 and operated the facility until September 2018 when flooding from Hurricane Florence filled the turbines and power generator with mud and debris. The project has not produced power since September 2018.[2]

[1] *Cook Industries, Inc.*, 28 FERC ¶ 62,352 (1984) (Order Granting Exemption From Licensing of a Small Hydroelectric Project of 5 Megawatts or Less); Unique Places to Save (Unique Places) is a conservation non-profit that was brought on as a project manager by the exemptee in 2020.

[2] Cook Industries, Inc. transferred the exemption to Hydrodyne Industries, LLC and notified the Commission on November 28, 1994. Hydrodyne Industries, LLC transferred the exemption to UP Property 2, LLC and notified the Commission on March 8, 2018, which was acknowledged by Commission staff in a letter issued on April 19, 2018.

UP Property 2 states that its primary reason for requesting to surrender its exemption is to enable dam removal for conservation purposes including restoring and connecting habitat for the federally endangered Cape Fear shiner. The removal of High Falls Dam is a part of American Rivers' larger proposal for re-establishing natural river flow and habitat connectivity within the Cape Fear River Basin. The U.S. Fish and Wildlife Service (FWS) would provide the expertise and labor for dam removal.

1.2 Project Description

The High Falls Dam is located on the Deep River approximately 20 miles west of Sanford, North Carolina, within the Cape Fear River Basin. The run-of-river project consists of an 800-foot-long, 9-foot-high low head, concrete and stone gravity dam with non-overflow and overflow sections (the main overflow section is 300 feet wide); (2) an approximately 20-acre impoundment with minimal useable storage capacity (approximately 30-acre-feet at a normal maximum water surface elevation of 389.5 feet mean sea level [msl]); (3) a gate structure at the north non-overflow section of the dam; (4) a millrace; (5) a powerhouse having an extension to include a 32-foot-wide trash rack, housing three generator units with a total installed capacity of 600 kW; (6) a tailrace; (7) a 20-foot-long, 13.2-kV transmission line; and (8) appurtenant facilities.

Access to the site is provided by a gated gravel road off North Carolina State Highway 22, just north of the Highway 22 Bridge crossing the Deep River. The gravel access road follows the northern boundary of the site, with a spur crossing a concrete bridge over the mill race that provides access along the southern edge of the storage pond.

On the western portion of the site there are two sets of headgates (six original headgates and three newer replacement headgates). The six original headgates were abandoned in the mid-1960s and three newer steel headgates were built as part of dam upgrades in the 1980s.

The mill race extends approximately 950 feet from the headgates to the powerhouse and runs parallel to the Deep River for approximately 2,000 feet until it rejoins the river downstream. The powerhouse is located over the mill race and houses three turbines and generator system, which no longer function. The powerhouse transformer wires were forcibly disconnected from the distribution lines by floodwaters in September 2018 and remain disconnected.

The canal spillway is perpendicular to the mill pond dam and connects to the canal embankment, which extends to the powerhouse about 950 feet downstream. The left side of the canal consists of an older concrete wall and natural ground. There is a shallow storage pond downstream of mill pond dam and canal spillway. The canal embankment separates the storage pond and the Deep River.

1.3 Project Operation

Standard Article 2 of the exemption requires compliance with any terms and conditions that federal or state fish and wildlife agencies determined appropriate to prevent loss of, or damage to, fish and wildlife resources. The terms and conditions referred to in Article 2 are contained in letters of comment by these agencies which have been forwarded to the exemptee in conjunction with the exemption. Commission staff provided the agency letters to the exemptee by letter issued September 12, 1984.

By letter dated July 24, 1984, and amended August 2, 1984, the North Carolina Wildlife Resources Commission set as terms and conditions of the exemption that the project must operate in a run-of-river mode, maintain a minimum flow of 108 cubic feet per second (cfs), and install a fish diversion screening rack with spacing no greater than one-inch and flow no greater than 0.5 cfs in front of the headgate. By letter dated July 26, 1984, the Environmental Protection Agency provided comments related to items to be addressed in the exemptee's environmental report. By letter dated August 7, 1984, the North Carolina Department of Natural Resources and Community Development stated that the minimum instantaneous release at the base of the dam must be 108 cfs and should be made to the channel south of the island below the dam and stating that leakage and movement of water from the main channel would provide water to the much smaller channel north of the island. Additionally, the project must be entirely operated on a run-of-river basis, with no storage or peaking, and that flow above the dam must equal flow below the tailrace. The U.S. Department of Interior comments, by letter dated August 16, 1984, required a minimum instantaneous flow in the river channel at the base of the dam of 108 cfs[3] or at times when inflow to the reservoir is less, must equal inflow to the reservoir and provide uninterrupted protection of fish from entrainment and impingement for the life of the project.

2.0 PURPOSE AND NEED FOR ACTION

The project has not produced electricity since September 2018, when flooding from Hurricane Florence filled the turbines and power generator with mud and debris. The project has since been sold and on October 5, 2023, as supplemented, UP Property 2 filed an application to surrender the exemption from license and remove the dam. The exemptee is seeking to remove the dam in order to restore the river to more natural conditions.

[3] The final August 16, 1984 letter includes a typographical error requiring a 208 cfs minimum flow; however, all other correspondence refers to the 108 cfs requirement.

Under the Commission's regulations at 18 C.F.R. § 4.102(d) (2024), exemptions may be surrendered only upon fulfillment by the exemptee of such obligations under the exemption as the Commission may prescribe and, if construction has begun, upon such conditions with respect to the disposition of such project works and restoration of project lands as may be determined by the Commission and the federal and state fish and wildlife agencies.

This Environmental Assessment (EA) is being prepared to satisfy the Commission's responsibilities under the National Environmental Policy Act of 1969 (NEPA)[4] and the Commission's implementing regulations under 18 C.F.R. 380. The EA analyzes the environmental effects of UP Property 2's proposed action to decommission and remove project works and will allow the Commission to make an informed decision regarding the application to surrender and decommission the project.

3.0 PROPOSED ACTION AND ALTERNATIVES

3.1 Proposed Action

UP Property 2 proposes to surrender the project exemption and remove the concrete and rock masonry dam down to the riverbed. The mill pond dam and canal spillway, as well as the mill race, canal embankment, storage pond, and powerhouse would be left in place with the powerhouse locked during dam removal. The headgates on the mill pond dam and powerhouse gates would remain in place unless they need to be opened to support dam removal. The property would be gated and not open to the public during dam removal and river restoration activities.

Once the dam is removed and the impoundment is dewatered, the mill race would only have water flowing through it when the river water level exceeds approximately 283 feet msl (riverbed is approximately 273 feet at the location of the dam). The mill pond would function as a floodplain area and hold water only when the river water level exceeds approximately 280-285 feet. There are no plans to alter the mill pond or mill race.

3.1.1 Proposed Environmental Measures

UP Property 2 proposes the following environmental measures for decommissioning project works: collecting sensitive mussel species for relocation during dewatering, installing and maintaining erosion and sediment control devices, and restoring areas affected by construction activities after completing the proposed dam removal. Mussel relocation would be conducted in coordination with the FWS, North Carolina Wildlife Resources Commission (North Carolina WRC), and U.S. Army Corps

[4] 42 U.S.C. §§ 4321 *et seq*.

of Engineers (Corps). Erosion and sediment control devices would minimize downstream effects from site runoff. Disturbed areas (staging areas, stockpile areas, haul roads, and construction entrances) would be seeded, mulched, and stabilized.

3.2 No-Action Alternative

Under the no-action alternative, the surrender and dam removal would not be approved. The no-action alternative represents existing conditions and serves as the baseline for evaluating the effects of UP Property 2's proposed action. Under the no-action alternative, the project would continue to be subject to the terms and conditions of the existing exemption. The dam, powerhouse, and other damaged project features would remain in place until the exemptee either repairs the damaged facilities and places the project into operation in compliance with the terms and conditions set forth in the exemption order, transfers the exemption to another entity, or until the Commission chooses to revoke the exemption. However, the Commission cannot require continued project operation,[5] and the exemptee has not proposed repairing the project and returning it to operation. Under the no-action alternative, environmental resources at the project area would remain the same as they are as described in section 6 of this EA, resulting in no effects.

4.0 STATUTORY AND REGULATORY COMPLIANCE

The surrender and dam removal request are subject to numerous requirements under the Federal Power Act and other applicable statutes. The major regulatory and statutory requirements are described in Appendix A.

5.0 CONSULTATION AND PUBLIC INVOLVEMENT

The Commission's regulations (18 C.F.R. § 4.102 (b)) require that exemptees, prior to filing a petition with the Commission, consult with the fish and wildlife agencies in accordance with 18 C.F.R. § 4.38, substituting for the information required under 18 C.F.R. § 4.38(b)(1) information appropriate to the disposition and restoration of the project works and lands. The petition must set forth the exemption holder's plans with respect to disposition and restoration of the project works and lands.

5.1. Pre-filing Consultation

The exemptee consulted with local, state and federal agencies while developing the surrender application. Prior to 2020, the exemptee consulted with the North Carolina State Historic Preservation Office (North Carolina SHPO) and local Floodplain

[5] *Arizona Pub. Serv. Co.*, 109 FERC ¶ 61,036, at P 39 (2004).

Administrator. Since 2020, the exemptee and its consultants have consulted with the FWS, Corps, North Carolina WRC, and North Carolina Division of Water Resources (North Carolina DWR) to create a comprehensive dam removal plan. On September 6th, 2018, the North Carolina SHPO found that no historical/archaeological resources would be affected by the surrender and dam removal.

In the process of obtaining the Corps Nationwide Permit (NWP) 53 (removal of low head dams), UP Property 2 consulted with several agencies. Wildlife and monitoring concerns outlined in the Biological Opinion prepared by the FWS are included in the Corps NWP 53 (Special Conditions). The Special Conditions require that removal of High Falls Dam and restoration of the Deep River adhere to an erosion and sedimentation control plan from the North Carolina Department of Environmental Quality (North Carolina DEQ), Division of Energy, Mineral and Land Resources. The North Carolina DEQ, Division of Water Resources issued an approval of the Individual 401 Water Quality Certification (WQC or certification).[6]

By letter dated August 2, 2018, UP Property 2 notified 41 residents adjacent to the site of the plan to remove the dam. On October 11, 2023, UP Property 2 held a public meeting to discuss removal of the dam. Feedback was received from a representative of the Town of Robbins (David Lambert). By letter dated August 10, 2018, Mr. Lambert expressed the town's concern about how the dam removal would affect the ability to provide water and sewer services to residents and how expanding recreational opportunities at the High Falls site would affect the existing asset of Bear Creek Trails. The exemptee states that a non-project dam on Bear Creek maintains the necessary water levels for water and sewer services as well as recreation.

UP Property 2's supplemental filings include multiple letters from supporters of the surrender. By letter dated October 13, 2023, the North Carolina Wildlife Resources Commission stated that it supports the surrender of the exemption because it would improve aquatic habitat and reconnect riverine habitat for aquatic species including the Cape Fear Shiner. By letter dated October 18, 2023, Resource Environmental Solutions, LLC wrote of their support for the dam removal, including on behalf of its subsidiary Colonel Land, LLC. By letter dated October 20, 2023, American Rivers supported dam removal due to the improvement of habitat for native species and water quality among other benefits. By letter dated October 23, 2023, the FWS stated that dam removal would restore and reconnect critical habitat for the federally endangered Cape Fear Shiner and federally threatened Atlantic Pigtoe. Further, the FWS underscored the completed section 7 consultation under the Endangered Species Act of 1973[7] (ESA) between the Corps and FWS, as well as the future involvement of the Service's own Aquatic

[6] 401 Water Quality Certificate issued May 25, 2023.

[7] 16 U.S.C. § 1536(a).

Resource Team in conducting physical dam removal activities. By letter dated November 7, 2023, NMFS indicated support of the application to surrender because dam removal would benefit the riverine ecosystem and NOAA-trust species.

5.2 Public Notice and Responses

On December 20, 2023, the Commission issued a notice of application for surrender of exemption, soliciting comments, motions to intervene, and protests. The notice set January 19, 2024, as the deadline for filing comments, interventions, and protests. The following entities responded to the Commission's notice:

Entity	Response	Date Filed
American Rivers	Motion to Intervene and Comments	January 2, 2024
Sam Warnock	Comments	January 3, 2024
Moore County, North Carolina	Motion to Intervene And Protest	January 5, 2024
Zachariah Schiada	Comments	January 8, 2024
Danny Garner	Comments	January 16, 2024
Edward J. Sharp, PhD	Comments	January 16, 2024
North Carolina Wildlife Resources Commission	Motion to Intervene	January 18, 2024
Morton A. Barlaz	Comments	January 18, 2024
Southern Environmental Law Center	Comments	January 19, 2024
North Carolina Department of Environmental Quality	Motion to Intervene	January 19, 2024

American Rivers filed a motion to intervene supporting the proposal and stating the Deep River is a valuable ecological, recreational, and scenic resource. American Rivers also stated that the project is non-operational and a physical barrier to fish passage, which fragments the habitat of the Cape Fear Shiner. Sam Warnock commented in support of dam removal because it would provide more connectivity resulting in ecological benefits and recreational opportunities and would eliminate the dangers associated with a low head dam. Danny Garner commented in support of dam removal because the dam is in a state of disrepair, and he would like to see the dam removal followed by restoration of the river to its natural state and a park or natural area to benefit the public and larger community. Edward Sharp commented in support of dam removal to restore habitat for a variety of aquatic species by reestablishing the original stream bed and improve recreational opportunities for canoeing, kayaking, and fishing. Morton A. Barlaz commented in support of dam removal for increased recreational paddling opportunities and restoration of the river's natural state. Southern Environmental Law Center commented in support of the proposal because it would benefit a wide range of

aquatic species by restoring the natural flow of the Deep River and would improve recreational opportunities by restoring unimpeded flows to a lengthy river reach through scenic areas.

Moore County filed a motion to intervene and protest, opposing the surrender and removal of the dam, which would diminish the recreational, aesthetic, and environmental values of the Deep River and would compromise the quality of life for the surrounding population. It also stated concern over the potential drop in depth of the river following removal.

Comments neither in support nor opposition of the proposal were received from Zachariah Schiada, who recognized the benefit of dam removal as a whitewater kayaker, but was neutral to the proposal because they do not live in the vicinity of the project. North Carolina Wildlife Resources Commission filed a motion to intervene due to its interests in conservation of fish and wildlife resources, and the recreational opportunities the resources provide. The North Carolina Department of Environmental Quality, Division of Water Resources filed a motion to intervene but takes no position regarding the application to surrender the exemption and remove the dam.

5.3 Notice of Intent

On February 15, 2024, Commission staff issued a notice of intent that informed the public that Commission staff intends to issue an EA within one year. In this notice, Commission staff also invited federal, state, local, and Tribal agencies to participate as cooperating agencies. No filings were received pursuant to the notice of intent.

6.0 ENVIRONMENTAL ANALYSIS

In this section, Commission staff describe the existing condition of environmental resources that are relevant to the proposed action and analyze the environmental effects of the proposed action.[8] Sections are organized by resource areas. Commission staff identified no effects to air quality and climate change, so no further analysis on these resource areas is included. Under each resource area, we first describe the current conditions. The existing condition is the baseline against which the environmental effects of the proposed action are compared, including an assessment of the effects of proposed mitigation, protection, and enhancement measures, and any potential cumulative effects. Our conclusions and recommended measures are discussed in Section 7.0, *Conclusions and Recommendations* of the EA.

[8] Unless otherwise stated, information used in the development of this EA came from the projects' exemption and UP Property 2, LLC's October 5, 2023 surrender application.

6.1 Geology and Soils

6.1.1 Affected Environment

High Falls Dam is in the piedmont region of North Carolina, within the Carolina Slate Belt. The Carolina Slate Belt contains metamorphic rock (argillite, mudstone, volcanic sandstone, conglomerate, and volcanic) that is typical in Moore County. The region is characterized by a gently to steeply sloping topography, rolling hills and ridge lines, dissected by moderate to well-developed (mature) dendritic type drainage system and drainage swales, hollows, tributaries, creeks, streams, and rivers. The topography ranges from a low point of 270 feet msl to a high point of 378 feet msl.

The amount of sediment trapped behind High Falls Dam is small in comparison to the average annual flows and sediment transport capacity of the Deep River. Below the dam, the riverbed is primarily comprised of boulders (greater than 12 inches), cobbles (3 to 12 inches), gravel, and sand sized particles overlying bedrock. Sand and gravel samples from the reservoir and downstream of the dam ranged from well graded sand and gravelly sands with little to no fines to poorly graded sands and gravelly sands with little to no fines.

6.1.2 Environmental Effects

Dam removal, as proposed by the exemptee, would allow for most previously trapped sand and gravel to be transported downstream quickly, and the historic riverbed would be revealed after several months. Riverbed changes downstream would be negligible following dam removal and as the exposed shoreline along the impoundment recovers. The location of the dam near a river bend would leave a point bar as the river level drops which may take longer to equilibrate than a straight section of river. After a few months or a few storms, the exemptee would conduct a visual inspection to determine whether these areas are stable enough for planting or need additional stabilization efforts. Once the dam is removed, areas that now receive regular flows from the hydropower gates would revegetate over time, consistent with the pre-dam condition of the river.

Restoration and revegetation activities would be implemented along areas of the shoreline which were exposed once waters of the impoundment recede and the shoreline stabilizes. The areas exposed would be reseeded and, in some areas, live stakes, consisting of native tree material, would be planted to accelerate the revegetation. Revegetation as proposed by the exemptee would limit long-term affects to soils. The exemptee would implement best management practices (BMPs), including the use of silt fencing, as required by the WQC, to limit sediment transport and erosion. Commission staff concludes that the proposed action would have minor, temporary adverse effects on geology and soils, but long-term benefits to the ecosystem would outweigh any short-

term minor effects. Restoration and reclamation activities, as proposed by the licensee, would minimize long-term adverse effects to geology and soils.

6.2 Water Quality and Quantity

6.2.1 Affected Environment

The Deep River at the High Falls Site is classified as Class C; High Quality Water body. Class C waters are waters protected for uses such as aquatic life propagation, survival and maintenance of biological integrity, wildlife, secondary contact recreation, and agriculture. The High Quality Water classifications are given to water bodies rated excellent based on biological, physical, and chemical characteristics through monitoring or special studies, primary nursery areas designated by the North Carolina Marine Fisheries Commission, and other functional nursery areas designated by the North Carolina Marine Fisheries Commission.

6.2.2 Environmental Effects

The removal of High Falls Dam would transition this portion of the Deep River from a lentic ecosystem to a free-flowing lotic ecosystem. This transition would have a permanent positive effect on the site's environment by increasing the area of shallow water with rock outcrops, natural riffle features, pools, runs, and woody debris. These habitats are vital for aquatic species. Dam removal would improve stream temperature and dissolved oxygen levels and restore the natural river pattern. Once the dam is removed, river connectivity would be positively affected as 19,669 linear feet of stream ecosystem would be regained.

The exemptee has proposed a single-phase dam removal based on site-specific conditions, including the high sediment transport capacity of the Deep River at the project location. Removing the dam down to the natural grade in 5-foot widths is expected to result in the most efficient movement of the sediment that is currently behind the dam. Dam removal is expected to occur in late summer/fall or early winter, during which river flows would be lower facilitating dam deconstruction and would also avoid spawning seasons for most aquatic species. River flows would then increase after dam removal in the mid/late winter and spring which would help transport sediment through the site quickly and minimize potential sedimentation effects on mussels. The exemptee tested the sediment behind the dam and determined that it primarily consists of gravel and sand with very small amounts of silt and is relatively clean and free of toxins.

The WQC includes conditions the licensee would follow to minimize water quality effects from the proposed action, and to ensure that discharge from the project into waters of the United States would not violate applicable federal water quality requirements. Such conditions in the WQC include, but are not limited to: (1) on-site

supervision by the engineer and permitee/exemptee (conditions 2, 10, 11); (2) monitoring and reporting requirements (condition 2); (2) implementation of BMPs to limit sediment transportation from disturbed and exposed areas (conditions 6, 9, 14); (3) fertilizer limitations related to revegetation (condition 12); and (4) monitoring, maintenance, reporting spills, and other limitation to mechanized equipment and the use of fuel, lubricants, and other pollutants (conditions 15, 16). Commission staff concludes that implementation of these conditions, and others included in the WQC, would adequately protect water quality resources in the project area. Thus, only minor effects to water quality would occur as a result of the proposed action.

6.3 Aquatic Resources

6.3.1 Affected Environment

The reservoir behind High Falls Dam is a man-made lentic ecosystem and non-lotic species found in the reservoir would have been introduced after the dam was constructed in the early 1900s. Similar to the impoundment at the previously removed Carbonton Dam (located approximately 20 river miles downstream of High Falls Dam),[9] the reservoir likely supports communities of benthic macroinvertebrates, fish (typical warm water fish communities of bass, sunfish, catfish, suckers, and "minnow" species), and freshwater mussels that are representative of a lentic ecosystem. Dams are known to lower dissolved oxygen levels and reduce water quality which, in turn affects aquatic resources.

Freshwater mussels are filter feeders that obtain their food by filtering large volumes of water. Mussels remove bacteria, algae, nutrients, detritus, and contaminants from the water column, but contaminants can build up in their tissues. Therefore, mussels are indicators of water quality due to their sensitivity to poor conditions and contaminants. The project area has typical populations of freshwater mussels, which suggests the area has good water quality. According to the North Carolina WRC, 13 species of mussels may be present at the site including several Species of Greatest Conservation Need: Triangle Floater (state threatened), Brook Floater (state endangered), Yellow Lampmussel (state endangered), Creeper (state threatened), Savannah Lilliput (state endangered), Notched Rainbow (state threatened), Eastern Creekshell, Carolina Creekshell, (state endangered), Eastern Elliptio, Lanceolate Elliptio, Florida Pondhorn, Paper Pondshell, and Atlantic Pigtoe (federal threatened).

[9] Order Approving Transfer of License and Approving Surrender of License with Dam Removal (113 FERC ¶ 62,004), issued October 3, 2005.

6.3.2 Environmental Effects

High Falls Dam inhibits the natural river flow, alters natural river conditions of shallow water and rocky outcrops, and presents a barrier to movement of aquatic organisms. Dam removal would restore the natural (lotic) flow regimen of the Deep River in the project area. The buildup of sediment within the impoundment would be transported via river flow during and after dam removal, and natural shallow water habitat would be restored on the Deep River which would promote re-establishment of the native aquatic community and species.

With dam removal, the Deep River in the project area would become a free-flowing river with overall water quality improving. The composition of the fish community would change from an impoundment-type community to a riverine-type community. Removal of High Falls Dam and restoring riverine habitat would allow for natural conditions that establish vegetation growth, provide proper spawning grounds for native species, and decrease predation risks. Freshwater mussels exhibit a unique life history in that mussel larvae have a parasitic life stage reliant on suitable host fish, which are typically riverine species that aid mussels in dispersing up- and downstream. Thus, Commission staff concludes that dam removal and river restoration would have long-term beneficial effects on freshwater mussel populations, as well as fish and other aquatic species.

While dam removal would reconnect habitats for aquatic species, the process of removing the dam would also have temporary adverse effects to local mussel habitat. In the case of High Falls Dam, there would be disruption to established habitat for and populations of state-listed mussel species directly downstream of the base of the dam and towards the North Carolina Highway 22 bridge. The exemptee has surveyed the area downstream of High Falls Dam and has collected and relocated mussels (2023) to suitable habitat in anticipation of dam removal. The exemptee would reevaluate the area before beginning deconstruction to determine whether additional relocation is necessary. Commission staff conclude that while there would be minor and temporary adverse effects to existing mussel population in the project area, the exemptee's relocation efforts would minimize these effects and minimize the disruption caused by dam removal. Once construction activities have been completed and the area stabilizes, suitable habitat similar to that downstream of the project area should reestablish and mussel populations would reestablish to a similar condition as exists downstream. As discussed in Section 6.5, Threatened and Endangered Species, any potential adverse effects on federally-protected Atlantic Pigtoe (*Fusconaia masoni*, threatened) and Cape Fear Shiner (*Notropis mekistocholas*, endangered) would be temporary.

6.4 Terrestrial Resources

6.4.1 Affected Environment

Vegetation

Land upstream of the dam is primarily forested, or in pasture or agriculture. The reservoir bank is forested with riparian vegetation. Emergent vegetation is present in the mill pond when water levels are low. Emergent vegetation provides refuge, potential food sources, and locations for depositing and attaching eggs to the substrate associated around willow beds and other riparian vegetation.

Wetlands

Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support vegetation typically adapted for life in saturated soil conditions. Vegetated wetlands are defined by the presence of three parameters to include hydric soils, hydrophytic vegetation, and evidence of hydrology at or near the surface for a portion of the growing season. The exemptee surveyed the project area and identified six wetland areas located within the floodplain of the Deep River in a bottomland hardwood community composed of tree species including hackberry, river birch, yellow poplar, willow oak, Japanese privet, and netted chain fern. The estimated area of the six wetlands is 0.171 acre. The approximate ground surface elevations of these wetland areas are between 3 and 10 feet above the river water surface elevation, and they receive water from the adjacent uplands. None of the wetland areas appear to be directly influenced by the surface water elevation of the river.

Wildlife

Wildlife in the area surrounding the impoundment is typical of mature upland forest, pine forest, and riparian areas. Common mammal species include white tail deer, gray squirrel, raccoon, gray fox, opossum, and cottontail rabbit. There may be over 100 species of birds and bats that frequent the area, and many species of frogs, salamanders, and reptiles are also common in the area.

6.4.2 Environmental Effects

Vegetation

Shortly after dewatering of the impoundment, early successional vegetation, both herbaceous and woody, would begin to colonize in the newly dewatered shoreline. As the shoreline stabilizes, targeted streambank mulching, seeding, and live stake planting

would occur and would minimize sediment discharge to downstream reaches. Live stake planting would consist of native species such as black willow (*Salix nigra*) and elderberry (*Sambucus canadensis*) and would be planted along the exposed stream banks. Bare root trees such as black gum (*Nyssa sylvatica*) and pawpaw (*Asimina triloba*) would be planted within the floodplain to promote stabilization of the riverbank. In the months and years following dam removal, the exposed streambank would revegetate, and a new canopy would form along the natural river channel. Commission staff concludes that while dam removal would cause temporary effects by exposing the previously inundated shoreline, the exemptee's proposed revegetation plan would mitigate these effects and restoration of the riverine habitat would provide long-term benefits to this portion of the Deep River.

Wetlands

Several wetlands upland of the project impoundment discharge to tributaries which in turn drain into the Deep River. The ground surface of these wetlands appears to be between 3 and 10 feet above the river water elevation and receive water from adjacent uplands. None of the wetlands are directly influenced by the surface water elevation of the river. While the proposed action does not directly affect the wetlands associate with the proposed action, the WQC includes provisions which protect wetland areas from potential effects, including the use of BMPs (conditions 6, 9, 14) and limitations on the use of mechanized equipment in wetland areas (condition 17), Commission staff concludes that implementation of these conditions, and others included in the WQC, would adequately protect wetlands in the project area, resulting in no effects.

Wildlife

The transition of the project area from a lentic ecosystem to a lotic ecosystem would alter the existing habitat and its function. However, a lotic ecosystem would enhance habitat and the habitat function for both aquatic and terrestrial species, serving as a wildlife corridor upstream, downstream, and across, whereas the existing impoundment is currently an obstacle for wildlife species. Once the dam is removed and vegetation begins to colonize the areas previously submerged, wetland habitat would develop, thereby increasing habitat available for wetland-dependent species. The action would create a permanent gain of habitat and habitat function.

The project would develop long-term beneficial effects by connecting approximately 3.1 miles of improved riverine habitat which would allow for demographic dispersal, genetic diversity, and species richness of aquatic wildlife. Specifically, characteristics such as higher dissolved oxygen levels, stable water temperatures, consistent hydrologic and sediment regimes would establish microhabitats within and around run and riffles complexes, shallow pools, and woody debris deposits throughout the reach.

Water-dependent species that currently use this area, such as reptiles, amphibians, waterfowl, wading birds, and semi-aquatic furbearers, could be affected by the temporary displacement of riparian habitat while the impoundment is dewatered. This would be short-term since the previous location of the impoundment would develop into wetland habitat and new riparian habitat. Species that are more mobile would be less affected by any changes as would species that are habitat generalists. Commission staff concludes that the majority of wildlife species in the project area are relatively mobile and use both lacustrine and riverine habitats and would, therefore, not be negatively affected by the river flow conversion.

6.5 Threatened and Endangered Species

6.5.1 Affected Environment

High Falls Dam represents a barrier to aquatic species ability to disperse freely and exchange genetic material with neighboring populations. High Falls Dam and its associated impoundment disrupt natural flow and sediment regimes, and shallow water habitat on approximately 16,502 linear feet within the Deep River and 3,167 linear feet of perennial tributaries.

UP Property 2 and its consultant performed a Biological Assessment (BA) pursuant to the FWS's Streamlined Consultation Guidance for Restoration / Recovery Projects. Based on information in the BA and supplemental information in the application for Corps' NWPs 53 (Removal of Low-Head Dams), 27 (Aquatic Habitat Restoration, Enhancement, and Establishment Activities), and 13 (Bank Stabilization), the FWS completed a Biological Opinion (BO) on the proposed High Falls Dam removal project and its effects on federally-protected Atlantic Pigtoe (*Fusconaia masoni*, threatened) and Cape Fear Shiner (*Notropis mekistocholas*, endangered), in accordance with Section 7 of the ESA.

Section 7(a)(2) of the ESA requires federal agencies to ensure their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species or result in the destruction or adverse modification of their designated critical habitat. By letter issued January 22, 2024, Commission staff requested confirmation from the FWS that no additional section 7 consultation is required for the proposed surrender of the High Falls Project, and that the Commission may proceed in reliance on the FWS's July 13, 2023 BO which was issued following formal consultation with the Corps. The BO and the BO's Incidental Take Statement include terms and conditions that the Corps must implement to be exempt from the prohibition of section 9 of the ESA. On February 23, 2024, FWS staff indicated that the conservation measures and terms and conditions in the BO are adequate to avoid, minimize, and mitigate for adverse impacts to listed species, and that the FWS relies on the conclusions of the BO for the Commission's

authorization since it is consistent with the activities of the action.[10] Nonetheless, on December 17, 2024, Commission staff accessed the FWS Information, Planning, and Conservation (IPaC) database to determine if federally listed species might occur at or near the site and determine whether any effects to those species might occur.

According to the IPaC database, there are four threatened or endangered species, but no critical habitats, that could potentially be affected. These species include one bird: red-cockaded woodpecker, one fish: Cape Fear shiner, one clam (mussel): Atlantic pigtoe, and one plant: Michaux's sumac. The red-cockaded woodpecker and Atlantic pigtoe are listed as threatened and the Cape Fear shiner and Michaux's sumac are listed as endangered. The Corps determined, and the FWS concurred, that the proposed action would have no effect on the red-cockaded woodpecker and Michaux's sumac, and the species were not discussed in the BO. Consistent with this determination, red-cockaded woodpecker and Michaux's sumac are not discussed in this EA.

Cape Fear Shiner

The Cape Fear shiner is a North American species of freshwater fish in the minnow family. It is endemic to the upper Cape Fear River Basin in central North Carolina and is found in tributaries and mainstreams of the Deep, Haw, Rocky, and upper Cape Fear rivers in Chatham, Harnett, Lee, Moore, and Randolph counties. Segmentation (the separation of sub-populations) caused by dams and resulting in the loss of free-flowing river habitat is a concern for the Cape Fear shiner.

The Cape Fear shiner has benefited from successful captive breeding and augmentation, and the removal of other dams in the Cape Fear River Basin that once hindered sub-population connectivity within the Deep and Rocky river basins. The FWS has documented declines in the disconnected Cape Fear Shiner population upstream of the dam as a result of the dam preventing aquatic species from dispersing and exchanging genetic material with neighboring populations. The FWS states that experts are hopeful that by implementing strategic efforts and habitat conservation, the Cape Fear shiner can be recovered throughout its range.

Atlantic Pigtoe

The Atlantic pigtoe is a freshwater mussel once found in Atlantic Slope drainages from the James River Basin in Virginia to the Altamaha River Basin in Georgia, including the Cape Fear River Basin. Dams affect both upstream and downstream mussel

[10] In order to rely on the Corps BO to meet the Commission's section 7 responsibilities, the Commission would incorporate the conservation measures and terms and conditions of the July 13, 2023 BO, as amended on January 3, 2024, in any authorization it issues.

populations by disrupting natural flow patterns, scouring river bottoms, changing water temperatures, and eliminating habitat. The Atlantic pigtoe cannot survive in still water impounded behind dams and depends on host fish as a means of dispersal. Because dams are barriers that prevent host fish from moving upstream, they also prevent mussels from moving upstream. Upstream mussel populations then become isolated from downstream populations which leads to small, unstable populations that are more likely to die out.

The species has declined across its range and according to the North Carolina WRC, it appears that the species has been extirpated from the Deep River in Moore County. Therefore, no mussel surveys have been conducted in the project area to confirm presence or absence of this species. However, suitable habitat is available in the immediate vicinity of the project.

6.5.2 Environmental Effects

As determined in the BO, the proposed action is likely to adversely affect the Cape Fear shiner and Atlantic pigtoe during the dam removal, but is not likely to adversely modify Cape Fear shiner designated critical habitat. As required by condition 18 of NWP 53, no activity is authorized that is likely to jeopardize the continued existence of a threatened or endangered species directly or indirectly or a species proposed for such designation, as identified under the ESA, or which would directly or indirectly destroy or adversely modify the critical habitat of such species.

Despite adverse effects during dam removal construction, removal would result in substantial long-term benefit to aquatic species and natural sediment transport processes which would be restored through removal of the dam. The reintroduction of a natural sediment regime would enhance habitat in the impoundment by flushing sand and fine sediments downstream and it would allow gravels and cobbles trapped behind the dam to coarsen downstream riffles that have been previously starved of a natural sediment regime. Pebble counts conducted above and below the impoundment show that riffles below the dam have smaller amounts of coarse gravel and small cobbles, confirming the effect of an interrupted sediment regime.

Cape Fear Shiner

The Cape Fear shiner has not been found in the impoundment; however, populations have been confirmed upstream and downstream of the project. While dam removal activities may affect and are likely to adversely affect the Cape Fear shiner, there would be very limited take, if any, as the gradual lowering of the impoundment would provide opportunity for the Cape Fear shiner to reach maximum dispersal distances over time. Incidental take is possible in the form of harassment due to machinery and noise in the immediate area, and from transported debris or sediment during the dam removal, and

immediate post-removal stages of the project, but the take is not anticipated to result in any mortalities.

There is no designated critical habitat for the Cape Fear shiner in the project area, and the project would not adversely modify or destroy the designated critical habitat located 8.3 miles upstream and over 20 miles downstream of the project area. Removing the dam and restoring the free-flowing river habitat would be a long-term benefit to aquatic communities and the federally listed Cape Fear shiner as it would allow for genetic exchange between populations. The exemptee would ensure that a qualified crew monitors the Cape Fear shiner for three years following removal of the dam to document project success. If Cape Fear shiner are detected at locations outside the impounded area during the first or second year of monitoring, sampling of those locations could be discontinued early, but sampling in the previously impounded reach would continue for the full three years.

The transition from a lentic ecosystem to a lotic ecosystem would alter the existing habitat and its function and would provide long-term beneficial effects by connecting approximately 3.1 miles of improved riverine habitat which would allow for demographic dispersal, genetic diversity, and species richness. The establishment of new vegetation along streambanks, on bars and islands of rock outcrops would provide refuge from predation for aquatic species, including the Cape Fear shiner, which is crucial for larval and young to reach their first year of reproductive maturity.

Atlantic Pigtoe

While initial dam removal construction activities may affect and are likely to adversely affect the Atlantic pigtoe, removal of High Falls Dam and restoration of the Deep River are expected to have a long-term beneficial effect on the Atlantic pigtoe. Any potential adverse effects would be temporary and limited. During the demolition process, some turbidity would occur. The main area of concern would be immediately downstream of the dam where impounded sediment could be temporarily displaced. No fine sediment was found in samples taken from the impoundment, and the river is expected to pulse sediment downstream quickly, so turbidity is expected to be minimal and of short duration. Measures to control and prevent erosion or excessive turbidity would be implemented (e.g., seeding along streambanks would provide streambank stability and decrease siltation).

There would be minimal take, if any, upstream of the High Falls Dam removal, and dewatering the impoundment may benefit the Atlantic pigtoe by exposing rocky riffle habitat that was previously unavailable. Incidental take is possible in the form of potential harm from transported dam debris or sediment during the construction associated with the dam removal and immediate post-removal stages of the project. Any

harm would be temporary in duration. There is no designated critical habitat for the Atlantic pigtoe in the project area, and the proposed action would not adversely modify or destroy the designated critical habitat nine miles upstream.

Any potential adverse effects to threatened and endangered species would be temporary. During the dam removal, some turbidity of the water downstream would occur. No fine sediment was found in samples taken from the impoundment, and the river is expected to push excess sediment downstream quickly, so turbidity would be minimal and of short duration. Further, measures to control and prevent mass erosion or excessive turbidity would be implemented.

6.6 Recreation, Land Use, and Aesthetic Resources

6.6.1 Affected Environment

The area upstream of the dam and adjacent to the reservoir consists primarily of forested, pasture, or agricultural uses, and few residences are located along the impoundment's shoreline. While comments regarding recreation in the vicinity of the project were received in response to the public notice, there are no public recreation facilities in the general area and the project site is privately owned and not open to the public. A few of the private residents directly upstream of the dam have access to the impoundment for their private recreation. The spillway of the dam creates a small waterfall effect, which can be seen from the nearby North Carolina Highway 22 bridge crossing the Deep River.

6.6.2 Environmental Effects

Removal of the High Falls Dam would return the environment back to its natural state, which would be consistent with the rest of the river area. Although dam removal and the subsequent loss of the impoundment would change the type of recreation available for those residing along the impoundment shoreline from small, motorized boat fishing to bank or wade fishing, dam removal would also improve access and safety for paddlers in the area as no portage around the dam is currently required or provided. It is uncertain how much recreation use occurs at the impoundment given that there are no Commission-approved recreation sites. Commission staff concludes that while the loss of the impoundment would affect the private landowners along its shoreline other types of recreational opportunities would remain available once the river returns to a natural free-flowing state and would be dependent on local flow conditions.

During dam removal, there would be an increase in noise and traffic due to construction activities which would result in temporary and intermittent adverse effects to visitors and those living in the immediate vicinity of the project; however, noise and

traffic would return to the current condition once these activities are complete. While removal of the dam would eliminate the distant view of the waterfall effect over the spillway, approximately 0.25 miles from the North Carolina Highway 22 bridge, the restoration of the river would be consistent with other views from the bridge, including exposing bedrock which is currently submerged and could potentially contribute to additional upstream tiered pools where whitewater conditions may be apparent during higher river flows, providing additional aesthetic and recreational value to the area. Commission staff concludes that effects to aesthetic resources would be minor and post construction aesthetics would be consistent with areas adjacent to the project.

6.7 Cultural Resources

6.7.1 Affected Environment

Section 106 of the National Historic Preservation Act[11] and its implementing regulations,[12] requires the Commission to evaluate potential effects on properties listed or eligible for listing the National Register of Historic Places (National Register), defined as historic properties, and afford the Advisory Council on Historic Preservation (Advisory Council) a reasonable opportunity to comment on the Undertaking. An Undertaking means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including, among other things; processes requiring a federal permit, license or approval. Advisory Council regulations implementing Section 106 define effects on historic properties as those that change characteristics that qualify those properties for inclusion for the National Register.

The dam was constructed in the 1900s to power a textile mill. The concrete and masonry gravity dam is approximately 800 feet long and 9 feet high where it impounds the Deep River. The facility, as it currently exists, includes a set of hydraulic gates, a 950-foot raceway, a mill pond, a powerhouse, and tailrace. Except for the raceway, most of the facilities were constructed between 1980 and 1982 when the dam was converted from a mill facility to a hydroelectric facility.

On April 15, 2024, the Commission notified the Catawba Indian Nation and invited their participation in Section 106 consultation in the undertaking. On November 22, 2024, Commission staff sent an email reminder regarding the exemptee's application to surrender its exemption and remove the dam and requested comments on the proposal. No response from the Catawba Indian Nation was received.

[11] 54 U.S.C. § 306108.

[12] 36 C.F.R. pt. 800 (2024).

6.7.2 Environmental Effects

Effects on cultural resources can result from project-related activities such as reservoir operations, modifications to project facilities, or project related ground-disturbing activities. Effects can also result from other factors such as wind and water erosion, recreational use (both project and non-project), vandalism, and private and commercial development. There are no known archaeological sites within the proposed project area. The exemptee consulted with the North Carolina SHPO to determine whether and how the proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects. Based on the North Carolina SHPO's knowledge of the area,[13] it is unlikely that any archaeological resources that may be eligible for inclusion in the National Register would be affected by the project. The High Falls Dam is not eligible for listing on the National Register; therefore, Commission staff concludes that no cultural resources or historic properties would be affected by the proposed action.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusion

Approval of the proposal to surrender the High Falls Project exemption and remove the concrete and rock masonry dam down to the riverbed is broadly in the public interest because the project is not operating, would not be restored, and is no longer a source of clean and reliable energy. The proposed surrender and decommissioning would not result in long-term adverse environmental effects, and it would allow UP Property 2 to move forward with its plans to transition the system from a lentic ecosystem back to a lotic ecosystem at and upstream of the site. This transition would have a permanent positive environmental effect by increasing the area of shallow water with rock outcrops, natural riffle features, pools, runs, and woody debris. These habitats are vital for aquatic species, particularly the federally endangered Cape Fear Shiner and federally threatened Atlantic Pigtoe. Shallower water would also make temperature and dissolved oxygen more consistent with conditions preferred by Cape Fear Shiner. Restoration of riparian buffers and streambanks would provide additional habitat for refuge, critical for the survival of young aquatic species. The combination of these benefits would be a direct gain for threatened and endangered aquatic species of the Deep River including Cape Fear Shiner (federally endangered) and Atlantic Pigtoe (federally threatened). Commission staff concludes there would be no long-term adverse effects from the proposed surrender of the High Falls Project exemption but there would be long-term environmental benefits.

[13] *See* UP Property 2, LLC, October 5, 2023 Application to Surrender Exemption at 18 (referencing application letter from North Carolina SHPO, dated September 6, 2018 which was included in the exemption surrender application).

7.2 Staff Recommendations

Commission staff recommend UP Property 2 implement the Special Conditions included in the Corps NWP 53, which require that removal of High Falls Dam and restoration of the Deep River adhere to an erosion and sedimentation control plan from the North Carolina DEQ, Division of Energy, Mineral and Land Resources. Commission staff also recommend UP Property 2 implement the Reasonable and Prudent Measures contained in the BO, as well as the conditions contained in the North Carolina DEQ WQC.

7.3 Finding of No Significant Impact

The proposed surrender of the High Falls exemption and removal the concrete and rock masonry dam down to the riverbed would allow UP Property 2 to pursue a larger river restoration effort. Based on our independent analysis, we find that the proposed surrender of the High Falls exemption and removal of the concrete and rock masonry dam would not constitute a major federal action significantly affecting the quality of the human environment.

APPENDIX A: STATUTORY AND REGULATORY REQUIREMENTS

A. Clean Water Act

Under section 401(a)(1) of the Clean Water Act (CWA),[14] any applicant for a federal license or permit to conduct activities that may result in a discharge into United States waters, must obtain either a water quality certification (WQC or certification) from the appropriate state pollution control agency verifying that any discharge from the project would comply with applicable provisions of the Clean Water Act or a waiver of such certification. If the state "fails or refuses to act on a request for certification, within a reasonable period of time (which shall not exceed one year) after receipt of such a request," then certification is deemed waived.

UP Property 2's October 5, 2023 application included a water quality certification that the North Carolina Department of Environmental Quality (North Carolina DEQ) issued on May 25, 2023 to the U.S. Army Corps of Engineers (Corps) for in-water work associated with proposed surrender of the exemption and dam removal. By letter issued January 4, 2024, Commission staff requested that UP Property 2, LLC provide either: (1) a copy of the water quality certification for the proceeding before the Commission; (2) a copy of the request for certification, including proof of the date on which the certifying agency received the request, or (3) evidence of waiver of water quality certification. UP Property 2, LLC filed a response on February 13, 2024, stating that it consulted with North Carolina DEQ and by letter dated February 13, 2024, the North Carolina DEQ, 401 and Buffer Permitting Branch, informed UP Property 2 that conditions in the May 25, 2023 401 Water Quality Certification must be adhered to if the Commission approves the proposed surrender and removal of the concrete and rock masonry dam. Further, the North Carolina DEQ requested that after the final engineering plan and monitoring plan are developed for the High Falls Dam removal, that the documents also be submitted to the Division. A copy of the conditions included in the May 25, 2023 WQC is attached to this EA in Appendix F.

B. Endangered Species Act

Section 7 of the ESA[15] 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. Consultation pursuant to section 7 of the ESA was conducted between the Corps and FWS during prefiling consultation for UP Property 2's NWP #53, #27, and #13 under

[14] 33 U.S.C. § 1341(a)(1).

[15] 16 U.S.C. § 1536(a).

the Clean Water Act. The Corps determined that the Action is likely to adversely affect the Cape Fear Shiner and Atlantic Pigtoe, and is not likely to adversely modify Cape Fear Shiner designated critical habitat. The FWS concurred with the Corps determination that the Action will have No Effect on two additional species listed in Moore County: the Red-cockaded woodpecker and Michaux's sumac.

On July 3, 2023, as amended to extend the time frame for the work to be completed on July 3, 2024, the FWS issued a Biological Opinion (BO) to the Corps for the proposed removal of High Falls Dam. By letter dated January 22, 2024, Commission staff contacted the FWS regarding section 7 of the ESA and requested clarification from the FWS regarding the Commission's section 7 obligations for UP Property 2's surrender application for the High Falls Dam and its effect on the Cape Fear Shiner and the Atlantic Pigtoe. Specifically, Commission staff sought confirmation that additional section 7 consultation between the FWS and the Commission was not required.

By email on February 23, 2024, FWS staff informed Commission staff that the conservation measures and terms and conditions in BO issued to the Corps are adequate to avoid, minimize, and mitigate for adverse impacts to listed species. Additionally, the FWS stated that it relies on the conclusions of the BO issued to the Corps for the Commission's authorization because it is consistent with the activities of the action. The FWS also confirmed that to meet the Commission's Section 7 responsibilities, the Commission's authorization must incorporate the conservation measures and terms and conditions of the BO issued to Corps on July 13, 2023, as amended on January 3, 2024.

C. National Historic Preservation Act

Under section 106 of the National Historic Preservation Act (NHPA),[16] and its implementing regulations,[17] federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register of Historic Places (National Register), defined as historic properties, and afford the Advisory Council on Historic Preservation (Advisory Council) a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation officer (SHPO) or, where a project will be located on Tribal lands, the Tribal Historic Preservation Officer, to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

Pursuant to section 106 of the NHPA, the Commission must take into account whether any historic property could be affected by the issuance of an exemption within a

[16] 54 U.S.C. § 306108 *et seq*.

[17] 36 C.F.R. pt. 800 (2024).

project's area of potential effects (APE). The APE is determined in consultation with the SHPO and is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.[18] For the High Falls Project, the APE is all lands surrounding existing exempted project facilities and other lands where cultural resources may be affected by project-related activities that would be conducted in accordance with any exemption.

In its pre-filing consultation, the exemptee consulted with the North Carolina SHPO on proposed surrender of the exemption and removal of the concrete and rock masonry dam. On September 6, 2018, the North Carolina SHPO office responded that there are no known archaeological sites within the proposed project area, and it is unlikely that any archaeological resources that may be eligible for inclusion in the National Register of Historic Places would be affected by the proposed actions. The North Carolina SHPO recommended that no archaeological investigation be conducted in connection with this project. Based on current information, the High Falls Dam is not eligible for listing on the National Register of Historic Places, therefore no historic properties would be affected by this project. In sum, the North Carolina SHPO concluded that no historic or archeological resources would be affected by the proposed exemption surrender and dam removal.

D. Tribal Consultation

Pursuant to the Commission's Tribal Consultation Policy,[19] Commission staff consulted with the federally recognized Tribe that has interest within the project's APE. By letters issued April 15, 2024, and November 22, 2024, Commission staff notified the Catawba Indian Nation of the proposed action and requested their comments on the proposed exemption surrender.

[18] 36 C.F.R. 800.16(d).

[19] https://www.ferc.gov/industries/hydropower/indus-act/order-2002/tribal

APPENDIX B: LIST OF PREPARERS

Shana High - Environmental Biologist. Geology and Soils; Water Quality and Quantity; Aquatic Resources; Terrestrial Resources; Threatened and Endangered Species; Recreation, Land Use, and Aesthetic Resources; and Cultural Resources (Graduate Certificate in Natural Resources; B.A. Environmental Science).

Mary Karwoski – Outdoor Recreation Planner. Geology and Soils; Water Quality and Quantity; Aquatic Resources; Terrestrial Resources; Threatened and Endangered Species; Recreation, Land Use, and Aesthetic Resources; and Cultural Resources (Bachelor of Landscape Architecture).

APPENDIX C: LITERATURE CITED

North Carolina Wildlife Resources Commission. Atlantic Pigtoe. Available at: https://www.ncwildlife.org/species/atlantic-pigtoe. Accessed January 8, 2025.

iNaturalist. Wildlife species in Moore County, North Carolina. Accessed December 4, 2024 at: https://www.inaturalist.org/places/moore-county-nc-us

U.S. Fish and Wildlife Service (FWS). Atlantic Pigtoe. Available at: https://www.fws.gov/species/atlantic-pigtoe-fusconaia-masoni. Accessed November 26, 2024.

FWS. Cape Fear Shiner. Available at: https://www.fws.gov/species/cape-fear-shiner-notropis-mekistocholas. Accessed November 26, 2024.

APPENDIX D: WATER QUALITY CERTIFICATION

NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY

CERTIFICATION #WQC005950 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to North Carolina's Regulations in 15 NCAC 02H .0500 and 15A NCAC 02B .0200, to Jeffrey A. Fisher and UP Property 2, LLC, who have authorization for the impacts listed below, as described within your application received by the N.C. Division of Water Resources (Division) on February 2, 2023 and subsequent information on April 10, 2023, and by Public Notice issued by the Division on February 3, 2023.

The State of North Carolina certifies that this activity will comply with water quality requirements and the applicable portions of Sections 301, 302, 303, 306, 307 of the Public Laws 92-500 and PL 95-217 if conducted in accordance with the application, the supporting documentation, and conditions hereinafter set forth.

The following impacts are hereby approved. No other impacts are approved, including incidental impacts. [15A NCAC 02H .0506(b)]

Type of Impact	Amount Approved Permanent	Amount Approved Temporary	Mitigation Amount Required
Perennial Streams			
S1 – Dam Removal	linear feet	43 linear feet	credits
S2 – Temporary Construction Access	linear feet	20 linear feet	credits
Open Waters			
C1 (Mill Race Canal) – Temporary Construction Crossing	acres	0.01 acres	credits

CONDITIONS OF CERTIFICATION [15A NCAC 02H .0507(c)]:

1. Prior to, and during the dam removal, the permittee shall coordinate with the North Carolina Wildlife Resources Commission and U.S. Fish and Wildlife Service to ensure that the dam removal will not result in negative impacts to threatened and endangered species located downstream. Should the Wildlife Resources Commission or USFWS require changes to the proposed design or construction activities, a modification to this 401 Water Quality Certification may

be required. Any changes to the design authorized by this certification will require approval from the NC Division of Water Resources.

Citation: 15A NCAC 02H .0506(b)(1)

Justification: In order to protect against impairment of water quality standards and best usage of receiving and downstream waters, water quality based management practices must be employed to protect against direct or indirect discharge of waste or other sources of water pollution. Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule (including, at minimum: aquatic life propagation, survival, and maintenance of biological integrity, wildlife, secondary contact recreation, agriculture) and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis.

2. The designer or his/her designee shall supervise the installation of in-stream demolition work.

   Citation: 15A NCAC 02H .0506(b)(1) and (2)

   Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. Ensuring that in-stream demolition is conducted properly will ensure that conditions of waters are suitable for all best uses provided for in state rule.

3. The permittee shall report to the DWR Fayetteville Regional Office any noncompliance with, and/or any violation of, stream or wetland standards [15A NCAC 02B .0200], including but not limited to sediment impacts to streams or wetlands. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the permittee became aware of the non-compliance circumstances.

   Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

   Justification: Timely reporting of non-compliance is important in identifying and minimizing detrimental impacts to water quality and avoiding impacts due to water pollution that precludes any best use on a short-term or long-term basis.

4. For all dam removal projects meeting the definition under G.S. 143-215.25 and requirements under G.S. 143-215.27 of a professionally supervised dam removal, the applicant shall provide documentation that any sediment that may be released

has similar or lower lever of contamination than sediment sampled form downstream of the dam in accordance with Session Law 2017-145.

Citation: 15A NCAC 02H .0502; 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; S.L. 2017-145

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

5. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the approved impacts (including temporary impacts).

   Citation: 15A NCAC 02H .0506; 15A NCAC 02H .0507(c)

   Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule (including, at minimum: aquatic life propagation, survival, and maintenance of biological integrity; wildlife; secondary contact recreation; agriculture); and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis.

6. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur.

   Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the North Carolina Sediment and Erosion Control Manual, or for linear transportation projects, the North Caroline Department of Transportation Sediment and Erosion Control Manual.

   All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the North Carolina Surface Mining Manual. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC02B .0200; 15A NCAC 02B .0231

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses; and (21) turbidity in the receiving water shall not exceed 50 Nephelometric Turbidity Units (NTU) in streams not designated as trout waters and 10 NTU in streams, lakes, or reservoirs designated as trout waters; for lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTU; if turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased. As cited in Wetland Standards: (c)(1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

7. Sediment and erosion control measures shall not be installed in wetland or waters except within the footprint of temporary or permanent impacts otherwise authorized by this Certification. If placed within authorized impact areas, then placement of such measures shall not be conducted in a manner that results in dis-equilibrium of any wetlands, streambeds, or streambanks. Any silt fence installed within wetlands shall be removed from wetlands and the natural grade restored within two (2) months of the date that DEMLR or locally delegated program has released the specific area within the project to ensure wetland standards are maintained upon completion of the project.

   Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

   Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities

must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses; and (21) turbidity in the receiving water shall not exceed 50 Nephelometric Turbidity Units (NTU) in streams not designated as trout waters and 10 NTU in streams, lakes, or reservoirs designated as trout waters; for lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTU; if turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased. As cited in Wetland Standards: (c)(1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

8. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands.

   Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

   Justification: A project that affects waters shall not be permitted unless the existing uses (including aquatic life propagation and biological integrity), and the water quality to protect such uses, are protected. Protections are necessary to ensure any remaining surface waters or wetlands, and any surface waters or wetlands downstream, continue to support existing uses during and after project completion. The Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards, or would result in secondary or cumulative impacts.

9. If the project is covered by NPDES Construction Stormwater Permit Number NCG010000 or NPDES Construction Stormwater Permit Number NCG250000, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required.

   Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

   Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or

colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses; and (21) turbidity in the receiving water shall not exceed 50 Nephelometric Turbidity Units (NTU) in streams not designated as trout waters and 10 NTU in streams, lakes, or reservoirs designated as trout waters; for lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTU; if turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased. As cited in Wetland Standards: (c)(1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

10. The designer or his designee shall supervise the dam removal project. [15A NCAC 02H .0506(b)(1) and (2)]

    Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. Ensuring the proper implementation of dam removal plan will ensure that conditions of waters are suitable for all best uses provided for in state rule.

11. The permittee shall provide on-site supervision of dam removal work including, but not limited to bank re-sloping, culvert installation, in-stream structure placement, and riparian zone re-establishment, by an appropriately trained individual. [15A NCAC 02H .0506(b)(1) and (2)]

    Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. Ensuring that dam removal process is conducted properly will ensure that conditions of waters are suitable for all best uses provided for in state rule.

12. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters.

    Citation: 15A 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses. As cited in Wetland Standards: (c)(1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

13. If concrete is used during construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state.

    Citation: 15A 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

    Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses. As cited in Wetland Standards: (c)(1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

14. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams or wetlands shall be installed as outlined in the most recent edition of the North Carolina Sediment and Erosion Control Planning and Design Manual or the North Carolina Surface Mining Manual or the North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities so as not to restrict stream flow or cause dis-equilibrium during use of this Certification.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. Ensuring that structures are installed properly in waters will ensure that surface water quality standards are met and conditions of waters are suitable for all best uses.

15. Any rip-rap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall be placed such that the original streambed elevation and streambank contours are restored and maintained and shall consist of clean rock or masonry material free of debris or toxic pollutants. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or be installed in a manner that precludes aquatic life passage.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

    Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. The Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards, or would result in secondary or cumulative impacts.

16. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication, and general equipment maintenance shall be performed in a manner to prevent, to the maximum extent practicable, contamination of surface waters by fuels and oils.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

    Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any

designated uses. As cited in Wetland Standards: (c)(1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

17. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance and compaction.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0231

    Justification: Wetland standards require maintenance or enhancement of existing uses of wetlands such that hydrologic conditions necessary to support natural biological and physical characteristics are protected; populations of wetland flora and fauna are maintained to protect biological integrity of the wetland; and materials or substances are not present in amounts that may cause adverse impact on existing wetland uses.

18. In accordance with 143-215.85(b), the permittee shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours.

    Citation: 15A NCAC 02H .0507(c); N.C.G.S 143-215.85(b)

    Justification: Person(s) owning or having control over oil or other substances upon notice of discharge must immediately notify the Department, or any of its agents or employees, of the nature, location, and time of the discharge and of the measures which are being taken or are proposed to be taken to contain and remove the discharge. This action is required in order to contain or divert the substances to prevent entry into the surface waters. Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule (including, at minimum: aquatic life propagation, survival, and maintenance of biological integrity; wildlife; secondary contact recreation; agriculture); and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis.

19. The permittee and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. The Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards, or would result in secondary or cumulative impacts.

20. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this certification in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this Water Quality Certification. A copy of this Water Quality Certification shall be available at the project site during the construction and maintenance of this project.

    Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

    Justification: Those actually performing the work should be aware of the requirements of this 401 Water Quality Certification to minimize water quality impacts.

This approval to proceed with your proposed impacts or to conduct impacts to waters as depicted in your application shall expire upon expiration of the 404 Permit. The conditions in effect on the date of issuance shall remain in effect for the life of the project, regardless of the expiration date of this Certification. [15A NCAC 02H .0507(c)]

APPENDIX E: REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS CONTAINED IN THE BIOLOGICAL OPINION

U.S FISH AND WILDLIFE SERVICE

The FWS determined the level of anticipated take is not likely to result in jeopardy to the Cape Fear shiner and Atlantic Pigtoe. The FWS believes the following reasonable and prudent measures (RPMs) are necessary or appropriate to minimize the impact (the amount or extent of incidental take):

RPM #1. Conservation Measures. Conservation Measures included Sections I(D) and I(E) must be implemented in the proposed project. If a RPM and T&C address the same requirement, the requirements of the RPM and T&C take precedence over the Conservation Measure.

RPM #2. Mussel Relocation Surveys. Mussel relocation surveys must be conducted prior to start of in-water work. Survey and relocation/translocation plans must be coordinated with and approved by the Service, NCWRC, and Corps prior to start of surveys.

RPM #3. Coordination of long-term in-stream monitoring. Prior to start of in-water work, an in-stream monitoring plan must be developed to investigate the movement of sediment downstream and the effects on the habitat of Cape Fear Shiner and Atlantic Pigtoe. The plan must be coordinated and approved by the Service, NCWRC, and Corps.

APPENDIX F: NATIONWIDE PERMIT 53

U.S. ARMY CORPS OF ENGINEERS

The following special conditions are based on the FWS Biological Opinion, and are hereby incorporated as special conditions of this permit verification:

a. Conservation Measures included Sections I(D), and I(E) of the above referenced Biological Opinion must be implemented. The Conservation Measures included in Sections I(D), and I(E) are listed below (i, ii, iii, and iv).

   i. Demolition of the High Falls Dam shall be conducted as soon as practicable and no later than December 31, 2023.

   ii. Removal of the High Falls Dam and the restoration of the Deep River must adhere to a permitted erosion and sediment control plan through the NCDEQ Division of Energy, Mineral, and Land Resources. Dam removal shall be completed to limit impact and contact of equipment, sediment, and materials with the riverbed and water column. To the extent possible while considering worker safety, water will be routed through the powerhouse throughout dam removal, maintaining the water level at elevation 283 or lower. The dam shall be removed down to the remaining impounded water level starting at the intersection with the millpond dam and working across to the right bank. The remaining dam must be removed in small vertical sections working back toward the millpond dam. As material is removed it shall be placed in the river within the footprint of the dam itself, to allow construction equipment to cross the streambed on a concrete pad. Once the dam is fully deconstructed, the pad and dam refuse must be removed from the river floodplain. Water will then be turned into the center of the channel. The ability to continue a natural flow regime during dam removal will reduce potential impact on downstream aquatic species. Not having to utilize pumps protects aquatic species from being inadvertently pumped through the system. Additional erosion control features must include silt fence along any staging and stockpile areas and stabilizing exposed banks with erosion control matting and temporary and permanent seed.

   iii. The applicant has developed a request for proposals (RFP) for a mussel salvage/relocations/translocation effort to be conducted. This effort must be coordinated with the Service and North Carolina Wildlife Resource Commission (NCWRC). The river channel and margins downstream of the dam to 150 m downstream of the NC Highway 22 Bridge shall be surveyed for state-listed and species of greatest conservation need mussel species. Based on

guidance from the North Carolina Wildlife Resources Commission, it is expected that some of these individuals will be collected, tagged, and transported to a facility to propagate or translocated to another site with suitable habitat.

iv. Monitoring plans must be coordinated with the Corps, Service, and NCWRC prior to construction.

b. Mussel translocation/relocation surveys must be conducted prior to start of in-water work, in the action area to a point at least 150 meters downstream of the NC Highway 22 bridge. Survey and relocation/translocation plans must be coordinated with and approved by the Service, NCWRC, and Corps prior to start of surveys. Coordination with the Service includes submittal of a relocation/salvage plan prior to conducting the relocation surveys and a survey report after conducting the relocation surveys.

c. Prior to start of in-water work, an in-stream monitoring plan must be developed to investigate the movement of sediment downstream and the effects on the habitat of Cape Fear Shiner and Atlantic Pigtoe. The plan must be coordinated and approved by the Service, NCWRC, and Corps. Some components may be conducted by the Service, NCWRC, or other entities. A final approved in-stream monitoring plan must be submitted to the Service at least 30 days prior to the start of in-water work.

d. Monumented cross-sections shall be established at five (5) locations in Deep River: 1) upstream reference reach, 2) within the impoundment, 3) 200 meters downstream of the dam, 4) 400 meters downstream of the dam, and 5) 600 meters downstream of the dam.

e. Daily during construction, turbidity and dissolved oxygen (DO) shall be measured at a reference station above the impoundment in Deep River, and below the dam at 200 meters, 400 meters, and 600 meters downstream. If monitoring discovers significant elevated turbidity or depressed DO at 600 meters downstream (more than 50 NTU above the values at the upstream reference station, or DO below 5 mg/L), the Service must be advised within 24 hours. In this case, additional survey stations may be required further downstream to determine if there are effects outside of the established action area. In the absence of significantly elevated turbidity or depressed DO, a weekly report of the turbidity (in NTU) and DO must be provided to the Service until construction activities are complete. Reporting by email to (raleigh@fws.gov and/or kathryn_matthews@fws.gov) is preferred to allow for timeliness of the reporting.

f. Any spills of motor oil, hydraulic fluid, coolant, or similar fluids, not contained before entry into the Action Area, must be reported to the Service by email (raleigh@fws.gov and/or kathryn_matthews@fws.gov) and National Response Center by telephone (800-424-8802) immediately.

g. Timely notification must be made to the Corps (raleighncreg@usace.army.mil) and the Service (raleigh@fws.gov and/or kathryn_matthews@fws.gov), if a federally listed mussel or fish is discovered during project-related activities. The timing of notification should be consistent with the notification and reporting requirements of the mussel surveyor's ESA Section 10(a)(1)(A) permit. The reporting of listed mussel and fish individuals is required to enable the Service to determine if take is reached or exceeded.

h. Upon locating a dead individual (all species), preserve the specimen(s) and notify the Service at the phone number and email below for further instructions on where to send it. The Service may ask for the specimen(s) to be sent to the Raleigh office, below, or to the repository at the North Carolina Museum of Natural Sciences. Care must be taken in handling any dead specimens of proposed or listed species to preserve biological material in the best possible state. Dead individuals must be preserved by complete immersion in ethanol or by freezing within 2 hours of discovery. For mussel species, if the shell is sealed or closes upon contact, the individual is not dead and must not be removed from the water. In conjunction with the preservation of any dead specimens, the finder has the responsibility to ensure that evidence intrinsic to determining the cause of death of the specimen is not unnecessarily disturbed. The finding of dead specimens does not imply enforcement proceedings pursuant to the ESA. The reporting of dead specimens is required to enable the Service to determine if take is reached or exceeded and to ensure that the terms and conditions are appropriate and effective.

i. Upon locating a dead, injured, or sick individual of an endangered or threatened species, initial notification must be made to the Service's Law Enforcement Office identified below. Additional notification must be made by email to the Service's Ecological Services Field Office (raleigh@fws.gov and/or kathryn_matthews@fws.gov). Care must be taken in handling sick or injured individuals and in the preservation of specimens in the best possible state for later analysis of cause of death or injury. Matt Brink U.S. Fish and Wildlife Service / Law Enforcement Office 551-F Pylon Drive Raleigh, NC 27606 919-856-4786 ext. 34

j. If the amount or extent of incidental take specified in the Incidental Take Statement, as specified within the above referenced Biological Opinion, is exceeded during action implementation the applicant must immediately notify the

Corps (raleighncreg@usace.army.mil) and the Service (raleigh@fws.gov and/or kathryn_matthews@fws.gov).

k. Suitable habitat for tricolored bat (Perimyotis subflavus) may be present at the site. On September 14, 2022, the USFWS published a proposal in the Federal Register to list the tricolored bat as endangered under the Endangered Species Act (ESA). The permittee understands and agrees that all work associated with the clearing and removal of trees and removal or modification of culverts must be completed prior to September 15, 2023. Work associated with the aforementioned activities not completed by September 15, 2023, must cease and the permittee must contact the Corps' (raleighncreg@usace.army.mil) to determine if additional coordination with the United States Fish and Wildlife Service is required under Section 7 of the Endangered Species Act prior to continuing work.

Document Content(s)