

**Yadkin Hydroelectric Project
FERC No. 2197**

Relicensing Settlement Agreement

February 2007

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Acronyms

ADA	Americas with Disabilities Act
AIP	Agreement in Principle (dated June 23, 2006)
APGI	Alcoa Power Generating Inc.; Licensee
BLA	Badin Lake Association
cfs	Cubic Feet per Second
CIN	Catawba Indian Nation
Commission	Federal Energy Regulatory Commission (FERC)
DO	Dissolved Oxygen
DOAP	Dissolved Oxygen Action Plan
DOCAP	Dissolved Oxygen Corrective Action Plan
Downstream Licensee	Licensee of the Yadkin-Pee Dee River Project (FERC No. 2206); Progress Energy Carolinas, Inc. (PE)
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission; Commission
FPA	Federal Power Act
FWCA	Fish and Wildlife Coordination Act
FWPCA	Federal Water Pollution Control Act
HPMEP	Hydro Project Maintenance and Emergency Protocol
HPMP	Historic Properties Management Plan
HRLA	High Rock Lake Association
Land Trust	The Land Trust for Central North Carolina (LTCNC)
Licensee	Alcoa Power Generating Inc. (APGI)
LIP	Low Inflow Protocol
LTCNC	The Land Trust for Central North Carolina; Land Trust
MGD	Million Gallons per Day
NCDENR	North Carolina Department of Environment and Natural Resources
NCDOT	North Carolina Department of Transportation
NCDWQ	North Carolina Division of Water Quality
NCDWR	North Carolina Division of Water Resources
NCSHPO	North Carolina State Historic Preservation Office
NCWRC	North Carolina Wildlife Resources Commission
NME	Normal Minimum Elevation
NMFS	National Marine Fisheries Service
NOAA	U.S. Department of Commerce National Oceanic and Atmospheric Administration
PE	Progress Energy Carolinas, Inc.; Downstream Licensee; Licensee of the Yadkin-Pee Dee River Project (FERC No. 2206)
Project	Yadkin Hydroelectric Project (FERC No. 2197); Yadkin Project
QAPP	Quality Assurance Project Plan
RSA	Relicensing Settlement Agreement; Settlement Agreement; Agreement
RTE	Rare, Threatened and Endangered
SC	State of South Carolina
SCDHEC	South Carolina Department of Health and Environmental Control

SCDNR	South Carolina Department of Natural Resources
SCPDR	South Carolina Pee Dee River Coalition
Settlement Agreement	Relicensing Settlement Agreement (RSA); Agreement
SHPO	State Historic Preservation Office
SMP	Shoreline Management Plan
TLC Plan	Transmission Line Corridor Management Plan
TMDL	Total Maximum Daily Load
TNC	The Nature Conservancy
UNF	Uwharrie National Forest
USFWS	U.S. Fish and Wildlife Service
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
Yadkin	Yadkin Division of Alcoa Power Generating Inc.
Yadkin Project	Yadkin Hydroelectric Project (FERC No. 2197); Project
YPD-DMAG	Yadkin-Pee Dee River Basin Drought Management Advisory Group

1.0 General

1.1 Purpose and Effect of Settlement Agreement

The Parties have entered into this Settlement Agreement for the purpose of resolving all issues that have or could have been raised by the Parties in connection with the Federal Energy Regulatory Commission (FERC or Commission) relicensing of the Yadkin Project (Project) and to provide the necessary assurances to Alcoa Power Generating Inc. (APGI or Licensee) and to receive the necessary commitments of APGI regarding future financial obligations, environmental and resource undertakings, and other licensing-related matters as specifically addressed herein.

APGI filed an application for a Major New License for the Yadkin Project with the Commission on April 25, 2006. Included in that application is information on the ongoing impacts of the Project developed through studies scoped and performed in the communications-enhanced traditional relicensing process conducted by APGI and approved by FERC. Once executed, the Parties understand and agree that this Agreement will be filed with FERC as an Offer of Settlement that FERC may choose to implement in a New License for the Project in lieu of the operational proposals and certain other elements of that application.

This Agreement specifies the Licensee's obligations for the protection, mitigation and enhancement of ecological, environmental, recreational and cultural resources affected by the Project under a New License to be issued by FERC, as well as enforceable obligations of other Parties to this Agreement. All rights necessary or desirable to operate, manage and maintain the Project and to engage in power and utility operations that are consistent with this Settlement Agreement are reserved by APGI. This Agreement also specifies procedures to be used among the Parties to ensure the implementation of those License Articles and other agreed upon contractual obligations consistent with this Agreement, and with other legal and regulatory mandates. For these purposes, the Parties agree that this Agreement is fair and reasonable and in the public interest. Except as specifically provided below, any Party that is also a governmental agency agrees that the Licensee's performance of its obligations under this Agreement will be consistent with and is intended to fulfill the Licensee's existing statutory and regulatory obligations, as to each Party that is also a governmental agency relating to the relicensing of the Project, with regard to the Federal Power Act (FPA), 16 U.S.C. § 791(a) et. seq., the Federal Water Pollution Control Act (as amended) (FWPCA), 33 U.S.C. § 1251 et. seq., the Endangered Species Act (ESA), 16 U.S.C. § 1531 et. seq., the National Historic Preservation Act 16 U.S.C. § 470F, and the Fish and Wildlife Coordination Act (FWCA), 16 U.S.C. § 661 et. seq.

1.2 Definitions

1.2.1 "Agreement in Principle" shall mean the preliminary agreement dated June 23, 2006 (AIP).

1.2.2 "Annual License" shall mean the license(s) issued on an annual basis by the Commission, pursuant to 16 U.S.C. § 808(a), upon expiration of the current License on March 31, 2008 until such time as the Commission issues a New

License for the Project, or upon expiration of the New License until such time as the Commission issues a subsequent new license for the Project.

- 1.2.3 “Commission” or “FERC”** shall mean the Federal Energy Regulatory Commission.
- 1.2.4 “Effective Date”** means the date as stated in Section 1.3.5 of this Agreement.
- 1.2.5 “FERC-Imposed Modification”** shall exist if 1) the Commission issues a New License that contains a license article that is not included in the L-Form (as defined by 18 C.F.R. § 2.9) applicable to the Project and that is not proposed by the Parties; omits a Proposed License Article and the substance of that Proposed License Article is not otherwise enforceable by contract under Section 2 of this Agreement, provided that there is no other provision in the New License that prevents the implementation of that omitted Proposed License Article; modifies a Proposed License Article; or otherwise takes action that is materially inconsistent with the terms of this Settlement Agreement and 2) a Party determines, in its sole judgment, that the Commission’s Order issuing the New License materially (i) increases a Party’s overall costs and burdens of and/or (ii) impairs a Party’s bargained-for benefits under this Settlement Agreement. FERC’s inclusion of the following within APGI’s New License shall not be construed as a material increase or impairment: 1) language reserving authority throughout the license term to require changes to plans or other requirements of the Licensee or 2) any reopener clause. A Proposed License Article, or part thereof, will be considered “omitted” if the Commission declares that it will not enforce the Proposed License Article, or part thereof.
- 1.2.6 “Final and Non-Appealable”** when used in conjunction with the issuance of the New License, shall be deemed to have occurred on either (1) the thirty-first day after the date FERC issues an order setting forth the New License for the Yadkin Project if no Party seeks rehearing of such order; or (2) if any Party seeks rehearing of such an order, the earliest date upon which no further court appeal of a FERC order issuing a New License for the Yadkin Project, including a Petition for Writ of Certiorari to the Supreme Court of the United States, or action by a court or by FERC with respect to such appeal, is possible.
- 1.2.7 “License”** shall mean the regulatory authorization for construction, maintenance, and operation of the Project subject to the jurisdiction of FERC pursuant to the Federal Power Act, 16 U.S.C. § 791 et seq. (“the FPA”).
- 1.2.8 “Licensee”** shall mean Alcoa Power Generating Inc. (APGI), the legal entity holding the existing FPA license for the Project as well as the legal entity to which the Commission is expected to issue the New License for the Project and any successors in interest.
- 1.2.9 “New License”** shall mean the license the Parties expect to be issued by the Commission to the Licensee pursuant to Section 15 of the FPA for the continued operation of the Project.

- 1.2.10 “Offer of Settlement”** shall mean an offer of settlement to be filed with FERC pursuant to 18 C.F.R. § 385.602, which offer shall be comprised of this Settlement Agreement.
- 1.2.11 “Party” or “Parties”** shall mean the entities that are signatories to this Agreement. (The Parties are listed in Appendix F of this Settlement Agreement.)
- 1.2.12 “Project”** shall mean the Yadkin Hydroelectric Project, licensed to the Licensee as FERC Project No. 2197 (1958).
- 1.2.13 “Proposed License Article(s)”** shall mean the terms and conditions set forth in Section 3 of this Settlement Agreement.
- 1.2.14 “Section 401”** shall mean Section 401 of the Federal Water Pollution Control Act (as amended), codified at 33 U.S.C. § 1341.
- 1.2.15 “Section 401 Agency”** shall mean the agency of the State of North Carolina (i.e. the Division of Water Quality) that is authorized to issue certifications pursuant to Section 401 to the extent that such agency is acting in its capacity as a decision maker pursuant to Section 401, and not in an unrelated capacity e.g., commenting in a proceeding before another agency.
- 1.2.16 “Section 401 Certification”** shall mean the certification issued under Section 401 by the State of North Carolina Section 401 Agency in connection with the issuance of the New License.
- 1.2.17 “Settlement Agreement”** shall mean this document, including appendices, together with any information herein incorporated by reference. Hereinafter “Settlement Agreement” may be referred to as either “Settlement Agreement” or “Agreement”.

1.3 General Provisions

1.3.1 Scope of Settlement Agreement

The Parties agree that this Settlement Agreement resolves all issues among the Parties associated with, and constitutes a comprehensive settlement of, all issues that have or could have been raised by the Parties in connection with the FERC relicensing of the Project.

1.3.2 Procedures Regarding Certain Statutory Authorities and Obligations

The Parties have negotiated this Agreement with the intent that the terms of the Agreement satisfy and are consistent with all legal requirements of all governmental agencies with statutory rights or duties regarding the Project and/or mandatory conditioning authority over the Project (except for fish passage issues under Section 18 of the FPA). The Parties recognize that any Party that is also a governmental agency with statutory rights or obligations, including, but not limited to mandatory conditioning authority, must abide by all applicable procedural and substantive laws, regulations and rules in the exercise of such authority in order to ensure consistency with applicable laws, regulations and rules during implementation of this Agreement.

and to issue lawful, mandatory conditions or recommendations, and such Party has not compromised its authority or acted unlawfully by negotiating and entering into this Agreement. No provision in this Agreement shall diminish, modify, or otherwise affect the statutory or regulatory authorities of the agencies involved, including those with mandatory conditioning authority. Specifically, nothing in this Agreement shall preclude the state and federal resource agencies from complying with their obligations under the FPA, FWPCA, ESA, FWCA, the Clean Air Act or the National Environmental Policy Act.

1.3.3 Commitments During Relicensing

The Parties agree to support the issuance of a New License with a 50-year license term. In the event that FERC issues a New License with a term of less than 50 years, the Parties agree that APGI may file a request for rehearing with FERC and, if necessary, an appeal with the United States Court of Appeals. In its request for rehearing and any subsequent appeal, APGI is authorized to state affirmatively that each Party supports the request of a New License with a term of 50 years, unless a Party gives notice to APGI within ten days of FERC's issuance of the New License that it no longer supports a 50-year license term due to a FERC-Imposed Modification(s). The Parties also agree either to join APGI in filing such request or to otherwise express support on the record for APGI's request.

If FERC denies the request for rehearing the Parties that are not governmental agencies agree to join APGI in filing an appeal with the United States Court of Appeals or to otherwise express their support for the appeal on the record with that Court. The Parties recognize and agree that the Parties that are also governmental agencies must request participation in the appeal by their agencies in a manner consistent with their respective agency's protocols, and can only participate in the appeal to the extent that those protocols allow each agency's participation. In addition, the Parties agree to request, in a manner consistent with and to the extent allowed by each Party's protocols, if any, the State of North Carolina and the United States, respectively, to join APGI in filing an appeal, or to otherwise express their support for the appeal on the record with the United States Court of Appeals.

The Parties' commitments herein with regard to said request for rehearing and appeal shall be limited to the sole issue of the duration of the license term. However, any Party may choose to and is urged to join APGI in any request for rehearing and appeal that is brought by APGI to effectuate any element or elements of this Agreement.

In any proceeding relevant to the terms or interpretation of the terms of the New License, the Parties agree to support and/or defend the conditions of the Certification by the State of North Carolina Section 401 Agency that are consistent with the terms of this Agreement. However, nothing in this Agreement shall be construed to limit the State of South Carolina's (SC's) or the U.S. Environmental Protection Agency's (EPA's) right to initiate the procedures under 33 U.S.C. § 1341 should it be deemed necessary by SC or EPA.

In any proceeding before any agency with mandatory conditioning authority, the Parties are encouraged to urge upon such agency that the terms of this Agreement satisfy the agency's legal mandates and are within the agency's discretion; provided that Parties who are governmental agencies are not by this commitment compromising or relinquishing any legal authority or process requirements.

During the relicensing process, the Parties agree not to propose or otherwise communicate to FERC or to any other federal or state resource agency with jurisdiction directly related to the relicensing process any comments, recommendations, measures, prescriptions, terms or conditions, other than ones consistent with the terms of this Agreement. Any Party that is also a governmental agency with statutory rights or obligations, including, but not limited to mandatory conditioning authority, agrees that any comments, recommendations, measures, prescriptions, terms or conditions such party makes to FERC or any other federal or state resource agency will be made in good faith under each party's respective authority and regulatory and statutory obligations and that each may, consistent with applicable law, take into account the process culminating in this Agreement.

1.3.4 Structure of Settlement Agreement

This Settlement Agreement consists of an Agreement signed by the Parties together with six appendices to that Agreement. The Agreement includes "General" provisions, "Settlement Provisions Not Covered by Proposed License Articles" and "Proposed License Articles". Appendices A, B, C and D consist of various agreements that are included in the overall settlement bargain among the Parties and are incorporated by reference into the Agreement. Appendix E consists of various maps of land conveyances and grants, and Appendix F consists of a list of the Parties executing the Settlement Agreement and primary contacts, which is included to provide information regarding the giving of notice in accordance with Section 1.3.10.5 of this Agreement and which otherwise has no significance within the Settlement Agreement.

To the extent that there are conflicts between the language of any Proposed License Article and the language of the remainder of the Settlement Agreement (including the Appendices), the language of the Proposed License Article shall be controlling. To the extent that there are conflicts between the language of the documents included in the Appendices and the language of the remainder of the Settlement Agreement, the language in the Appendices shall be controlling.

1.3.5 Effective Date and Term of Settlement Agreement

Once negotiations on the terms of this Settlement Agreement have been completed, the Agreement will be presented to the Parties for signature for a 30-day period. After the close of the signature period, and before the effective date of this Agreement, those Parties that choose to sign the Agreement may agree to modify the substantive provisions of the Agreement to match the collective interests and needs of those Parties, which may include the deletion of provisions beneficial to non-signatories. This Settlement Agreement shall become effective among its signatories on April 22, 2007, or, if the Parties that choose to sign the Agreement agree to modify the substantive provisions of the Agreement, on a date on which they mutually agree. This Agreement may be executed in separate counterparts, with each counterpart deemed to be an original having the full force and effect thereof. The Agreement shall remain in effect for the term of the New License issued by the Commission for the Project and for any Annual License issued subsequent thereto, unless terminated pursuant to Section 1.3.14. Upon the Effective Date of this Agreement, the AIP is terminated, and no provision in that AIP shall be used to interpret any provision of this Agreement.

1.3.6 Effective Date of Settlement Obligations

To the extent that the Licensee's obligations under this Settlement Agreement are contained in the New License, those obligations shall be binding upon the Licensee upon issuance of the New License, except to the extent such obligations may be stayed by law. For all Parties other than the Licensee, and for the Licensee with respect to obligations not set forth in the New License, the obligations under this Settlement Agreement shall become binding and effective once the New License becomes Final and Non-Appealable, EXCEPT THAT, from the Effective Date of the Settlement Agreement until termination, all Parties shall have the obligations as set forth in this Agreement including (i) supporting approval of the Settlement Agreement before FERC and, if there be one, in any court appeal regarding the New License consistent with the commitments in Section 1.3.3 and (ii) complying in good faith with respect to the dispute resolution process specified herein.

1.3.7 Jurisdiction

Execution of this Agreement does not constitute a consent to jurisdiction of any court unless such jurisdiction otherwise exists. Execution of this Agreement also does not constitute a waiver of any immunity or privilege except as provided by law.

1.3.8 Dispute Resolution

1.3.8.1 General

Except where otherwise specifically provided in this Settlement Agreement, a dispute that arises under or is related to any Party's compliance with any obligation arising under this Settlement Agreement or under the New License, including a Party's failure to act or a Party's abuse of discretion in performing such duty shall be resolved as follows:

1.3.8.2 Consensus Required

The Parties will make best efforts to reach consensus and resolve any dispute arising under or related to the Settlement Agreement or the New License. A resolution based on consensus shall have either the unanimous support of all Parties, or at least no opposition from any Party. If a Party has no objection to the resolution but does not specifically endorse it, for purposes of this Section 1.3.8.2, the lack of opposition shall be considered to be support of the resolution.

1.3.8.3 Consultation

In the event any dispute arises under either the New License or this Settlement Agreement, the disputing Parties agree to engage in good faith negotiations for a period of at least 45 days commencing once written notice of the dispute is delivered by any disputing Party to any other disputing Party in an effort to resolve the dispute, provided that nothing in this Agreement prevents the Licensee from taking any legally available appeal to FERC or the Courts, which may require action in less than 45 days, where it deems necessary. During the 45-day period, any disputing Party may request the services of a neutral mediator to assist in resolving the dispute. If mediation is acceptable to all of the disputing Parties, such mediator shall be jointly

agreed upon by them. Before engagement of a mediator, the disputing Parties will reach an agreement on each party's obligation for the costs of such services.

If any Party believes that another Party has failed to comply with any obligation under this Agreement (including compliance by the Licensee with the New License), the Party shall notify all other Parties in writing and the interested Parties shall consult and may engage a mediator as described above. The interested Parties shall attempt to determine (i) whether non-compliance has occurred, and (ii) in the event of non-compliance, establish a reasonable time in which the Party must cure the non-compliance. In emergency situations, a Party may, in good faith and for good cause, seek relief as provided by law without regard to any Consultation requirements, such as those in this paragraph and Section 1.3.8.4 immediately below.

In the event that FERC institutes an action to enforce a License Article against APGI before the Consultation process is completed, any Party may participate in that action as such Party considers appropriate without completing or complying with the Consultation process.

1.3.8.4 Remedies

If after engaging in Consultation pursuant to Section 1.3.8.3, the Parties have not reached consensus or if, in the event of non-compliance for which a schedule to cure the non-compliance has been established through Consultation, the offending Party has not cured the failure within the time established, any Party that participated in the Consultation may seek resolution before any agency or court with jurisdiction over the matter; provided that if the dispute concerns the Licensee's compliance with the New License and the dispute is not resolved at the conclusion of Consultation, or if, in the event of non-compliance for which a schedule to cure the non-compliance has been established through Consultation, the Licensee has not cured the non-compliance within the established time, any Party that participated in the Consultation may petition or otherwise request FERC to enforce the License Article with which the Licensee is alleged to have failed to comply. If FERC affirmatively declines to enforce a License Article or fails to act within a reasonable time after a petition or request to enforce has been filed which period of time shall not be less than six months, then such Party may file with FERC a petition for rehearing regarding the alleged failure and pursue any further remedies, including judicial review.

If FERC's failure to enforce is unrelated to the merits of whether a License violation has occurred but is due solely to a Commission policy and/or legal determination or a combination of policies and determinations (such as a jurisdictional restriction on the Commission), then the State of North Carolina may bring suit to enforce any coordinate obligation of this Agreement as a matter of contract. In that event the Licensee shall not raise as a defense that the suit is in any manner precluded in whole or in part on the ground that the obligation under this Agreement can not be enforced because it is incorporated into the FERC license.

In addition, for any dispute regarding compliance with any license condition included in the New License pursuant to Section 401 Certification, the State may, in its sole discretion, enforce such provision in federal or State court or by State administrative means. The Licensee shall not defend against any such enforcement action on the grounds that the State is precluded from enforcing a final Section 401 Certification (i.e., one that has undergone public notice and comment and is final and effective after any timely appeals) in federal or State court or by State administrative means as a matter of law, which may preclude defenses of, e.g., lack of subject matter jurisdiction, lack of personal jurisdiction, improper venue, or that FERC is a necessary or

proper party. Except as provided in this section, nothing in this Settlement Agreement shall be construed as creating a right of any Party to enforce the New License against the Licensee as a matter of contract. Notwithstanding the forgoing or any other provision of this Settlement Agreement, nothing in this Agreement shall be construed to require the Licensee to seek or participate in consultation or any other form of dispute resolution hereunder with respect to any issue relating to State enforcement of any condition of the New License.

1.3.8.5 No Damages at Law

No Party shall be liable for damages at law for any breach of this Settlement Agreement or the New License, any performance or failure to perform an obligation imposed by either or both of them or any other cause of action arising from either or both of them. As such, the Parties implicitly agree that specific performance shall be an appropriate remedy for any breach. This section, however, shall not otherwise exempt the Licensee from liability for its actions under Section 10(c) of the Federal Power Act, 16 U.S.C. § 803(c).

1.3.9 Withdrawal from Settlement Agreement

1.3.9.1 Withdrawal Once New License is Final and Non-Appealable

A Party may withdraw from this Settlement Agreement once the New License is issued with a FERC-Imposed Modification and has become Final and Non-Appealable, provided that the withdrawing Party has exhausted its administrative and judicial remedies in contesting such FERC-Imposed Modification. As used in the preceding sentence, a Party will have exhausted its administrative and judicial remedies if it undertakes all steps necessary to have a FERC-Imposed Modification reviewed up to and including a review by the United States Court of Appeals, but will not be required to seek a Writ of Certiorari from the Supreme Court of the United States. A Party seeking to withdraw pursuant to this section must give notice in the manner prescribed by section 1.3.10.5. Upon withdrawal, this Agreement will have no force or effect as to that Party.

1.3.9.2 Withdrawal upon Denial of Request for Rehearing

A Party may withdraw from this Settlement Agreement once the New License is issued with a FERC-Imposed Modification and FERC has denied rehearing of the Party's request for rehearing. A Party seeking to withdraw pursuant to this section must give notice in the manner prescribed by section 1.3.10.5. Withdrawal is authorized if (i) it has complied with the Consultation procedures in Section 1.3.8.3 and (ii) all other Parties consent to the withdrawal. In determining whether to consent to a Party's request to withdraw, the other Parties shall consider the likelihood of the requesting Party's success on the merits of appealing the denial of rehearing to the United States Court of Appeals and the requesting Party's projected costs in appealing FERC's denial of rehearing to the United States Court of Appeals.

1.3.9.3 A License Term Less Than 50 Years is Not a Basis for Withdrawal

APGI agrees that a New License with a term of less than 50 years does not constitute a basis for withdrawal from the Agreement. However, should FERC issue a New License with a term of less than 45 years, the Licensee may withdraw.

1.3.9.4 Withdrawal Upon Other Causes

A Party may withdraw from this Agreement if it is deprived of a significant bargained-for benefit under this Agreement by the withdrawal of another Party.

1.3.9.5 Notice of Withdrawal

In order to withdraw, in addition to any other requirements, a Party must provide written notice to all other Parties as required by Section 1.3.10.5. The notice must describe the reasons for withdrawal in sufficient detail to allow for good faith discussion of the issues. The Party must comply completely and in good faith with the Consultation procedures required by Section 1.3.8.3. The withdrawal is effective upon completion in good faith of the Consultation process, upon completion of the rehearing and appeal requirements, or 60 days after the notice, whichever is later.

1.3.9.6 Waiver of Right to Withdraw

Any right to withdraw under this Agreement is waived if the Party with such right does not give notice to all other Parties of its intent to withdraw within 180 days of the New License becoming Final and Non-Appealable, unless a Party is participating in rehearing or some other appeal of the New License. In which case that Party's right to withdraw shall expire 180 days after the rehearing or other appeal is Final and Non-Appealable.

1.3.10 Miscellaneous

1.3.10.1 Limitations of Applicability

This Settlement Agreement is made on the express understanding that it constitutes a negotiated settlement of issues specific to the Project as they have been addressed by documents contained in or referred to in this Agreement and its Appendices. No Party shall be deemed, by virtue of execution of this Settlement Agreement, to have established precedent, or admitted or consented to any approach, methodology, or principle except as expressly provided herein. In the event this Settlement Agreement is approved by the Commission, such approval shall not be deemed a precedent for or controlling regarding any particular issue or contention in any other proceeding.

1.3.10.2 Successors and Assigns

This Settlement Agreement shall apply to, and be binding on, the Parties and their successors and assigns. No change in ownership of the Project or transfer of the New License by the Licensee shall in any way modify or otherwise affect any other Party's interests, rights, responsibilities, or obligations under this Settlement Agreement. Unless prohibited by applicable law, the Licensee shall provide in any transaction for a change in ownership of the Project or transfer of the existing or New License, that such new owner shall be bound by, and shall assume the rights and obligations of this Settlement Agreement upon completion of the change of ownership. In the event applicable law prohibits the new owner from assuming some or all of the rights and obligations of this Settlement Agreement, any Party may withdraw from this Settlement Agreement, after providing written notice of withdrawal as set forth in section 1.3.9.5.

The Licensee shall provide written notice to the other Parties at least 90 days prior to completing such transfer of license.

1.3.10.3 Severability

This Settlement Agreement is made on the understanding that each term is in consideration and support of every other term, and each term is a necessary part of the entire Settlement Agreement. Should any court hold that any section, provision, or part thereof is invalid or unenforceable, the validity or enforceability of any other provision of this Agreement is not affected thereby, provided that if the invalidity or unenforceability of any section, provision or part thereof materially (1) increases a Party's overall costs and burdens or (2) impairs a Party's bargained-for benefits under this Settlement Agreement, that Party may withdraw in the manner prescribed by Section 1.3.9.5.

1.3.10.4 Force Majeure

In those instances where force majeure may apply, no Party shall be liable to any other Party for breach of this Settlement Agreement as a result of a failure to perform or for delay in performance of any provision of this Settlement Agreement due to any cause reasonably beyond its control. This may include, but is not limited to: a) acts of God, fire, war, insurrection, civil disturbance, explosion; b) adverse weather conditions that could not be reasonably anticipated causing unusual delay in transportation and/or field work activities; c) restraint by court order or order of public authority; or d) inability to obtain, after exercise of reasonable diligence and timely submittal of all applicable applications, any necessary authorizations, approvals, permits, or licenses due to action or inaction of any governmental agency or authority; and (e) labor disputes or strikes which are reasonably beyond the control of the Party seeking excuse from performance. The Party whose performance is affected by a force majeure will make all reasonable efforts to promptly resume performance. The Party affected by a force majeure event shall notify the other Parties of the circumstances of the event that it believes constitutes a force majeure event as soon as it is reasonably possible and practical to do so. The settlement of strikes or lockouts or industrial disputes or disturbances is entirely within the discretion of the Party declaring force majeure, and that Party will not be required to settle the strikes, lockouts, or industrial disputes or disturbances by acceding to the demands of any opposing Party when such course of action is inadvisable in the discretion of the Party declaring the force majeure.

1.3.10.5 Notices and Communications

All written notices to be given pursuant to this Settlement Agreement shall be mailed by electronic mail, facsimile, certified first class mail return receipt requested, or overnight express service, to each Party at the addresses listed in Appendix F or to such subsequent address as a Party shall by written notice identify. Notices shall be deemed to be given on the same business day as any electronic mail or facsimile transmitted before 5:00 p.m., eastern time, unless the intended recipient demonstrates that the electronic mail or facsimile was not timely received, or on date of receipt if overnight express or other receipt-notification service is used.

For purposes of implementing this Settlement Agreement, the Parties agree that the individuals listed in Appendix F shall be designated to be the primary contact person and all written notices shall be posted to these individuals at the addresses listed in Appendix F. Notification of

changes in the contact persons or addresses must be made in writing and delivered to all other contact persons by certified first class mail return receipt requested.

Upon reasonable request by any Party, the Licensee will make available copies of the Settlement Agreement, together with all amendments including changes to the Parties' contact information, to the extent that such changes have been provided in writing to the Licensee.

1.3.10.6 Responsibility for Costs

Except as expressly provided for in this Settlement Agreement, all Parties are to bear their own costs for participating in the Agreement, provided that any State or federal government Party's participation in the Agreement is subject to available funding.

1.3.10.7 Water Rights Unaffected

This Settlement Agreement does not grant or affirm any property right, license or privilege to any Party or other entity in any waters or any right of use by any Party or other entity in any waters. This Agreement does not authorize any person to interfere with the riparian rights, littoral rights or water use rights of any other person. No person shall interpose this Agreement as a defense in any action respecting the determination of riparian or littoral rights or other water use rights.

1.3.10.8 Cross Referenced Laws and Documents

Unless otherwise noted, any reference to any statute, regulation or other document refers to the statute, regulation or document as it exists on the Effective Date of this Settlement Agreement as described in Section 1.3.5 of this Agreement.

1.3.10.9 No Third Party Beneficiaries

This Settlement Agreement shall not create any right as a third-party beneficiary in any individual or entity that is not a Party. This Agreement shall not be construed to authorize any such third party to maintain a suit in law or equity under this Agreement.

1.3.10.10 No Commitment of Government Funds

Nothing in this Settlement Agreement shall be construed as obligating any federal, state, or local agency to expend in any fiscal year any sum in excess of appropriations made by Congress or state or local legislatures or administratively allocated for the purpose of this Agreement for the fiscal year or to involve any federal, state, or local agency in any contract or obligations for the future expenditure of money in excess of such appropriations or allocations nor shall it be construed to require the transfer or use of any government lands or other resources (including personnel) except as authorized by law.

1.3.10.11 No Delegation

Nothing in this Agreement shall be construed as requiring, affecting modifying or involving the authorization or delegation by any government agency to any other body of any authority that has been authorized by Congress or the legislature of any state.

1.3.10.12 Signatory Authority

Intending to be legally bound by the terms of this Settlement Agreement, each Party has executed the Agreement by the signature of its duly authorized representative(s), and by his or her signature that duly authorized representative(s) certifies that he or she has in fact the authority to commit his or her agency or organization to the terms of this Agreement to the maximum extent permissible by law.

1.3.10.13 Paragraph Titles for Convenience Only

The titles for the paragraphs of this Agreement are used only for convenience of reference and organization, and shall not be used to modify, explain, or interpret any of the provisions of this Agreement or the intentions of the Parties.

1.3.10.14 Waiver

Failure by any Party to insist upon or otherwise call upon others to account for the strict performance of any term or covenant of this Agreement, or of any right under this Agreement shall not be a continuing waiver. To be effective a waiver must be in writing. A Party's failure to secure a written waiver shall not be construed as a waiver by that Party of any statute of limitations or other limitations period. Waiver of any requirement of law shall not be, or be evidence of, a continuing waiver or recurring waiver of such requirement of law.

1.3.10.15 No Standing

No Party will seek to use its status as a Party to this Agreement to establish standing, or aggrieved-party status in order to challenge any action of any Party that is also a governmental agency when that governmental agency's actions are pursuant to fulfilling its statutory duties.

1.3.10.16 Future Licensing Proceedings

Nothing in this Agreement shall be construed to restrict in any way any Party's participation in any proceeding for a New License for the Project with an effective date on or after the expiration of the New License, nor shall any Party be restricted in any way from participating in any proceeding associated with the application for such a new license, including any application for a Section 401 Certification.

1.3.11 Actions upon Execution of Agreement

1.3.11.1 FERC Filings by APGI

Within 30 days after the Effective Date of this Settlement Agreement, the Licensee shall file with FERC an Offer of Settlement pursuant to Rule 602 (18 C.F.R. § 385.602) consisting of the Settlement Agreement. The Offer of Settlement shall request FERC to incorporate all Proposed License Articles, without modification, into the New License for the Project and to identify all Proposed License Articles, if any, that are unenforceable by FERC.

1.3.11.2 Other Filings with FERC by the Parties

The Parties shall: a) submit, individually or collectively, a statement or statements in support of this Agreement to FERC within 45 days of the Effective Date of this Settlement Agreement; b) the Party's complete and final recommendations, measures, terms, conditions, and/or prescriptions pursuant to Sections 10(a), 10(j), and 18 of the FPA, Section 106 of the National Historic Preservation Act, and Section 7 of the Endangered Species Act, if the Party has such authority, shall be consistent with the Agreement; c) ensure that any supplemental information, comments or responses to comments filed by them with FERC or any mandatory conditioning agency in the context of the relicensing process are consistent with this Agreement (with the exception of a Section 401 Agency with regard to its Section 401 Certification); d) use their best reasonable efforts to obtain a FERC order approving this Agreement and issuing a New License for the Project consistent with this Agreement in a timely manner, and e) actively support, in all relevant regulatory and judicial proceedings in which they participate, regulatory and judicial actions consistent with this Agreement

1.3.11.3 Adoption by FERC Without Modification

The Parties have entered into this Settlement Agreement with the express expectation and condition that FERC will approve the Settlement and issue a New License for the Project that incorporates, without modification, the Proposed License Articles in Section 3. The Parties shall request that FERC adopt the Proposed License Articles without modification.

The Parties agree that if FERC approves the Offer of Settlement and incorporates the Proposed License Articles into the New License without modification or otherwise does not disapprove or supersede the terms of this Agreement, they will not seek rehearing of the FERC order granting a New License for any issues covered by this Agreement, or support in any way any such request for rehearing by any non-Party to this Agreement.

The Parties recognize that if FERC issues a new license to APGI that is consistent with the Agreement, the Agreement will have the status of a contract enforceable at law and in equity with respect to those provisions that FERC or a court of competent jurisdiction determines are beyond FERC's jurisdiction to enforce. The Parties also acknowledge that the Agreement binds all Parties to perform any commitments they have made therein. Furthermore, the Parties agree that if FERC declines to include in the New License one of the Proposed License Articles, that Article retains its status as a contractual commitment under this Agreement and may be enforceable at law in state court to the extent that it does not conflict with any provision of the New License. The Parties agree that they have provided consideration for the Agreement by compromising rights and remedies they could assert before FERC in this relicensing proceeding.

1.3.11.4 Modification and/or Amendment

1.3.11.4.1 Effect of FERC Adoption with Modification

If FERC adopts the Proposed License Articles with modification, the Settlement Agreement shall be deemed amended to conform to the New License unless a Party gives notice of objection to the New License with a FERC-Imposed Modification pursuant to Section 1.3.11.4.2, below. Absent such objection, the Parties will be bound by the terms of this Settlement Agreement as amended.

If FERC incorporates Settlement Agreement obligations into the New License that are intended to be specific resource commitments by and between certain Parties to the Settlement Agreement such that the commitments were not proposed as License Articles by the Parties and become enforceable by FERC against the Licensee (e.g., if FERC requires through a License Article that the Licensee fund recreation commitments that were to be made by a resource agency funded by APGI), the Parties agree that any funds obligated by APGI in the Settlement Agreement to meet those commitments will be applied to the cost to APGI of meeting the New License requirement. Funds intended to provide operational and maintenance support for public recreation areas, in whole or part, shall not be subject to re-appropriation unless FERC obligates the Licensee for operation and maintenance of the area. The Parties further agree that this Agreement allows this reallocation by APGI after consultation with the Parties to the original non-License commitment but without requiring APGI to engage in the Objection To New License With Modification procedures pursuant to Section 1.3.11.4.2 below.

1.3.11.4.2 Objection To New License With Modification

If in the opinion of any Party, the Commission issues an order with a New License that contains a FERC-Imposed Modification, such Party shall give notice of the existence of the FERC-Imposed Modification to all the other Parties as soon as possible but no later than ten days after the date that the Commission's order is issued. Thereafter, all Parties shall immediately engage in Consultation in accordance with Section 1.3.8.3 in an attempt to reach consensus on (i) conforming the Settlement Agreement to the New License with FERC-Imposed Modification or (ii) filing a request for rehearing of the New License. If consensus has not been reached ten days prior to the due date for the request for rehearing, such Party may file a request for rehearing of the New License to challenge the FERC-Imposed Modification, which no other Party shall oppose. All Parties shall support such request for rehearing to the greatest extent possible. Any Party filing a request for rehearing is authorized to state affirmatively that no Party opposes such request.

1.3.11.4.3 Request for Rehearing Shall Not Terminate Consultation

The filing of a request for rehearing shall not terminate Consultation, which shall continue, if necessary, for the full 45-day period, mindful of the demands on Parties involved in a request for rehearing. If at any time the Parties unanimously consent to modify the Settlement Agreement to conform to the New License, the filing Party shall withdraw its request for rehearing.

1.3.11.4.4 Settlement Agreement Temporarily Amended

After the conclusion of Consultation, and unless and until the New License is Final and Non-Appealable, the Settlement Agreement shall temporarily be deemed amended by FERC's modification if supported by (i) the Licensee and (ii) each resource agency with jurisdiction over a resource that is a subject of the disputed license article or omission. A resource agency shall be considered to have jurisdiction over a resource if a characteristic of the resource is within the agency's statutory mandate and, with respect to state agencies, the resource is within the agency's geographic jurisdiction.

1.3.11.4.5 Development of Biological Opinion by USFWS or NOAA Pursuant to Section 7 of the Endangered Species Act

In the event that the U.S. Department of the Interior Fish and Wildlife Service (USFWS) or the U.S. Department of Commerce National Oceanic and Atmospheric Administration (NOAA) issues a Biological Opinion that contains measures, recommendations, terms or conditions that 1) modifies a Proposed License Article or are otherwise inconsistent with the terms of this Settlement Agreement, and 2) the Licensee determines, in its sole judgment, that the Biological Opinion materially (i) increases its overall costs and burdens of and/or (ii) impairs its bargained-for-benefits under the Settlement Agreement, then the Licensee may withdraw from this Agreement; provided, however, that, prior to exercising its right to withdraw, the Licensee shall (i) comply with the Consultation provisions in Section 1.3.8.3 and (ii) exhaust its administrative and judicial remedies in contesting the measures, recommendations, terms or conditions up to and including a review by the United States Court of Appeals. However, if a Party believes that an appeal of the objectionable recommendations, terms or conditions to the Court of Appeals would be futile and the other Parties, having considered the costs and the likelihood of the requesting Party's success on the merits of such an appeal agree, the requesting Party may withdraw absent such an appeal. Such agreement shall not be unreasonably denied.

1.3.11.4.6 License Articles Not Related to Settlement Agreement

Any Party may file a request for rehearing of issues arising under the FERC order issuing the New License that are not deemed to be related to the Settlement Agreement, provided that: (i) the Party shall notify all other Parties of its intention by electronic mail or facsimile at the earliest practicable time; and (ii) the Parties will undertake the Consultation process in Section 1.3.8.3 if any other Party disputes the request as inconsistent with the Settlement Agreement.

1.3.11.4.7 Amendment of Settlement Agreement

The Parties may amend this Settlement Agreement, as executed, before or after issuance of the New License.

A Party proposing an amendment shall provide notice pursuant to Section 1.3.10.5. The Notice shall state the substance and basis of the proposed amendment. The Parties shall make best efforts to informally meet and confer within 30 days of such Notice. The proposing Party may request to utilize the Consultation process set forth in Section 1.3.8.3 of this Agreement. Within 60 days of the Notice, or such different period as may be established by mutual consent, each other Party shall provide a written confirmation of its consent to or rejection of the proposed amendment. Any nongovernmental Party that does not respond within that period shall be deemed to have accepted the proposed amendment unless that Party's interests would be materially impacted by the approval of the proposed amendment.

If an amendment is proposed before issuance of a New License and has the unanimous consent of the Parties, it shall go into effect upon the Parties' execution of an Amended Settlement Agreement, which shall be promptly filed as an amended Offer of Settlement.

If an amendment is proposed after issuance of the New License and has the unanimous consent of the Parties, the Parties shall, if such amendment warrants, seek modification of the New License, and any related permits or authorization, to conform to the proposed amendment

of the Settlement Agreement. The proposed amendment shall not go into effect until all authorizations, including the New License, are conformed to the proposed amendment. However, if the proposed amendment lacks the unanimous consent of the Parties or FERC denies modification of the New License, that lack of unanimous consent or denial of the proposed amendment shall not constitute grounds for withdrawal under Section 1.3.9.

1.3.11.4.8 Amendment of the New License

To the extent permitted by law, a Party may petition FERC to amend the New License, pursuant to any reopener condition contained in the New License, or to take any other action with regard to the Licensee or the Project or may petition the Section 401 Agency to amend its Section 401 Certification, pursuant to any reopener condition included in any Certification, or to take any other action with regard to the Licensee or the Project, so long as the amendment or other action would not substantially conflict with this Agreement. Before filing any such petition or initiating any such action, the Party shall notify all other Parties and consult with any Party that wishes to consult, but under no circumstance shall such consultation requirement be construed to prevent a Party from pursuing any action within the time required by law or regulation.

1.3.12 Rights, Duties, and Obligations Regarding Section 401 Certification

Except as permitted by Paragraph 3, below, the Parties shall not: (1) request or support any Section 401 Certification conditions for the Project that conflict with the proposed license conditions or any other terms of this Agreement or that add substantial additional burdens, costs or risks to the Licensee beyond those to which all Parties have herein agreed or (2) oppose any Section 401 Certification conditions that are not inconsistent with the proposed license articles or any other terms of this Agreement; or oppose any Section 401 Certification conditions that are standard State of North Carolina Section 401 Certification conditions. These standard North Carolina Section 401 Certification conditions are, as included in the Section 401 Certification for the Tapoco Hydroelectric FERC Relicensing Project, dated December 17, 2003, with reference number 03-0191: conditions no. 9 (regarding reporting of consumptive uses), 10 (regarding continuing compliance), and 11 (regarding property rights). The inclusion in the Section 401 Certification, and therefore in the New License, of any conditions that are not inconsistent with the proposed license articles or any other terms of this Agreement shall not be deemed a FERC-Imposed Modification.

The Parties reserve the right to be actively involved in any Section 401 Certification process, and nothing in this Agreement shall prevent the Licensee from opposing any Section 401 Certification condition that it, in its sole judgment, determines is or could be inconsistent with any provision of this Settlement Agreement.

Nothing in this Settlement Agreement is intended to or shall be construed to affect in any way the authority of the State of North Carolina pursuant to 33 U.S.C. § 1341, and related state statutes and rules, such as by limiting the authority of the State of North Carolina to issue, condition, or in any way alter a water quality certification or by limiting the exercise of the State of North Carolina's discretion. Execution of this Settlement Agreement by the State of North Carolina or any agency thereof expresses or implies no representation that the requirements of this Settlement Agreement ensure compliance with State water quality standards and other appropriate requirements of State law. Nothing in this Agreement shall limit the right of the State of North Carolina from enforcing its Section 401 Certification and from taking any steps, within the sole discretion of the State, to protect and defend its authority, such as by seeking rehearing

of any FERC action regarding issues related to the exercise of the State's authority with regard to 33 U.S.C. § 1341. Similarly, nothing in this Agreement shall be construed to limit SC's or the EPA's right to initiate the procedures under 33 U.S.C. § 1341 should it be deemed necessary by SC or EPA.

1.3.13 Potential for Negotiation of Recreation Easements

Notwithstanding section 1.3.14, in the event that the Project ceases to be a federally licensed hydropower project, the Licensee shall convey recreational easements to the United States of America and/or the State of North Carolina. No later than one year prior to the date that the Project ceases to become a federally licensed hydroelectric project, the Licensee shall negotiate recreational easements with the United States and/or the State of North Carolina to ensure continued public access to the public recreational facilities on the Project reservoirs as they exist at the time the Project ceases to be federally licensed hydroelectric project. Such easements will only become effective in the event that the Project ceases to be a federally licensed hydroelectric project. However, nothing in this Agreement shall prevent the Licensee (under which circumstances would be a former Licensee and owner of private land encumbered by any recreational easements) from proposing to the United States or the State of North Carolina the closure of a recreational facility that becomes a "stranded asset" or has otherwise fallen into disuse for any reason, and agreement to such closure shall not be unreasonably withheld by the United States or the State of North Carolina.

1.3.14 Termination of Settlement Agreement

This Settlement Agreement shall terminate as to all Parties and have no further force or effect upon withdrawal of the Licensee, or upon expiration of the New License and any Annual License issued thereafter

2.0 Settlement Provisions Not Covered by Proposed License Articles

2.1 Project Operations

2.1.1 Flow Adjustment for Enhancement of Downstream Spawning

The Licensee (Alcoa Power Generating Inc. or APGI) will work with the licensee of the Yadkin-Pee Dee River Project, FERC No. 2206, (Downstream Licensee), the North Carolina Division of Water Resources (NCDWR), the North Carolina Wildlife Resources Commission (NCWRC), the South Carolina Department of Natural Resources (SCDNR), the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), The Nature Conservancy (TNC) and American Rivers (collectively, Group) to develop a process to allow the Downstream Licensee to provide adjusted flow between February 1 and May 15 to enhance spawning conditions in the lower river downstream of the Blewett Falls development, part of the Yadkin-Pee Dee River Project.

The Parties agree that the Licensee's role in enhancing downstream spawning below Blewett Falls will be limited to:

- a) Attending an annual meeting with the Group, if held, to consider expected flow and hydrologic conditions and to schedule adjusted flow period(s) for the upcoming spawning season, and
- b) Once the schedule for adjusted spawning flow period(s) has/have been established by the Group, the Licensee will communicate its daily generation/flow release schedule during the adjusted spawning flow period(s) to the Downstream Licensee at least one week in advance of the start of the adjusted spawning flow period(s). If unexpected hydrologic conditions, or other conditions, such as those covered in the Low Inflow Protocol (LIP, Appendix A) or the Hydro Project Maintenance and Emergency Protocol (HPMEP, Appendix B), occur during any adjusted spawning flow period, the Licensee shall communicate to the Downstream Licensee any resulting changes in its daily generation/flow release schedule for the remainder of that adjusted spawning flow period.

The Parties agree that the Licensee will not be required to attempt to match Yadkin Project outflow to inflow during any adjusted spawning flow period(s), nor will the Licensee be required to provide an instantaneous minimum flow release from the Yadkin Project during any adjusted spawning flow period(s).

The Parties understand and agree that the Licensee's participation in enhancement of downstream spawning will take place within the confines of the other requirements of the New License relating to management of flows and reservoir water elevations, and would not result in any modification of those flow and reservoir management requirements. Specifically, nothing in this section will require or cause the Licensee to fall below its FERC-prescribed Project Minimum Flows as described in Article PO-2 or to have to modify its reservoir operations as prescribed in Article PO-1.

If state and federal agencies and the Downstream Licensee are unable to come to an agreement on what measures are to be undertaken by the Downstream Licensee to achieve Flow Adjustment for Enhancement of Downstream Spawning, the Licensee will be under no obligation to meet the commitments outlined in this section.

2.1.2 Low Inflow Protocol

The Parties to the Relicensing Settlement Agreement that also have designated roles and responsibilities under the LIP (Appendix A) hereby agree to uphold their respective LIP commitments. In the event that a Party or Parties do not uphold their respective LIP commitments, then any Party, including the Licensee may (but is not required to) invoke the dispute resolution process described in Section 1.3.8 of this Agreement to attempt to resolve issues regarding LIP commitments

Assuming the U.S. Geological Survey (USGS) has necessary rights for the License term, the Licensee shall continue to provide 100% funding support during the License term for the maintenance of the following USGS standard flow gages that are used in the LIP to determine the Three-Month Rolling Average Flow:

- Yadkin River at Yadkin College (02116500)
- South Yadkin River near Mocksville (02118000)
- Abbotts Creek at Lexington (02121500)

Any substantial increase in funding support due to changes in these flow gages are subject to review by the Licensee with the North Carolina Department of Environment and Natural Resources (NCDENR). The Licensee may review and propose changes in the contractor, location, or equipment associated with these gages. Any changes proposed by the Licensee will require agreement of NCDENR.

2.2 Water Quality

2.2.1 Tailwater Dissolved Oxygen Enhancement Schedule

The Licensee shall install equipment and implement measures designed to enhance Yadkin Project (Project) tailwater dissolved oxygen (DO) conditions as specified in the schedule in Table WQ-1.

Table WQ-1. Dissolved Oxygen Enhancement and Monitoring Schedule

Year	DO Enhancement Action	Monitoring/Reporting
2007 ¹		<ul style="list-style-type: none"> - Continuous DO/temperature monitoring 5/1-11/30 at existing stations in all four tailwaters. - File Draft DO Monitoring Plan and Quality Assurance Project Plan (QAPP) with the North Carolina Division of Water Quality (NCDWQ) as part of 401 Application.
2008 ²	Narrows Unit 2 - Addition of two aeration valves by 03/31/08.	<ul style="list-style-type: none"> - Continuous DO/temperature monitoring 5/1-11/30 at existing stations in all four tailwaters. - File Final DO Monitoring Plan and QAPP for approval by NCDWQ and the Commission.

Year	DO Enhancement Action	Monitoring/Reporting
2009	Narrows Unit 1 - Addition of two aeration valves by 12/31/09.	- Implement NCDWQ/FERC approved DO Monitoring Plan. - File annual DO monitoring data report with NCDWQ by March 31.
2010	Narrows Unit 3 - Addition of two aeration valves by 12/31/10. High Rock Unit 3 - Install "through the blade" aerating turbine by 12/31/10.	- Monitoring/reporting in accordance with DO Monitoring Plan.
2011	High Rock Unit 2 - Install a "through the blade" aerating turbine by 12/31/11.	- Monitoring/reporting in accordance with DO Monitoring Plan. - Initiate special study (up to 2 years) to evaluate the effectiveness of the aeration at Narrows on DO levels being discharged from Falls (2011-2012).
2012	High Rock Unit 1 - Install a "through the blade" aerating turbine by 12/31/12.	- Monitoring/reporting in accordance with DO Monitoring Plan. - Complete second year of 2-year study of effectiveness of aeration at Narrows on DO at Falls by 12/31/12 and prepare Study Report.
2013		- Monitoring/reporting in accordance with DO Monitoring Plan. - File 2-year Narrows/Falls DO Study Report with NCDWQ by 3/1/13. - If 2-year study does not demonstrate compliance at Falls, file an Action Plan for DO (DOAP) enhancement at Falls with NCDWQ by 12/31/13. - Initiate special study (up to 2 years) to evaluate the effectiveness of aeration at High Rock on DO levels being discharged from Tuckertown (2013-2014).
2014	Falls Unit 1 - Install aeration valves or other appropriate aeration technology, if needed, in accordance with Falls Action Plan by 12/31/14.	- Monitoring/reporting in accordance with DO Monitoring Plan. - Complete second year of 2-year study of High Rock/Tuckertown DO by 12/31/14 and prepare Study Report.
2015	Falls Unit 2 - Install aeration valves or other appropriate aeration technology, if needed, in accordance with Falls Action Plan by 12/31/15.	- Monitoring/reporting in accordance with DO Monitoring Plan. - File 2-year High Rock/Tuckertown DO Study Report with NCDWQ by 3/1/15. - If 2-year study does not demonstrate compliance at Tuckertown, file an Action Plan for DO enhancement at Tuckertown by 12/31/15.
2016	Falls Unit 3 - Install aeration valves or other appropriate aeration technology, if needed, in accordance with Falls Action Plan by 12/31/16. Tuckertown - Install aeration technology, if needed, at Tuckertown in accordance with Tuckertown Action Plan by 12/31/16.	- Monitoring/reporting in accordance with DO Monitoring Plan.

- Notes:
- 1 Actions to be taken under the current License for the Yadkin Project.
 - 2 The schedule shown starting in 2008 assumes an effective date of the New License for the Yadkin Project of or before May 1, 2008. If the effective date of the New License is after May 1, 2008, the schedule will be adjusted such that the 2008 schedule would begin within the year following the effective date of the New License, as provided in a revised schedule that has written approval from NCDWQ.

2.2.2 Tailwater Dissolved Oxygen Enhancement Operations

As DO enhancement equipment or measures are installed or implemented on the schedule in Table WQ-1, the Licensee shall operate the generating units with DO enhancement equipment added on a “first-on-last-off” basis, subject to unit availability, from no later than May 1 of each year through November 30 of each year. If DO enhancement equipment or measures are not associated with generating equipment, once completed, that equipment or those measures shall be operated or implemented as designed from no later than May 1 of each year through November 30 of each year.

If at any time during the term of the New License, the Licensee can demonstrate through studies and/or monitoring that DO conditions have improved, the Licensee may consult with the North Carolina Division of Water Quality (NCDWQ) regarding the possibility of reducing the period of DO enhancement operations (May 1 – November 30). Should any such consultation result in an agreement between the Licensee and the NCDWQ to modify the operation of the Project for purposes of DO enhancement, the Licensee shall consult with the NCDWQ to develop a plan to revise DO enhancement operations. The Licensee shall include with the plan, an implementation schedule, documentation of consultation, copies of comments and recommendations on the plan after it has been prepared and provided to NCDWQ, and specific descriptions of how NCDWQ’s comments are accommodated by the plan. The Licensee shall file the plan with the Commission within 30 days of receiving NCDWQ’s written approval of the plan.

2.2.3 Dissolved Oxygen Monitoring

Within six months of the effective date of the New License, the Licensee shall file with NCDWQ a Dissolved Oxygen Monitoring Plan (DO Monitoring Plan) and Quality Assurance Project Plan (QAPP) for the Project. The DO Monitoring Plan and QAPP will be developed in consultation with NCDWQ and other appropriate state and federal resource agencies.

The primary component of the DO Monitoring Plan will be the operation of four (4) continuous DO/temperature monitors (one in each tailwater), for the period May 1 through November 30 of each year. The Plan shall include a schedule for preparing an annual DO and temperature data report. The annual report shall be filed with NCDWQ and the Downstream Licensee no later than March 31 of the following year.

The Plan shall also include provisions for conducting two studies as part of the overall DO enhancement schedule (Table WQ-1) designed specifically to investigate the effectiveness of aeration technology installed and operating at Narrows on the DO conditions in the Narrows and Falls tailwaters, and the effectiveness of aeration technology installed and operating at High Rock on DO conditions in the High Rock and Tuckertown tailwaters. At the completion of each of the two studies, the Licensee shall prepare a study report which shall be filed with NCDWQ in accordance with the schedule in the DO Monitoring Plan. If the study results demonstrate that the Falls and/or Tuckertown tailwaters do not meet state dissolved oxygen standards as a result of Project operations, the Licensee shall prepare a DO Action Plan (DOAP) for the Falls and Tuckertown developments, respectively. The resulting DOAP(s), if needed, will be filed with NCDWQ in accordance with the schedule shown in Table WQ-1.

The Licensee shall file the DO Monitoring Plan with the Commission within 30 days of receiving NCDWQ’s written approval of the plan. The Licensee shall include with the DO Monitoring Plan

an implementation schedule, documentation of consultation, copies of comments and recommendations on the plan after it has been prepared and provided to NCDWQ, and specific descriptions of how NCDWQ's comments are accommodated by the plan.

2.2.4 Additional Dissolved Oxygen Enhancement Actions

If at any time during the term of the New License, after all the DO enhancement equipment and measures outlined in Table WQ-1 have been installed and implemented, all of the planned unit upgrades have been completed and the upgraded units are operational, and at least two additional years of monitoring have been completed, the Licensee is notified by the NCDWQ that based on the results of monitoring under the DO Monitoring Plan, state water quality standards are not being met as a result of the Licensee's hydroelectric operations, the Licensee shall consult with the NCDWQ to develop a plan to implement corrective actions. The Licensee shall file a Dissolved Oxygen Corrective Action Plan (DOCAP) for NCDWQ approval within one year of initiating consultation with the NCDWQ. The Licensee shall include with the DOCAP an implementation schedule, documentation of consultation, copies of comments and recommendations on the plan after it has been prepared and provided to NCDWQ, and specific descriptions of how NCDWQ's comments are accommodated by the plan. The Licensee shall file the plan with the Commission within 30 days of receiving NCDWQ's written approval of the plan.

2.2.5 Total Maximum Daily Load Process

The Licensee agrees to participate in the High Rock Total Maximum Daily Load (TMDL) process for High Rock Reservoir initiated by the State of North Carolina in 2005. The Parties agree that the Licensee will contribute up to \$50,000 in in-kind services for planned water quality sampling efforts, upon notification that the Yadkin-Pee Dee River Basin Association has received federal or state grants of at least \$50,000, for which the Licensee's contribution will be used as the required "matching funds".

If, during the term of the New License, other TMDL processes are required for the Yadkin River or its tributaries, within the Project Boundary of the Yadkin Project, the Licensee will participate in these processes.

2.3 Recreation

2.3.1 Recreation Facility Improvements

The Parties agree that the Licensee will develop a Recreation Plan that at a minimum will include the recreation facility enhancements described in Appendix C.

2.3.2 Operations and Maintenance Funding Commitments

The Parties agree that the Licensee will contribute \$30,000 annually to the U.S. Forest Service (USFS) for the purposes of assisting with the operation and maintenance of six public recreation sites in Uwharrie National Forest that provide direct access to the Yadkin Project reservoirs (Badin Lake Campground, Cove Boat Ramp, Kings Mountain Point, Deep Water Trail Access, Holt's Cabin, Badin Lake Hiking Trail). The use of these funds by the USFS for any purpose other than the operation, maintenance, or construction of new facilities at the recreation sites

listed above will require the concurrence of the Licensee. In the first year following issuance of New License, the funds will be made available within six months of the effective date of the New License. Thereafter, the funds will be made available no later than January 31 of each year.

The Parties agree that the Licensee will contribute \$35,000 annually to NCWRC for the purposes of assisting with the operation and maintenance of seven NCWRC public recreation sites that provide direct access to the Yadkin Project reservoirs (Bringle Ferry Boat Access, Flat Creek Boat Access, Flat Creek Fishing Access, Old Whitney Fishing Pier, Dutch Second Creek Boat Access, Circle Drive, Lakemont Boat Access). The use of these funds by the NCWRC for any purpose other than the operation, maintenance, or construction of new facilities at the recreation sites listed above will require the concurrence of the Licensee. In the first year following issuance of a New License, the funds will be made available within six months of the effective date of the New License. Thereafter, the funds will be made available in July of each year.

All payment amounts specified in dollars in this section shall be deemed to be stated as of the year 2008, and such sums shall be escalated as of January 1 of each following year (starting in January 2009) according to the formula set forth in Section 2.3.9.

2.3.3 Yadkin-Pee Dee River Trail Fund

Within one year of the effective date of the New License, the Parties agree that the Licensee will provide a one-time donation of \$40,000 to NCDENR who will serve as the Yadkin-Pee Dee River Trail Fund's fiduciary agent and who will deposit the funds in an interest-bearing account. The donated funds are to be used for improvements to the river trail or maintenance of river trail facilities upstream of Falls Dam.

2.3.4 Railroad Lines

To the degree that the Licensee or its parent company has property rights, and considers abandoning the railroad line that runs from Halls Ferry Junction and along the western shore of Narrows Reservoir into Badin, the Parties agree that the Licensee will first discuss with the Town of Badin, Stanly County and NCDENR the interest in evaluating the line for the "Rails to Trails" program at that time. The Licensee or its parent company will provide a right of first refusal to the State of North Carolina for this railroad line under the condition that ownership can revert to the Licensee or its parent company upon notice that the railroad line is to be reactivated by either of the companies.

2.3.5 Portage Trail Reimbursement

The Parties agree that if NCDENR elects to make improvements to any of the Yadkin Project portage trails prior to the agreed upon schedule in Appendix C, the Licensee will reimburse actual, reasonable expenses, escalated in accordance with Section 2.3.9, to the NCDENR for deposit into the Yadkin-Pee Dee River Trail Fund. Reimbursement will be made by the Licensee upon written notice that work on the portage trails has been completed, accompanied by conceptual design drawings that were used in making the improvements, and a line item invoice of the costs incurred by NCDENR in making the improvements. Upon the satisfaction of the Licensee that the work has been done in a manner consistent with the safety and security requirements of the Licensee, its parent company, and the Commission, the Licensee will

reimburse the funds at a time of its discretion, but in any case on or before the 10- or 20-year dates noted in Appendix C.

2.3.6 Recreation Safety and Enforcement

The Parties agree that within one year of the effective date of the New License the Licensee will make a one-time contribution of \$50,000 to the NCWRC to assist with the development of two boathouse facilities, one each on High Rock and Narrows reservoirs, for enforcement purposes. The Licensee and NCWRC will work together to identify appropriate locations for the new boathouse facilities and to develop and execute any necessary license agreements.

The Licensee will also provide NCWRC with \$2,500 annually to assist with the installation and maintenance of buoys and other hazard markers/signs on the Project reservoirs. In the first year following issuance of a New License, the funds will be made available within six months of the effective date of the New License. Thereafter, the funds will be made available in July of each year. This payment amount specified in dollars shall be deemed to be stated as of the year 2008, and such sums shall be escalated as of January 1 of each following year (starting in January 2009) according to the formula set forth in Section 2.3.9.

2.3.7 Assessing Future Recreational Needs

Nothing in this Relicensing Settlement Agreement (RSA) shall preclude the use of established mechanisms for monitoring growth in recreation facility demands such as the FERC Form 80, North Carolina State Comprehensive Outdoor Recreation Plan, and USFS recreation use monitoring. The information generated by these processes will serve as indicators of future recreational needs beyond those noted in this RSA.

2.3.8 Compliance with the Project's Shoreline Management Plan

The Parties agree that any new recreational facilities or upgrades to existing facilities shall be in accordance with the requirements of the Project's Shoreline Management Plan.

2.3.9 Escalation of Funds

Where noted, the Parties agree that the Licensee will escalate payment amounts specified in dollars according to the following formula:

$$AD=D \times ((NGDP)/IGDP)$$

Where:

AD = Adjusted dollar amount as of January 1 of the year in which the adjustment is made

D = Dollar amount prior to adjustment

IGDP = GDP-IPD for the third quarter of the year before the previous adjustment date (or, in the case of the first adjustment, the third quarter of the year before the effective date of the New License)

NGDP = GDP-IPD for the third quarter of the year before the adjustment date

“GDP-IPD” is the value published for the Gross Domestic Product Implicit Price Deflator by the U.S. Department of Commerce, Bureau of Economic Analysis in the publication Survey of Current Business, Table 7.1 (being on the basis of 2000 = 100), in the third month following the end of the applicable quarter. If that index ceases to be published, any reasonably equivalent index published by the Bureau of Economic Analysis may be substituted. If the base year for GDP-IPD is changed or if publication of the index is discontinued, the Licensee will promptly make adjustments or, if necessary, select an appropriate alternative index to achieve the same economic effect.

Contribution amount will not be adjusted to be less than the amount from the previous year.

2.4 Shoreline Management

2.4.1 Modifications to the Existing Yadkin Shoreline Management Plan

The Parties agree that the Licensee will make modifications to the existing Yadkin Project Shoreline Management Plan (SMP) Specifications for Private Recreation Facilities, Shoreline Stewardship Policy, and Subdivision Access Approval, Multi-use Facility Permitting, and Industrial Approval Procedures consistent with Appendix D.

2.4.2 Implementation of the Shoreline Management Plan Modifications

The Parties agree that the Licensee will implement the modifications to the existing SMP referenced in Section 2.4.1 within three months of the effective date of the New License. The Parties agree that any provisions in the existing, FERC approved SMP that are not addressed in Appendix D remain unchanged and in full force and effect.

2.4.3 Fees

The Parties agree that the Licensee has the right to recover the cost of administering the SMP through permit fees.

2.5 Wildlife, Aquatics, and Rare, Threatened and Endangered (RTE) Species

2.5.1 RTE Species

The Parties agree that periodic freshwater mussel monitoring to be conducted under the Rare, Threatened and Endangered Species Management Plan, required by Article FW-1, will be completed within the first 10 years of the effective date of the New License and will be limited in scope and duration so as not to exceed a total cost to the Licensee of \$50,000 (in 2008 dollars) over the term of the New License.

The Parties further agree that if, at the completion of the 10-year mussel monitoring period, the Licensee and NCWRC agree that recruitment of the freshwater mussel species occurring in the Falls tailwater area is not sufficient to justify continued management efforts in this location, within one year of such a finding, the Licensee will make a one-time contribution of \$50,000 to the NCWRC to assist with its freshwater mussel management and preservation efforts elsewhere in the watershed.

2.5.2 Invasive Exotic Species

The Parties understand and agree that the issue of invasive exotic species is of concern at a regional level, and that to be effective, monitoring and management of invasive exotic species is best done on a cooperative, regional basis. Accordingly, the Licensee agrees to work in cooperation with the NCDWR and NCWRC to monitor invasive exotic species of concern at the Project, and to undertake control activities, as needed. The primary focus of the monitoring efforts will be on invasive aquatic plants, such as hydrilla, but will also consider other invasive aquatic species that may become established in the reservoirs, such as the Chinese mystery snail. The Licensee will help fund efforts to be undertaken by NCDWR or NCWRC to survey the Yadkin Project reservoirs periodically for the presence and extent of invasive, exotic aquatic species of concern. If at any time NCDWR or NCWRC determines the presence of invasive exotics in any of the Yadkin Project reservoirs is sufficient to be of concern to the agencies, the Licensee will work with the agencies to identify and undertake appropriate control actions on a cost-share basis. The Licensee will make up to \$25,000 available annually, on a 50% cost-share basis, to support invasive aquatic species monitoring and control efforts undertaken by NCDWR or NCWRC in any Yadkin Project waters.

2.6 Land Conveyances

2.6.1 Morrow Mountain State Park Expansion Lands

The Parties agree that the Licensee will donate to the State of North Carolina (State) by Quit Claim Deed approximately 1,085 acres¹ (5.7 miles of shoreline) of non-Project land located in Stanly County, North Carolina in the vicinity of Narrows and Falls reservoirs for the future expansion of Morrow Mountain State Park (Morrow Mountain Lands) (Appendix E-1). The Parties agree that the Morrow Mountain Lands currently possess natural, scenic, open space, forest, wildlife habitat, watershed protection, historical, cultural, archaeological, educational and recreational values (Conservation Values) of great importance to the Licensee, the State, and others. By its execution of this RSA, the State agrees to preserve and protect the Conservation Values of the Morrow Mountain Lands in perpetuity, to the extent practicable.

Prior to the transfer of the Morrow Mountain Lands, the Licensee and the State will execute an agreement, which shall contain terms and conditions satisfactory to the Licensee and the State, including, but not limited to, property description, interim lands management, continued rights (Reserved Rights) of the Licensee in and to the property and other provisions typical in transactions of this nature.

2.6.2 Tuckertown Reservoir Lands

The Parties agree that the Licensee will make available for sale by Special Warranty Deed to the State and/or The Land Trust for Central North Carolina (Land Trust) approximately 2,420 acres (31 miles of shoreline) of non-Project land located in Davidson and Montgomery counties, North Carolina along the eastern shore of Tuckertown Reservoir (Tuckertown Lands) for gamelands, recreation and/or the protection and preservation of Conservation Values (Appendix

¹ Note to signatories: all acreage amounts referenced in this Section 2.6 or elsewhere in this RSA are subject to verification by survey, legal description, and title search and are subject to change as a result of any lands retained by Licensee.

E-2). By their execution of this RSA, the State and/or Land Trust agree to preserve and protect the Conservation Values of the Tuckertown Lands in perpetuity, to the extent practicable.

The purchase price for the Tuckertown Lands is \$8.5 million payable to the Licensee or its designee in immediately available funds at closing. Prior to the sale of the Tuckertown Lands, the Licensee and the State, and/or the Licensee and Land Trust will execute a Real Estate Sales Agreement (Sales Agreement), which shall contain terms and conditions satisfactory to the Licensee, the State, and Land Trust including, but not limited to, the purchase price, property description, status of the title to be conveyed (subject to all encumbrances of record or reasonably ascertainable by physical inspection), interim lands management, continued Reserved Rights of the Licensee in and to the property and other provisions typical in transactions of this nature.

2.6.3 High Rock Reservoir Lands

The Parties agree that the Licensee will make available for sale by Special Warranty Deed to the State and/or Land Trust approximately 2,310 acres (45 miles of shoreline) of non-Project land located in Davidson, Davie and Rowan counties, North Carolina along or in close proximity to High Rock Reservoir, primarily north of the Interstate 85 bridges (High Rock Lands) for gamelands, recreation, and/or the protection and preservation of Conservation Values (Appendix E-3). By their execution of this RSA, the State and/or Land Trust agree to preserve and protect the Conservation Values of the High Rock Lands in perpetuity, to the extent practicable.

The purchase price for the High Rock Lands is \$7.7 million payable to the Licensee or its designee in immediately available funds at closing. Prior to the sale of the High Rock Lands, the Licensee and the State and/or the Licensee and Land Trust will execute a Real Estate Sales Agreement (Sales Agreement), which shall contain terms and conditions satisfactory to the Licensee, the State, and Land Trust including, but not limited to, the purchase price, property description, status of the title to be conveyed (subject to all encumbrances of record or reasonably ascertainable by physical inspection), interim lands management, continued Reserved Rights of the Licensee in and to the property and other provisions typical in transactions of this nature.

2.6.4 Time Requirements of Land Conveyances

The Parties agree that the Morrow Mountain Lands will be donated within three years of the effective date of the New License.

The Parties agree that one of the remaining two land conveyance transactions contemplated in Section 2.6, must be completed within three years of the effective date of the New License and the other remaining conveyance must be completed within five years of the effective date of the New License. If the Tuckertown Lands and High Rock Lands conveyances do not occur in accordance with this schedule, the Licensee's commitment to make the lands available for sale and any and all requirements of Section 2.6 will expire.

Execution of the Sales Agreements referred to in Sections 2.6.2, and 2.6.3 and satisfaction of their terms are conditions precedent to the Licensee's obligations to sell the Tuckertown Lands and High Rock Lands to the State and/or Land Trust, as applicable.

2.6.5 Interim Land Management

Until the Morrow Mountain Lands, Tuckertown Lands, and High Rock Lands are donated or conveyed, the Parties agree that interim land management by the Licensee will continue based on its on-going forestry management practices.

Where timbering is scheduled, the Licensee will use reasonable efforts to:

- thin to approximately 30 trees/acre the loblolly pine 30+ year old plantations;
- thin to approximately 30 trees/acre the pine/hardwood mixed 30+ year old stands after consultation with NCWRC;
- thin to approximately 60 trees/acre the 15-30 year old stands;
- reserve the ability to clear-cut parcels up to 25 acres in size where best management practices would dictate (not including the Morrow Mountain Lands) after consultation with NCWRC; and,
- leave a no touch buffer along the reservoirs of not less than 100 feet in width and along blue line streams of not less than 25 feet in width on each side.

In addition, hardwood stands will not be timbered.

2.7 Land Grants

2.7.1 Uwharrie National Forest Lands

The Parties agree that within three years of the effective date of the New License the Licensee will donate to the USFS by Warranty Deed approximately 270 acres of non-Project land located in Montgomery County, North Carolina along Narrows and Falls Reservoirs (UNF Lands) for inclusion in the Uwharrie National Forest (UNF) (Appendix E-4).

The Parties agree that the UNF Lands currently possess Conservation Values of great importance to Licensee, USFS, and others. By its execution of this RSA, the USFS agrees to preserve and protect the Conservation Values of the UNF Lands in perpetuity, in accordance with the Uwharrie Land and Resource Management Plan, as amended.

2.7.2 Eagle Point Nature Preserve and Park Lands

The Parties agree that within three years of the effective date of the New License, the Licensee will donate to Rowan County by Quit Claim Deed approximately 63 acres of non-Project lands located in Rowan County, North Carolina on the western shore of High Rock Reservoir that are currently being leased by Rowan County as part of the Eagle Point Nature Preserve and Park (Eagle Point Lands) (Appendix E-5).

The Parties agree that the Eagle Point Lands currently possess Conservation Values of great importance to Licensee, Rowan County, and others. By its execution of this RSA, Rowan County agrees to preserve and protect the Conservation Values of the Eagle Point Lands in perpetuity, to the extent practicable.

2.7.3 Town of Badin Lands

The Parties agree that the Licensee and/or its parent company Alcoa Inc. will donate to the Town of Badin by Quit Claim Deed approximately 14 acres in Stanly County, North Carolina adjacent to the existing Badin Boat Launch Access Area (Badin Lands) (Appendix E-6). The Town of Badin will use the donated land to develop a public park. The Town of Badin will assume responsibility for the construction, maintenance, and operation of any public recreation facilities developed at this site.

Additionally, the Parties agree that the Licensee and/or its parent company, to the degree that they have property rights, will make available for sale three vacant lots around the Badin Public Library building at fair market value. The Parties agree that the Licensee and/or its parent company will provide the Town of Badin a right of first refusal to purchase the Alcoa Conference Center and surrounding land (Appendix E-6).

All transfers of property as more fully described in Section 2.6, Land Conveyances, shall be subject to (i) real property taxes for the year of conveyance, which shall be pro-rated between the Licensee and the acquiring party as of the date of closing with the Licensee being responsible for such taxes to the date of closing and the acquiring party being responsible for and assuming such taxes from and after the date of closing to the extent the same are due; (ii) Reserved Rights; (iii) such other liens or encumbrances as are of record in the Register's Office for the county(ies) in which the properties are located, or as are otherwise ascertainable by physical inspection of the property to be acquired; and (iv) such other terms and conditions as may be agreed upon between the Licensee and the acquiring party.

2.8 Local Community Enhancement

2.8.1 City of Albemarle Water Withdrawals

Within three years of the effective date of the New License, the Licensee agrees to seek approval from the Commission to increase the maximum allowable withdrawal limit at the City of Albemarle's water intakes on Tuckertown and Narrows reservoirs to 30 million gallons per day (MGD). The Licensee, with assistance from the City of Albemarle, will gather necessary supporting documentation required under the SMP, or as otherwise required. The Licensee then will prepare and file the request with the Commission.

Effective January 1 of the first year following the effective date of the New License, the Licensee agrees to eliminate the surcharge for Albemarle water withdrawals below 11 MGD, averaged over one month.

3.0 Proposed License Articles

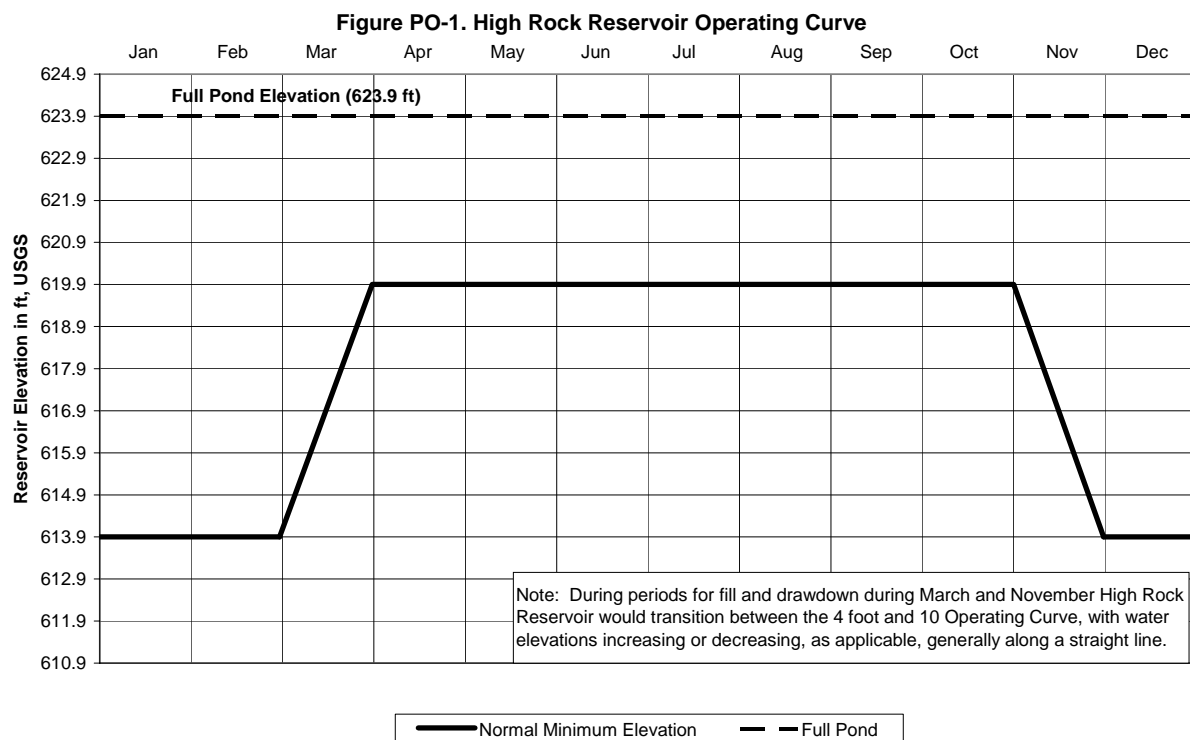
3.1 Project Operations

Unless in accordance with the Hydro Project Maintenance and Emergency Protocol and Low Inflow Protocol, Project minimum flows take priority over reservoir water elevations, as specifically described in Articles PO-1 and PO-2, below.

3.1.1 Article PO-1 - Reservoir Operations

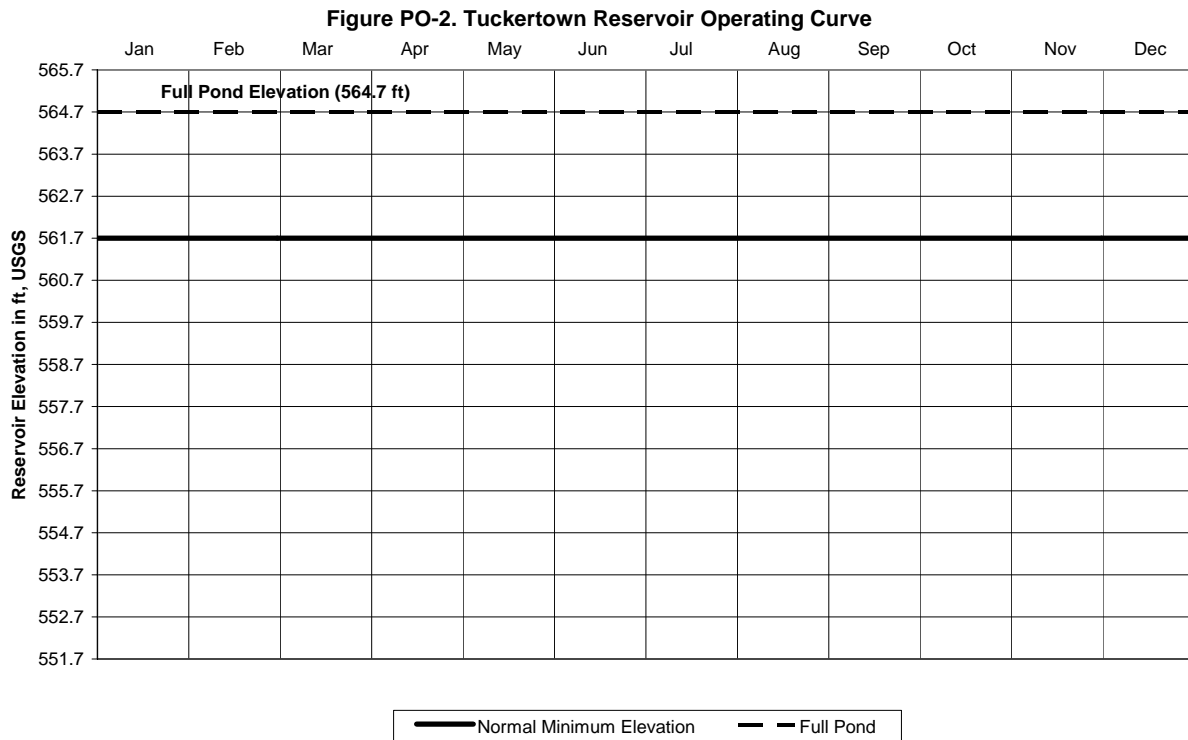
3.1.1.1 High Rock Reservoir Operations

The Licensee shall operate High Rock Reservoir at or above the normal minimum elevation (NME) as depicted on the High Rock Operating Curve (Figure PO-1), except as needed in order to maintain minimum flows or as provided under the Low Inflow Protocol (LIP) or the Hydro Project Maintenance and Emergency Protocol (HPMEP). High Rock Reservoir may be drawn down below its NME in order to meet the Required Minimum Instream Flow at Falls, as specified in License Article PO-2, only after Narrows Reservoir has reached its NME. If High Rock Reservoir water elevation is below the NME at 12:01 AM on any operating day, where the operating day is defined as 12:01 AM through 12:00 midnight, the Licensee shall reduce releases from High Rock Reservoir for that operating day up to a maximum of the daily average flow equivalent of the minimum flow requirement at Falls, as specified in License Article PO-2. Under this condition, releases from Falls will be limited to those defined in License Article PO-2.



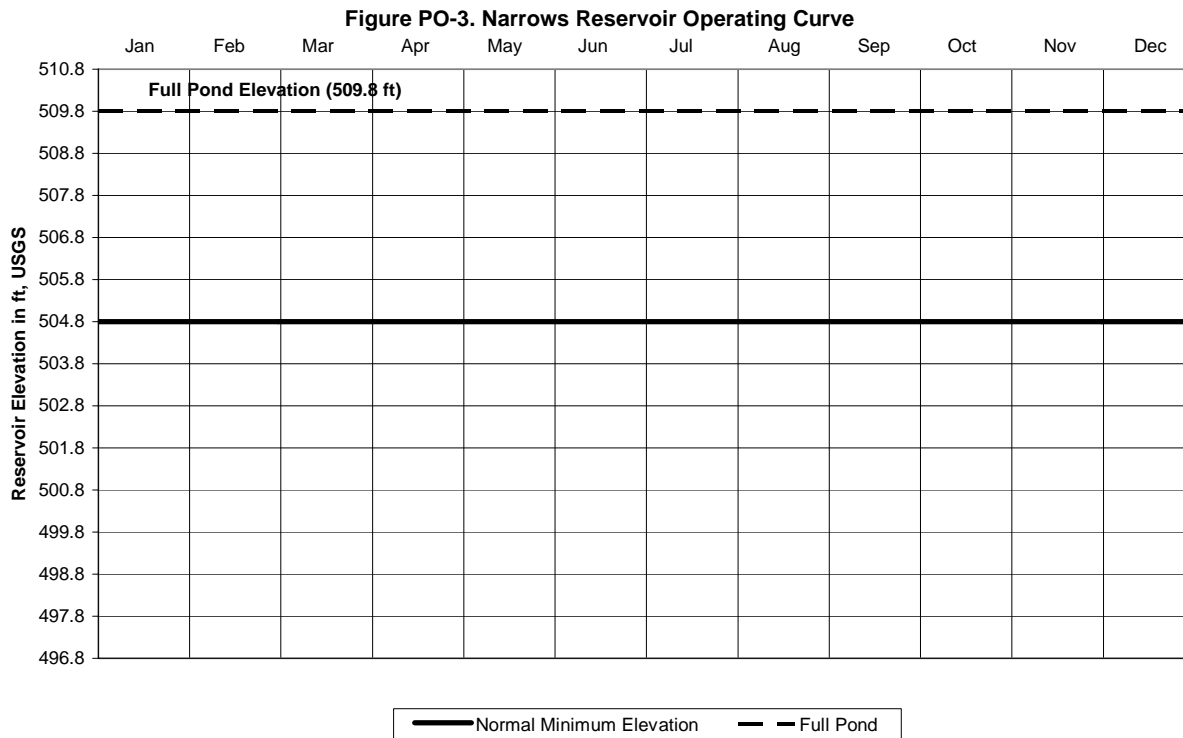
3.1.1.2 Tuckertown Reservoir Operations

The Licensee shall operate Tuckertown Reservoir at or above the NME as depicted on the Tuckertown Operating Curve (Figure PO-2), except as provided in the HPMEP.



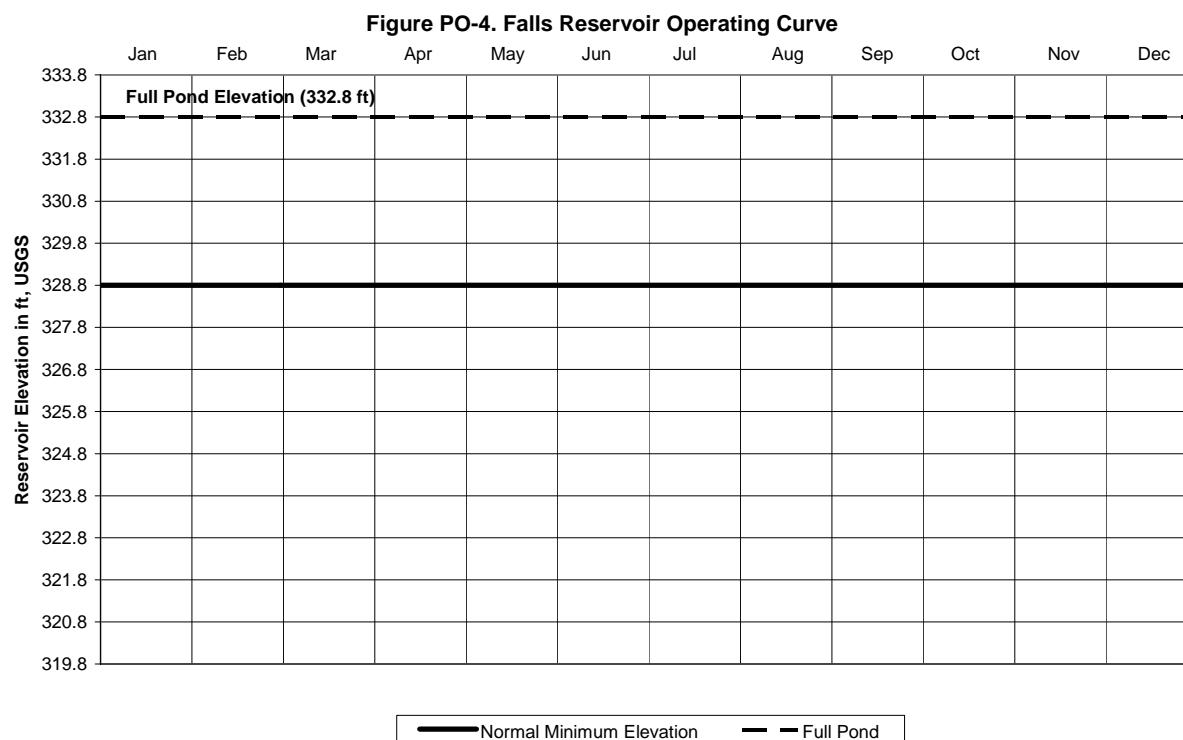
3.1.1.3 Narrows Reservoir Operations

The Licensee shall operate Narrows Reservoir at or above the NME as depicted on the Narrows Operating Curve (Figure PO-3), except as needed in order to maintain minimum flows, or as provided under the LIP or HPMEP.



3.1.1.4 Falls Reservoir Operations

The Licensee shall operate Falls Reservoir at or above the NME as depicted on the Falls Operating Curve (Figure PO-4), except as provided in the HPMEP.



3.1.1.5 Reservoir Stabilization to Enhance Fish Spawning

From April 15 through May 15 of each year, the Licensee will endeavor to maintain reservoir water elevations at all four Project reservoirs no lower than -1.0 feet below the elevation of each reservoir on April 15 to enhance conditions for fish spawning in the reservoirs. No later than August 31 of each year, the Licensee will report the resulting reservoir water elevations at each reservoir during the April 15 through May 15 period in a letter report to the North Carolina Wildlife Resources Commission (NCWRC). The letter report will provide an explanation of any circumstances that prevented the Licensee from maintaining the target water elevations. Within 60 days of filing the letter report with the NCWRC, a copy of the letter report will be filed with the Commission. Satisfaction of these reporting commitments shall constitute compliance with this License Article.

3.1.2 Article PO-2 - Project Instream Flows

3.1.2.1 Required Minimum Instream Flows

Commencing no later than six months from the effective date of this License and except when operating under the Low Inflow Protocol (LIP) or Hydro Project Maintenance and Emergency Protocol (HPMEP), the Licensee shall operate the Project to provide a daily average minimum flow from the Falls Development according to the following schedule:

June 1 – January 31	1,000 cfs
February 1 – May 15	2,000 cfs
May 16 – May 31	1,500 cfs

3.1.3 Article PO-3 - Flow and Reservoir Elevation Monitoring

Within six months of the effective date of this License, the Licensee shall file with the Commission a final Flow and Reservoir Elevation Monitoring and Compliance Plan for the Yadkin Project. The Flow and Reservoir Elevation Monitoring and Compliance Plan shall be developed in consultation with the North Carolina Division of Water Resources (NCDWR), the North Carolina Division of Water Quality (NCDWQ), the South Carolina Department of Natural Resources (SCDNR), the U.S. Geological Survey (USGS) and the Downstream Licensee (the Licensee of the Yadkin-Pee Dee River Project, FERC No. 2206), and shall include detailed provisions for monitoring reservoir water elevations and for monitoring flows from both the Narrows and High Rock developments.

The Licensee shall include with the final plan documentation of consultation, copies of comments and recommendations on the draft plan after it has been prepared and provided to the agencies and Downstream Licensee, and specific descriptions of how comments are accommodated by the final plan. The Licensee shall allow a minimum of 30 days for the agencies and Downstream Licensee to comment prior to filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on Project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission. The Licensee shall file the final plan with NCDWQ within 30 days of receiving Commission approval.

3.1.3.1 Releases from High Rock Development

Flow monitoring from the High Rock Development will serve as the measure for the flow releases from the High Rock Development required under License Article PO-1 or under the Low Inflow Protocol (LIP). Daily average flows within +25% of the applicable maximum flow, measured from 12:01 AM to 12:00 midnight, shall be considered compliant for each operating day.

3.1.3.2 Releases from Falls Development

Flow monitoring from the Narrows Development will serve as the compliance measure for the flow release from the Falls Development required under License Articles PO-1, PO-2 or under the LIP. Daily average flows within -5% of the applicable minimum flow, measured from 12:01 AM to 12:00 midnight, shall be considered compliant for any operating day so long as:

- a) Whenever High Rock Reservoir is at or above its normal minimum elevation (NME), the applicable daily average minimum flow is achieved on a weekly average basis, measured from 12:01 AM Saturday to 12:00 midnight Friday.
- b) Whenever High Rock Reservoir is drawn down below its NME (when a maximum release from Falls is also applicable), releases from Falls shall be limited to +/- 5% of the cfs equivalent of the Required Instream Minimum Flow at Falls, as measured on a weekly average basis from 12:01 AM Saturday to 12:00 midnight Friday.

The Licensee shall endeavor to meet the Required Minimum Instream Flows required in Article PO-2, and shall not routinely use the flow variances provided above. The Licensee shall prepare an annual flow monitoring report documenting its compliance with minimum flow releases, including a record of any days during the year when the daily average required minimum instream flow fell within the -5% and was made up as part of the weekly average, a record of flows during any period when High Rock was below its NME, and a record of any LIP events. The Licensee shall file the report with the Commission and the North Carolina Department of Environment and Natural Resources (NCDENR) summarizing its evaluation by no later than March 31 of the following year. If, based on the results of the report, the State of North Carolina has a concern about the frequency or pattern of use of the variance by the Licensee, the State may request consultation with the Licensee to discuss the Licensee's reasons for that use and any practicable alternatives to that use.

3.1.4 Article PO-4 - Low Inflow Protocol

This License Article highlights the responsibilities of the Licensee from Appendix A, "Low Inflow Protocol for the Yadkin-Pee Dee River Hydroelectric Projects" (LIP), of the Yadkin Hydroelectric Project, FERC No. 2197, Relicensing Settlement Agreement.

3.1.4.1 Definitions

The following definitions shall be applicable to this Article PO-4:

1. Stream Gage Three-Month Rolling Average Flow – The three-month rolling average of streamflow at the following U.S. Geological Survey (USGS) stream gages:
 - Yadkin River at Yadkin College (02116500)
 - South Yadkin River near Mocksville (02118000)
 - Abbotts Creek at Lexington (02121500)
 - Rocky River near Norwood (02126000)

On the last day of each month, the Licensee shall calculate the arithmetic mean of (a) the daily flows of the current month and (b) the arithmetic mean of the daily flows of each of the

two preceding months. The sum of the three-month rolling average for these four gage stations shall be compared by the Licensee to the Historic Stream Gage Three-Month Rolling Average Flow for the corresponding period and a percentage of Historic Three-Month Rolling Average shall be calculated.

2. Historic Stream Gage Three-Month Rolling Average Flow – The historical three-month rolling average flow for each of the four designated USGS stream gages for the period 1974 through 2003 (except for the Abbotts Creek gage, for which the period is 1988 through 2003) are set forth in Table LIP-1 below:

Table LIP-1. Historic Stream Gage Three-Month Rolling Average Flow

For Evaluation of Flow Trigger on:	Average of daily flows during:	Historic Three-Month Rolling Average Flow, cfs
January 1	Oct-Nov-Dec	4,000
February 1	Nov-Dec-Jan	5,200
March 1	Dec-Jan-Feb	6,250
April 1	Jan-Feb-Mar	7,700
May 1	Feb-Mar-Apr	7,550
June 1	Mar-Apr-May	6,850
July 1	Apr-May-Jun	5,350
August 1	May-Jun-Jul	4,200
September 1	Jun-Jul-Aug	3,600
October 1	Jul-Aug-Sep	3,200
November 1	Aug-Sep-Oct	3,300
December 1	Sep-Oct-Nov	3,550

3. Full Pond Elevation –The Full Pond Elevation for each development's reservoir is listed in Table LIP-2.

Table LIP-2. Full Pond Elevations

Reservoir	Full Pond Elevation (feet, USGS datum - NGVD 1929)
High Rock	623.9
Tuckertown	564.7
Narrows	509.8
Falls	332.8

4. Normal Minimum Elevation (NME) – NME for each Project reservoir is listed in Table LIP-3.

Table LIP-3. Normal Minimum Elevations (feet, USGS datum - NGVD 1929)

Month	High Rock	Tucker-town	Narrows	Falls
Full Pond	623.9	564.7	509.8	332.8
January 1	613.9	561.7	504.8	328.8
February 1	613.9	561.7	504.8	328.8
March 1	transition	561.7	504.8	328.8

April 1	619.9	561.7	504.8	328.8
May 1	619.9	561.7	504.8	328.8
June 1	619.9	561.7	504.8	328.8
July 1	619.9	561.7	504.8	328.8
August 1	619.9	561.7	504.8	328.8
September 1	619.9	561.7	504.8	328.8
October 1	619.9	561.7	504.8	328.8
November 1	transition	561.7	504.8	328.8
December 1-15	613.9	561.7	504.8	328.8
December 16-31	613.9	561.7	504.8	328.8

5. U.S. Drought Monitor Three-Month Numeric Average – The Licensee shall calculate a three-month rolling average of U.S. Drought Monitor (<http://www.drought.unl.edu/dm/monitor.html>.) values by (a) assigning a numeric value equal to the highest U.S. Drought Monitor designation (e.g. D0=0, D1=1, D2=2, D3=3 and D4=4) for any part of the Yadkin-Pee Dee River Basin draining to Blewett Falls development as of the last day of that month; and (b) calculating an arithmetic mean of that numeric value and numeric values correspondingly assigned for the previous two months. A normal condition in the basin, defined as the absence of a drought designation, shall be assigned a numeric value of negative one (-1).
6. Yadkin-Pee Dee River Basin Drought Management Advisory Group (YPD-DMAG) –The YPD-DMAG shall consist of one representative from each of the following organizations (to the extent that they are willing to participate): Alcoa Power Generating Inc. (APGI), Progress Energy (PE), North Carolina Department of Environment and Natural Resources (NCDENR), North Carolina Division of Water Resources (NCDWR), North Carolina Division of Water Quality (NCDWQ), North Carolina Wildlife Resources Commission (NCWRC), South Carolina Department of Natural Resources (SCDNR), South Carolina Department of Health and Environmental Control (SCDHEC), the United States Fish and Wildlife Service (USFWS), High Rock Lake Association (HRLA), Badin Lake Association (BLA), Duke Power Company, Lake Tillery Homeowners Association, South Carolina Pee Dee River Coalition (SCPDR) and owners of intakes that withdraw more than one million gallons of water per day from the impoundments of either the Yadkin Project (P-2197) or the Yadkin-Pee Dee Project (P-2206).

3.1.4.2 Implementation Procedure

1. Table LIP-4 sets forth the combinations of conditions under which the LIP shall be implemented. The determination of the applicable LIP Stage shall be made using the High Rock Reservoir water elevation as of midnight between the last day of the previous month and the first day of the current month in combination with the U.S. Drought Monitor Three-Month Numeric Average and the Stream Gage Three-Month Rolling Average Flow to determine the need to declare or change a Stage of the LIP. The LIP shall be implemented beginning at Stage 0 and, if the combination of conditions becomes more severe, the Stages shall increase in one Stage increments.

Table LIP-4. Summary of LIP Triggers					
Stage	High Rock Reservoir Elevation		US Drought Monitor Three-Month Numeric Average		Stream Gage Three-Month Rolling Average as a percent of the Historical Average
0	< NME minus 0.5 ft	and	any	or	any
	OR				
	< NME	and either	≥ 0	or	< 48 %
1	< NME minus 1 ft	and either	≥ 1	or	< 41 %
2	< NME minus 2 ft	and either	≥ 2	or	<35 %
3	< NME minus 3 ft	and either	≥ 3	or	<30 %
4	< ½ of (NME minus Critical Reservoir Water Elevation)	and either	≥ 4	or	<30 %

- The average daily flows set forth in Table LIP-5 shall be initiated no later than seven days after the determination of the applicable LIP Stage and shall be in effect for the balance of the month except as provided in Section 3.1.4.3.

Table LIP-5. LIP Flows ⁽¹⁾ , cfs						
Stage	High Rock (daily average maximum flow target)			Falls ⁽²⁾ (daily average flow target)		
	Feb 1–May 15	May 16-31	Jun 1- Jan 31	Feb 1- May 15	May 16-31	Jun 1- Jan 31
0	2000	1500	1000	2000	1500	1000
1	1450	1170	900	1450	1170	900
2	1080	950	830	1080	950	830
3	770	770	770	770	770	770
4	Additional measures may be determined by consensus of the Licensee and State Agencies, subject to FERC approval					
<p>(1) Developments shall be operated to achieve the target flows to the extent practicable as a first priority and to supplement inflows equitably from the storage reservoirs as a second priority. For LIP Stages 1, 2, 3 and 4, APGI shall achieve the indicated average daily flows set forth in this table by supplementing Project inflows by drawing proportionally from High Rock and Narrows reservoirs such that the difference between the respective drawdowns below NME of High Rock and Narrows reservoirs shall be approximately one foot.</p> <p>(2) For LIP Stages 0-3, the values shown in this table reflect flow targets. These values cannot be met exactly as shown and shall likely vary slightly on a real time basis from the values shown here, but it is expected that the variances from the target flows shall be minimal.</p>						

- The Licensee shall notify via email the Commission and NCDWR of LIP implementation or a change in Stage as soon as practicable but no later than (i) three business days after a Stage 0 determination; (ii) two business days after a Stage 1 or a Stage 2 determination; or (iii) 48 hours after a Stage 3 or Stage 4 determination.
- The Licensee shall consult with the YPD-DMAG with respect to issues relating to or arising out of implementation of the LIP, including, but not limited to, (i) notification to the public of the possible effects of and/or continuance of drought; (ii) issues relating to the effects of

drought conditions on life, health, property, wildlife, aquatic life; (iii) possible public health concerns; and (iv) short and long term prospects for recovery from drought.

5. The Licensee shall develop and provide information on its website to inform the public on reservoir water elevations, Project releases, usability of public access areas, reservoir inflows, meteorological forecasts, Historic and Actual Stream Gage Three-Month Rolling Average Flow calculations, U.S. Drought Monitor Three-Month Numeric Average calculations, LIP status, YPD-DMAG meeting summaries, and implementation of maintenance or emergency operation plans.

3.1.4.3 Recovery from LIP Stages

1. Recovery from the LIP shall be triggered by the occurrence of any of the three following conditions either separately or in combination:
 - Condition 1: All three triggering conditions associated with a lower numbered LIP Stage, as described in Table LIP-4, are met.

OR

- Condition 2: High Rock Reservoir water elevations return to at or above the NME plus 2.5 ft.

OR

- Condition 3: High Rock Reservoir water elevations return to at or above the NME for 2 consecutive weeks.

2. When any of these three conditions occurs, the Licensee shall take the following actions as indicated by the particular condition:
 - Condition 1: The LIP recovery shall be a stage-by-stage reversal of the staged approach described in Table LIP-4 above, beginning at the first day of each month.
 - Condition 2: Implementation of the LIP shall be immediately discontinued.
 - Condition 3: Implementation of the LIP shall be immediately discontinued.

3. The Licensee shall notify the Commission and NCDWR via email within 3 business days following attainment of any of the conditions necessary to return to a lower stage of the LIP.

3.1.4.4 Updating the LIP

During the term of this license, the Licensee shall consult with the YPD-DMAG at least once every five (5) years to review and consider updating the LIP. The use of the period of record 1974 through 2003 to calculate the Historic Stream Gage Three-Month Rolling Average flows set forth in Table LIP-1 of this Article shall be evaluated every five years during such review. On the basis of such consultation, review and consideration, the Licensee may propose modifications to this Article for the Commission's review and approval.

3.1.5 Article PO-5 - Hydro Project Maintenance and Emergency Protocol

If conditions so warrant, the Licensee shall operate the Project in accordance with the Hydro Project Maintenance and Emergency Protocol (HPMEP) included as Appendix B, "Yadkin Project Hydro Project Maintenance and Emergency Protocol" of the Yadkin Hydroelectric Project, FERC No. 2197, Relicensing Settlement Agreement.

3.2 Water Quality

3.2.1 Article WQ-1 - Water Quality

The Licensee shall operate the Project in accordance with the conditions of the water quality certification submitted by the North Carolina Division of Water Quality under section 401 of the Clean Water Act.

3.2.2 Article WQ-2 - Dissolved Oxygen Monitoring

The Licensee shall conduct dissolved oxygen (DO) monitoring pursuant to the DO Monitoring Plan approved by the North Carolina Division of Water Quality (NCDWQ) as part of the water quality certification issued by that agency and attached to this License as an Appendix. Any subsequent amendments to the DO Monitoring Plan approved in writing by NCDWQ shall also be approved by the Commission prior to implementation. Copies of the annual DO monitoring reports submitted to NCDWQ shall be filed with the Commission within 30 days of their filing with NCDWQ.

3.3 Recreation

3.3.1 Article REC-1 - Recreational Enhancements

3.3.1.1 Recreation Facility Improvements

The Licensee shall upgrade and improve existing recreational facilities and construct new recreational facilities in accordance with Table REC-1 within ten years of the effective date of this License, with the exception of the planned improvements to the High Rock, Tuckertown, and Narrows portage trails, which will be completed within 20 years of the effective date of this License.

3.3.1.2 Recreation Facility Closures

The Licensee shall remove its Part 8 and safety signs from the Rowan County Pump Station Access Area within one year of the effective date of this License to effectively close the site due to safety and security concerns.

3.3.1.3 Recreation Operations and Maintenance

The Licensee shall continue to operate and maintain its existing recreation sites at the Yadkin Project. In addition, the Licensee shall operate and maintain a new recreation site proposed for development on High Rock Reservoir in Rowan County and up to ten dispersed campsites.

3.3.1.4 Project Recreation Plan

Within two years of the effective date of this License, the Licensee shall file, for Commission approval, a final Recreation Plan for the Yadkin Project. The plan will be developed in consultation with the North Carolina Department of Environment and Natural Resources (NCDENR), North Carolina Wildlife Resources Commission (NCWRC), U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service (USFS) and the State Historic Preservation Officer (SHPO), as appropriate.

The final Recreation Plan shall address, at a minimum, the specific recreation facility improvements outlined in Table REC-1.

The final Recreation Plan shall also include: (1) a map(s) that clearly identifies all existing and proposed recreation sites and public access, in relation to the existing Yadkin Project boundary; (2) a schedule, (3) the length and width of any Project-related trail, canoe portage, etc.; (4) a discussion of how the needs of the disabled were considered in the planning and design of the recreation facilities and public access; and (5) identification of appropriate signage.

The Licensee shall include with the final Recreation Plan documentation of agency consultation, copies of comments and recommendations on the completed draft plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the final plan. The Licensee shall allow a minimum of 30 days for the agencies to comment prior to filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons for not doing so, based on Project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

Table REC-1. Yadkin Project Recreation Facility Improvements

1.	Americans with Disabilities Act (ADA) improvements at up to 10 public recreation sites
2.	Provide and maintain new portable toilet facilities at several existing recreation sites, where such facilities are not currently available
3.	Install two ADA compliant fishing piers at existing recreation sites, one on High Rock Reservoir and the other on Tuckertown Reservoir
4.	Modify existing tailwater fishing areas located at the High Rock and Tuckertown tailwaters
5.	Improve the four Project portage trails to North Carolina standards
6.	Construct a new public recreation site with a swimming area and beach on High Rock Reservoir in Rowan County
7.	Construct up to ten "hardened" campsites dispersed throughout the Project area
8.	Replace the Highway 49 Boat Access Area when necessary

3.4 Shoreline Management

3.4.1 Article SMP-1 - Shoreline Management Plan

The Licensee shall file a revised Shoreline Management Plan (SMP) for the Project with the Commission within two years of the effective date of this License. The Licensee shall revise the SMP in consultation with state and federal resource agencies and other interested parties. The

Licensee shall provide the consulted parties with a 30-day period to review and comment on a draft revised SMP. The Licensee shall include with its filing copies of all comments received on the draft revised SMP and a discussion of those comments, including whether the Licensee adopted the comments or the Licensee's rationale for not incorporating the comments in the final revised SMP.

The Commission reserves the right to require changes to the SMP. Upon Commission approval, the Licensee shall implement the approved SMP, including any changes required by the Commission.

3.5 Cultural Resources

3.5.1 Article HP-1 - Historic Properties Management Provisions

3.5.1.1 Compliance with the Programmatic Agreement

The Licensee shall implement the provisions of the Programmatic Agreement for the Yadkin Project, in accordance with its terms.

[Drafting note to Commission staff: The Parties request that the following provision be included in the New License only if the Licensee has not filed a Historic Properties Management Plan for the Project prior to the effective date of the License.]

3.5.1.2 Development and Filing of a Historic Properties Management Plan

The Licensee shall develop and file with the Commission a Historic Properties Management Plan (HPMP) within one year of the effective date of this License. The Licensee shall develop the HPMP in consultation with the U.S. Forest Service (USFS), North Carolina State Historic Preservation Office (NCSHPO), the Catawba Indian Nation Tribal Historic Preservation Office (CIN THPO), the Badin Historic Museum Inc., and others with an interest in cultural issues at the Project. The Licensee shall provide the USFS, NCSHPO, CIN THPO, the Badin Historic Museum Inc., and others with a 30-day period to review and comment on a draft HPMP.

The Licensee shall include with the final HPMP copies of all comments received on the draft HPMP and a discussion of those comments, including whether the Licensee adopted the comments or the Licensee's rationale for not incorporating the comments into the final HPMP.

The Commission reserves the right to require changes to the HPMP. Upon Commission approval, the Licensee shall implement the HPMP, including any changes required by the Commission.

[Drafting note to Commission staff: The Parties request that the following provision be included in the New License if the Licensee has filed an HPMP for the Project prior to the effective date of the License.]

The HPMP for the Project shall be considered a condition of and be incorporated into this License upon its approval by the Commission.

3.6 Wildlife, Aquatics and RTE Species

3.6.1 Article FW-1 - Rare, Threatened and Endangered (RTE) Species Management Plan

Within two years of the effective date of this License, the Licensee shall file with the Commission an RTE Species Management Plan (RTE Plan) for the Project. The RTE Plan will be developed in consultation with the U.S. Fish and Wildlife Service (USFWS), North Carolina Wildlife Resources Commission (NCWRC), and other appropriate state and federal wildlife resource agencies. The RTE Plan shall address issues regarding the impact of the Project or Project operations on the following species and their habitats:

- 1) Bald Eagle (*Haliaeetus leucocephalus*)
- 2) Yadkin River Goldenrod (*Solidago plumosa*)
- 3) Schweinitz's Sunflower (*Helianthus schweinitzii*)

The RTE Plan shall also include plans for periodic monitoring of freshwater mussels in the Project tailwaters, with an emphasis on the Falls tailwater area. The monitoring contemplated in the RTE Plan should be a cooperative effort between the Licensee, the NCWRC, and other interested state and federal agencies.

The Licensee shall include with the RTE Plan, documentation of agency consultation, copies of comments and recommendations on the plan after it has been prepared, and specific descriptions of how the agencies' comments are accommodated by the plan. If the Licensee does not adopt an agency recommendation, the filing shall include the Licensee's reasons for not doing so, based on Project-specific information.

The Commission reserves the right to require changes to the RTE Plan. Implementation of the plan shall not begin until the plan is approved by the Commission. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

3.6.2 Article FW-2 - Transmission Line Corridor Management Plan

Within two years of the effective date of this License, the Licensee shall file with the Commission a Transmission Line Corridor Management Plan (TLC Plan). The TLC Plan shall be developed in consultation with the North Carolina Wildlife Resources Commission (NCWRC), U.S. Fish and Wildlife Service (USFWS), and other appropriate state and federal wildlife resource agencies. The TLC Plan shall establish vegetation and wetland management objectives for the two Project transmission line corridors and shall outline actions to be taken by the Licensee to manage the corridors in a manner consistent with those objectives.

The Licensee shall include with the TLC Plan, documentation of agency consultation, copies of comments and recommendations on the plan after it has been prepared, and specific descriptions of how the agencies' comments are accommodated by the plan. If the Licensee does not adopt an agency recommendation, the filing shall include the Licensee's reasons for not doing so, based on Project-specific information.

The Commission reserves the right to require changes to the TLC Plan. Implementation of the plan shall not begin until the plan is approved by the Commission. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

Appendices

Appendix A - Low Inflow Protocol for the Yadkin & Yadkin-Pee Dee River Hydroelectric Projects

Low Inflow Protocol for the Yadkin & Yadkin-Pee Dee River Hydroelectric Projects

GOAL

The fundamental goal of this Low Inflow Protocol (LIP) is to take staged actions in the Yadkin-Pee Dee River Basin needed to delay the point at which available water storage in the Yadkin Hydroelectric Project (Federal Energy Regulatory Commission – FERC No. 2197) and the Yadkin-Pee Dee Hydroelectric Project (FERC No. 2206) (collectively, projects) reservoirs is fully depleted while maintaining downstream flows. This LIP is intended to provide additional time to increase the probability that precipitation will restore streamflow and reservoir water elevations to normal ranges. The amount of additional time that is gained during implementation of this LIP depends on the diagnostic accuracy of the trigger points, the amount of regulatory flexibility available to operate the projects, and the effectiveness of the projects' operators and the water users in working together to implement required actions and achieve significant water use reductions. It is assumed that water users in the Yadkin-Pee Dee River Basin not subject to this LIP must comply with all applicable State and local drought response requirements.

More specifically, this LIP establishes procedures for adjusting operations during periods of low inflow to the Yadkin Hydroelectric Project owned and operated by Alcoa Power Generating Inc. (APGI) and the Yadkin-Pee Dee River Hydroelectric Project owned by Carolina Power & Light Company and operated by Progress Energy Carolinas, Inc. (PE) (collectively, Licensees) during the term of the new FERC licenses issued for these projects. The provisions of this LIP should be interpreted in a manner consistent with all other provisions of the new FERC licenses.

OVERVIEW

This LIP will be implemented during periods when there is not enough water flowing into the projects' reservoirs to meet the projects' Required Minimum Instream Flows while maintaining reservoir water elevations within Normal Operating Ranges. This LIP provides trigger points and operating procedures that the Licensees will follow for the projects. This LIP also specifies water withdrawal reduction measures for other water users in portions of the Yadkin-Pee Dee River Basin.

The Licensees will provide flow from storage in the projects' reservoirs to support hydroelectric generation and to provide Required Minimum Instream Flows in accordance with their respective new FERC licenses. During periods of normal inflow, reservoir water elevations will be maintained within their Normal Reservoir Operating Ranges. During times that inflow is not adequate to provide Required Minimum Instream Flows and maintain reservoir water elevations within their Normal Reservoir Operating Ranges, the Licensees will reduce releases for hydroelectric generation. If reservoir storage continues to drop and climatologic or hydrologic conditions worsen until trigger points defined in this LIP are reached, the Licensees will implement additional provisions of this LIP, including meeting with the designated agencies and water users to discuss the need for actions pursuant to this LIP. If conditions worsen, progressive stages of this LIP will allow additional use of the available water storage inventory, while conserving water storage volumes through required reductions in LIP Flows and required reductions in water withdrawals.

Implementation of this LIP and movement between the various stages are based on measurements of Stream Gage Three-Month Rolling Average Flow, U. S. Drought Monitor Three-Month Numeric Average, and the High Rock Reservoir water elevation. The calculation of these triggers and specific thresholds associated with each stage are detailed in this LIP.

Recognizing that improvements to this LIP may be identified during the new FERC license period, this LIP will be re-evaluated as defined in Key Definitions, Facts and Assumptions No. 18.

KEY DEFINITIONS, FACTS, AND ASSUMPTIONS

1. Low Inflow Watch or Low Inflow Condition – A period of time when there is not enough water flowing into the projects' reservoirs to meet the projects' Required Minimum Instream Flows while maintaining reservoir water elevations within Normal Reservoir Operating Ranges.
2. LIP Flows – For the purposes of this LIP, this term refers to the flows defined in Table 6.
3. Required Minimum Instream Flows – For the purposes of this LIP, this term includes the minimum flow requirements included in the new FERC licenses for the projects.
4. Public Information Obligations – The Licensees will develop and provide information on their respective websites to inform the public on reservoir water elevations, project releases, usability of public access areas, reservoir inflows, meteorological forecasts, Historic and Actual Stream Gage Three-Month Rolling Average Flow calculations, U.S. Drought Monitor Three-Month Numeric Average calculations, LIP status, YPD-DMAG meeting summaries, and implementation of maintenance or emergency operation plans.
5. Stream Gage Three-Month Rolling Average Flow – The three-month rolling average of streamflow will be calculated at the following USGS stream gages:
 - Yadkin River at Yadkin College (02116500)
 - South Yadkin River near Mocksville (02118000)
 - Abbotts Creek at Lexington (02121500)
 - Rocky River near Norwood (02126000)

This flow will be calculated on the last day of each month by averaging the monthly average of the current month and the two preceding months. The sum of the three-month rolling average for these four gage stations will be compared to the Historic Stream Gage Three-Month Rolling Average Flow for the corresponding period.

6. Historic Stream Gage Three-Month Rolling Average Flow – The daily flow for each of the four designated USGS stream gages has been used to calculate a monthly average flow for the period of record 1974 through 2003. Because the USGS only began gaging flows for Abbotts Creek in 1988, the historical average for this gage will be based on the period 1988 through 2003. The historic three-month rolling average flow for each month of the year, presented in Table 1, was calculated on the last day of each month of the year by averaging the monthly average flow for each month and the preceding two months. The use of the period of record 1974 through 2003 to calculate the historic three-month rolling average flow will be evaluated every five years during the review of this LIP (see Key Definitions, Facts, and Assumptions No. 18).

Table 1. Historic Stream Gage Three-Month Rolling Average Flow

For Evaluation of Flow Trigger on:	Average of daily flows during:	Historic Three-Month Rolling Average Flow, cfs
January 1	Oct-Nov-Dec	4,000
February 1	Nov-Dec-Jan	5,200
March 1	Dec-Jan-Feb	6,250
April 1	Jan-Feb-Mar	7,700
May 1	Feb-Mar-Apr	7,550
June 1	Mar-Apr-May	6,850
July 1	Apr-May-Jun	5,350
August 1	May-Jun-Jul	4,200
September 1	Jun-Jul-Aug	3,600
October 1	Jul-Aug-Sep	3,200
November 1	Aug-Sep-Oct	3,300
December 1	Sep-Oct-Nov	3,550

7. Full Pond Elevation – Also referred to as “Full Pond”, this is the elevation of a reservoir (measured in feet, USGS datum [NGVD 1929]) that corresponds to the point at which water would first begin to spill from each reservoir’s dam if the respective Licensee took no action. This elevation corresponds to the lowest point along the top of the spillway (including flashboards) for reservoirs without flood gates; and to the lowest point along the top of the flood gates for reservoirs that have flood gates. The Full Pond Elevation for each projects’ reservoirs is listed in Table 2.

Table 2. Full Pond Elevations

Reservoir	Full Pond Elevation (feet, USGS datum - NGVD 1929)
High Rock	623.9
Tuckertown	564.7
Narrows	509.8
Falls	332.8
Tillery	278.2
Blewett Falls	178.1

8. Normal Reservoir Operating Range – The band of reservoir water elevations within which the Licensees normally attempt to maintain a given reservoir on a given day. Each reservoir has its own specific Normal Reservoir Operating Range, bounded by Full Pond Elevation and Normal Minimum Elevation. If net inflows to the reservoir are within a reasonable tolerance of the average or expected amounts, project equipment is operating properly, and if maintenance or emergency operation plans have not been implemented, reservoir water elevation excursions outside of the Normal Reservoir Operating Range should not occur. The new FERC license for the Yadkin Project includes operating curves that establish the Normal Reservoir Operating Range for each Yadkin Project reservoir.

9. Normal Minimum Elevation (NME) – The elevation of a reservoir (measured in feet, USGS datum [NGVD 1929]) that defines the bottom of the reservoir's Normal Operating Range for a given day of the year. NME for each of the projects' reservoirs is listed in Table 3.

Table 3. Normal Minimum Elevations (feet, USGS datum - NGVD 1929)

Month	High Rock	Tucker-town	Narrows	Falls	Tillery	Blewett Falls
Full Pond	623.9	564.7	509.8	332.8	278.2	178.1
January 1	613.9	561.7	504.8	328.8	273.2	172.1
February 1	613.9	561.7	504.8	328.8	273.2	172.1
March 1	transition	561.7	504.8	328.8	275.7	172.1
April 1	619.9	561.7	504.8	328.8	275.7	172.1
May 1	619.9	561.7	504.8	328.8	275.7	172.1
June 1	619.9	561.7	504.8	328.8	275.7	172.1
July 1	619.9	561.7	504.8	328.8	275.7	172.1
August 1	619.9	561.7	504.8	328.8	275.7	172.1
September 1	619.9	561.7	504.8	328.8	275.7	172.1
October 1	619.9	561.7	504.8	328.8	275.7	172.1
November 1	transition	561.7	504.8	328.8	275.7	172.1
December 1-15	613.9	561.7	504.8	328.8	275.7	172.1
December 16-31	613.9	561.7	504.8	328.8	273.2	172.1

10. Public Water System – For the purposes of this LIP, a Public Water System is any publicly or privately owned water system that supplies potable water to the public having an instantaneous withdrawal capacity of one million gallons per day or more, and withdraws from storage in the projects' reservoirs.
11. Non-Public Water User – For the purposes of this LIP, a Non-Public Water User is any publicly or privately owned water withdrawer that withdraws water for uses other than supplying potable water to the public, having an instantaneous withdrawal capacity of one million gallons per day or more that withdraws from storage in the projects' reservoirs.
12. U.S. Drought Monitor – A synthesis of multiple indices, outlooks, and news accounts (published by the U. S. Department of Agriculture) that represent a consensus of federal and academic scientists concerning the drought status of all parts of the United States. Typically, the U.S. Drought Monitor indicates intensity of drought as D0-Abnormally Dry, D1-Moderate, D2-Severe, D3-Extreme and D4-Exceptional. The current U.S. Drought Monitor and explanatory material can be found at <http://www.drought.unl.edu/dm/monitor.html>.
13. U.S. Drought Monitor Three-Month Numeric Average – If the U.S. Drought Monitor has a designation ranging from D0 to D4 as of the last day of a month for any part of the Yadkin-Pee Dee River Basin that drains to the Blewett Falls development, the basin will be assigned a numeric value for that month. The numeric value will equal the highest U.S. Drought Monitor designation (e.g. D0=0, D1=1, D2=2, D3=3 and D4=4) for any part of the Yadkin-Pee Dee River Basin draining to Blewett Falls development as of the last day of the month. A normal condition in the basin, defined as the absence of a drought designation, will be assigned a numeric value of negative one (-1). A rolling average of the numeric values of the current month and previous two months will be calculated by APGI at the end of the month and designated as the U.S. Drought Monitor Three-Month Numeric Average for purposes of this LIP.

14. Critical Reservoir Water Elevation – The reservoir water elevation (measured in feet, USGS datum [NGVD 1929]) below which a Public Water System intake, Non-Public Water User's intake, or hydropower plant located on the reservoir cannot operate under normal conditions. Critical Reservoir Water Elevations are defined in Table 4.

Table 4. Critical Reservoir Water Elevation

Reservoir	Critical Reservoir Water Elevation measured at the dam (feet USGS Datum - NGVD1929)	Type
High Rock	599.9 (24 ft below full pool)	Hydropower Production
Tuckertown	560.7 (4 ft below full pool)	Public Water Supply
Narrows	486.8 (23 ft below full pool)	Public Water Supply
Falls	322.8 (10 ft below full pool)	Hydropower Production
Tillery	268.2 (10 ft below full pool)	Public Water Supply
Blewett Falls	168 (10.1 ft below full pool)	Public Water Supply/ Hydropower Production

15. Critical Flow – The flows from the projects that are necessary to prevent long-term or irreversible damage to aquatic communities consistent with the resource management goals and objectives for the affected stream reaches and necessary to provide some basic level of water quality maintenance in affected river reaches. For the purposes of this LIP, the Critical Flows are defined as follows:

- Falls Development – the Critical Flow from the Falls Development is equal to 770 cfs measured on a daily average basis.
- Tillery Development – the Critical Flow from the Tillery Development is the same as required minimum instream flow as defined in the new FERC license for Yadkin Pee-Dee River Hydroelectric Project.
- Blewett Falls Development – the Critical Flow from the Blewett Falls Development is 925 cfs measured on a continuous basis.

16. Organizational Abbreviations – Organizational abbreviations include Alcoa Power Generating Inc. (APGI), Progress Energy (PE), NC Department of Environment and Natural Resources (NCDENR), North Carolina Division of Water Resources (NCDWR), North Carolina Division of Water Quality (NCDWQ), North Carolina Wildlife Resources Commission (NCWRC), South Carolina Department of Natural Resources (SCDNR), South Carolina Department of Health and Environmental Control (SCDHEC), the United States Fish and Wildlife Service (USFWS), High Rock Lake Association (HRLA), Badin Lake Association (BLA), and South Carolina Pee Dee River Coalition (SCPDRC).

17. Yadkin-Pee Dee River Basin Drought Management Advisory Group (YPD-DMAG) –The YPD-DMAG is established to facilitate implementation and review of this LIP. Members of the YPD-DMAG agree to comply with this LIP. Membership on the YPD-DMAG is open to one representative from each of the following organizations:

- APGI
- PE
- NCDWR
- NCDWQ
- NCWRC
- SCDNR
- SCDHEC
- USFWS
- Duke Power
- HRLA
- BLA
- Lake Tillery homeowners representation
- SCPDRC
- All owners of a Public Water System intake or a Non-Public Water User's intake that withdraw from storage in one of the projects' reservoirs.

The Licensees will share the responsibility to notify NCDWR of a Low Inflow Condition. NCDWR and SCDNR will share responsibility to coordinate with the YPD-DMAG including notifying, setting agendas, leading discussions, and providing call/meeting summaries. Regardless of the Low Inflow Condition, coordination will include a meeting convened annually by NCDWR during April to discuss issues relevant to this LIP. Membership in the YPD-DMAG may be expanded based on a consensus of the members or at the direction of FERC. The NCDWR will maintain an active roster of the YPD-DMAG, will prepare meeting summaries of all YPD-DMAG meetings.

18. Revising this LIP – During the new FERC license period, the YPD-DMAG will be convened by NCDWR and SCDNR at least once every five (5) years to review and, if necessary, update this LIP. Decisions on modifications to the Licensees' responsibilities under this LIP, if any, will be determined by consensus of the Licensees and the States of North Carolina and South Carolina (specifically NCDWR, NCDWQ, SCDNR, SCDHEC) after consultation with other members of the YPD-DMAG. Proposed modification to the Licensees' responsibilities will be submitted to FERC for review and approval as necessary. Modifications to the responsibilities of other members (not the FERC licensees) of the YPD-DMAG under this LIP, if any, will be determined by consensus of those members after consultation with the Licensees. Approved modifications will be incorporated through revision of this LIP. The YPD-DMAG may appoint an *ad hoc* committee to consider issues relevant to this LIP. An issue such as the substitution of a regional drought monitor for the U.S. Drought Monitor, if developed in the future, or proportional drawdown of storage reservoirs during LIP stages are examples of items that may be considered.

19. Consensus – The unanimous support of all Parties, or at least no opposition from any Party.

20. Water Withdrawal Data Collection and Reporting – The owners of all water intakes impacted by this LIP are to comply with water use reporting requirements of the appropriate State

Agencies. The YPD-DMAG can request and should receive relevant water use information from the appropriate state agency or directly from the owners of individual intakes.

21. Drought Response Plan Updates – All Public Water Supply System owners and Non-Public Water Users subject to this LIP will review and update their drought response plans, or develop a plan if they do not have one, to ensure compliance and coordination with this LIP, including the authority to enforce the provisions outlined herein. Nothing in this LIP is intended to prevent Public Water System owners or Non-Public Water Users from taking more restrictive actions or from complying with any applicable law or regulation.
22. Relationship Between this LIP and Maintenance and Emergency Plans – Maintenance and emergency plans outline the general approach the Licensees will take under certain maintenance, emergency, equipment failure and other situations to continue practical and safe operation of the projects; to maintain operations consistent with the new FERC license conditions to the maximum extent possible; and to communicate with resource agencies and the affected parties. Under these plans, temporary modifications to Required Minimum Instream Flow releases, and the Normal Reservoir Operating Ranges are allowed. Lowering projects' reservoir water elevations caused by situations addressed under maintenance and emergency plans will not invoke implementation of this LIP. Also, if this LIP has already been implemented at the time that a situation covered by these plans is initiated, the Licensee may suspend implementation of this LIP until the maintenance or emergency situation has been eliminated. Notification will be provided by the Licensees to the State Agencies as soon as practicable.

PROCEDURE

A Low Inflow Watch or Low Inflow Condition, as specifically defined below, will be triggered by the combination of conditions defined in Table 5. This LIP will be implemented at Stage 0 and, if the combination of conditions becomes more severe, the stage will increase in one stage increments. The Licensees and other water users will follow the procedure set forth in this section regarding communications and adjustments to flows and other water demands.

Table 5. Summary of LIP Triggers					
Stage	High Rock Reservoir Elevation		US Drought Monitor Three-Month Numeric Average		Stream Gage Three-Month Rolling Average as a percent of the Historical Average
0	< NME minus 0.5 ft	and	any	or	any
	OR				
	< NME	and either	≥ 0	or	< 48 %
1	< NME minus 1 ft	and either	≥ 1	or	< 41 %
2	< NME minus 2 ft	and either	≥ 2	or	<35 %
3	< NME minus 3 ft	and either	≥ 3	or	<30 %
4	< ½ of (NME minus Critical Reservoir Water Elevation)	and either	≥ 4	or	<30 %

The LIP Flows set forth in Table 6 will be initiated on a monthly basis and are designed to equitably allocate the impacts of reduced water availability in accordance with the goal of this LIP. Initiation of this LIP will be based on analysis of the trigger conditions on the first day of each month. The High Rock Reservoir water elevation as of midnight between the last day of the previous month and the first day of the current month will be used in combination with the U.S. Drought Monitor Three-Month Numeric Average and the Stream Gage Three-Month Rolling Average Flow to determine the need to declare a Low Inflow Watch or change the stage of Low Inflow Conditions.

Table 6. LIP Flows ⁽¹⁾ , cfs									
Stage	High Rock (daily average maximum flow target)			Falls ⁽²⁾ (daily average flow target)			Blewett Falls ⁽²⁾ (continuous flow target ⁽³⁾)		
	Feb 1– May 15	May 16– 31	Jun 1– Jan 31	Feb 1– May 15	May 16– 31	Jun 1– Jan 31	Feb 1– May 15	May 16– 31	Jun 1– Jan 31
0	2000	1500	1000	2000	1500	1000	2400	1800	1200
1	1450	1170	900	1450	1170	900	1750	1400	1080
2	1080	950	830	1080	950	830	1300	1150	1000
3	770	770	770	770	770	770	925	925	925
4	Additional measures may be determined by consensus of the Licensees and State Agencies. FERC approval of any additional measures may be required.								
1	Consistent with the goal of this LIP to conserve water while maintaining downstream flows, projects will be operated to achieve the target flows to the extent practicable as a first priority and to supplement inflows equitably from the storage reservoirs as a second priority.								
2	The LIP flow values shown in the table above reflect flow targets. These values cannot be met exactly as shown and will likely vary slightly on a real time basis from the values shown here. It is expected that the variances from the target flows will be minimal. In Stages 0-2 the releases from Blewett Falls will be within 5% of the target as measured at the USGS Rockingham gage. In stages 3-4 the releases from Blewett Falls will be between 900-950 cfs as measured at the USGS Rockingham gage.								
3	Local inflows to Blewett Falls Reservoir may be large even during extended low inflow conditions. If at any time during the implementation of the LIP local inflows to Blewett Falls Reservoir are large enough to fill Blewett Falls Reservoir to full pond, the Downstream Licensee may temporarily increase Blewett Falls generation to avoid spill.								

Stage 0 - Low Inflow Watch:

The Licensees will monitor High Rock Reservoir water elevations, the U.S. Drought Monitor and the designated stream gages and will declare a Stage 0 Low Inflow Watch for the month if the following conditions are present on the first day of the month:

- If the High Rock Reservoir water elevation is below the NME minus 0.5 ft under any inflow or drought condition.

OR

- The High Rock Reservoir water elevation is below its NME.

AND EITHER

- The U.S. Drought Monitor Three-Month Numeric Average for the Yadkin-Pee Dee River Basin draining to Blewett Falls Development is greater than or equal to zero.

OR

- The Stream Gage Three-Month Rolling Average Flow for the monitored stream gages is less than 48% of the Historic Stream Gage Three-Month Rolling Average Flow.

When a Stage 0 Low Inflow Watch is declared:

1. The Licensees will notify via email the NCDWR of a Stage 0 Low Inflow Watch as soon as practicable but no later than three business days after the declaration.
2. The NCDWR will activate the YPD-DMAG and initiate monthly meetings or conference calls to be held on the Monday before the second Tuesday. Monthly discussions will:
 - a. Review provisions of this LIP.
 - b. Clarify communication channels between the YPD-DMAG members.
 - c. Review hydrological status of the basin.
 - d. Review the roles of each YPD-DMAG member and discuss their plans for responding if an elevated Low Inflow Condition is declared.
 - e. Review information reporting by YPD-DMAG members, including a storage history and forecast from the Licensees, a water use history and forecast from each water user on the YPD-DMAG, and state-wide drought response status (including, but not limited to, impact to water quality, fisheries, wildlife, etc.) from the member agencies.
 - f. Public communications.

Stage 1 - Low Inflow Condition:

The Licensees will monitor High Rock Reservoir water elevations, the U.S. Drought Monitor and the designated stream gages and will declare a Stage 1 Low Inflow Condition for the month if the following conditions are present on the first of the month:

- The prior month LIP condition was Stage 0;

AND

- The High Rock Reservoir water elevation is more than 1 ft below the NME;

AND EITHER

- The U.S. Drought Monitor Three-Month Numeric Average for the Yadkin-Pee Dee River Basin draining to Blewett Falls Development is greater than or equal to 1.

OR

- The Stream Gage Three-Month Rolling Average Flow for the monitored stream gages is less than 41% of the Historic Stream Gage Three-Month Rolling Average Flow.

When a Stage 1 Low Inflow Condition is declared:

1. The Licensees will:
 - a. Notify NCDWR of declaration of a Stage 1 Low Inflow Condition via email as soon as practicable but no later than two business days after the declaration.
 - b. Implement LIP Flows as detailed in Table 6 for each project by the seventh day of the month in which a Stage 1 Low Inflow Condition is declared. To meet the LIP Flows for Stage 1 :
 - APGI will supplement Project inflows by drawing first from Narrows Reservoir until the Narrows Reservoir drawdown below its NME matches the High Rock Reservoir drawdown below its NME at the time that the Stage 1 Low Inflow Condition is declared.
 - APGI will supplement Project inflows by drawing from High Rock and Narrows reservoirs approximately equally on a foot-per-foot basis below the Normal Minimum Elevation (NME).
 - PE will supplement Project inflows by drawing from either Tillery or Blewett Falls as required.
 - c. Update their respective websites as noted in Key Definitions, Facts and Assumptions No. 4.
 - d. Provide Public Water System intake owners and Non-Public Water Users with weekly updates on reservoir water elevations and inflow of water into the projects' reservoirs.

2. If they have not already done so, NCDWR will coordinate with SCDNR to conduct monthly meetings or conference calls to be held on the Monday before the second Tuesday. Monthly discussions will:
 - a. Review provisions of this LIP.
 - b. Clarify communication channels between the YPD-DMAG members.
 - c. Review hydrological status of the basin.
 - d. Review the roles of each YPD-DMAG member and discuss their plans for responding if an elevated Low Inflow Condition is declared.
 - e. Review information reporting by YPD-DMAG members, including a storage history and forecast from the Licensees, a water use history and forecast from each water user on the YPD-DMAG, and state-wide drought response status (including, but not limited to, impact to water quality, fisheries, wildlife, etc.) from the member agencies.
 - f. Public communications.
3. Owners of Public Water System intakes will complete the following activities within 14 days after a Stage 1 Low Inflow Condition is declared:
 - a. Notify their water customers of the low inflow condition through public outreach and communication efforts.
 - b. Request that their water customers implement voluntary water use restrictions, in accordance with their drought response plans. At this stage, the goal is to reduce water withdrawals by approximately 5% from the amount that would otherwise be expected. These restrictions may include:
 - Reduction of lawn and landscape irrigation to no more than two days per week (i.e. residential, multi-family, parks, streetscapes, schools, etc).
 - Reduction of residential vehicle washing.
 - c. Provide a status update to the YPD-DMAG on actual water withdrawal trends and discuss plans for moving to mandatory restrictions, if they are required.
4. Non-Public Water Users on the YPD-DMAG will complete the following activities within 14 days after a Stage 1 Low Inflow Condition is declared:
 - a. Notify their employees and/or customers of the low inflow condition,
 - b. Request that their employees and customers conserve water through reduction of water use, electric power consumption, and other means, and
 - c. Institute in-house conservation consistent with their drought management plan and minimize consumptive uses to the extent feasible.

Stage 2 – Low Inflow Condition:

The Licensees will monitor High Rock Reservoir water elevations, the U.S. Drought Monitor and the designated stream gages and will declare a Stage 2 Low Inflow Condition for the month if the following conditions are present on the first of the month:

- The prior month LIP condition was Stage 1;

AND

- The High Rock Reservoir water elevation is more than 2 ft below the NME.

AND EITHER

- The U.S. Drought Monitor Three-Month Numeric Average for the Yadkin-Pee Dee River Basin draining to Blewett Falls Development is greater than or equal to 2.

OR

- The Stream Gage Three-Month Rolling Average Flow for the monitored stream gages is less than 35% of the Historic Stream Gage Three-Month Rolling Average Flow.

When a Stage 2 Low Inflow Condition is declared:

1. The Licensees will:

- a. Notify NCDWR of a declaration of Stage 2 Low Inflow Condition via email as soon as practicable but no later than two business days after the declaration.
 - b. Implement LIP Flows as detailed in Table 6 for each project by the seventh day of the month in which a Stage 2 Low Inflow Condition is declared. To meet the LIP Flows for Stage:
 - APGI will supplement Project inflows by drawing from High Rock and Narrows reservoirs approximately equally on a foot-per-foot basis.
 - PE will supplement Project inflows by drawing from either Tillery or Blewett Falls as required.
 - c. Update their respective websites as noted in Key Definitions, Facts and Assumptions No. 4.
 - d. Provide Public Water System intake owners and Non-Public Water Users with updates twice per week on reservoir water elevations and inflow of water into the system.
 - e. Continue participation in monthly or more frequent meeting or conference calls of the YPD-DMAG
2. NCDWR will coordinate with SCDNR to conduct monthly YPD-DMAG meetings or conference calls to be held on the Monday before the second Tuesday. Monthly discussions will:

- a. Review provisions of this LIP.
 - b. Clarify communication channels between the YPD-DMAG members.
 - c. Review hydrological status of the basin.
 - d. Review the roles of each YPD-DMAG member and discuss their plans for responding if an elevated Low Inflow Condition is declared.
 - e. Review information reporting by YPD-DMAG members, including a storage history and forecast from the Licensees, a water use history and forecast from each water user on the YPD-DMAG, and state-wide drought response status (including, but not limited to, impact to water quality, fisheries, wildlife, etc.) from the member agencies.
 - f. Public communications.
3. Owners of Public Water System intakes will complete the following activities within 14 days after the Stage 2 Low Inflow Condition is declared:
 - a. Notify their water customers of the continued low inflow condition and movement to more stringent mandatory water use restrictions through public outreach and communication efforts.
 - b. Require that their water customers implement mandatory water use restrictions, in accordance with their drought response plans. At this stage, the goal is to reduce water withdrawals by approximately 10% from the amount that would otherwise be expected. These restrictions may include:
 - Limiting lawn and landscape irrigation to no more than one day per week (i.e. residential, multi-family, parks, streetscapes, schools, etc).
 - Eliminating residential vehicle washing.
 - Limiting public building, sidewalk, and street washing activities except as required for safety and/or to maintain regulatory compliance.
 - Limiting construction uses of water such as dust control.
 - Limiting flushing and hydrant testing programs, except to maintain water quality or other special circumstances.
 - Eliminating the filling of new swimming pools.
 - Enforce mandatory water use restrictions through the assessment of penalties.
 - Encourage industrial/manufacturing process changes that reduce water consumption.
 - Provide a status update to the YPD-DMAG on actual water withdrawal trends.
 4. Non-Public Water Users on the YPD-DMAG will complete the following activities within 14 days after the Stage 2 Low Inflow Condition is declared:
 - a. Notify their employees and/or customers of the low inflow condition through public outreach and communication efforts.
 - b. Request that their employees and customers conserve water through reduction of water use, electric power consumption, and other means.
 - c. Institute in-house conservation consistent with their required drought management plans and minimize consumptive uses to the extent feasible.

Stage 3 - Low Inflow Condition:

The Licensees will monitor High Rock Reservoir water elevations, the U.S. Drought Monitor and the designated stream gages and will declare a Stage 3 Low Inflow Condition for the month if the following conditions are present on the first of the month:

- The prior month LIP condition was Stage 2;

AND

- The High Rock Reservoir water elevation is more than 3 ft below the NME.

AND EITHER

- The U.S. Drought Monitor Three-Month Numeric Average for the Yadkin-Pee Dee River Basin draining to Blewett Falls Development is greater than or equal to 3.

OR

- The Stream Gage Three-Month Rolling Average Flow for the monitored stream gages is less than 30% of the Historic Stream Gage Three-Month Rolling Average Flow.

When a Stage 3 Low Inflow Condition is declared:

1. The Licensees will:
 - a. Notify NCDWR of a declaration of Stage 3 Low Inflow condition via email as soon as practicable but no later than 48 hours after the declaration.
 - b. Implement LIP Flows to designated Critical Flows as detailed in Table 6 for each project by the seventh day of the month in which a Stage 3 Low Inflow Condition is declared. To meet the Critical Flows:
 - APGI will supplement Project inflows by drawing from High Rock and Narrows reservoirs approximately equally on a foot-per-foot basis.
 - PE will supplement Project inflows by drawing from either Tillery or Blewett Falls as required.
 - c. Update their respective websites as noted in Key Definitions, Facts, and Assumptions No. 4.
 - d. Provide Public Water System intake owners and Non-Public Water Users with bi-weekly (twice each week) updates on reservoir water elevations and inflow of water into the system.
 - e. Continue participation in monthly or more frequent meeting or conference calls of the YPD-DMAG.

2. NCDWR will coordinate with SCDNR to conduct monthly YPD-DMAG meetings or conference calls to be held on the Monday before the second Tuesday. Monthly discussions will:
 - a. Review provisions of this LIP.
 - b. Clarify communication channels between the YPD-DMAG members.
 - c. Review hydrological status of the basin.
 - d. Review the roles of each YPD-DMAG member and discuss their plans for responding if an elevated Low Inflow Condition is declared.
 - e. Review information reporting by YPD-DMAG members, including a storage history and forecast from the Licensees, a water use history and forecast from each water user on the YPD-DMAG, and state-wide drought response status (including, but not limited to, impact to water quality, fisheries, wildlife, etc.) from the member agencies.
 - f. Public communications.
3. Owners of Public Water System intakes will complete the following activities within 14 days after the Stage 3 Low Inflow Condition is declared:
 - a. Notify their water customers of the continued low inflow condition and movement to emergency water use restrictions through public outreach and communication efforts. At this stage, the goal is to reduce water usage by approximately 20% from the amount that would otherwise be expected.
 - b. Restrict all outdoor water use.
 - c. Implement emergency water use restrictions in accordance with their drought response plans, including enforcement of these restrictions and assessment of penalties.
 - d. Prioritize and meet with their commercial and industrial large water customers and meet to discuss strategies for water reduction measures including development of an activity schedule and contingency plans.
 - e. Prepare to implement emergency plans to respond to water outages.
4. Non-Public Water Users on the YPD-DMAG will complete the following activities within 14 days after a Stage 3 Low Inflow Condition is declared:
 - a. Continue informing their customers of the low inflow condition through public outreach and communication efforts.
 - b. Request that their customers conserve water through reduction of water use, electric power consumption, and other means.

Stage 4 - Low Inflow Condition:

The Licensees will monitor reservoir elevations, the U.S. Drought Monitor and the designated stream gages and will declare a Stage 4 Low Inflow Condition for the month if the following conditions are present on the first of the month:

- The prior month LIP condition was Stage 3;

AND

- The High Rock Reservoir water elevation is less than 606.9 ft USGS (November 1 through March 1) or less than 609.9 ft USGS (April 1 through October 1).¹

AND EITHER

- The U.S. Drought Monitor Three-Month Numeric Average for the Yadkin-Pee Dee River Basin draining to Blewett Falls Development is greater than or equal to 4.

OR

- The Stream Gage Three-Month Rolling Average Flow for the monitored stream gages is less than 30% of the Historic Stream Gage Three-Month Rolling Average Flow.

When a Stage 4 Low Inflow Condition is declared:

1. The Licensees will notify NCDWR via email as soon as practicable but no later than 48 hours after the declaration.
2. NCDWR will request a meeting of the YAD-DMAG within 5 days after the declaration of the Stage 4 Low Inflow Condition for discussion to determine if there are any additional measures that can be implemented to:
 - a. Reduce water withdrawals, reduce water releases from the projects or use additional reservoir storage without creating more severe regional problems.
 - b. Work together to develop plans and implement any additional measures identified above.
 - c. Communicate conditions to the public.

Additional measures may be determined by consensus of the Licensees and State Agencies with FERC approval as necessary.

¹ Less than one half the distance between the NME and the Critical Reservoir Water Elevation.

Recovery from LIP Stages

Recovery from this LIP will be triggered by any of the three following conditions:

- Condition 1: All three triggers associated with a lower numbered LIP Stage are met.

OR

- Condition 2: High Rock Reservoir water elevations return to at or above the NME PLUS 2.5 ft.

OR

- Condition 3: High Rock Reservoir water elevations return to at or above the NME for 2 consecutive weeks.

When any of these three conditions occurs:

1. The Licensees will take the following action:
 - a. Condition 1: The LIP recovery will be a general reversal of the staged approach described above.
 - b. Condition 2: The LIP will be discontinued.
 - c. Condition 3: The LIP will be discontinued.
2. The Licensees will notify the NCDWR via email within 3 business days following attainment of any of the conditions necessary to return to a lower stage of this LIP. Changes to less restrictive Stages will be made:
 - a. Condition 1: on the first of each month if a slow recovery is indicated; or
 - b. Condition 2: immediately if High Rock Reservoir elevations are at or above the NME **PLUS** 2.5 ft.
 - c. Condition 3: immediately if High Rock Reservoir elevations are at or above the NME for 2 consecutive weeks.
3. The Licensees will update their respective websites as noted in Key Definitions, Facts and Assumptions No. 4.

Appendix B - Yadkin Project Hydro Project Maintenance and Emergency Protocol

Yadkin Project (FERC No. 2197)

Hydro Project Maintenance and Emergency Protocol

1.0 Overview

Under some maintenance and emergency situations, certain license conditions may be impractical or even impossible to meet and may need to be suspended or modified temporarily. The objectives of this Hydro Project Maintenance and Emergency Protocol (HPMEP) are to define the most likely situations of this type, identify the potentially impacted license conditions, and outline the general approach that Alcoa Power Generating Inc. (Licensee) will take at the Yadkin Project (Project) (Federal Energy Regulatory Commission – FERC No. 2197) to maintain operations consistent with license conditions, to the maximum extent possible, and to communicate with the resource agencies and affected parties.

Due to the potential variability of these abnormal situations, this HPMEP is not intended to give an exact step-by-step solution path. It does, however, provide basic expectations for the Licensee's approach to dealing with the situation. The specific details of each maintenance or emergency situation will vary and will be determined on a case-by-case basis as this HPMEP is implemented.

The Licensee will review the requirements of this HPMEP each time it is used and if it determines revisions are warranted, the Licensee will consult with appropriate resource agencies and shall file with the Commission a revised HPMEP for the Yadkin Project. The Licensee shall include with the revised HPMEP documentation of consultation, copies of comments and recommendations on the revised HPMEP after it has been drafted and provided to the agencies for their review, and specific descriptions of how comments are accommodated by the final revised HPMEP. The Licensee shall allow a minimum of 30 days for the agencies to comment on the revised HPMEP prior to filing it with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on Project-specific information. Upon Commission approval, the Licensee shall implement the revised HPMEP, including any changes required by the Commission.

2.0 Key Definitions, Facts, and Assumptions

1. Required Minimum Instream Flows – For the purposes of this HPMEP, this term refers to the Required Minimum Instream Flow requirements included in the new FERC license for the Project.
2. LIP Flows - For the purposes of this HPMEP, a Low Inflow Protocol (LIP) flow is any flow required under the LIP.
3. Public Information Obligations – The Licensee will develop and provide information on its website to inform the public on reservoir water elevations, Project releases, usability of public access areas, reservoir inflows, meteorological forecasts, Historical and Actual Stream Gage Three-Month Rolling Average Flow calculations, U.S. Drought Monitor Three-Month Numeric Average calculations, LIP status, flow and drought triggers, and implementation of this HPMEP.

4. Full Pond Elevation – Also referred to as “full pond”, this is the elevation of a reservoir (measured in feet, USGS datum [NGVD 1929] that corresponds to the point at which water would first begin to spill at the dam if the Licensee took no action. This elevation corresponds to the lowest point along the top of the flood gates. The Full Pond Elevations for the Yadkin Project reservoirs are:

<u>Reservoir</u>	<u>Full Pond Elevation</u> <u>(feet, USGS datum – NGVD 1929)</u>
High Rock	623.9
Tuckertown	564.7
Narrows	509.8
Falls	332.8

5. Normal Minimum Elevation (NME) – The elevation of a reservoir (measured in feet, USGS datum [NGVD 1929]) that defines the bottom of the reservoir’s Normal Operating Range for a given day of the year.
6. Normal Reservoir Operating Range – The band of reservoir water elevations within which the Licensee normally attempts to maintain a given reservoir on a given day. Each reservoir has its own specific Normal Reservoir Operating Range, bounded by Full Pond Elevation and Normal Minimum Elevation. If net inflows to the reservoir are within a reasonable tolerance of the average or expected amounts, Project equipment is operating properly, the LIP has not been implemented, and this HPMEP has not been implemented, reservoir water elevation excursions outside of the Normal Reservoir Operating Range should not occur. The new FERC license for the Project includes operating curves that establish the Normal Reservoir Operating Range for each Project reservoir.

7. Most Likely Situations - The following table identifies the most likely situations when this HPMEP will be implemented and the license conditions that would most likely be affected:

Situation	Indications	Potentially Affected License Conditions	
		Required Minimum Instream Flows or LIP Flows	Normal Reservoir Operating Range
Hydro Unit or Dam Maintenance	Maintenance may require hydro unit shutdown or gates placed out of service.	X	X
Maintenance of Normal Means of Providing Required Minimum Instream Flow	Maintenance will require interruption of scheduled minimum releases from normal locations.	X	
Safety Emergency	Red Alert or Yellow Alert (i.e. dam failure has occurred, is imminent or a potential failure situation is developing) is declared per Emergency Action Plan or other dam safety concern is identified.	X	X
Voltage or Capacity Emergency	A voltage or capacity emergency is declared by the electric grid security authority.	X	X
Reservoir Drawdown Beyond Normal Minimum Elevation due to maintenance, emergency or other reasons (not due to low inflow)	The reservoir water elevation at a reservoir is significantly below Normal Minimum Elevation	X	X
Expected or existing high inflow event	The reservoir water elevation at a reservoir is significantly below the Normal Minimum Elevation	X	X

8. Returning to Normal - Some of the above situations can impact the Licensee's ability to operate the Project in the most efficient and safest manner for power production. The Licensee will therefore endeavor in good faith to repair existing Project equipment and facilities and return them to service within a reasonable period of time, commensurate with the severity of the equipment / facility repair requirements.
9. Scheduled Maintenance – Maintenance that is planned at least 3 months in advance.
10. Unscheduled Maintenance - Any maintenance activity other than Scheduled Maintenance that arises out of need, generally in response to unexpected conditions or events.

11. Incidental Maintenance – Maintenance of Project works that are very brief or that require minimal, if any, deviation from normal license conditions. For the purposes of this HPMEP, maintenance of Project works that does not require deviation from any license conditions related to Required Minimum Instream Flows, LIP Flows or the Normal Reservoir Operating Ranges or are less than 24 hours in duration are considered Incidental Maintenance and, except for the identified notification for Incidental Maintenance that impact Required Minimum Instream Flows, are exempt from the requirements of this HPMEP.
12. Notification Guidance for Scheduled Maintenance - Once a likely maintenance schedule has been established, the Licensee will endeavor in good faith to provide as much advance notice as possible to the affected parties identified in this HPMEP.
13. Notification Guidance for Unscheduled Maintenance and Emergencies – In the event of an emergency or unscheduled maintenance, it is not possible for the Licensee to assure any level of advance notice. For these situations, the Licensee will endeavor in good faith to inform the affected parties identified in this HPMEP within some reasonable amount of time after the situation has been identified.
14. Preparation for High Inflow Events – With modern forecasting, it is more possible than ever to predict large precipitation events and to increase generation hours to reduce reservoir water elevations in order to mitigate the potential for spilling and downstream high water. Typically, this type of advance action is taken from 1 to 5 days before the expected arrival of a storm. It is assumed that the Normal Reservoir Operating Ranges may not provide adequate flexibility (i.e. band width) to allow for this type of reservoir water elevation reduction under heavy inflow circumstances, and therefore, allowances are made in this HPMEP to lower reservoir water elevations below the Normal Minimum Elevations, if needed, in preparation for such events.
15. Relationship Between this HPMEP and the Low Inflow Protocol – The Low Inflow Protocol (LIP) provides for deviations from the Required Minimum Instream Flows and deviation from the Normal Reservoir Operating Ranges when water demands on the reservoirs substantially exceed net inflow. Lowered reservoir water elevations caused by maintenance or emergency situations addressed under this HPMEP will not invoke implementation of the LIP.
16. Critical Flow – The flow that is considered necessary to prevent long-term or irreversible damage to aquatic communities consistent with the resource management goals and objectives for the affected stream reaches and necessary to provide some basic level of water quality maintenance in affected river reaches. The LIP defines the Critical Flow from the Falls Development as 770 cfs, measured on a daily average basis
17. Organizational Abbreviations - Organizational abbreviations include Alcoa Power Generating Inc. (APGI), Progress Energy (PE), North Carolina Department of Environment and Natural Resources (NCDENR), North Carolina Division of Water Resources (NCDWR), North Carolina Division of Water Quality (NCDWQ), North Carolina Wildlife Resources Commission (NCWRC), the United States Fish and Wildlife Service (USFWS).
18. Voltage and Capacity Emergencies – The Yadkin transmission system is interconnected to the Duke Power transmission system and the Progress Energy transmission system. If system reliability is at risk due to Voltage and Capacity Emergencies, the ability to provide secure and continuous electric service becomes compromised. The electric grid security

authority continuously monitors the electric transmission system. Therefore, for the purposes of this HPMEP, a voltage or capacity emergency shall exist when declared by the electric grid security authority.

19. Human Health and Safety and Electric System Integrity are of Utmost Importance – Nothing in this HPMEP will limit the Licensee’s ability to take any and all lawful actions necessary at the Yadkin Project to protect human health and safety, protect its equipment from major damage, and ensure the stability of the regional electric grid. It is recognized that the Licensee may take the steps that are necessary to protect these things without prior consultation or notification.
20. Large Water Intake – For the purposes of this HPMEP, a Large Water Intake is any intake (e.g. public water supply, industrial, agricultural, power plant, etc.) having a maximum instantaneous capacity greater than or equal to one Million Gallons per Day (MGD), the FERC approval level for new intakes.
21. Critical Reservoir Water Elevation – The elevation of water in a reservoir (measured in feet, USGS datum [NGVD 1929]) below which a Large Water Intake or hydropower plant located on the reservoir cannot operate under normal conditions. The Critical Reservoir Water Elevations are the Critical Reservoir Water Elevations defined in the LIP.

3.0 General Approach to Abnormal Situations

A. Powerhouse and Dam Maintenance

1. Mitigating Actions

a. Scheduled Maintenance

Scheduling - To the extent practical, the Licensee will avoid scheduling unit maintenance that would impact Required Minimum Instream Flows or LIP Flows, unless it is likely that the equipment condition will cause damage or unscheduled unit maintenance if repairs are delayed.

b. Unscheduled Maintenance

Required Minimum Instream Flow Releases – If the Unscheduled Maintenance affects equipment that provides the normal method of providing Required Minimum Instream Flows or LIP Flows, then the Licensee will endeavor in good faith to restore some or all of the Required Minimum Instream Flows or LIP Flow as soon as practicable.

2. Communication with Resource Agencies and Affected Parties

a. Scheduled Maintenance

1) Direct Consultation - If the Scheduled Maintenance will affect any Required Minimum Instream Flow release or Normal Reservoir Operating Range, the Licensee will consult with NCDENR, NCWRC, PE, and USFWS, as soon as approximate maintenance schedule dates are determined, but at least 10 days prior to beginning any reservoir drawdown for the unit maintenance. If the scheduled maintenance is expected to result in a drawdown of any of the Project reservoirs below the Critical Reservoir Water Elevation, the Licensee will consult with the North Carolina State Historic Preservation Office (NCSHPO). The Licensee will notify FERC after consultation with agencies. If the maintenance will require a reservoir drawdown below the Critical Reservoir Water Elevation (as defined in the LIP) the Licensee will notify the owner of any Large Intakes located on the reservoir of the maintenance and drawdown schedule. The Licensee will consider options suggested by the identified agencies and organizations that could lessen the impact of the maintenance.

2) General Notification – If the Scheduled Maintenance will affect any downstream Required Minimum Instream Flow release or Normal Reservoir Operating Range, at least 10 days before beginning any reservoir drawdown or the unit maintenance, the Licensee will add the appropriate messages to its public information website and/or its reservoir water elevation phone system to inform the general public of the maintenance and drawdown schedule.

b. Unscheduled Maintenance

1) Direct Notification - If the Unscheduled Maintenance will affect any Required Minimum Instream Flow, LIP Flow, or Normal Reservoir Operating Range, the

Licensee will notify NCDENR, NCWRC, PE, USFWS, and FERC as soon as possible after the unscheduled maintenance begins, but no longer than 72 hours afterwards. If the maintenance will require a reservoir drawdown below the Critical Reservoir Water Elevation (as defined in the LIP), the Licensee will notify the owner of any Large Intakes located on the reservoir of the maintenance and drawdown schedule.

- 2) General Notification – If the Unscheduled Maintenance will affect any Required Minimum Instream Flow, LIP Flow or Normal Reservoir Operating Range, as soon as possible after the unscheduled maintenance begins but no longer than 72 hours afterwards, the Licensee will add the appropriate messages to its public information website and its reservoir water elevation phone system to inform the general public of the maintenance and drawdown schedule.
- 3) Direct Consultation – If the Unscheduled Maintenance will affect any Required Minimum Instream Flow, LIP Flow, or Normal Reservoir Operating Range, the Licensee will consult with NCDENR, NCWRC, PE, USFWS as soon as possible after the unscheduled maintenance begins, but no longer than 10 days afterwards. If the Unscheduled Maintenance is expected to result in a drawdown of any of the Project reservoirs below the Critical Reservoir Water Elevation, the Licensee will consult with the NCSHPO. The Licensee will notify FERC after consultation with agencies. The Licensee will consider options suggested by the identified agencies and organizations that could lessen the impact of the maintenance.

B. Maintenance of the Normal Means of Providing Required Minimum Instream Flow

1. Mitigating Actions

a. Scheduled Maintenance

- 1) Scheduling - To the extent practical, the Licensee will avoid scheduling maintenance that would impact the ability to release Required Minimum Instream Flows from the Project, unless it is likely that the equipment condition will cause damage or an unscheduled maintenance condition if repairs are delayed.
- 2) Required Minimum Instream Flows - If the Scheduled Maintenance cannot avoid impacting Required Minimum Instream Flows from the Project, then the Licensee will endeavor in good faith to restore some or all of the Required Minimum Instream Flows as soon as practicable.
- 3) Critical Flow – To the extent practical, the Licensee will avoid falling below the Critical Flow (as defined in the LIP). If it is determined that 100% exceedance of the Critical Flow cannot reasonably be achieved, the Licensee will work with the resource agencies to monitor any potential aquatic species impacts in the affected reach below Falls Dam.

b. Unscheduled Maintenance

- 1) Required Minimum Instream Flows - If the Unscheduled Maintenance cannot avoid impacting Required Minimum Instream Flows or LIP Flows, then the Licensee will endeavor in good faith to restore some or all of the Required Minimum Instream Flows or LIP Flows as soon as practicable.

- 2) Critical Flow – To the extent practical, the Licensee will avoid falling below the Critical Flow (as defined in the LIP) as noted above. If it is determined that 100% exceedance of the Critical Flow cannot reasonably be achieved, the Licensee will work with the resource agencies to monitor any potential aquatic species impacts in the affected reach below Falls Dam.

2. Communication with Resource Agencies and Affected Parties

a. Scheduled Maintenance

- 1) Direct Consultation – If the Scheduled Maintenance cannot avoid impacting Required Minimum Instream Flows from the Project, the Licensee will consult with NCDENR, NCWRC, PE, and USFWS, as soon as approximate maintenance schedule dates are determined, but at least 10 days prior to beginning the maintenance. The Licensee will notify FERC after consultation with the agencies. The Licensee will consider options suggested by the identified agencies and organizations that could lessen the impact of the maintenance.
- 2) General Notification – If the Scheduled Maintenance will affect any Required Instream Minimum Flow, at least 10 days before beginning the maintenance, the Licensee will add the appropriate messages to its public information website and its reservoir water elevation phone system to inform the general public of the maintenance.

b. Unscheduled Maintenance

- 1) Direct Notification - If the Unscheduled Maintenance cannot avoid impacting Required Minimum Instream Flows from the Project, the Licensee will notify NCDENR, NCWRC, PE, USFWS, and FERC as soon as possible after the unscheduled maintenance begins, but no longer than 72 hours afterwards.
- 2) Direct Consultation – If the Unscheduled Maintenance cannot avoid impacting Required Minimum Instream Flows or LIP Flows, the Licensee will consult with NCDENR, NCWRC, PE, USFWS as soon as possible after the Unscheduled Maintenance begins, but no longer than 10 days afterwards. The Licensee will notify FERC after consultation with agencies. The Licensee will consider options suggested by the identified agencies and organizations that could lessen the impact of the maintenance.

C. Dam Safety Emergency

1. Actions

Safety Must Come First – If a Red Alert or Yellow Alert is declared per the Licensee's Emergency Action Plan, or other dam safety concerns arise, the Licensee can take any and all steps necessary to restore the dam to a safe condition.

2. Communication with Resource Agencies and Affected Parties

- a. Direct Notification – Notification of any dam safety emergency will be conducted strictly in accordance with the Licensee's Emergency Action Plan. In cases where dam safety concerns arise that are not a Red Alert or Yellow Alert per the Licensee's Emergency Action Plan, consultation with resource agencies and affected parties will occur as soon as possible, after the dam safety concern arises.
- b. Once Dam Safety Conditions Have Stabilized – The Licensee will add the appropriate messages to its public information website and/or its reservoir water elevation phone system to inform the general public of the situation and any expected return to normal operation.

D. Voltage and Capacity Emergencies

1. Actions

- a. Normal Reservoir Operating Range – If a Voltage or Capacity Emergency (as defined above) occurs, the Licensee may take any and or all steps necessary to aid in restoring the electric grid to a stable condition.
- b. Conserving Water for Power Generation - If a Voltage or Capacity Emergency is expected to continue for two weeks or more, the Licensee may reduce Project outflow below Required Minimum Instream Flows or LIP Flows to the Critical Flow (as defined in the LIP) if taking such action is necessary to maintain the water inventory in Project reservoirs for use during the voltage and capacity emergency. During a voltage and capacity emergency, the Licensee will not conserve water for power generation strictly as a cost avoidance measure, but only to assist in addressing the emergency.

2. Communication with Resource Agencies and Affected Parties

- a. Direct Notification - The Licensee will notify NCDENR, NCWRC, PE, USFWS and FERC as soon as possible following a deviation from license conditions for Voltage or Capacity Emergency reasons. If the Voltage or Capacity Emergency is expected to result in a drawdown of a reservoir below its Critical Reservoir Water Elevation, the Licensee will notify NCSHPO.
- b. General Notification - Within 72 hours following the start of the emergency deviation, the Licensee will add the appropriate messages to its public information website and its reservoir water elevation phone system to inform the general public of the situation and any expected dates for return to normal operations.
- c. Direct Consultation – The Licensee will consult with NCDENR, NCWRC, PE, and USFWS as soon as possible following a deviation from license conditions for voltage or capacity emergency reasons. The Licensee will consult with downstream water users if they are affected by the Voltage and Capacity Emergency through reduction of the Required Minimum Instream Flow or LIP Flow to the Critical Flow. If the voltage or capacity emergency is expected to result in a drawdown of any of the Project reservoirs below the Critical Water Elevation, the Licensee will consult with NCSHPO. The Licensee will notify FERC after consultation with agencies. If the emergency requires a reservoir drawdown below the Critical Reservoir Water Elevation the Licensee will notify

the owner of any Large Intakes located on the reservoir of the nature of the emergency and the anticipated drawdown schedule. The Licensee will consider options suggested by the identified agencies and organizations that could lessen the impact of the emergency.

E. Reservoir Drawdown

1. Actions

a. Planned Drawdowns

- 1) Scheduling - To the extent practical, the Licensee will avoid scheduling reservoir drawdowns needed for maintenance purposes that would impact the ability of the Licensee to release Required Minimum Instream Flows from the Project.
- 2) Required Minimum Instream Flows - If a Planned Drawdown cannot avoid impacting Required Minimum Instream Flows from the Project, then the Licensee will endeavor in good faith to restore some or all of the Required Minimum Instream Flows as soon as practicable.
- 3) Critical Flow – To the extent practical, the Licensee will avoid falling below the Critical Flow (as defined in the LIP). If it is determined that 100% exceedance of the Critical Flow cannot reasonably be achieved, the Licensee will work with the resource agencies to monitor any potential aquatic species impacts in the affected reach below Falls Dam.

b. Unplanned Drawdowns

- 1) Required Minimum Instream Flows - If an Unplanned Drawdown cannot avoid impacting Required Minimum Instream Flows from the Project, then the Licensee will endeavor in good faith to restore some or all of the Required Minimum Instream Flows as soon as practicable.
- 2) Critical Flow – To the extent practical, during an Unplanned Drawdown, the Licensee will avoid falling below the Critical Flow (as defined in the LIP). If it is determined that 100% exceedance of the Critical Flow cannot reasonably be achieved, the Licensee will work with the resource agencies to monitor any potential aquatic species impacts in the affected reach below Falls Dam.

2. Communication with Resource Agencies and Affected Parties

a. Planned Drawdowns

- 1) Direct Consultation – If the Planned Drawdown will cause the reservoir to be out of the Normal Reservoir Operating Range, the Licensee will consult with NCDENR, NCWRC, PE, and USFWS as soon as approximate dates of a planned drawdown are determined, but at least 10 days prior to beginning the drawdown. If the Planned Drawdown is expected to draw the reservoir below the Critical Reservoir Water Elevation, the Licensee will consult with NCSHPO. If the Planned Drawdown is expected to go below the Critical Reservoir Water Elevation (as defined in the LIP), the Licensee will consult with the owners of any Large Intakes located on the

reservoir. The Licensee will notify FERC after consultation with agencies. The licensee will consider options suggested by the identified agencies and organizations that could lessen the impact of the drawdown.

- 2) General Notification – If the Planned Drawdown will cause the reservoir to be out of the Normal Reservoir Operating Range, at least 10 days before beginning any drawdown, the Licensee will add the appropriate messages to its public information website and its reservoir water elevation phone system to inform the general public of the planned drawdown schedule.

b. Unplanned Drawdowns

- 1) Direct Notification - If an Unplanned Drawdown causes the reservoir to be out of the Normal Reservoir Operating Range or the unplanned drawdown cannot avoid impacting Required Minimum Instream Flows or LIP Flows, the Licensee will notify NCDENR, NCWRC, PE, USFWS, and FERC, of the Unplanned Drawdown as soon as practicable, but no longer than 72 hours afterwards.
- 2) Direct Consultation – If the Unplanned Drawdown cannot avoid impacting Required Minimum Instream Flows or LIP Flows, the Licensee will consult with NCDENR, NCWRC, PE, and USFWS as soon as possible, but no longer than 10 days afterwards. The Licensee will notify FERC after consultation with agencies. The Licensee will consider options suggested by the identified agencies and organizations that could lessen the impact of the drawdown.

F. Expected or Existing High Inflow Event

1. Actions

In preparation for an expected high inflow event or in response to an ongoing high inflow event, the Licensee may reduce reservoir water elevations significantly below the Normal Minimum Elevation, in order to minimize the effects of spilling. The reservoir water elevation may be below Normal Minimum Elevations for as long as necessary to minimize the effects of spilling and to manage reservoir elevations during high inflow events.

2. Communication with Resource Agencies and Affected Parties

- a. Direct Notification - The Licensee will notify NCDENR, NCWRC, PE, USFWS and FERC as soon as practicable following a deviation from the Normal Reservoir Operating Range for an existing or expected high inflow event. If the drawdown is anticipated to go below Critical Reservoir Water Elevation (as defined in the LIP) of the reservoir, the Licensee will notify the owners of any Large Water Intakes on the reservoir.
- b. General Notification – As soon as practicable after the Licensee determines that deviation from Normal Reservoir Operating Range is needed due to an ongoing or expected high inflow event, the Licensee will add the appropriate messages to its public information website and its reservoir water elevation phone system to inform the general public of the situation and any expected dates for return to normal operations.

Appendix C - Yadkin Project Recreation Facility Enhancements

Yadkin Project Recreation Facility Enhancements

I. Project Recreation Site Facility Upgrades and Improvements

1. The Licensee (Alcoa Power Generating Inc. or APGI) will make improvements at up to 10 of its public recreation sites to make the facilities more ADA (Americans with Disabilities Act) compatible. A preliminary list of sites that can most readily be made to comply with ADA standards and that would benefit recreation users the most is provided in Table 1. A final list of sites and the improvements necessary to make the sites ADA compatible will be determined in consultation with resource agencies and the surrounding Counties, and will be included in the Recreation Plan for the Project.

Table 1
Preliminary List of APGI's Public Recreation Sites
That Can Most Readily Be Made to Comply with ADA Standards

Site Name	Reservoir	Improvements Needed to Achieve Barrier-Free Accessibility
Buddle Creek Boat Access Area	High Rock	ADA parking signage; accessible bathroom; accessible pathway; accessible picnic table
Old Whitney Boat Access	Narrows	ADA parking space; ADA parking signage; accessible pathways; accessible bathroom; accessible picnic table
Badin Boat Access	Narrows	ADA parking spaces; ADA parking signage; transition plates; accessible bathroom; accessible picnic table; accessible pathways
Riles Creek Recreation Area	Tuckertown	ADA parking space; ADA parking signage; accessible bathroom; accessible pathways
Falls Boat Access	Falls	ADA parking space; ADA parking signage; dock abutment; courtesy floating dock
Highway 601 Access Area	High Rock	ADA parking space; ADA parking signage; dock abutment; courtesy floating dock; accessible pathways
Badin Lake Swim/Picnic Area	Narrows	ADA parking spaces; ADA parking signage; accessible bathroom; accessible picnic tables; accessible pathways
Flat Swamp Boat Access	High Rock	ADA parking space; ADA parking signage; accessible bathroom; accessible picnic table; accessible pathways
Southmont Boat Access Area	High Rock	ADA parking spaces; ADA parking signage; accessible bathroom; accessible picnic table; accessible pathways

2. The Licensee will provide and maintain new portable toilet facilities at several of its existing public recreation sites, where such facilities are not currently available. A preliminary list of sites where portable toilets will be added is provided in Table 2. A final list of sites where portable toilets will be added will be determined in consultation with resource agencies and the surrounding Counties, and will be included in a Recreation Plan for the Project.

Table 2
Preliminary List of APGI Recreation Sites
Where New Portable Toilets will be Added

Site Name	Reservoir	Number of Toilets to be Added
York Hill Boat Access	High Rock	1
Dutch Second Creek Boat Access	High Rock	1 - 2
Riles Creek Recreation Area	Tuckertown	1
Lakemont Access Area	Narrows	1

3. The Licensee will install two (2) ADA compliant fishing piers at existing APGI public recreation sites. One of the fishing piers will be installed on High Rock Reservoir and the other on Tuckertown Reservoir. The final location of the new fishing piers will be determined in consultation with resource agencies and the surrounding Counties during development of the Recreation Plan.
4. The Licensee will make modifications to the existing tailwater fishing areas located at the High Rock and Tuckertown tailwaters. The concept would be to provide facilities that allow improved access to the tailwater areas for fishing, with special consideration given to public safety and facility security issues. Conceptual plans for these facility modifications will be developed in consultation with the resource agencies, with guidance from Federal Energy Regulatory Commission (FERC or Commission) staff during the development of the Recreation Plan.
5. The Licensee will make improvements to North Carolina standards at the existing portage trails at each of the four Project dams. Implementation of portage trail improvements will be spread out over the New License period. Improvements to the Falls Dam portage trail will be made within ten years of the effective date of the New License. Improvements to the High Rock, Tuckertown and Narrows portage trails will be made within 20 years of the effective date of the New License, unless the North Carolina Department of Environment and Natural Resources (NCDENR) agrees that recreational use data demonstrates insufficient demand by non-motorized boaters. Any proposal to defer improvements to the High Rock, Tuckertown or Narrows portage trails beyond 20 years of the effective date of the New License will be filed for Commission approval. Conceptual designs for the portage trail improvements will be developed in consultation with NCDENR and other resource agencies during the development of the Recreation Plan.

II. New Project Recreation Facilities

1. The Licensee will develop a new public recreation site with a swimming area and beach on the Rowan County side of High Rock Reservoir. The final location of the new recreation site will be determined by APGI and will be on non-Project land currently owned by APGI. Conceptual plans for this new recreation site will be developed in consultation with Rowan County, NCDENR, North Carolina Wildlife Resources Commission (NCWRC), and other resource agencies during the development of the Recreation Plan.
2. The Licensee will install up to ten “hardened” (or platform) campsites dispersed throughout the Project area. The purpose of the campsites is to promote paddling through the Project by non-motorized boaters using the Yadkin-Pee Dee River Trail.

The Licensee will consult with the NCDENR Division of Parks and Recreation, and others as appropriate, to determine the location of the campsites during the development of the Recreation Plan. Preferred locations will be those that meet the following minimum criteria: 1) located on Licensee-owned Project or non-Project land, 2) located in areas not prone to flooding, 3) located away from existing public recreation sites, 4) accessible by water or by trail, 5) sites conducive for use primarily by non-motorized watercraft, 6) sites distributed throughout the Project so as to support use of the Project reservoirs as part of the Yadkin-Pee Dee River Trail, and 7) sites conducive with the safety and security of the Project and Project facilities. Consideration will also be given to the following:

- Design and location criteria should promote use by non-motorized boaters and seek to exclude access by motorized boaters or automobiles. Criteria that should be evaluated include locating campsites away from public access roads.
- Campsites should be located to avoid competition for commercial campgrounds and existing facilities.
- A reconnaissance level survey of potential campsite locations should be conducted. Potential site locations include near Boone's Cave Park and Eagle Point Nature Preserve on High Rock Reservoir.
- Campsites do not have to be equally distributed throughout the Project area. Clustering of campsites may be desirable.
- Design of campsites should be based on applicable North Carolina paddle trail standards.
- When possible, the sites should be accessible by land to facilitate maintenance by APGI. A right-of-way to the campsites should be maintained by APGI as a condition of land sales and donations contemplated in this Relicensing Settlement Agreement.

III. Replacement Project Recreation Facilities

1. Boating access to the lower part of Tuckertown Reservoir is currently provided at an access area located immediately off of Highway 49, in the vicinity of the Highway 49 Bridge. While the facility is located primarily on property owned by APGI, parking for the site is located in the North Carolina Department of Transportation (NCDOT) Highway 49 right-of-way. NCDOT has plans to widen Highway 49 in this area. It is likely that when that widening occurs the existing site would have to be closed due to lack of parking. At the time of the Highway 49 widening, the Licensee will replace the existing boat launch with a similar facility located elsewhere on the lower portion of Tuckertown Reservoir. A final determination on the site of the new facility will be made by the Licensee, and the design of the new facility will be carried out in consultation with NCWRC and other resource agencies. Plans for the new facility will be filed for Commission approval.

**Appendix D - Modifications to the Yadkin Project
Specifications for Private Recreation Facilities, Shoreline
Stewardship Policy, and Subdivision Access Approval, Multi-
use Facility Permitting, and Industrial Approval Procedures
for Inclusion in the Revised Shoreline Management Plan**

I. Private Recreation Facility Specifications - General

- F. All other activities undertaken in the reservoirs or along the shoreline within the FERC)-licensed Project boundary (Project Boundary) or on the Yadkin-Managed Buffer, including installation or maintenance of shoreline erosion control measures, pathways, sitting areas, utilities, or irrigation equipment; vegetation removal; and excavation require a written activity permit from Yadkin before work begins. An onsite meeting between the adjoining property owner and a Yadkin representative is mandatory before Yadkin will issue a written activity permit. See the Stewardship Policy for procedures and requirements related to activity permits. In some cases, the permission for other activities may be included in a construction permit or private recreation facility permit.

III. New Recreation Facilities

All new private piers, including replacement structures, must meet the following specifications. Construction of new launch ramps, boat houses, sun-decks, and other “on-pier” structures, other than conforming boat lifts, boat lift covers, and on-pier gazebos/shelters, is not permitted.

A. Individual and Shared Piers

1. **Lot Width** — The adjoining property (applicant’s lot) must have a minimum shoreline lot width of 200 feet as measured by extending the adjoining property owner’s side lot lines to the normal full-pool elevation of the reservoir (623.9-foot¹ contour on High Rock Reservoir and 509.8-foot contour on Narrows Reservoir). For subdivisions developed prior to May 1, 1987, an individual pier may be granted for a lot with a minimum shoreline width of 50 feet (as measured above) provided Yadkin’s other minimum eligibility requirements are satisfied.

Two adjoining shoreline lots of 100 feet minimum shoreline width each (measurement as described above) may share a pier. For subdivisions developed prior to May 1, 1987, a shared pier may be granted for two adjoining shoreline lots with a total combined shoreline width of 50 feet (as measured above) provided Yadkin’s other minimum eligibility requirements are satisfied. Shared piers must be located on or close to the adjoining property line.

2. **Water Depth** — Piers must be constructed such that they have access to a minimum water depth of 6 feet within 75 feet of the shoreline as measured from the normal full-pool elevation of the reservoir (623.9-foot contour on High Rock Reservoir and 509.8-foot contour on Narrows Reservoir).
3. **Cove Width** — Piers cannot be located in coves less than 100 feet in width at normal full-pool elevation, and piers may not extend more than 25% of the width of the cove at normal full-pool elevation.
4. **Piers with Floating Sections** — The pier must have a floating section for ingress/egress to watercraft. The remainder of the pier may include stationary and ramp sections.
5. **Private Individual or Shared Pier Dimensions:**

¹ All contour elevations are US Geological Survey datum.

- i) Total maximum pier length — 75 feet or 25% of the width of a cove at normal full-pool elevation. Yadkin may require the pier to be less than 75 feet in total length for purposes of safety, navigation, and ingress/egress.
 - ii) Total maximum square footage — 1,100 square feet (for an individual or shared pier)
 - iii) Stationary Section
 - a) Maximum width — 12 feet
 - b) Minimum width — 5 feet
 - iv) Floating Section
 - a) Minimum total area — 144 square feet
 - v) Ramp Section (the following only apply if the ramp is constructed of pressure treated lumber)
 - a) Minimum width — 4 feet
 - b) Maximum width — 6 feet
 - c) Maximum length — 16 feet
6. Pier Location — A pier will be located as near as possible to the middle of the applicant's lot(s), and the pier should not encroach across the extended adjoining property owner's side lot lines. In cases where there is aquatic vegetation (e.g., water willow) present along the shoreline adjacent to the applicant's lot, piers must be located as far from the vegetation as possible without encroaching on the neighboring property. In cases where piers cannot be located away from aquatic vegetation, piers must meet the criteria described in Section IV, below.
7. Pier Construction — Piers must be constructed of pressure-treated lumber and pilings, grade marked by the American Wood Preservers' Bureau. Proposals to use materials other than pressure treated lumber will be reviewed on a case by case basis and may require approval of a MSDS sheet from the material manufacturer and written approval from Yadkin. The construction permit will constitute written approval from Yadkin. Other materials must meet the standards cited in these Specifications and must be installed according to manufacturer's specifications. Only manufactured plastic-encased floatation devices will be permitted as floatation. All piers must meet all applicable County and State building codes.
8. Handrails — Handrails are required on stationary and walkway ramp sections of pier and must meet North Carolina State Building Code Standards.
9. Reflectors — 2-inch minimum diameter blue colored reflectors must be placed at 10-foot intervals along all sides of the pier.
10. Boat Lifts —
- i) Boat lifts must be mounted on the floating portion of a pier. If the boat lift is located inside of a boat slip, the lift may have supports resting on the reservoir bottom, so long as the area affected is incorporated into the total allowable maximum pier footprint.
 - ii) Boat lift covers must be pre-fabricated and designed specifically for piers. Covers can be no more than 10 feet in height above the deck and can be used to cover the area of the boat slip only. No asphalt roofing material will be allowed.
11. On-Pier Structures — Gazebos/shelters may be installed over the stationary section of the pier provided the overall square footage of the structure does not exceed 240 square feet.

Such structures must be open-sided (not screened). The roof pitch should be no more than 3/12, with the bottom of the outer edges of the roof no less than seven feet above the pier surface to allow for boater visibility through the structure. No asphalt roofing material will be allowed. All applicable county and state building requirements must be satisfied. No decks, sitting areas, or other on-roof structures will be permitted on the gazebo/shelter.

12. Plans must be submitted for each proposed pier. Yadkin reserves the right of final approval or denial of any proposed pier design.
13. Shared pier applicants are individually and jointly responsible for compliance with these Specifications, the Stewardship Policy, and all other applicable Yadkin policies, procedures, and requirements. Failure of one applicant to comply therewith may render both lots ineligible for a shared pier and subject to other enforcement, as provided in Section VI, below.

Shoreline Stewardship Policy

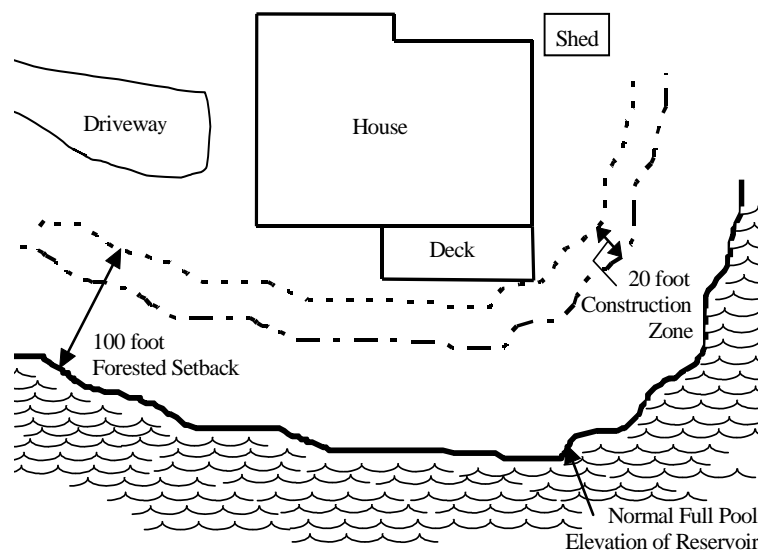
III. 100-foot Forested Setback Requirement

A. Specifications

For all lots in new subdivisions platted and recorded on or after July 1, 1999, as a condition of eligibility for private individual piers, shared piers, or use of, or private access to the Project lands and waters across, the Yadkin-Managed Buffer, Yadkin requires satisfaction of the following minimum specifications for a 100-foot forested setback:

1. All structures (including but not limited to buildings, houses, driveways, roof overhangs, decks, porches, patios, cantilevered decks, stairs, posts, columns, fences, retaining walls, landscaping walls, and gazebos), unless otherwise allowed in III.A.2 and III.A.3, must be set back at least 100 feet from the reservoir shoreline. The setback will be maintained as a forested area. The 100-foot forested setback will be measured along the ground surface from the normal full-pool elevation of the reservoir to the nearest structure(s) (see Figure 1).

Figure 1
100-foot Forested Setback



100-foot Forested Setback —All structures (including but not limited to buildings, houses, driveways, roof overhangs, decks, porches, patios, cantilevered decks, stairs, posts, columns, fences, retaining walls, landscaping walls, and gazebos), unless otherwise allowed in III.A.2 or III.A.3, must be set back at least 100 feet from the reservoir shoreline. A septic field or well, however, will be allowed in the 100-foot forested setback to the extent that installation does not require removal of any vegetation other than as permitted in Section III.A.5, below. In addition, the 100-foot forested setback requirement does not apply to a pathway to a pier, an irrigation system, etc., that has been permitted by Yadkin in accordance with this Policy. The 100-foot forested setback will be measured along the ground

surface from the normal full-pool elevation of the reservoir to the nearest structure(s).

20-foot Construction Zone — A 20-foot-wide construction zone will be permitted to intrude into the 100-foot forested setback to accommodate construction. Vegetation may be removed in the construction zone, but that portion of the construction zone intruding into the setback must be revegetated upon completion of the construction.

Vegetation Removal — Vegetation removal on the adjoining property owner's property is allowed within the 100-foot forested setback in accordance with Section III.A.5. No vegetation removal is allowed on the Yadkin-Managed Buffer without a written permit from Yadkin.

2. A septic field or well will be allowed in the 100-foot forested setback to the extent that installation does not require removal of any vegetation other than as permitted in Section III.A.5, below. In addition, the 100-foot forested setback requirement does not apply to a pathway to a pier, an irrigation system, etc., that has been constructed pursuant to a written permit issued by Yadkin in accordance with this Policy.
3. A sitting area may be permitted within the 100-foot setback. The sitting area must be at ground level, must not exceed 200 square feet, and must have a pervious surface (e.g. pressure-treated wood, gravel, or uncemented brick, rock, stone, or paving blocks).
4. Variances will be granted only when a lot is unbuildable. Unbuildable means the inability to build the minimum size house required by the subdivision's restrictive covenants, or an 1,800 square foot home, if no minimum house size is specified, behind the 100-foot forested setback.

In instances where compliance with the 100-foot forested setback requirement would render a lot unbuildable, Yadkin may, but is not required to, approve variances granting a lesser setback on a lot-by-lot basis that would provide the maximum possible setback, which in no case will be less than 50 feet. For lots where Yadkin approves a setback of less than 100 feet, Yadkin will also designate an appropriate construction zone for that lot.

5. Vegetation in the 100-foot forested setback must be maintained as it existed prior to development.
 - i) Fallen trees (blow-down), fallen limbs, and fallen branches may be removed, but all leaf litter (leaves, pine needles, etc.) must remain.
 - ii) No lap trees, trees, or vegetation of any type overhanging the reservoirs or within the reservoirs may be removed without specific permission from Yadkin.
 - iii) Any tree that poses an imminent threat to life or property may be removed.
 - iv) Within 30 feet of tributaries that drain into the reservoir, no living vegetation, or dead vegetation root structure may be removed.

To provide opportunity for improved water views, adjoining property owners may remove one hundred percent (100%) of trees less than two inches in diameter (measured one foot above ground level). Fifty percent (50%) of other vegetation less than 5 feet in height may be removed. In addition to the above, living limbs may be removed up as much as fifty percent (50%) of the height of the tree as necessary (dead limbs of any height may be removed on trees). If the above measures do not provide satisfactory views of the reservoir, the property owner may remove, with Yadkin's written permission,

additional trees up to six inches in diameter within a 30-ft wide corridor. The adjoining property owner may be required to re-vegetate the view corridor with low-growing native species to minimize overland erosion.

6. Removal of any vegetation from any portion of the 100-foot forested setback within the Yadkin-Managed Buffer requires a written permit from Yadkin. For adjoining property owners in new subdivisions who satisfy the above requirements on their property, vegetation removal from the Yadkin-Managed Buffer will generally be considered, by written permit, in accordance with the criteria listed under Section III.A.5. Failure to secure a permit from Yadkin prior to removing any vegetation from the Yadkin-Managed Buffer, or removal in any manner other than as permitted by Yadkin, is subject to enforcement as set forth in Section XIV below.
7. In a permit to construct a private individual or shared pier (see Yadkin's Specifications for Private Recreation Facilities), Yadkin may allow movement or removal of identified lap trees where necessary for construction or installation of the facilities. In cases where removal is necessary, Yadkin will require replacement of the lap trees along the same stretch of shoreline at a 2:1 replacement to removal ratio.
8. For any lot in a new subdivision subject to the 100-foot forested setback requirement set forth above, the primary sanction for failure to comply with this requirement is a loss of eligibility for: (i) a private (individual or shared) permit within the Project Boundary (i.e., on a reservoir); and (ii) use of, or private access to the Project lands and waters across, the Yadkin-Managed Buffer. Once an adjoining property owner in a subdivision to which these setback requirements apply has a permitted private pier, subsequent removal of vegetation from the 100-foot forested setback, other than as allowed under the above criteria, is also subject to enforcement as set forth in Section XIV below.
9. In no case may management of the 100-foot forested setback be inconsistent with the requirements of North Carolina's watershed protection rules and county watershed protection ordinances.

XV. Voluntary Guidelines for Timbering Operations

[Note: APGI proposes to delete Section XV of the Shoreline Stewardship Policy (Voluntary Guidelines for Timbering Operations) because most of the protective measures are already contained in the 100-ft Forested Setback Requirement (Section III of the Shoreline Stewardship Policy).]

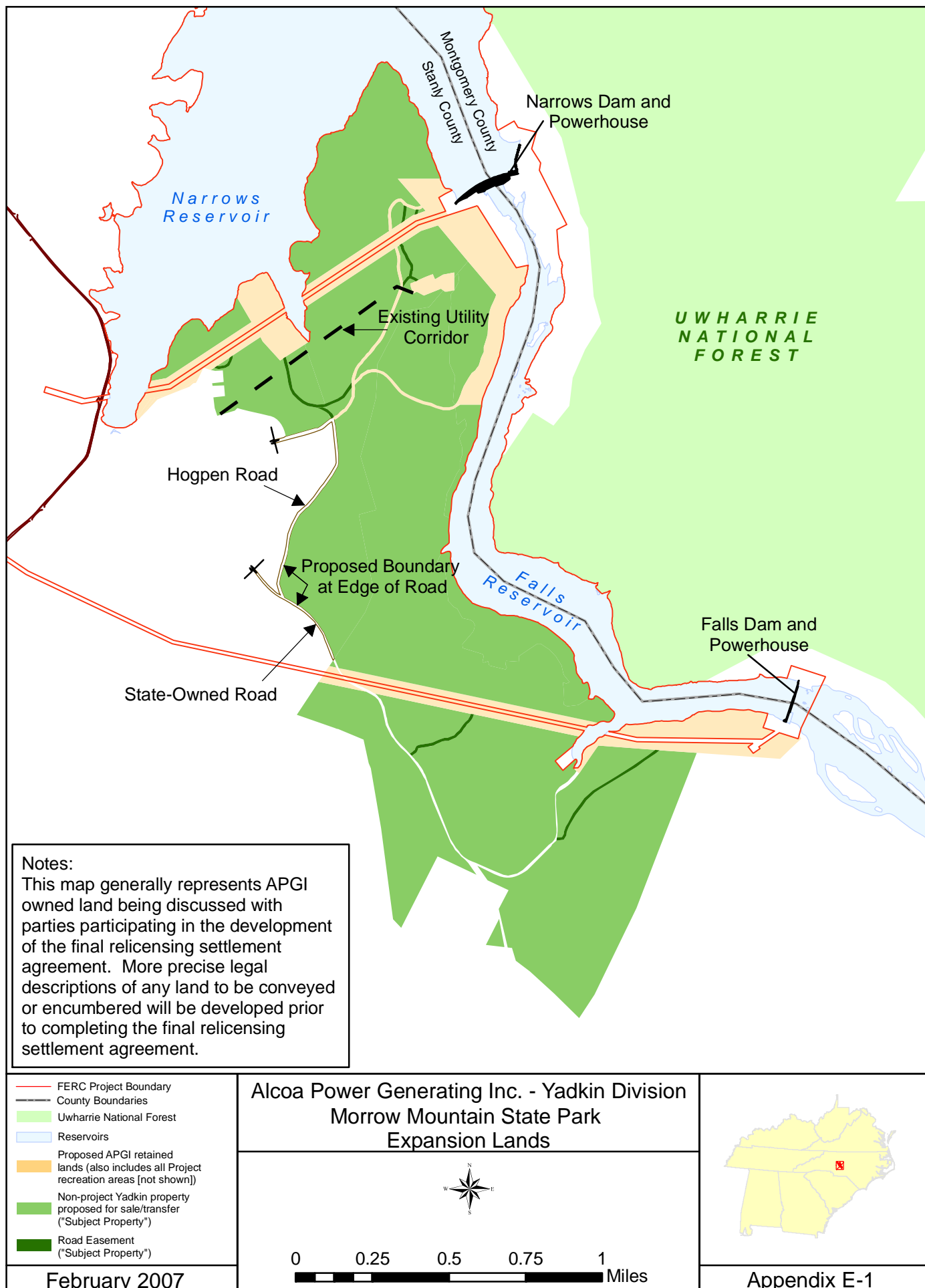
Subdivision Access Approval, Multi-use Facility Permitting, and Industrial Approval Procedures

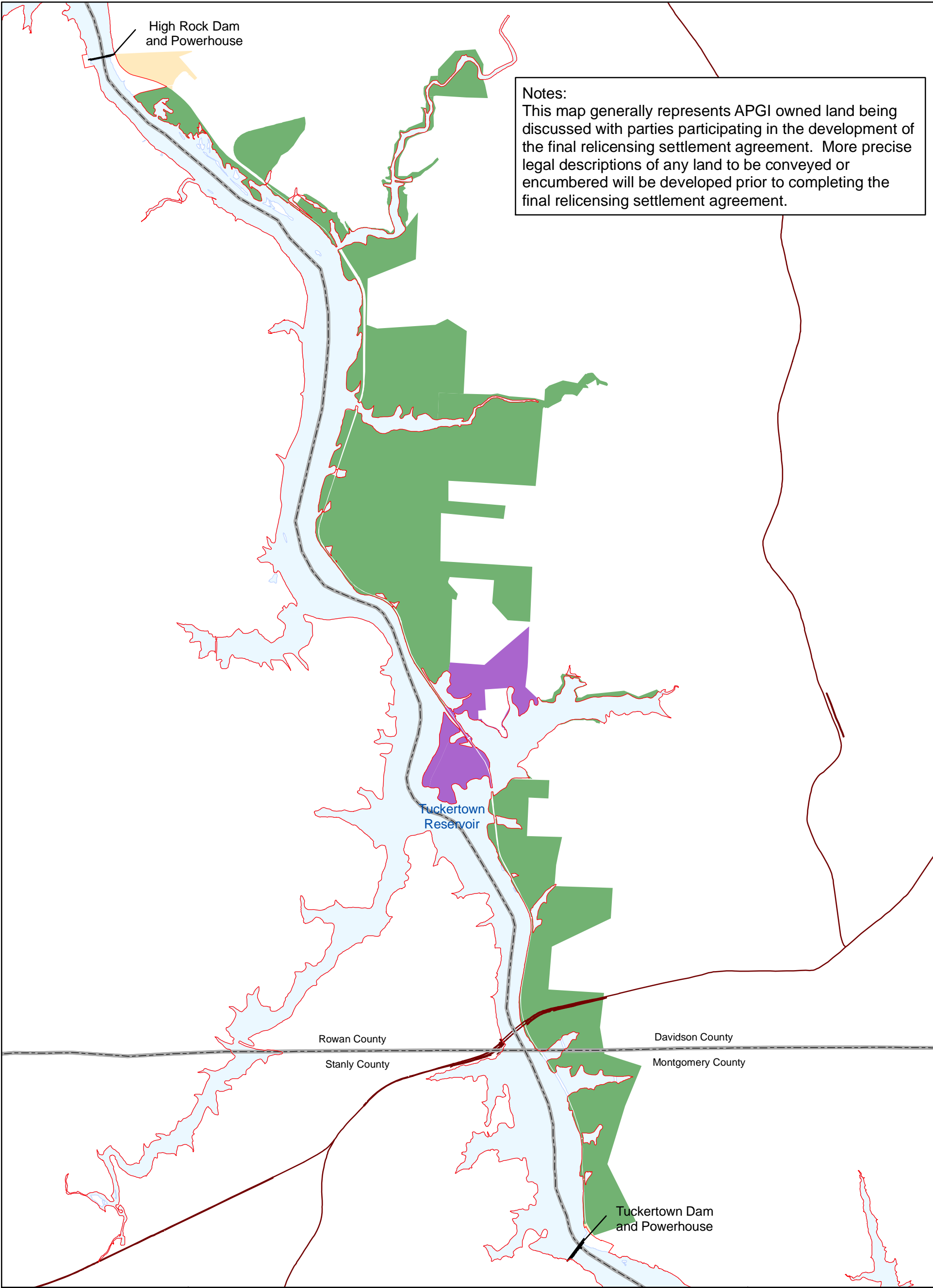
D. Construction Permit Approval Criteria and Provisions

1. Yadkin will determine whether to issue a multi-use facility construction permit based on its review of the application package and, where applicable, FERC's response to the prior notice or Yadkin's request for prior approval. Yadkin's determination will be based, in part, on the following criteria:
 - a. Proposed facilities meet the following specifications:
 - i. Proposed facilities will generally not encroach or extend into Project waters more than 1/4 of the distance to the opposite shoreline or more

- than 120 feet into Project waters, whichever is less; and in no case will proposed facilities extend further into the water than is necessary to achieve the intended use;
- ii. Proposed facilities will meet Yadkin's minimum water depth requirements (6-foot minimum water depth at normal full-pool elevation) such that the minimum water depth is available to all proposed slips or along all portions of the facilities intended for docking watercraft;

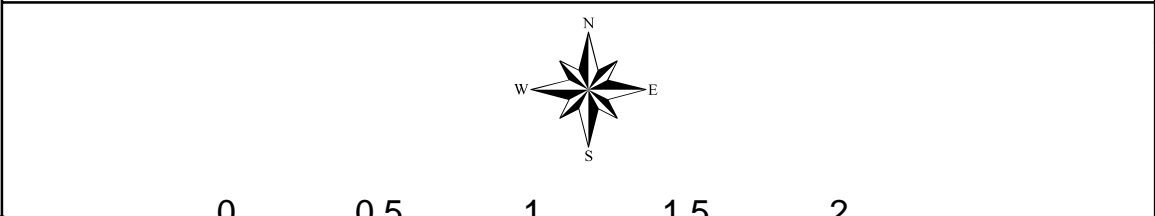
Appendix E - Maps of Land Conveyances and Land Grants





- FERC Boundary
- Major Roads
- County Boundaries
- Reservoirs
- Non-project Yadkin property proposed for sale/transfer ("Subject Property")
- Proposed APGI retained lands (also includes all Project recreation areas [not shown])
- Non-project Yadkin property proposed for sale/transfer to LTCNC ("Subject Property")

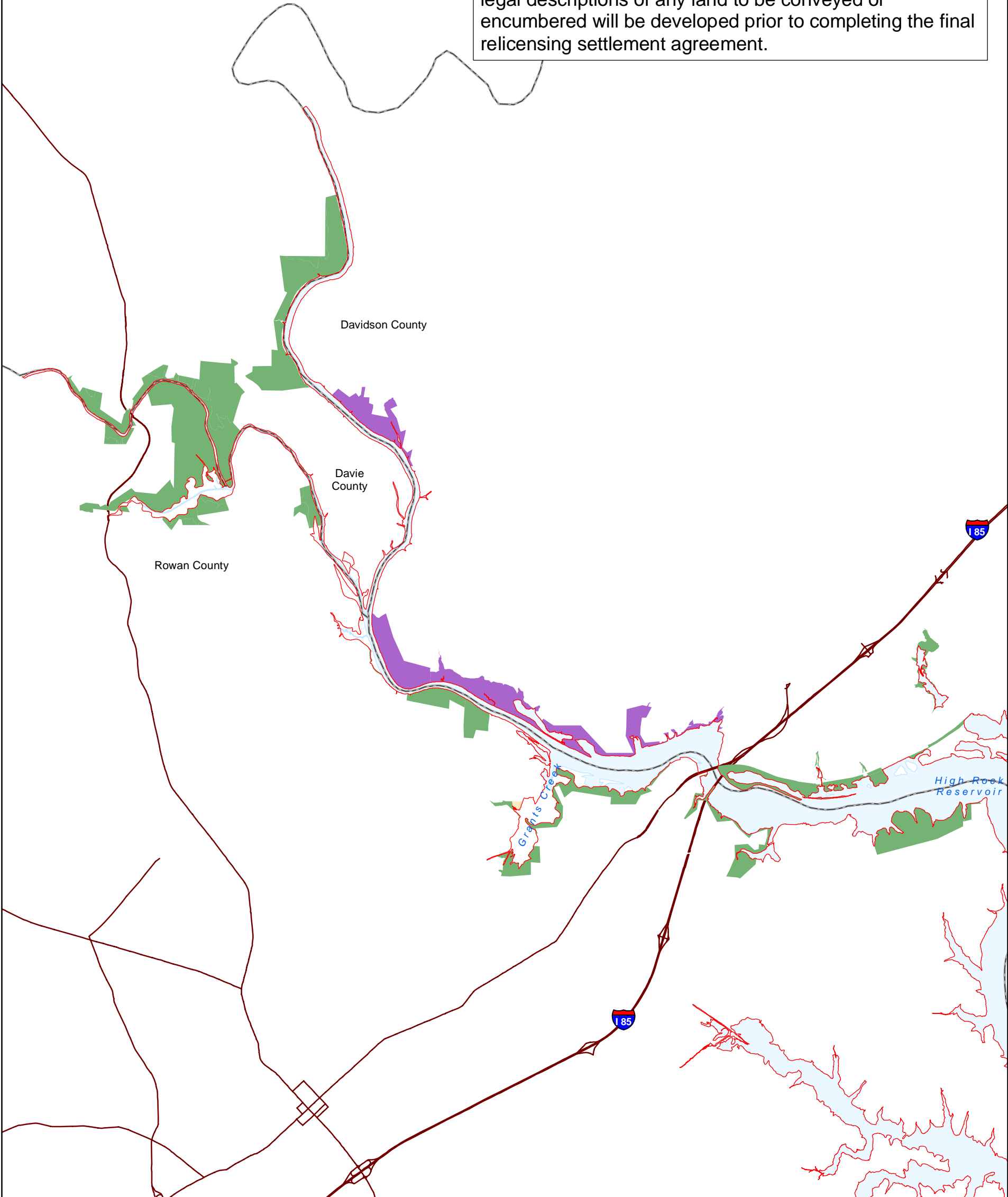
Alcoa Power Generating Inc. - Yadkin Division
Tuckertown Reservoir Lands



February 2007

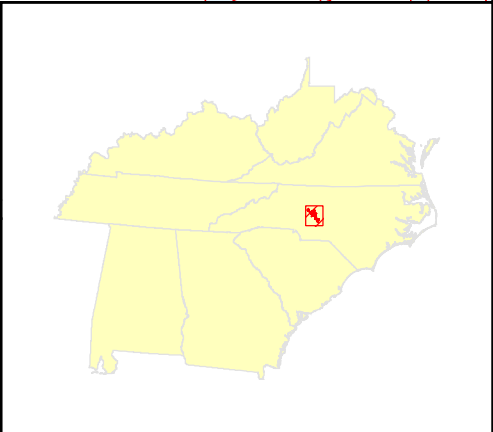
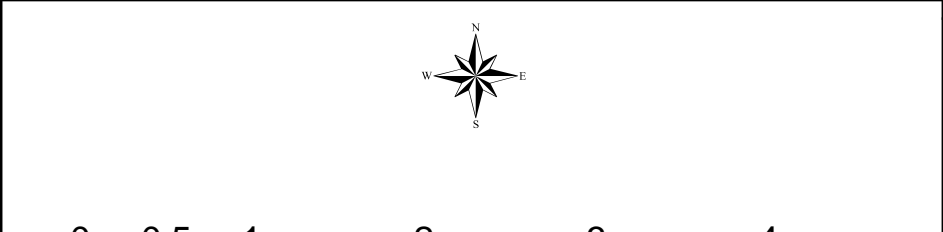
Appendix E-2

Notes:
This map generally represents APGI owned land being discussed with parties participating in the development of the final relicensing settlement agreement. More precise legal descriptions of any land to be conveyed or encumbered will be developed prior to completing the final relicensing settlement agreement.



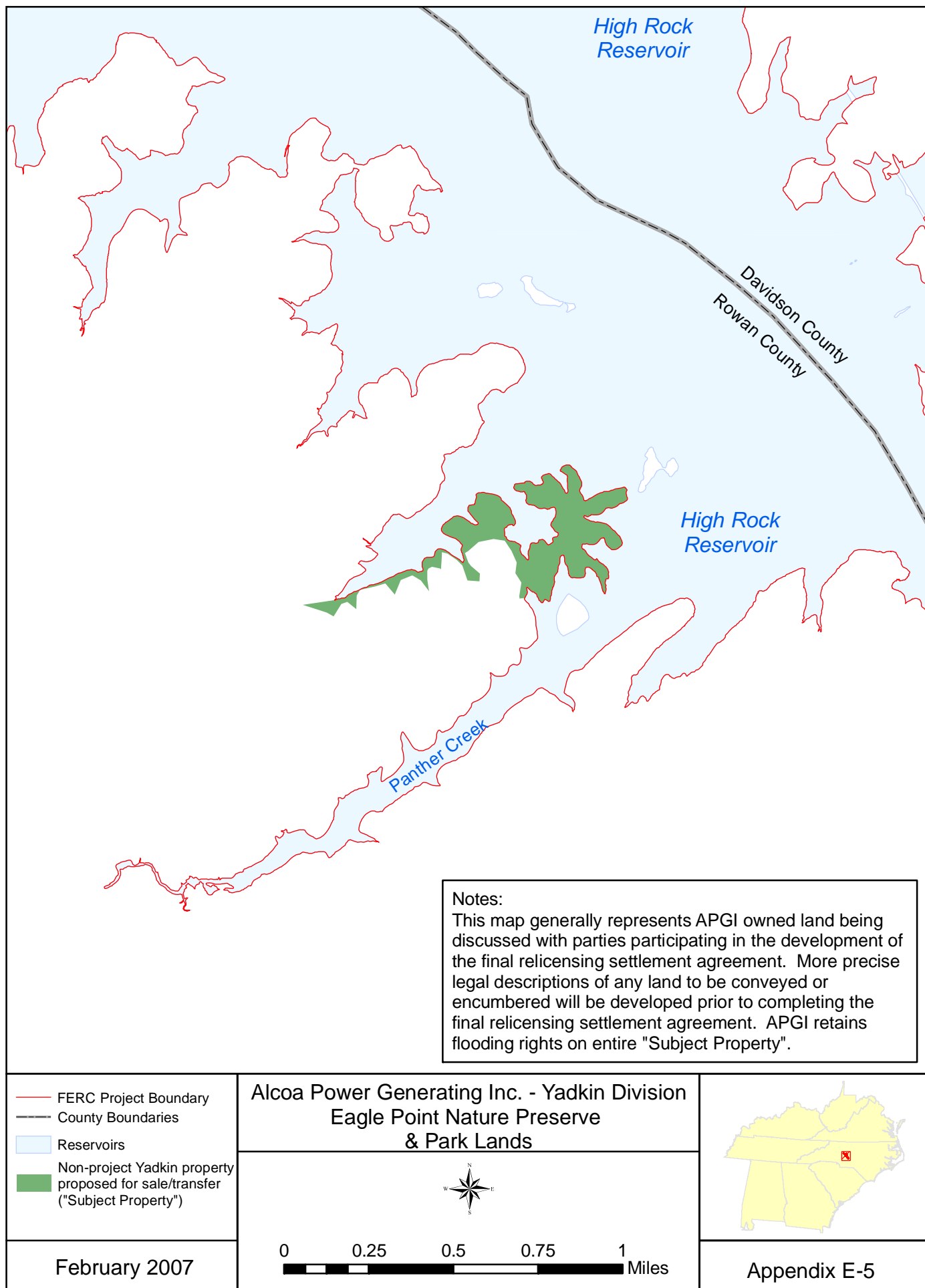
- FERC Project Boundary
- Roads
- County Boundaries
- Reservoirs
- Non-project Yadkin property proposed for sale/transfer ("Subject Property")
- Proposed APGI retained lands (also includes all Project recreation areas [not shown])
- Non-project Yadkin property proposed for sale/transfer to LTCNC ("Subject Property")

Alcoa Power Generating Inc. - Yadkin Division
High Rock Reservoir Lands



February 2007

Appendix E-3





- FERC Project Boundary
- Reservoirs
- ("Subject Property") Non-project
Yadkin property proposed for sale
- ("Subject Property") Non-project
Yadkin property proposed for
donation
- ("Subject Property") Non-project
Yadkin property available for sale.
Right of First Refusal to Town
of Badin
- Retained Land

Alcoa Power Generating Inc. - Yadkin Division Town of Badin Lands



0 100 200 400 600 800
Feet



February 2007

Appendix E-6

Appendix F - List of Parties and Primary Contacts

Contact information for each of the Relicensing Settlement Agreement signatories will be summarized in Appendix F.