Cultural Resources Resource Committee Report

1. Purpose

This Resource Committee Report is the bridge by which Catawba-Wateree (C-W) Relicensing study results are delivered to the relicensing stakeholder teams (State Relicensing Teams and Advisory Groups) for their use and consideration as they negotiate to develop the Agreement-In-Principle (AIP). It has been prepared by the Catawba-Wateree Relicensing Cultural Resources Resource Committee and supplements the detailed study reports available at www.catawbahydrolicensing.com. The purpose of this report is to:

1) consolidate and summarize key study findings;
2) merge the findings of several resource-related studies into a coordinated resource assessment;
3) identify relationships with other resource areas; and,
4) provide the Resource Committee's assessment of potential resource protection, mitigation and enhancement opportunities supported by study findings.

2. Contents

This Resource Committee Report includes:

- For each study within this Resource Committee's overview:
  - A brief summary of each study's purpose(s)
  - A brief summary of the methods/procedure used for each study
  - A brief summary of the Key Findings for each study
- At the Resource Committee level, a coordinated resource assessment of any potential Protection or Mitigation needs or Enhancement opportunities that are supported by study findings.

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Wenonah Haire	Catawba Indian Nation
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Jen Huff	Duke Power
Michelle Hamilton	Eastern Band of Cherokee Indians
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David Jones	South Carolina Department of Parks, Recreation & Tourism
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Table 1
Catawba-Wateree Cultural Resources Resource Committee

3. Study Summary – Purpose, Methods and Findings

The following cultural resource studies were conducted in support of the relicensing effort:

- Cultural 01: Project Cultural Resources Survey;
- Cultural 02: Historic Properties Management Plan; and,
- Cultural 03: Mulberry Site Assessment.

These studies and their findings are summarized below.

3.1 Cultural 01 – Project Cultural Resources Survey

3.1.1 Study Purpose

Identify significant archaeological and historic sites that could be or are affected by operation of the Catawba-Wateree Hydroelectric Project. For purposes of this study, significant sites are those that are eligible for the National Register of Historic Places (NRHP).

3.1.2 Study Methodology

The effort consisted of three activities:

- **National Register of Historic Places Evaluation of Project Structures:** TRC, a qualified historical architecture firm, assessed each project structure through a combination of field inspections and archival research. Two draft reports, one for the North Carolina structures and one for the South Carolina structures, were prepared and provided to the study team for review and comment. Based upon comments provided by the South Carolina Department of Archives & History (SCDAH) and the North Carolina Department of Cultural Resources (NCDCR), the draft reports were revised and finalized.

- **Historic Context of the Catawba-Wateree Hydroelectric Project:** Legacy Research Associates, a qualified archaeological consulting firm, conducted an extensive literature and cartographic survey to identify precontact (i.e., prior to the arrival of Europeans) and historic uses of the areas encompassed by the Catawba-Wateree Hydroelectric Project. Research sources included state files, university libraries, Duke Power's archives and local sources such as museums and historical societies. The information was compiled into a two-volume report with Volume 1 consisting of a written report and Volume 2 consisting of a series of maps. Based on comments from the Catawba Indian Nation (CIN), SCDAH and NCDCR on the draft document, the context was revised and finalized.

- **Archaeological Survey of the Islands within Project Reservoirs:** TRC, a qualified archaeological consulting firm, surveyed all Duke Power-owned islands located within Project reservoirs. In addition, Culp Island, located upstream of Fishing Creek Reservoir in the Wylie Regulated River Reach was surveyed. Surveys consisted of background research, pedestrian surveys and shovel testing as appropriate for each location. Two draft reports, one for the North Carolina islands and one for the South Carolina islands, were prepared and provided to the study team for review and comment. Based upon comments provided by the NCDCR, SCDAH and the CIN, the draft reports were revised and finalized.

3.1.3 Study Findings

A total of 93 archaeological sites were examined. Of these, 12 are eligible for or potentially eligible for the National Register. These sites are referred to as Historic Properties. Eight of these 12 sites are stable, two are undergoing active erosion (38CS339, 38YK427), one site has a high potential for erosion (38LA475) and one site has evidence of recent artifact collecting (31ID340).

In addition to the sites examined during this study, other Historic Properties are located within the Project Boundary or within the areas affected by Project operations according to records obtained from the North and South Carolina State Historic Preservation Offices. There are also additional archaeological and historic resources that are not Historic Properties (i.e., sites not eligible or potentially eligible for the National Register), but that are of interest to relicensing stakeholders. These sites include precontact and historic Native American sites, river fords, ferry sites, mines, historic military features and historic roads. These sites are discussed in detail in the Historic Context.

All of the Project dams and powerhouses with the exception of Cowans Ford were found to be Historic Properties. In addition there are additional outbuildings associated with some of the dams and powerhouses that are Historic Properties. The structures were found to be significant because of their role in the development of the region and the facilities have been maintained in such a way that they continue to retain the significant features of hydros constructed during the first half of the 20th century.

3.2 Cultural 02 - Historic Properties Management Plan (HPMP)

3.2.1 Study Purpose

Develop a HPMP that addresses the management of Historic Properties affected by the Catawba-Wateree Hydroelectric Project. Historic Properties are sites that are eligible for inclusion in the National Register of Historic Places. Development of a HPMP is a requirement of Section 106 of the National Historic Preservation Act.

3.2.2 Study Methodology

Brockington and Associates, a qualified cultural resources consulting firm was retained to develop the HPMP. The Cultural 01 and Cultural 03 study reports were reviewed thoroughly. Input from study team members was solicited regarding issues that needed to be addressed in the HPMP. The existing Shoreline Management Plan and other management plans were reviewed to determine which plans need to address cultural resources management. A draft HPMP, consistent with the FERC guidance document *"Guidelines for the Development of Historic Properties Management Plans for FERC Hydroelectric Projects, May 20, 2002,"* was drafted and provided to study team members for review and comment. After comments are received, the HPMP will be finalized for inclusion in the FERC License application.

3.2.3 Study Findings

The following Project operational impacts may affect Historic Properties:

- Management of historic dams, powerhouses and other Project structures;
- Authorization of non-Project uses of Project lands (i.e., the lake use permitting process);
- Lake and river level fluctuations; and,
- Recreational use of Project lands.

The HPMP addresses these operations as follows:

- Management of historic dams, powerhouses and other structures: These structures will be maintained in a manner that protects their historic features. A listing of Categorical Exclusions will be developed to clearly delineate what types of activities will be exempt from SHPO review.
- Non-Project uses of Project lands: The Shoreline Management Guidelines will include guidance for Lake Management staff in determining which proposed actions will require SHPO review. Specific types of activities including private facility construction, conveyances that do not involve ground-disturbing activities, maintenance of existing facilities, and similar activities with a low probability of affecting Historic Properties will be exempt from review.

Where Historic Properties are known to exist along the shoreline, the shoreline classification will be "Natural."

- Lake level fluctuations: Historic Properties that could be affected by lake level fluctuations will be monitored every 5-10 years depending upon the current state of the site.
- Project recreation facility construction: Duke Power will consult with the SHPOs and THPOs regarding new facility construction. Maintenance and upgrades of existing facilities that do not involve disturbance of areas that were previously undisturbed are exempt from SHPO review.

3.3 Cultural 03 - Mulberry Site Assessment

3.3.1 Study Purpose

Assess the impacts of current, historic and projected future Project operations on the Mulberry site (38KE12) relative to other nature and human-induced impacts affecting the site.

3.3.2 Study Methodology

The study, conducted by Brockington & Associates, included background research, Geographic Information Systems (GIS) analysis and in-field investigations. Historic and modern aerial photography was georeferenced to provide a means for assessing riverbank erosion rates since 1937. Historical descriptions of the mound size and site excavation reports were also utilized to identify how much of the site has eroded during the historic period. To identify lateral bank migration rates during the precontact period, geomorphological and chronological sampling of sediments on both sides of the river was conducted. Optically stimulated luminescence (OSL) techniques were utilized to determine the age of the sediments collected across from the Mulberry site.

3.3.3 Study Findings

The Mulberry site is located downstream of Wateree Hydro on the outside bend of the Wateree River downstream of a creek confluence. The cutbank along the river is susceptible to undercutting due to the hydraulic forces of the river and the sand / gravel mix at the water line. The soil above the waterline is highly cohesive, making it very susceptible to mass wasting during bankfull conditions and floods.

The OSL analysis of sediments deposited across the river from the Mulberry site indicates that precontact lateral migration rates ranged between 0.07 and 0.32 meters per year (m/yr) with an average of 0.10 to 0.20 m/yr. This information provides a basis for understanding what could be expected in terms of erosion on the opposite side of the river. In other words, this information defines what could be considered to be "baseline erosion."

The georeferenced historic aerial photography indicates that erosion rates along the 126 ft msl waterline at the Mulberry Site have ranged from a low of 0.03 m/year to 1.25 m/year with an average rate of 0.10 to 0.53 m/yr for all study points. However, this range includes the impacts associated with an archaeological study in 1952. The archaeological study involved removing or cutting back the vegetation along the eroding face of the mound and cutting a vertical face 10 to 18 feet high along the eroding riverbank. There is no evidence that the disturbed areas were stabilized following completion of the archaeological study. Based upon the georeferenced aerial photography, erosion rates in the vicinity of the mound reached their highest point during the time following the archaeological work and remained elevated for at least 10 years after completion of the study. A second period of above-average erosion was identified between 1975 and 1994. If the high erosion rates from 1953-1964 are disregarded, average annual erosion rates would range from 0.10 m/yr to 0.30 m/yr. Given the uncertainties inherent in photointerpretation of low-resolution

aerial photography, erosion rates from 1937 (the earliest aerial photography used in the evaluation) through the current day do not appear to differ significantly from precontact erosion rates.

Dissenting Opinion

(*Note: The following dissent represents the concerns of the Chad Long, SCDAH; Chris Judge, SCDNR; Gail Wagner, USC; and the owners of the Mulberry site.)*

Although the GIS and geomorphological investigations at the Mulberry site (Whitley and Leigh 2005) have established precontact and historic rates of erosion, the primary causes of erosion are still poorly understood. Factors contributing to soil loss at the site include archaeological excavation, artifact collecting, sheetwash runoff and erosion, and diurnal changes in water height/river flow. The 1952 archaeological excavations at Mound A are undoubtedly responsible for a brief period of rapid soil loss and increased erosion at the site. These excavations, however, do not solely account for the above-average rates of erosion that occurred at Mound A from 1937 to 1994.

The effects of daily river fluctuations on bank stability are of particular interest and concern. It was previously thought that the site was most susceptible to mass wasting during floods that exceeded bankfull stage (30,000 cfs). Whitley and Leigh's (2005: 44-45) comparison of erosion rates with the annual maximum flood record, however, failed to show any direct correlation between the two. The apparent lack of association between floods that exceeded bankfull stage and periods of increased erosion suggests that soil loss at the Mulberry site is possibly a product of hydraulic scour associated with daily river fluctuation.

The relationship between hydroelectric power generation and flows coming out of an unregulated stream adjacent to the Mulberry site is also poorly understood. Anecdotal evidence from the landowner and staff of Mulberry Plantation suggests that flows coming out of the stream are actually reversed during hydropower generation, thus causing further erosion to the southern portion of the Mulberry site. Unfortunately, the GIS and geomorphological investigations (Whitley and Leigh 2005) performed at the request of the study team did not examine the erosion processes affecting the southern portion of the site.

A hydrologic engineering study is necessary to fully understand and evaluate the effects of hydroelectric power generation, sheetwash erosion, and artifact collecting on the Mulberry site. This type of investigation will require long term monitoring to collect real-time data from various locations around the site. Unfortunately, the site will continue to erode during the time it takes to collect the data for the engineering study.

4. Resource Assessment

4.1 Overall Condition of the Resource

The Catawba-Wateree valley has been inhabited for thousands of years. These inhabitants left behind clues to understanding their lives in the form of archaeological and historic sites. These sites include Native American campsites, tool manufacturing areas and villages as well as resources from the historic period like grist mills, ferry landings, homes and industrial buildings.

The archaeological and historic resources of the valley have been and continue to be affected by numerous forces. Agricultural practices from the time when European settlers arrived in the region until the early 1900's led to erosion that destroyed many sites. Development of the hydroelectric reservoirs inundated many Native American sites as well as historic resources like grist mills, fords, homesites and industrial buildings. Because of this loss of resources, protection of the remaining sites is crucial to furthering our understanding of the lives of past inhabitants of the region.

The hydroelectric facilities themselves are also Historic Properties. Their continued economic viability allows for continued maintenance of the facilities as historic structures.

4.2 Resource Problems, Causes, and Needs

Based upon the information gathered in support of the Catawba-Wateree Hydroelectric Project relicensing effort, sites within the Project Boundary and in the areas affected by Project operations are at risk from the following activities. A complete listing with a brief descripton of Historic Properties addressed in this document are listed in Appendix 1.

- Looting (38CS235, 31ID340**, 38KE12);
- Erosion (38CS339, 38CS321, 38LA467, 38YK427, 38KE12);
- Management of historic Project structures;
- Recreational use of Project lands; and,
- Non-project uses of project lands.

A discussion of specific sites and factors affecting them follows.

- Site 38KE12 (Mulberry site): The Mulberry site is actively eroding. This is due to a number of factors including the highly erosive nature of the soils at the site, the location of the site on the outside bend of the river immediately downstream of a tributary, sheetwash erosion, flow from the adjoining creek, and fluctuations in flow levels in the Wateree River. Looting along the eroding edge of the site exacerbates erosion. Given these factors, erosion of the site will continue regardless of operation of Wateree Hydro.

- Site 38CS235: This site sacred to the Catawba Indian Nation has been regularly looted despite Duke Power's and the Catawba Indian Nation's cooperative monitoring efforts.

- Sites 38CS321, 38YK427: These sites, located on islands, are actively eroding. The erosion is caused by lake level fluctuations and wave action.

- Site 38CS307 (Dearborn Armory Site): According to the SC Institute of Archaeology and Anthropology, this site is "an interpretor's dream." The site has remained remarkably intact due to its location on an island with access primarily controlled by Duke Power. The site is not well-known outside of the region. However, awareness of the site and its significance is increasing. This increased attention increases the threat of looting. In addition, trees and other plants threaten the foundations and standing walls of the site. This site is currently being considered for management by the South Carolina Department of Parks, Recreation and Tourism (SCDPRT).

- Sites 38LA467, 38LA468, 38LA469, 38LA470, 38LA471, 38LA473, 38LA474, 38CS325, 38CS327, and 38CS339 are located on islands that are being evaluated for management by the SCDPRT. Management plans for the sites would have to take into account the presence of these Historic Properties.

- Historic Hydro Structures: Changes in technology, required safety modifications and maintenance can adversely affect the historic features of the facilities. Declines in the value of the facilities for electrical generation could also lead to maintenance changes that would diminish the historic characteristics of the facilities.

4.3 Assessment of Resource Improvement Options

Management of cultural resources in a FERC relicensing is subject to the requirements of Section 106 of the National Historic Preservation Act. The requirements of the Licensee are spelled out in the Historic Properties Management Plan (HPMP). Therefore, some of the options described below may fall within the HPMP (i.e. within FERC's jurisdiction) and some may fall outside the HPMP. Those actions that might not be required to comply with Section 106 regulations are asterisked.

The Resource Improvement Options listed in this report represent a menu of initiatives for consideration by the State Relicensing Teams and Regional Advisory Groups as they negotiate the Agreement-in-Principle (AIP). It is not necessary or expected for all of these initiatives to be included in the AIP. Also, other initiatives in combination with or in lieu of the options listed in this report may be included in the AIP.

Some alternatives include both an up-front or one-time capital cost while some activities would require only on-going expenditures. One-time costs are titled "Initial Cost Estimate;" "Annual Costs" are anticipated to extend through the life of the License.

4.3.1 **Site 38CS307 (Dearborn Amory Site)**

Management actions at the site should be dictated by the level of public interpretation that is desired. Therefore, there is a whole range of actions that could be taken that range from protecting the site up to providing for public interpretation of the sites. Alternatives are listed from those that provide the least amount of public interpretation to those that provide for the greatest amounts of public interpretation.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
1	Control vegetation that threatens building foundations and standing structures	$20,000	$5000
2	Monitor site for looting	$0 - $25,000	$5000
3	Provide controlled access for authorized visitors	$0	$5000
4	*Place a permanent conservation easement on the site to be held by a SC agency	$10,000	$1000
5	*Develop a website and curriculum using the "Teaching with Historic Places" model developed by the National Park Service	$50,000	$0
6	*Conduct additional archaeological investigations and curate artifacts in a public facility/museum for public interpretation	$150,000+	$0
7	*Lease island to SCDPRT through the Access Area Improvement Initiative for inclusion in the State Parks system with annual site monitoring	$0	$1000
8	*Provide start-up funding for state park at the island	To be negotiated	To be negotiated

4.3.2 Sites located on islands with recreational use (Sites 38LA467, 38LA468, 38LA469, 38LA470, 38LA471, 38LA473, 38LA474)

Many of the islands with the Project boundary are utilized for recreation. However, a number of islands are being evaluated for lease to SCDPRT for management as state parks. When these islands contain Historic Properties, the recreational use must be compatible with protection of the Historic Properties. If SCDPRT does not manage the islands, then the sites must be monitored.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
9	*Lease islands to SCDPRT with annual site monitoring	$0	$1000
10	Duke Power manages islands and monitors sites every 10 years (cost estimate averaged across 10 years)	$0	$1000

4.3.3 Site 38KE12 (Mulberry site)

Management alternatives for the Mulberry site pose significant challenges. Two alternatives are discussed. These alternatives would require the formation of partnerships to share in work activities and funding. Neither option could be pursued without the buy-in of the property owner.

- Data recovery efforts: The University of South Carolina has held frequent field schools at the site since 1979. With additional funding, these efforts could be enhanced with additional staff to focus on recovering data from the site prior to its subsequent erosion. Data recovery could be conducted by field schools or archaeological consulting firms. The site is currently leased to a hunt club and is, therefore, inaccessible for 6 months of each year. Complete data recovery might take as long as 5 field seasons. Complete data recovery at the mound by the University of South Carolina is estimated to cost approximately $850,000.

- Stabilize the eroding riverbank: Stabilizing the eroding riverbank is a significant challenge due to the nature of soils at the site, the height of the cutbank, and the hydraulics of the river at the site. This is compounded by the effects of flows including the potential for overbank flows from the adjacent creek. Further compounding the dilemma is that stabilization of riverbanks typically involves cutting back the bank to reduce the steepness of the slope. In this situation, this would be directly impacting the very site that is being protected. Stabilization of the slope could impact the aesthetics of the river and navigation within the river channel.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
11	Monitor site and erosion rates	$0	$15,000
12	*Data recovery efforts	$850,000	$0
13	*Stabilize the riverbank	$500k - $1 million	$15,000 +

4.3.4 Historic Cemeteries (31ID340**, 31BK427**, 31BK428**)

Protection of these cemeteries is a requirement of North Carolina laws. As these gravesites are located on islands, monitoring presents a challenge. Relocating the graves would be logistically challenging.

- Monitor sites: Utilize a partnership of Duke Power staff or local volunteer monitors to maintain the sites and report any vandalism. Ensure monitors are appropriately trained and that any headstones are recorded.
- Relocate graves if monitoring indicates need. This would require compliance with state laws including locating a place to relocate the graves to.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
14	Monitor sites	$0	$5000
15	*Relocate sites	$10,000 / grave	$0

4.3.5 Historic Properties or potential Historic Properties located on reservoir shorelines (Sites 31ID327, 31ID328, 31CT232, 31CT233, 31LN138, 31LN189)

Many of these sites were identified prior to the filling of Lake Norman and little is known about them. Since the sites have not been examined since their original identification, the sites may no longer exist. The best time to examine them would be during a large, extended drawdown of Lake Norman. There are currently no such drawdowns planned. Management of this type of site is currently addressed in the HPMP. This category also includes the rock wall located on the western shore of Lake Wateree.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
16	Monitor sites every 10 years (cost estimate averaged across 10 years)	$0	$1000
17	Reevaluate sites during planned extended drawdown	$25,000	$0
18	Modify shoreline classification to “Natural” to prevent future non-Project uses of site	$10,000	$1,000

4.3.6 Sites in stable condition (Sites 31ID40, 31ID332/332**, 31BK177, 31LN193, 38CS327, 38CS345, 38LA475, 38LA476)

Management of these sites is currently addressed in the HPMP. As the sites appear to be stable, they should be protected from disturbance. In the event that their status changes (i.e. they are threatened by recreational use, erosion or looting), other management strategies should be considered. Two of the sites (31ID332/332**, 31LN193) may extend lakeward. A complete assessment of the sites’ values for research potential can not take place without additional investigations.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
19	Monitor sites every 10 years (cost estimate averaged across 10 years)	$0	$1000
20	Modify shoreline classification to “Natural” to prevent non-Project uses of site	$10,000	$1,000
21	Conduct archaeological investigations of 31ID332/332** and 31LN193 during large planned drawdowns.	$25,000	$0

4.3.7 Historic Hydroelectric Structures

Continued economic operation of the hydroelectric facilities is key to their on-going use as hydroelectric facilities. Currently planned modifications to the structures that would affect their historic characteristics are discussed below. Annual training of hydro personnel and documentation of significant features of Project structures would be necessary to implement the following activities.

- Maintenance of structures’ exteriors: As long as materials are replaced in-kind, no consultation with the SHPOs is necessary. If dissimilar materials are to be used, exteriors are to be modified or new structures are to be constructed, consultation with the SHPOs will occur with the goal being to minimize adverse effects to the historic features of the structures in a cost-effective manner. When the modifications will adversely affect the historic features of Project structures, Duke Power will develop a documentation plan to document the historic features of the Project structures prior to modification. In case of

an emergency that falls under the Hydroelectric Project Maintenance and Emergency Management Protocol (Operations 06), the consultation process spelled out there will be followed.

- Maintenance of structures' interiors: Duke Power will endeavor to maintain significant features comparable to their state at the date of the issuance of the License. Duke Power will maintain the generation equipment, controls and equipment utilized to transmit electricity to the electrical grid utilizing the technology that best supports the continued operation of each facility. For all activities occurring inside Project structures, Duke Power will not be required to consult with the SHPOs.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
22	Maintenance of exteriors & interiors	$10,000	$7,500
23	Assess the eligibility of Cowans Ford Hydro after it becomes 50 years old	$8,000	$0

Note regarding the Bridgewater Development: Due to FERC dam stability requirements, dam stabilization activities are being implemented at the development. Engineers have determined that in order to achieve optimal stabilization, the Bridgewater Powerhouse will be removed. The timing of this activity with respect to relicensing is unclear, but it may occur prior to FERC issuing a new License. However, options to mitigate for this adverse effect to the Historic Property are listed below.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
24	Photodocumentation of the powerhouse	$25,000	$0
25	Development of interpretative signage	$25,000	$1,000
26	Development of interpretative written materials	$25,000	$0

4.3.8 Site 38CS235

Protection of this sacred site will require on-going protection measures.

- Develop a monitoring program. Monitor site weekly. The monitoring efforts should utilize both surveillance equipment as well as inspection by trained personnel.
- *Enter into management agreement with CIN that would enable the CIN to manage the site consistent with the tribe's values.
- *Conduct data recovery efforts. However, as the site involves burials, data recovery efforts would disturb human remains and burial goods. Therefore, this alternative is currently not acceptable to the CIN.
- *Place site in the Natural Heritage Program under the management of the South Carolina Natural Heritage Program. This would provide additional legal protections to the site and enhance enforcement officer presence at the site. Currently, this alternative is not acceptable to the CIN.
- Prosecute any artifact collectors apprehended on site.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
27	Monitoring program	$0 – $15,000	$15,000
28	Management agreement with CIN	$5,000	$1,000

4.3.9 Sites that are eroding (Sites 38CS321, 38CS339, 38LA467, 38YK427)

These sites, located on islands, are actively eroding. These sites represent the opportunity to increase knowledge of Native Americans in the region. There is currently a lack of knowledge regarding this time period in the region.

- Stabilize site using riprap. Cost to stabilize the sites is directly related to whether contractors already have barges located on the reservoirs for delivery of materials to the site. Monitoring would be conducted at these sites every 5 years.
- Conduct data recovery efforts. Efforts would be focused on excavation of a percentage of the site, not the entire site

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
29	Stabilize sites 38CS321, 38CS339, 38LA467 (cost estimate per site)	$250,000 - $500,000	$1,000
30	Stabilize site 38YK427	$50,000	$1,000
31	Data recovery (cost estimate per site)	$150,000	$0

In addition to the Historic Properties identified above, additional initiatives to address stakeholder interests are discussed below.

4.3.10 Education of law enforcement staff and officers of the courts

The enforcement of laws protecting cultural resources including human burials is vital to the protection of these sites. Local law enforcement personnel are not always aware of the laws that protect sites and magistrates, county solicitors and district attorneys are sometimes hesitant to prosecute cases to the fullest extent possible. An education initiative to address this gap, in cooperation with state agencies and Native American tribes, could lead to significant gains in the protection of archaeological and historic sites. Such an educational initiative could also target local and state historical socities.

- *Develop a video about the laws protecting archaeological and historic sites in cooperation with law enforcement training facilities in each state. Distribute the video to law enforcement personnel including wildlife management officers as well as state and local prosecutors.
- *Develop a computer-based training module, in cooperation with law enforcement training facilities in each state, about laws protecting archaeological and historic sites.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
32	*Develop training video for both states	$40,000	$1,500
33	*Develop CBT for both states	$40,000	$1,500

4.3.11 Sites that are not eligible for the National Register

The Catawba-Wateree area has a rich and varied history. Numerous historic features including fords, ferry sites, mill sites, military routes, roads, bridges and other similar sites are located throughout the region. Many of these sites are not located on Project lands or have been inundated. Protection of the sites that remain can be enhanced by educating the public about the history of the region.

- Develop a website or printed material utilizing the historic context.
- Develop information signs about the historic hydros.
- Provide information collected for the Cultural 01 study to local museums, historical societies and other interested parties.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
34	Website about history of region	$15,000	$1,500
35	Informational signs about Project and Project structures	$5,000/sign	$1,000
36	Printed material about history of the region	$15,000	$1000

4.3.12 Overmountain Victory Trail (OVT)

The OVT is a recreational resource with a cultural component. Therefore, there is a strong link with the Recreation 01 study. The alternatives below address activities associated with the historic trail route, not the trail corridor.

- Establish interpretative signage about the trail in areas where the historic route is on Project lands. This is primarily the area adjacent to the Catawba Dam and Paddy Creek Dam at the Bridgewater Development.
- *Provide funding for educational pieces about the OVT, its history and its route.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
37	Establish signage on Project lands in the vicinity of the historic trail route (cost per sign)	$5,000	$1,000
38	*Funding for public education about the OVT	To be negotiated	To be negotiated

4.3.13 Permitting of Non-Project Uses of Project lands

The permitting of non-Project uses of Project lands is governed by the requirements of the Shoreline Management Plan (SMP). Duke Power has been complying with a Programmatic Agreement (PA) for Cultural Resources consideration in the SMP since 2001. The PA identifies activities that are most likely to affect cultural resources and requires consultation with the SHPOs on these activities. These activities included conveyances, dredging in areas that have not been previously dredged and activities associated with the development of commercial facilities.

Option #	Option	Initial Cost Estimate	Annual Cost Estimate
39	Continue consultation process with addition of the EBCI and CIN THPOs	$0	$1000

APPENDIX 1
Historic Properties within the Area of Potential Effect

Site	Description, Significance, Cultural Component	Condition
31ID40	Mississippian	Inundated
31ID327	Unknown precontact on shoreline	Eroded / Stable
31ID328	Woodland / Mississippian on shoreline	Eroded / Stable
31ID332/332**	Unknown precontact and 18th – 19th century homesite	Undisturbed; may extend into lake
31ID340**	19th – 20th century; cemetery	Intact, but signs of looting
31CT232	19th – 20th century on shoreline	Eroded / Stable
31CT233	18th – 19th century on shoreline	Eroded
31LN 188	Woodland / Mississippian on shoreline	Unknown
31LN189	Unknown precontact; 18th – 19th century; on shoreline	Unknown
31LN193	Woodland / Mississippian; Research potential	Good; may extend lakeward
31BK177	18th – 20th century river ford	Inundated
31BK427**	Historic Berry Cemetery	Stable
31BK428**	Historic Frizzard Cemetery	Undisturbed
38CS307	Historic armory site	Good
38CS321	Woodland / Mississippian; Research potential	Eroding
38CS325	Native American Sacred Site	Stable; threat of looting
38CS327	Early through Middle Archaic; Research potential	Stable
38CS339	Early to Late Archaic; 19th century	Eroding
38CS345	Middle Archaic; Research potential	Stable
38KE12	Mulberry Site	Eroding; looting
38LA467	Woodland / Mississippian; not eligible, but contributes to eligible archaeological district	Eroding
38LA468	Woodland / Mississippian; Research potential; part of eligible archaeological district	Stable
38LA469	Woodland / Mississippian; not eligible, but contributes to eligible archaeological district	Stable
38LA470	Woodland / Mississippian; not eligible, but contributes to eligible archaeological district	Stable
38LA471	Archaic to Mississippian; Research potential; part of eligible archaeological district	Stable
38LA473	Woodland / Mississippian; not eligible, but contributes to eligible archaeological district	Stable
38LA474	Woodland / Mississippian; not eligible, but contributes to eligible archaeological district	Eroded; located in floodplain
38LA475	Woodland; Research potential	Stable / Potential future erosion

Site	Description, Significance, Cultural Component	Condition
38LA476	Woodland / Mississippian; Research potential	Stable
38YK427	Archaic through Woodland; Research potential	Eroding; site may extend lakeward
Bridgewater Development	Historic hydroelectric facility	Powerhouse to be removed due to dam stability requirements
Rhodhiss Development	Historic hydroelectric facility	Stable
Oxford Development	Historic hydroelectric facility	Stable
Lookout Shoals Development	Historic hydroelectric facility	Stable
Mountain Island Development	Historic hydroelectric facility	Stable
Wylie Development	Historic hydroelectric facility	Stable
Fishing Creek Development	Historic hydroelectric facility	Stable
Great Falls-Dearborn Development	Historic hydroelectric facility	Stable
Rocky Creek-Cedar Creek Development	Historic hydroelectric facility	Stable
Wateree Development	Historic hydroelectric facility	Stable