Environmental Justice Study Report

Bad Creek Pumped Storage Project

FERC No. 2740

Prepared for:

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EXECUTIVE SUMMARY

The Bad Creek Pumped Storage Project (Bad Creek Project or Project; FERC No. 2740) provides a variety of socioeconomic benefits to the region by providing clean, renewable energy and energy storage capabilities, recreational opportunities, and wildlife habitat preservation (Duke Energy 2022). Duke Energy is currently evaluating opportunities to add pumping and generating capacity by adding a second power complex (Bad Creek II Complex) adjacent to the existing Project. The additional facilities proposed, if pursued, would increase that regional benefit by supporting local employment and economic output, and result in additional state and local tax revenues (Duke Energy 2022). The area surrounding the Project has minimal residential development, and it is anticipated that the small population of environmental justice (EJ) individuals would see an overall benefit from the added economic growth of the Bad Creek II Complex construction. This study report describes the existing Bad Creek Project with and without the proposed additions and provides an analysis of the impacts that can reasonably be expected as they relate to EJ communities in the surrounding area.

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ACRONYMS

B	
Bad Creek Project	Bad Creek Pumped Storage Project, FERC No. 2740
C	
Commission	Federal Energy Regulatory Commission
CT	census tract
D	
DPM	diesel particulate matter
Duke Energy	Duke Energy Carolinas, LLC
E	
EJ	environmental justice
F	
FERC	Federal Energy Regulatory Commission
K	
KT Project	Keowee-Toxaway Hydroelectric Project, FERC No. 2503
N	
NEPA	National Environmental Policy Act
P	
PAD	Pre-Application Document
PM	particulate matter
Project	Bad Creek Pumped Storage Project, FERC No. 2740
S	
SCDNR	South Carolina Department of Natural Resources
SD2	Scoping Document 2
U	
USEPA	U.S. Environmental Protection Agency

1.0 INTRODUCTION

On February 23, 2022, Duke Energy Carolinas, LLC (Duke Energy) submitted the Bad Creek Pumped Storage Project (Bad Creek Project or Project; FERC No. 2740) Notice of Intent to Relicense and Pre-Application Document (PAD) to the Federal Energy Regulatory Commission (FERC or Commission). The PAD included an alternative licensing proposal for installation of additional energy storage and generation capacity by constructing a new 1,400-megawatt power complex (Bad Creek II Complex) adjacent to the existing Bad Creek Powerhouse to meet the growing need for energy storage and renewable energy production across Duke Energy's service territories. Duke Energy plans to make a final decision regarding the alternative licensing proposal for the construction of the Bad Creek II Complex prior to the submittal of a Final License Application for the Bad Creek Project.

Following the submittal of the PAD, the Commission filed a letter on June 16, 2022 requesting that Duke Energy conduct an Environmental Justice (EJ) Study for the Bad Creek Project relicensing pursuant to Section 5.9 of the Commission's regulations. The request for an EJ Study aligns with the socioeconomic resource issues identified by the Commission in Scoping Document 2 (SD2)[1] issued for the Bad Creek Project relicensing on August 5, 2022. Resource issues identified in SD2 address the effects of continued operations under the existing license as well as potential construction and operation of a second powerhouse (Bad Creek II Complex) during the new license term.

This study evaluates impacts to EJ communities as they relate to 1) relicensing the existing Project without construction of the Bad Creek II Complex, and 2) relicensing the existing Project and including construction of the additional facilities as described in the PAD alternative licensing proposal. The following impacts to the region surrounding the Bad Creek Project, as they relate to EJ and as requested by FERC in SD2, are addressed in this study:

- Effects of Bad Creek Project construction and operation activities on local roads (including traffic), housing, businesses, employment opportunities, and government services; and
- Effects of Bad Creek Project construction and operation activities on human health or the environment in identified environmental justice communities.

[1] Scoping Document 1 was issued for the Project on April 22, 2022 and superseded by Scoping Document 2 on August 5, 2022.

2.0 CURRENT OPERATION

The Bad Creek Project began operation in 1991 after roughly ten years of construction. Located in Oconee County, South Carolina, approximately eight miles north of Salem, South Carolina, the Bad Creek Reservoir (upper reservoir) was formed when Bad Creek and West Bad Creek were dammed and serves as the Bad Creek Project's upper reservoir. Lake Jocassee (lower reservoir) serves as the Bad Creek Project's lower reservoir and is licensed as part of Duke Energy's Keowee-Toxaway Hydroelectric Project (KT Project; FERC No. 2503). The structures and features of the Bad Creek Project include the upper reservoir and dams, inlet/outlet structures in the upper and lower reservoirs, a water conveyance system, an underground powerhouse, tailrace tunnels, transmission facilities, and an approximately 9.25-mile-long transmission line corridor extending from the Bad Creek Project to the KT Project's Jocassee switchyard. The entirety of the Bad Creek Powerhouse is built within a large cavern inside a mountain. Similar to other hydroelectric stations, the engineering design of the Bad Creek Project involves the flow of water to produce electricity; however, the roughly 1,200-foot vertical distance between the upper and lower reservoirs makes the Bad Creek Project well-suited to take advantage of gravity to produce larger quantities of electricity for a given flow rate.

The Bad Creek Project was originally designed as a "weekly cycle" facility with approximately six hours of generation per day. This allowed Duke Energy to utilize roughly 29 hours of storage in the upper reservoir to generate at full load three hours in the morning and three hours in the evening, five days per week, and then pump back for a portion of each night and over the weekend utilizing Duke Energy's baseload coal and nuclear fleet. Current operations at the Bad Creek Project are "daily cycle" mode, alternating between generating and pumping on a daily basis, with the upper reservoir surface elevation typically maintained in the upper 50 to 60 feet, compared to a maximum drawdown of 160 feet. This operating mode allows Duke Energy to maximize head, energy density, and plant/unit efficiency and utilize the Bad Creek Project like a large battery to help balance the regional transmission system. Additionally, this mode of operation results in utilization of only 30 to 40 percent of the storage capacity of the Bad Creek Project due to the upper reservoir operating in the upper third of possible drawdown range.

The 30-year-old Bad Creek Project is one of the most powerful and flexible energy generation and storage assets in Duke Energy's system. Built primarily to store surplus

energy from baseload nuclear and fossil-fuel-driven power plants during times of low energy demand, today the Bad Creek Project is used to balance an increasingly complex energy grid. By pumping water from Lake Jocassee up to the Bad Creek Reservoir, the Bad Creek Project is able to provide storage of surplus baseload energy during low demand periods. While the Bad Creek Project is in turbine operation mode, water runs from the upper reservoir down to Lake Jocassee, providing power back to the grid when energy demand is higher or when renewable generation is unavailable (Figure 4.1).

3.0 PROPOSED ACTION

The demand for energy and energy storage has been steadily on the rise in the southeastern region of the country. In an effort to meet this growing demand, Duke Energy is proposing an expansion to the Bad Creek Project that will double the energy output of the station. The proposed Bad Creek II Complex would utilize the existing upper and lower reservoirs and consist of a new inlet/outlet within the existing upper reservoir, water conveyance system, and underground powerhouse. Additionally, a new inlet/outlet along the shoreline of the Whitewater River arm of Lake Jocassee would be constructed for the lower reservoir. As currently conceptualized, construction of the new Bad Creek II Complex would include the following additions to the FERC Project Boundary, with additional pertinent discussion included below:

- Upper reservoir inlet/outlet
- Low and high pressure headrace tunnels
- Manifold and penstock tunnels
- Vertical shaft
- Transformer yard
- New 525-kV switchyard
- New 525-kV transmission line from the new switchyard to the Jocassee switchyard (utilizing the existing transmission line right-of-way)
- Underground power complex
- Draft tube and tailrace tunnels
- Lower reservoir inlet/outlet

The Bad Creek II Complex underground powerhouse will be arranged and sized similarly to the existing Bad Creek Project powerhouse. In general, most of the features for the Bad Creek II Complex will be submerged, underground, and/or within lands classified as "project operations," which are not accessible to the general public. The location of the proposed lower reservoir inlet/outlet structure has been chosen to minimize construction-related environmental impacts to the Whitewater River arm of Lake Jocassee. Nevertheless, the Whitewater River cove of Lake Jocassee is anticipated to be closed to the public during construction of the Bad Creek II Complex.

4.0 DESCRIPTION OF STUDY AREA

The geographic scope (i.e., study area) of this EJ Study includes all areas within one mile of the proposed expanded Bad Creek Project Boundary[2], and within five miles of the proposed construction of the Bad Creek II Complex (Figure 4.1). The area surrounding the Bad Creek Project is generally rural, with minimal residential development on Lake Jocassee, and no residential development on the Bad Creek Reservoir. The expanded Project Boundary encompasses 1,490 acres, and includes primarily deciduous forest and open water, with mixed forest, pastureland, and agricultural land, and smaller amounts of development, barren land, and scrubland (Table 4.1).

Table 4.1 Land Use in the Expanded Project Boundary, Not Including the Transmission Line Corridor

Land Use Type	Percent
Barren Land	1.0
Cultivated Crops	2.4
Deciduous Forest	36.5
High Intensity Development	1.0
Medium Intensity Development	1.1
Low Intensity Development	2.1
Developed Open Space	3.3
Evergreen Forest	1.7
Hay/Pasture	8.2
Herbaceous	6.3
Mixed Forest	14.8
Open Water	20.5
Shrub/Scrub	1.1

Source: Duke Energy 2022

Each state, county, and applicable census block within the proposed expanded Bad Creek Project Boundary and proposed Bad Creek II Complex study area has been analyzed for

[2] Construction of the Bad Creek II Complex would require modifications to the existing Project Boundary to enclose the new facilities. Duke Energy currently owns or maintains under a property easement all lands that would be required for construction of the Bad Creek II Complex and intends to propose an expanded Project Boundary in the Final License Application that would include all lands necessary for access to, or control of, the expanded Project facilities.

EJ populations and potential impacts to them. Thirteen total census blocks have been identified within the study area. Of the thirteen total census blocks, five census block groups within four counties and two states are located within one mile of the Bad Creek Project: one in Jackson County, North Carolina; one in Transylvania County, North Carolina; two in Oconee County, South Carolina; and one in Pickens County, South Carolina. An additional eight census blocks within four counties and three states are located within five miles of the proposed Bad Creek II Complex: one in Rabun County, Georgia; one in Macon County, North Carolina; two in Pickens County, South Carolina; and four in Oconee County, South Carolina.

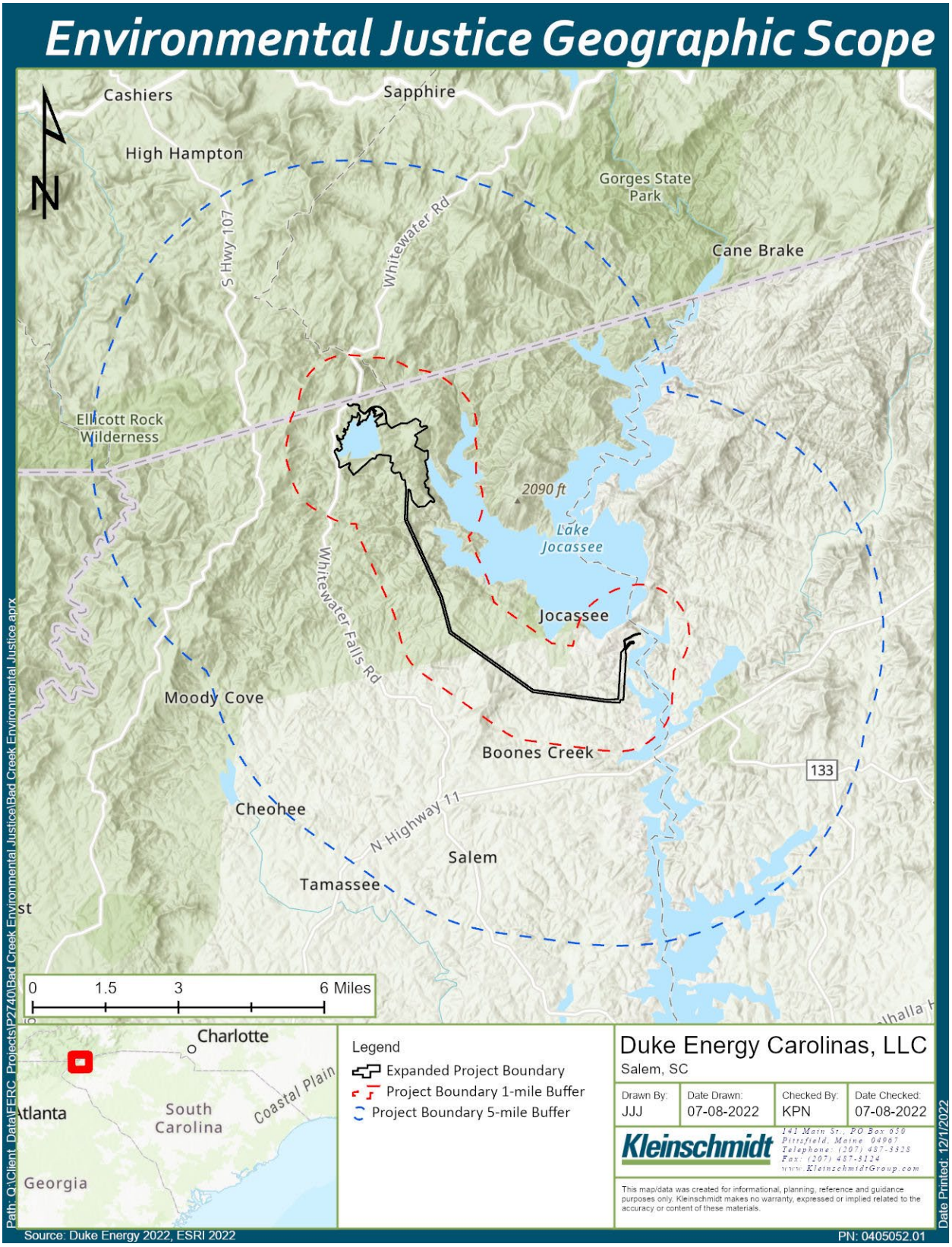

Figure 4.1 Environmental Justice Study Area

5.0 METHODOLOGY

Six objectives for accomplishing study goals were identified as part of the EJ Study Plan. The methods for accomplishing these objectives are outlined below.

Objective 1: Identify the presence of EJ communities that may be present within the study area.

The methodology used to identify the presence of EJ communities within the Bad Creek Project vicinity was adopted from the U.S. Environmental Protection Agency's (USEPA) *Promising Practices for EJ Methodologies in NEPA*[3] *Reviews* (2016). A table was prepared that included the racial, ethnic, and poverty statistics for each state, county, and census block group within the geographic study area (Table 6.1). The table includes information from the U.S. Census Bureau's most recently available (2020a, 2020b, 2020c) American Community Surveys 5-Year Estimates for each state, county, and block group within the scope of this study. Racial data was obtained using Table B03002, and poverty data was obtained using Table B17017.

The thresholds used for populations meeting EJ status are as follows:

- For minority populations, the meaningfully greater analysis method was used, where the total minority population for a block group is at least 10 percent greater than that of the county population:

  (County minority population) x (1.10) = threshold above which a block group minority population must be for inclusion as an EJ community

- The "low-income threshold criteria" was used to identify EJ communities based on income level, where the block group must have a higher percentage of low-income households than the county.

Objective 2: Identify the presence of non-English speaking populations that may be present within the study area.

The presence of non-English speaking populations was identified using Table B16004 from the most recently available U.S. Census Bureau American Community Survey 5-Year Estimates for each state, county, and block group within the scope of this study.

[3] National Environmental Policy Act

Objective 3: Identify sensitive receptor locations in the study area.

Sensitive receptor locations include, but are not limited to, schools, daycare centers, hospitals, and elderly care facilities. Sensitive receptor locations within the scope of this study were identified using the U.S. Geological Survey National Structures Dataset. The dataset consists of the name, function, and location of manmade facilities as determined by disaster planning and emergency response needs (USGS 2022). The data from The National Map viewer was downloaded as an Esri™ File Geodatabase, and then populated onto a map of the Bad Creek Project vicinity showing the 1-mile and 5-mile buffers around the proposed expanded Project Boundary.

Objective 4: Identify outreach strategies to engage EJ communities and non-English speaking populations in the relicensing if present within the study area.

The Environmental Justice Guidance Under the NEPA (USEPA 1997) suggests outreach could engage universities, labor organizations, local schools and libraries, senior citizen's groups, civic associations, environmental and EJ non-governmental organizations. Additionally, EJ outreach employed by the USEPA has consisted of engagement calls, dialogue meetings and the use of "data sharing tools." Engagement calls are typically hosted over ZOOM™ or a similar platform to maintain a dialogue with members of the public on EJ issues. Dialogue meetings are very similar to engagement calls; however, they are targeted towards specific stakeholders, members of the community, or tribal governments. Data sharing tools include the use of web-based data and information sharing tools to disseminate information related to EJ issues.

This document discusses the potential need for outreach to EJ communities within the study area, above and beyond that currently proposed for the relicensing process. As this document has been developed prior to a decision regarding the development of the Bad Creek II Complex, targeted EJ outreach has not yet been undertaken.

Objective 5: Discuss:

a. **The effects of the relicensing and Bad Creek II Complex construction on identified EJ communities;**
b. **Effects that are disproportionately high and adverse; and**
c. **Potential effects on non-English speaking communities and sensitive receptor locations, if present within the study area.**

Potential effects to EJ communities were identified using the USEPA's *Promising Practices for EJ Methodologies in NEPA Reviews* (2016) document and regional and site-specific conditions that may contribute to impacts. These are discussed in Section 7.0 of this study report.

Objective 6: Identify mitigation measures to avoid or minimize project effects on EJ communities, non-English speaking communities, and sensitive receptor locations, if present within the study area.

Mitigation measures for existing and potential Project effects are further discussed in Section 7.1 of this study report.

6.0 RESULTS

Using the meaningfully greater analysis method, one EJ community based on race was identified out of the thirteen census block groups within the scope of this study. Located in Transylvania County, North Carolina, the one race-related EJ community is primarily within the 5-mile buffer zone around the Project, with the southwestern portion located within the 1-mile buffer. Two EJ communities were identified based on income below poverty level, measured by household: one in Oconee County, South Carolina, and one in Transylvania County, North Carolina, both of which are located within the 5-mile buffer zone (Table 6.1; Figure 6.1). None of the identified EJ communities are in block groups that border Project lands (Figure 6.1).

Within the thirteen block groups in the study area, one block group includes a population of non-English speaking individuals. This block group is located in Pickens County, South Carolina, with one percent of the population unable to speak English (Table 6.1).

No sensitive receptor locations are present within the 1-mile radius surrounding the proposed expanded Bad Creek Project Boundary. Within the 5-mile radius around the proposed expanded Bad Creek Project Boundary there are two sensitive receptor locations: two schools, located within the 5-mile radius, on the southwestern extremity of the potentially effected zone (Figure 6.2). A table depicting the distances of identified sensitive receptor locations to the Bad Creek Project Boundary, the primary area within which proposed activities would take place, is provided as Table 6.2.

Table 6.1 Race and Ethnicity, Low Income, and English-Speaking Data for the 5-Mile Radius Around the Bad Creek Project

Geographic Area	Total Population (count)	White Alone, not Hispanic (count)	African American/ Black (count)	Native American/ Alaska Native (count)	Asian (count)	Native Hawaiian & Other Pacific Islander (count)	Some Other Race (count)	Two or More Races (count)	Hispanic or Latino (count)	Total Minority Population (%)	Below Poverty Data (%)	Non-English Speaking Persons Aged 5 Years and Greater (%)
Georgia	10403847	5485855	3244348	19382	410705	5164	32810	213189	992394	47%	14%	1%
Rabun County	16645	14598	316	55	188	0	41	113	1334	12%	16%	0%
Census Tract 970202, Block Group 1	1348	1335	0	0	0	0	0	0	13	1%	14%	0%
North Carolina	10264876	6474688	2165301	112504	290525	5640	22962	230591	962665	37%	14%	1%
Jackson County	42938	34635	928	3283	302	0	56	1182	2552	19%	18%	0%
Census Tract 950900, Block Group 2	1425	1410	0	0	0	0	0	0	15	1%	9%	0%
Macon County	34813	30998	541	240	302	0	91	201	2440	11%	14%	0%
Census Tract 970502, Block Group 1	2128	2023	6	0	18	0	0	0	81	5%	9%	0%
Transylvania County	33775	30528	1560	89	47	17	0	410	1124	10%	13%	0%
Census Tract 960600, Block Group 3	1143	1019	0	0	19	0	0	0	105	11%	18%	0%
South Carolina	5020806	3196421	1333876	14748	78102	3784	9139	99278	285458	36%	15%	0%
Oconee County	77528	65463	5288	231	570	11	44	1686	4235	16%	16%	0%
Census Tract 030200, Block Group 1	1340	1261	0	0	0	0	15	36	28	6%	9%	0%
Census Tract 030100, Block Group 2	679	671	0	0	0	0	0	0	8	1%	12%	0%
Census Tract 030100, Block Group 1	1167	1142	7	0	0	0	0	4	14	2%	8%	0%
Census Tract 030200, Block Group 5	872	872	0	0	0	0	0	0	0	0%	6%	0%
Census Tract 030200, Block Group 2	1109	1090	16	0	0	0	0	3	0	2%	25%	0%
Census Tract 030200, Block Group 3	1201	1201	0	0	0	0	0	0	0	0%	8%	0%
Pickens County	124029	106292	8392	306	2424	26	178	1854	4557	14%	17%	0%
Census Tract 010200, Block Group 2	2267	2216	24	0	0	0	0	0	27	2%	9%	0%
Census Tract 010100, Block Group 1	1443	1331	76	0	16	0	0	20	0	8%	4%	0%
Census Tract 010200, Block Group 1	2279	2164	27	0	0	0	0	20	68	5%	14%	1%

Source: U.S. Census Bureau 2020a, 2020b, 2020c

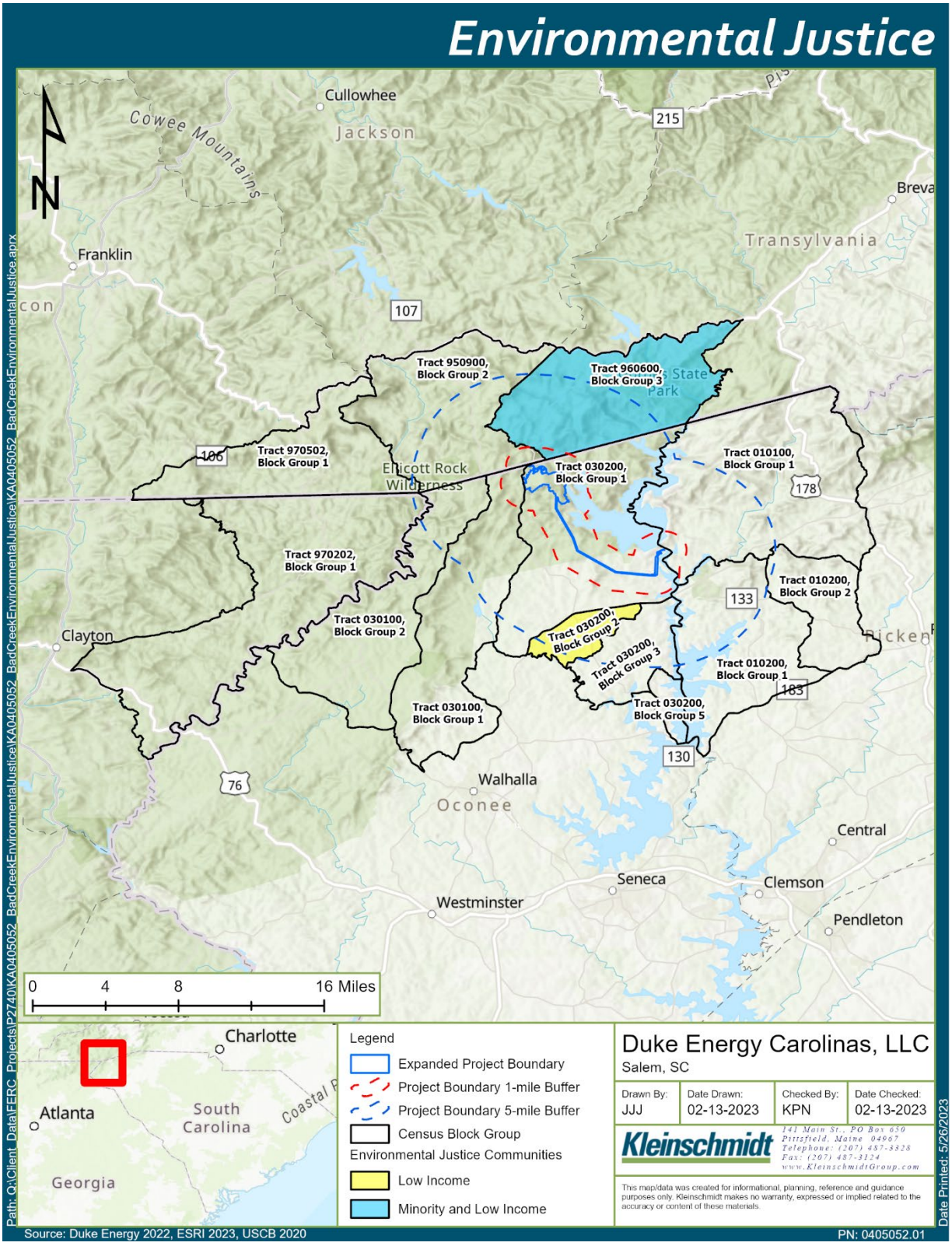

Figure 6.1 **Census Block Groups within a 1-mile and 5-mile Radius of the Bad Creek Project.**

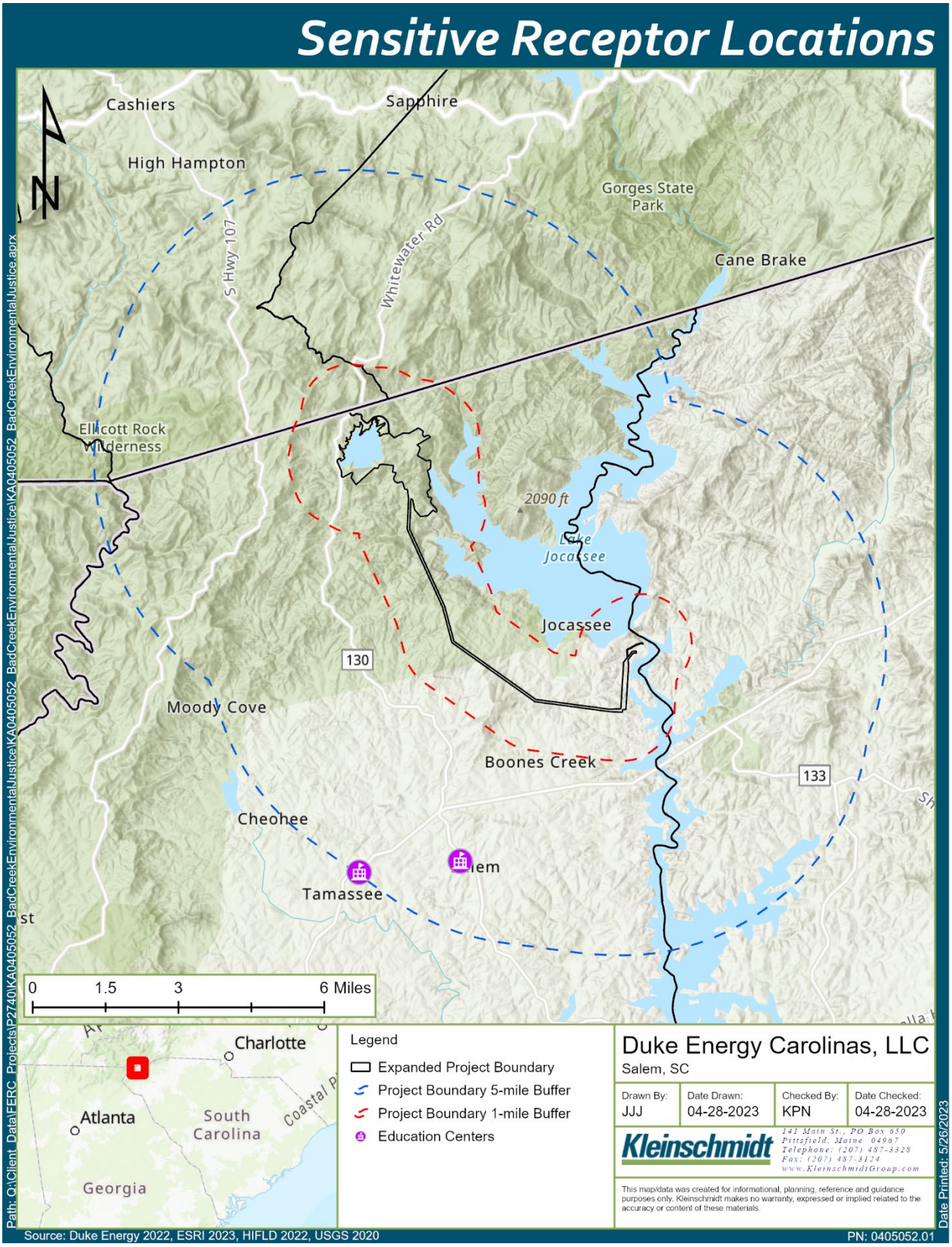

Figure 6.2 **Sensitive Receptor Locations within a 1-mile and 5-mile Radius of the Bad Creek Project.**

Table 6.2 Distances of Sensitive Receptor Locations to Proposed Expanded Bad Creek Project Boundary

Sensitive Receptor Location	Distance from Project Boundary (miles)
NEXT School Eagle Ridge	3.62
Tamassee Salem Elementary School	4.96

7.0 ANALYSIS

The USEPA-issued guidance document *Promising Practices for EJ Methodologies in NEPA Reviews* (2016) outlined the considerations for analysis of impacts to EJ communities as including exposure pathways; direct, indirect, and cumulative impacts to communities; and the distribution of potential impacts, either beneficial or adverse.

Exposure pathways are the routes by which contact, and the resulting impact, can occur. For the purpose of this study, the exposure pathways include noise, construction vehicle air pollution, and effects of project construction on local traffic and road networks. Additionally, potential impacts to subsistence fishing opportunities are reviewed and analyzed. These potential effects have been analyzed as they relate to relicensing both with and without the construction of the Bad Creek II Complex. The exposure pathways have been analyzed by direct, indirect, and cumulative impacts. The direct impacts occur at the time of the event and will include the time during construction of the Bad Creek II Complex. Indirect impacts are considered a result of the event but occur later in time or potentially farther away. They can be reasonably expected to happen and will include impacts during the year following completion of the Bad Creek II Complex construction. Cumulative impacts take into consideration the incremental impact of the event as it relates to past, present, and reasonably foreseeable future actions. Finally, given the pre-disposition of EJ populations to experiencing effects due to the historically disproportionate siting of environmentally hazardous locations, this study analyzes the uneven distribution of effects on EJ communities within the scope of the proposed actions.

7.1 Noise

Broadly, noise is considered unwanted and/or harmful sound and was first recognized as a hazard to public health in 1968 (APHA 2021). Environmental noise is more distinct and defined as unwanted and/or harmful noise created by outdoor sounds from human activities, such as road and railway traffic, airports, and industrial sites (APHA 2021). Major sources of environmental noise pollution related to construction activities include industrial machinery, outdoor power equipment, and increased traffic.

Research done over several decades indicates that excessive noise levels in the environment can contribute directly to auditory impacts such as hearing loss, sleep

disruption, and general annoyance (APHA 2021; Medic et al. 2017). Cumulative impacts from long-term environmental noise exposure include non-auditory impacts such as metabolic disturbances leading to diabetes and obesity, cardiovascular disease, noise-related hypertension, and exacerbation of mental health conditions such as depression and anxiety (APHA 2021). In general, temporary noise exposure is reversible and does not contribute to long-term cumulative impacts; however, in some instances, when coupled with underlying conditions, a temporary exposure of sufficiently intense noise levels can contribute to cardiovascular disease (Jariwala et al. 2017).

Finally, land use decisions and local zoning have historically favored wealthy and non-minority populations in determining where to locate sites that could result in elevated levels of noise pollution. This inequity at the decision-making level has led to roads, industrial sites, and other sources of noise pollution to be developed near EJ communities (APHA 2021). Due to the proximity of these types of sites to low-income and minority populations, EJ communities experience a higher baseline level of environmental noise compared to primarily non-EJ neighborhoods, leading to a population that is at a higher risk of developing noise-related health conditions. Added noise from temporary construction has the potential to have a disproportionately higher impact on EJ communities already experiencing poorer pre-existing health conditions from the baseline level of noise they are exposed to.

7.1.1 Impacts

Relicensing the Project as it Currently Operates (1-mile Radius Only)

Direct, Indirect, and Cumulative Impacts

Noise caused by the current operation of the Bad Creek Project is minimal. The powerhouse is located 600 feet underground within a mountain, resulting in negligible turbine or generator-related sound being emitted beyond the cavern, and therefore does not cause direct, indirect, or cumulative noise impacts to the surrounding EJ communities.

Additionally, only an exceedingly small portion of the block group containing EJ populations overlaps with the 1-mile radius around the Project and does not directly border the Project Boundary, further distancing any potential noise-related impacts to EJ communities within the Project vicinity.

Distribution of Impacts

There will be no substantive noise-related impacts to EJ communities within the 1-mile radius around the Bad Creek Project due to the relative distance of these populations to the Project powerhouse. Additionally, the location of the powerhouse 600 feet underground results in minimal noise reaching nearby populations from current operation. Therefore, there will be no disproportionately high impacts to EJ communities from relicensing the Bad Creek Project as it currently operates.

Relicensing the Current Project with Construction of the Bad Creek II Complex (1-mile and 5-mile Radiuses)

Direct Impacts

Noise from construction of the powerhouse, upper reservoir inlet/outlet, and lower reservoir inlet/outlet are the most likely causes of noise-related impacts to EJ communities from the addition of the Bad Creek II Complex. The most direct impacts will be isolated to the upper reservoir inlet/outlet construction due to the proximity of identified EJ census blocks to this section of the Project. However, further analysis of the land uses directly surrounding the upper reservoir, within the identified census block, indicates little to no residential development.

Indirect Impacts

The work done in the upper reservoir as part of the addition of the Bad Creek II Complex has the highest potential for impact to EJ populations; however, due to the sparse amounts of development and forested nature of the surrounding area, indirect noise-related impacts to EJ communities are not anticipated.

Cumulative Impacts

The Bad Creek II Complex powerhouse will be constructed underground and be of a similar size and arrangement to the existing powerhouse. Once constructed, the operation will be similar to existing Project operations, and will not cause additional noise-related impacts due to the depth underground of the second powerhouse. As such, cumulative noise-related impacts to EJ communities are not anticipated.

Distribution of Impacts

The area surrounding the Bad Creek Project is rural, with low levels of development, resulting in a generally quiet atmosphere. There is no residential development on the Bad Creek Reservoir, and the land around Lake Jocassee is dominated by mature growth forest, with minor residential development (Duke Energy 2022). The EJ communities present within the study area are not exposed to higher-than-average ambient noise, and therefore would not be disproportionately impacted by temporary construction noise.

7.2 Air Quality

The primary source of construction-related air pollution is diesel exhaust from earth moving machinery, resulting in a diesel particulate matter (DPM) release to the local environment (Boyle 2020). DPM is considered any solid particle that is emitted during the combustion process of a diesel engine and contains multiple types of metals and chemicals (Betts 2011). DPM is not the only pollutant to come from diesel machinery but it is among the most harmful, carrying particulates into lungs, and resulting in the potential development of chronic health conditions (Betts 2011).

Direct impacts occurring to nearby communities from construction include inhalation of DPM, general vehicle exhaust and particulate matter (PM), and dust turned up by increased road traffic and operations from earth-moving equipment. Exposure to these pollutants can contribute to health conditions that include asthma, reduced lung function, and cardiovascular disease (USEPA 2022a), as well as other chronic conditions such as chronic obstructive pulmonary disease and pulmonary fibrosis (Betts 2011). The effects of short-term exposure to PM and other forms of air pollution are not well known due to the difficulty of isolating the impacts of short-term exposure from impacts of consistent, ambient air pollution. Cumulative impacts of poor air quality resulting in chronic health conditions are influenced by many factors, including distance to traffic-related pollution, distance to point-source pollution, home environmental conditions, and socioeconomic factors that differ among communities (HEI 2013).

People living in communities of color and low-income tend to be disproportionately impacted by air pollution due to their proximity to factories, major roadways, and ports with diesel truck operations (USEPA 2022b), among other such industries. These sites are often located near EJ communities due to inequity at the decision-making level when

developing and siting highly polluting facilities, leading to a higher baseline of conditions caused by air pollution for EJ communities.

7.2.1 Impacts

Relicensing the Project as it Currently Exists (1-mile Radius Only)

Direct, Indirect, and Cumulative Impacts

Existing Project operation does not result in air quality related impacts to the Project vicinity. There will be no air quality related impacts from relicensing and continued operation of the existing Bad Creek Project.

Distribution of Impacts

There are no air quality related impacts from relicensing and continued operation of the Bad Creek Project. EJ communities will not be disproportionately impacted by continued Project operation.

Relicensing the Existing Project with Construction of the Bad Creek II Complex (1-mile and 5-mile Radiuses)

Direct Impacts

The short-term construction-related air pollution from building the Bad Creek II Complex has the potential to result in exacerbating already existing health conditions for EJ populations near the site. The construction activity most likely to impact air quality in the vicinity of EJ communities is the upper reservoir inlet/outlet work due to the proximity of that work to identified EJ populations. The air pollution caused by construction vehicles and equipment has the potential to be carried long distances on the wind and can include PM10 (particulate matter smaller than 10 microns in diameter), volatile organic compounds, and gases such as carbon dioxide, carbon monoxide, and nitrogen oxides (EPC 2023). The distance between EJ populations and the construction site, generally greater than one mile, will serve to mitigate potential impacts.

Indirect Impacts

Indirect impacts from construction of the Bad Creek II Complex may include exacerbation of pre-existing conditions but is unlikely to be the sole cause of development of those conditions due to the short duration of exposure and the good air quality that exists as a baseline in the Project vicinity. As with direct impacts, the distance between EJ populations and the construction site will be sufficient to result in minimal indirect impacts.

Cumulative Impacts

The Bad Creek Project vicinity is rural and largely undeveloped, with much of the land adjacent to Lake Jocassee designated for public recreation and resource conservation. Due to the natural character of the region and low baseline levels of air pollution, as well as the highly variable effect of localized, ongoing environmental conditions, it is not likely that the short duration of exposure from the Bad Creek II Complex construction will contribute to cumulative impacts to EJ communities in the Project vicinity.

Distribution of Impacts

The Bad Creek Project vicinity is rural and not highly developed, resulting in generally good air quality. There are no pre-existing facilities in the immediate Project vicinity leading to higher-than-average baseline air pollution conditions for EJ communities, and therefore, construction of the Bad Creek II Complex will not impact EJ communities at a disproportionately higher rate.

7.3 Subsistence Fishing

Across the country, many rural, marginalized, and Indigenous communities rely on subsistence resources, such as fish, for food and trade (OEPC 2021). Subsistence fishing, hunting, and harvesting continue to be important to the life and economy of marginalized and Indigenous people (OEPC 2021), and therefore an important part of the environmental discussion related to the construction of new projects and facilities.

7.3.1 Impacts

Relicensing the Project as it Currently Operates (1-mile Radius Only)

Direct, Indirect, and Cumulative Impacts

Due to the large fluctuations in upper reservoir elevations from approved existing Project operations, there are no recreational facilities or subsistence fishing opportunities located on the upper reservoir. Additionally, the upper reservoir is fenced in to prohibit public access and ensure public safety. The recreational facilities and subsistence fishing opportunities located within the nearby Devil's Fork State Park and Lake Jocassee will remain unchanged and be unaffected by continued Project operation. No direct, indirect, or cumulative impacts to subsistence fishing are anticipated as a result of relicensing the Bad Creek Project.

Distribution of Impacts

No impacts to subsistence fishing opportunities are anticipated as a result of relicensing and the continued operation of the Bad Creek Project.

Relicensing the Existing Project with Construction of the Bad Creek II Complex (1-mile and 5-mile Radiuses)

Direct Impacts

Although fishing is not permitted within the upper reservoir, the nearby Devil's Fork State Park potentially provides subsistence fishing opportunities on Lake Jocassee within the 5-mile buffer zone surrounding construction of the Bad Creek II Complex. Additionally, the Whitewater River located adjacent to the Project Boundary near the Bad Creek Reservoir is managed by the S.C. Department of Natural Resources (SCDNR) and stocked regularly, functioning as a desirable wild and stocked rainbow and brown trout fishery. The Whitewater River is located within the 1-mile and 5-mile buffer zones around the Project Boundary, and adjacent to a census block group with both low-income and minority populations. The Whitewater River cove of Lake Jocassee is expected to be closed to the general public for much of the duration of construction of the Bad Creek II Complex. However, the cove is only accessible by boat. Therefore, direct impacts to subsistence fishing opportunities for EJ communities as a result of project construction are not anticipated as the construction activities will be contained within the Bad Creek Reservoir and a portion of Lake Jocassee only accessible by boat.

Indirect Impacts

There will be no anticipated changes to the SCDNR stocking schedule or quantity associated with the project construction, and every effort will be made to limit the amount of pollution potentially entering the local freshwater rivers and streams. Temporary, localized water quality impacts during construction are not expected to adversely affect the Lake Jocassee fishery. Indirect impacts to subsistence fishing opportunities for EJ communities are not anticipated as a result of the Bad Creek II Complex construction.

Cumulative Impacts

There are no anticipated direct or indirect impacts to subsistence fishing opportunities for EJ communities, and the healthy baseline conditions and abundant fish population will not change as a result of construction. Therefore, no cumulative impacts are anticipated.

Distribution of Impacts

There will be no impacts to EJ communities related to subsistence fishing as a result of construction, and, therefore, no unequal distribution of impacts.

7.4 Effects of Project Construction on Local Traffic, Road Networks, and Aesthetics

Construction has the potential to impact local roads and traffic by creating congestion and travel delays, as well as temporarily restricting access to local businesses and residential areas (USDOT 2015). It is possible for these immediate impacts to spread to neighboring locations as people find alternate routes, potentially causing stress to roads that were not meant for increased capacity (USDOT 2015). Additionally, local businesses can experience hardship if customers are unable to access their location due to construction activities that block roads (USDOT 2015).

7.4.1 Impacts

Relicensing the Project as it Currently Exists (1-mile Radius Only)

Direct, Indirect, and Cumulative Impacts

There will be no changes to local traffic, road networks, or aesthetics as a result of relicensing and continued operation of the Bad Creek Project. Therefore, there will be no

impacts to EJ communities related to local traffic, road networks, or aesthetics as a result of relicensing.

Distribution of Impacts

There will be no impacts to EJ communities related to local traffic, road networks, or aesthetics as a result of relicensing, and, therefore, no unequal distribution of impacts.

Relicensing the Existing Project with Construction of the Bad Creek II Complex (1-mile and 5-mile Radiuses)

Direct Impacts

Existing access to the Bad Creek Project is by a 4.8-mile-long paved road leading from the Project entrance at SC Highway 130 to the powerhouse portal area at Lake Jocassee. It is expected that this existing access road will be utilized for construction-related activities at the powerhouse and lower reservoir intake/outlet work, with the potential addition of laydown areas for equipment. It is unlikely that EJ communities will be impacted by work done at this location due to the distance between the powerhouse construction and identified EJ populations.

Work conducted at the upper reservoir inlet/outlet location is the closest to identified EJ populations; however, impact to traffic and local roads within identified EJ census blocks is anticipated to be minimal. No residential development exists on the upper reservoir, and therefore no need for EJ populations to be traveling from this area for work or other activities, and no recreation is allowed on the upper reservoir due to the large drawdown fluctuations, limiting the need for travel to this area.

The removal of rock and soil to build the underground cavern for the additional powerhouse likely has the highest potential to cause impact to EJ communities. Excavation of the underground powerhouse will require disposal of significant quantities of material, mostly earth and rock "spoil." Spoil disposal methods and locations have not yet been determined but may include: 1) placement of rockfill at the submerged weir in Lake Jocassee; 2) disposal at designated, permitted upland spoil areas within the expanded Project Boundary or on Duke Energy-owned land adjacent to the Project Boundary; or 3) transport off-site. Disposal of excavated spoils may temporarily impact aesthetics,

streams and lands in the expanded Project Boundary, local water quality in and immediately downstream of the Whitewater River cove, or construction traffic.

Indirect Impacts

Following construction there will be no impact to local roads or traffic, and, therefore, no indirect impacts to EJ communities related to roads and traffic.

The disposal of excavated spoils has the potential for indirect impacts to long-term aesthetics and property value. If the disposal site is in close proximity to an EJ community, this could have the highest level of indirect impact. In analyzing potential spoil locations identified within the PAD, locations will be located within the immediate vicinity of the upper reservoir, Project operations properties, or adjacent to the Whitewater River arm of Lake Jocassee on Duke Energy-owned property. As such, no impacts to identified EJ communities would be anticipated from presently proposed spoil locations.

Cumulative Impacts

Cumulative impacts for this exposure pathway would be anticipated to be the same as indirect impacts. Please see the section above for a discussion on indirect impacts.

Distribution of Impacts

The distribution of impacts related to local roads and traffic will not be disproportionately high for EJ communities due to the undeveloped nature of the surrounding area. The pre-Project baseline of minimal pressure on local roads and traffic will result in even distribution of impacts.

Disproportionate impacts resulting from the disposal of excavated spoils are unlikely due to the undeveloped nature of the surrounding area but are not outside the realm of possibility depending on where the disposal site is and the baseline conditions of the site before material is left there.

7.5 Potential Effects on Non-English-Speaking Communities and Sensitive Receptor Locations

The nearest sensitive receptor location is a school located approximately four miles from the proposed construction site (Figure 6.2). Although noise can disrupt learning and contribute to mental and physical dysfunction in children and individuals with known sensory processing disorders, attention-deficit/hyperactivity disorder, post-traumatic stress disorder, and noise-induced developmental disorders (APHA 2021), it is unlikely that construction of the Bad Creek II Complex would have an effect on the sensitive receptor location due to the distance between the two sites.

Within the Project vicinity there is one small population of non-English speaking individuals located in Pickens County representing one percent of the population of the block group, or approximately 23 people (Table 6.1). This block group is primarily outside of the 5-mile radius, with only a small portion located within the 5-mile radius at the southeastern end. Due to the distance between the construction site and any non-English speaking individuals, impacts are not anticipated to this group.

8.0 DISCUSSION

The existing Bad Creek Project's continued operation is not expected to cause any noise or air quality-related effects due, in part, to the Project's relative distance to identified EJ communities. Subsistence fishing opportunities will remain unchanged in the vicinity with the continued operation of the existing Project. In addition, no changes to the local traffic, road networks, or aesthetics will occur as a result of relicensing, nor will there be effects to local non-English speaking communities and sensitive receptor locations.

Due to the history of inequitable siting of highly polluting facilities and industries within EJ communities, the potential for unequal distribution of impacts to these communities exists with any construction project or industrial site proposed today. The natural way in which sound and air pollution travel may result in temporary impacts outside the main construction area, necessitating the 1-mile and 5-mile radius analyses. Overall, the impacts to EJ communities from construction of the Bad Creek II Complex would be minimal due to the distance between construction activities and the nearest residential areas with EJ populations, and disproportionately adverse impacts to EJ communities should not occur due to the healthy baseline environmental conditions in the region.

Due to the distance between identified EJ communities and the potential project impacts, we have not identified the need for additional outreach efforts beyond those currently being employed by Duke Energy as part of the relicensing process. Should the proposed locations of spoil areas change, or alternative road closures/uses be identified, outreach may become necessary.

Construction of the Bad Creek II Complex has the potential for beneficial impact to the local economy by creating local jobs in areas such as contracting and construction work, plumbing, electrical, masonry, welding, and engineering (HoldRite 2023). Additional local economy benefits include increased business from the construction work force to establishments providing food and hospitality, entertainment, and retail sales. Though the direct sales impact from the construction work force will be temporary, it will contribute to indirect and cumulative benefits by giving the area a boost that will aid in the continuation of self-sufficiency and potentially providing resources for future improvements.

9.0 CONSULTATION RECORD

This report was provided in draft form to potentially interested agencies and stakeholders for review and comment on June 6, 2023. Comments were accepted on the draft report through July 31, 2023. Official responses to draft report distribution were received from the following entities:

- Advocates for Quality Development – June 28, 2023
- South Carolina Department of Parks, Recreation & Tourism – July 11, 2023
- South Carolina Department of Natural Resources – July 27, 2023

No substantive comments regarding the report, requests for report modifications, or requests for additional consultation were received. Consultation is included in Appendix A.

10.0 REFERENCES

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APPENDIX A

CONSULTATION DOCUMENTATION

From:	James Keane
To:	Crutchfield Jr., John U
Cc:	Alex Pellett; Dan Rankin; Elizabeth Miller; Greg Mixon; John Haines; Morgan Amedee; Pat Cloninger; Rowdy Harris; Tom Daniel; Wenonah Haire; Caitlin Rogers; syerka@ebci-nsn.gov; Alan.Stuart@duke-energy.com; Sarah Kulpa; Huff, Jen; Bruce, Ed; Dunn, Lynne; Maggie Salazar; Alison Jakupca
Subject:	Re: Bad Creek Relicensing Operations Resource Committee-Environmental Justice Draft Study Report Request for Review
Date:	Wednesday, June 28, 2023 9:07:36 PM

June 28, 2023

Mr. Stuart:

On behalf of AQD (Advocates for Quality Development), I have reviewed the above captioned report by Kleinschmidt and Associates of June 2023.
I find the report to be well researched and the findings in accordance with my understanding of the subject study area around the Bad Creek Project. I have no issues with the report and it confirms my belief that there will be minimal, if any, environmental justice issues resulting from the project.

Sincerely yours,

Terry Keane
Seneca, SC

From: Charles (Rowdy) B Harris
To: Crutchfield Jr., John U
Subject: [EXTERNAL] Re: Bad Creek Relicensing Operations Resource Committee-Environmental Justice Draft Study Report Request for Review
Date: Tuesday, July 11, 2023 1:30:16 PM
Attachments: image001.png

No comments from SCPRT.

Rowdy Harris
Park Manager
Devils Fork State Park
SC Department of Parks, Recreation & Tourism
161 Holcombe Circle
Salem, SC 29676
Office: (864) 944-2639
SCPRT.com
SouthCarolinaParks.com

From: Crutchfield Jr., John U <John.Crutchfield@duke-energy.com>
Sent: Tuesday, July 11, 2023 11:39 AM
To: Alex Pellett <PellettC@dnr.sc.gov>; Dan Rankin <RankinD@dnr.sc.gov>; Elizabeth Miller <MillerE@dnr.sc.gov>; Greg Mixon <mixong@dnr.sc.gov>; John Haines <jhains@g.clemson.edu>; Morgan Amedee <amedeemd@dhec.sc.gov>; Pat Cloninger <cloningerp@dnr.sc.gov>; Charles (Rowdy) B Harris <charris@scprt.com>; Terry Keene <jtk7140@me.com>; Tom Daniel <danielt@dnr.sc.gov>; Wenonah Haire <wenonah.haire@catawba.com>; Caitlin Rogers <caitlin.rogers@catawba.com>; syerka@ebci-nsn.gov <syerka@ebci-nsn.gov>
Cc: Stuart, Alan Witten <Alan.Stuart@duke-energy.com>; Sarah Kulpa <sarah.kulpa@hdrinc.com>; Huff, Jen <Jen.Huff@hdrinc.com>; Bruce, Ed <Ed.Bruce@duke-energy.com>; Dunn, Lynne <Lynne.Dunn@duke-energy.com>; Maggie Salazar <maggie.salazar@hdrinc.com>; Alison Jakupca <alison.jakupca@kleinschmidtgroup.com>
Subject: RE: Bad Creek Relicensing Operations Resource Committee-Environmental Justice Draft Study Report Request for Review

Dear Bad Creek Relicensing Stakeholders:

Just a reminder to provide comments on the Bad Creek Relicensing Environmental Justice Study, if you have not done so already.

The comment period will be extended until July 31, 2023.

Please reply if you do or don't have any comments so we can include in the stakeholder consultation record.

Please let me know if you have any questions.

Thank you,

John Crutchfield

Project Manager II
Water Strategy, Hydro Licensing & Lake Services
Regulated & Renewable Energy
Duke Energy
526 S. Church Street, EC12Q | Charlotte, NC 28202
Office 980-373-2288| Cell 919-757-1095

From: Crutchfield Jr., John U
Sent: Tuesday, June 6, 2023 7:43 AM
To: Alex Pellett <PellettC@dnr.sc.gov>; Dan Rankin <RankinD@dnr.sc.gov>; Elizabeth Miller <MillerE@dnr.sc.gov>; Greg Mixon <mixong@dnr.sc.gov>; John Haines <jhains@g.clemson.edu>; Morgan Amedee <amedeemd@dhec.sc.gov>; Pat Cloninger <cloningerp@dnr.sc.gov>; Rowdy Harris <charris@scprt.com>; Terry Keene <jtk7140@me.com>; Tom Daniel <danielt@dnr.sc.gov>; Wenonah Haire <wenonah.haire@catawba.com>; Caitlin Rogers <caitlin.rogers@catawba.com>; syerka@ebci-nsn.gov
Cc: Stuart, Alan Witten <Alan.Stuart@duke-energy.com>; Sarah Kulpa <sarah.kulpa@hdrinc.com>; Huff, Jen <Jen.Huff@hdrinc.com>; Bruce, Ed <Ed.Bruce@duke-energy.com>; Dunn, Lynne <Lynne.Dunn@duke-energy.com>; Maggie Salazar <maggie.salazar@hdrinc.com>; Alison Jakupca <alison.jakupca@kleinschmidtgroup.com>
Subject: Bad Creek Relicensing Operations Resource Committee-Environmental Justice Draft Study Report Request for Review
Importance: High

Dear Bad Creek Relicensing Stakeholders:

Please find attached the draft Environmental Justice Study Report which is being provided for your review and comment. I have included the Bad Creek Relicensing Stakeholder SharePoint link where you can also access the report: 405052 Draft Bad Creek EJ Study Report_Draft for Stakeholder Review 06.2023.pdf

As you may be aware, the Environment Justice Study was placed into the Operations Resource Committee during our study plan identification process last year.

I am providing the draft report to those stakeholders who signed up for the Operations Resource Committee as well as other pertinent stakeholders who may have an interest in this study.

Duke Energy requests your review of the draft study report with comments provided via email to Alan Stuart and me by July 6, 2023.

Please reply to all recipients copied on this email so all stakeholders are aware of filed comments. Please reply if you do or don't have any comments so we can include in the stakeholder consultation record.

Note that all comments will be included in the relicensing consultation record and included in the final Environmental Justice Study Report which will be filed as part of the relicensing application with FERC.

After comments are received, Duke Energy will convene a virtual Teams meeting to review the Environmental Justice study report and received stakeholder comments.

Please let me know if you have any questions.

Thank you,

John Crutchfield
Project Manager II
Water Strategy, Hydro Licensing & Lake Services
Regulated & Renewable Energy
Duke Energy
526 S. Church Street, EC12Q | Charlotte, NC 28202
Office 980-373-2288| Cell 919-757-1095

From:	Elizabeth Miller
To:	Crutchfield Jr., John U
Subject:	[EXTERNAL] RE: Bad Creek Relicensing Operations Resource Committee-Environmental Justice Draft Study Report Request for Review
Date:	Thursday, July 27, 2023 9:19:36 AM
Attachments:	image001.png

Hi John,

The SCDNR has no comments to provide on the Environmental Justice Draft Study Report.

Thank you,

Elizabeth

Elizabeth C. Miller
SCDNR
Office: 843-953-3881
Cell: 843-729-4636

From: Crutchfield Jr., John U <John.Crutchfield@duke-energy.com>
Sent: Tuesday, July 11, 2023 11:40 AM
To: Alex Pellett <PellettC@dnr.sc.gov>; Dan Rankin <RankinD@dnr.sc.gov>; Elizabeth Miller <MillerE@dnr.sc.gov>; Greg Mixon <MixonG@dnr.sc.gov>; John Haines <jhains@g.clemson.edu>; Morgan Amedee <amedeemd@dhec.sc.gov>; Pat Cloninger <CloningerP@dnr.sc.gov>; Rowdy Harris <charris@scprt.com>; Terry Keene <jtk7140@me.com>; Tom Daniel <DanielT@dnr.sc.gov>; Wenonah Haire <wenonah.haire@catawba.com>; Caitlin Rogers <caitlin.rogers@catawba.com>; syerka@ebci-nsn.gov
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John Crutchfield
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From: Crutchfield Jr., John U
Sent: Tuesday, June 6, 2023 7:43 AM
To: Alex Pellett <PellettC@dnr.sc.gov>; Dan Rankin <RankinD@dnr.sc.gov>; Elizabeth Miller <MillerE@dnr.sc.gov>; Greg Mixon <mixong@dnr.sc.gov>; John Haines <jhains@g.clemson.edu>; Morgan Amedee <amedeemd@dhec.sc.gov>; Pat Cloninger <cloningerp@dnr.sc.gov>; Rowdy Harris <charris@scprt.com>; Terry Keene <jtk7140@me.com>; Tom Daniel <danielt@dnr.sc.gov>; Wenonah Haire <wenonah.haire@catawba.com>; Caitlin Rogers <caitlin.rogers@catawba.com>; syerka@ebci-nsn.gov
Cc: Stuart, Alan Witten <Alan.Stuart@duke-energy.com>; Sarah Kulpa <sarah.kulpa@hdrinc.com>; Huff, Jen <Jen.Huff@hdrinc.com>; Bruce, Ed <Ed.Bruce@duke-energy.com>; Dunn, Lynne <Lynne.Dunn@duke-energy.com>; Maggie Salazar <maggie.salazar@hdrinc.com>; Alison Jakupca <alison.jakupca@kleinschmidtgroup.com>
Subject: Bad Creek Relicensing Operations Resource Committee-Environmental Justice Draft Study Report Request for Review
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John Crutchfield
Project Manager II
Water Strategy, Hydro Licensing & Lake Services
Regulated & Renewable Energy
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Office 980-373-2288| Cell 919-757-1095

Environmental Justice Outreach Summary

Bad Creek Pumped Storage Project

FERC No. 2740

Prepared for:

Duke Energy Carolinas, LLC

Prepared by:

Kleinschmidt Associates

January 2025

Kleinschmidtgroup.com

TABLE OF CONTENTS

LIST OF APPENDICES OR ATTACHMENTS

ACRONYMS

B	
Bad Creek Project	Bad Creek Pumped Storage Project, FERC No. 2740
C	
Commission	Federal Energy Regulatory Commission
D	
Duke Energy	Duke Energy Carolinas, LLC
E	
EJ	environmental justice
F	
FERC	Federal Energy Regulatory Commission
I	
ISR	Initial Study Report
P	
PAD	Pre-Application Document
Plan	Community Outreach Plan
Project	Bad Creek Pumped Storage Project, FERC No. 2740
U	
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION AND BACKGROUND

On February 23, 2022, Duke Energy Carolinas, LLC (Duke Energy) submitted the Bad Creek Pumped Storage Project (Bad Creek Project or Project; FERC No. 2740) Notice of Intent to Relicense and Pre-Application Document (PAD) to the Federal Energy Regulatory Commission (FERC or Commission). The PAD included an alternative licensing proposal for installation of an additional energy storage and generation capacity by constructing a new 1,400-megawatt power complex (Bad Creek II Complex) adjacent to the existing Bad Creek Project Powerhouse to meet the growing need for energy storage and renewable energy production across Duke Energy's service territories, which Duke Energy is proposing to move forward with.

Following the submittal of the PAD, the Commission filed a letter on June 16, 2022, requesting that Duke Energy conduct an Environmental Justice (EJ) Study for the Bad Creek Project relicensing pursuant to Section 5.9 of the Commission's regulations. The study was implemented and report filed with the Initial Study Report (ISR) on January 4, 2024. The methodology used to identify the presence of EJ communities within the Bad Creek Project vicinity was adopted from the United States Environmental Protection Agency's (USEPA) *Promising Practices for EJ Methodologies in NEPA*[1] *Reviews* (2016). One EJ community based on race was identified out of thirteen census block groups within the scope of this study. Located in Transylvania County, North Carolina, the one race-related EJ community is primarily located within the 5-mile buffer zone around the Project, with the southwestern portion within the 1-mile buffer. Two EJ communities were identified based on income below poverty level, measured by household: one in Oconee County, South Carolina, and one in Transylvania County, North Carolina, both of which are located within the 5-mile buffer zone. None of the EJ communities are in block groups that border Bad Creek Project lands.

During the ISR meeting held January 17, 2024, FERC staff recommended that Duke Energy conduct outreach efforts to engage identified EJ communities in the Bad Creek Project relicensing. This document provides a summary of the EJ outreach efforts conducted following the ISR meeting, including development of a community outreach plan and informational material, and hosting public meetings.

[1] NEPA = National Environmental Policy Act

2.0 COMMUNITY OUTREACH PLAN

Duke Energy and their consultants, Kleinschmidt Associates, developed a Community Outreach Plan (Plan) (Appendix A) that described strategies for engaging and encouraging feedback from identified EJ communities associated with the Bad Creek Project. The Plan included hosting two public meetings in counties of the identified communities (which is described in further detail in Section 3.0), developing informational material, and distributing that material through newspapers and community leaders.

A one-page document was developed that discussed the Project relicensing and proposed expansion in plain language in both English and Spanish (Appendix B). This informational document was distributed to the six organizations listed in the Plan on three separate occasions: November 15, 2024; November 22, 2024; and December 6, 2024 (Appendix C). These organizations, who play a key role in supporting and securing resources for members of the local EJ communities, were asked to disburse the informational document as they deemed appropriate. The one-page document was additionally placed on Duke Energy's Project website at: https://www.badcreekpumpedstorage.com/meetings/.

3.0 PUBLIC MEETINGS

Two town-hall style public meetings were held in counties of identified EJ communities at the following dates and times: December 10, 2024, beginning at 6:00 PM in Salem, South Carolina (Oconee County); and December 11, 2024, beginning at 10:00 AM in Sapphire, North Carolina (Transylvania County). The two EJ communities and meeting locations were approximately 20 miles from one another, and thus, both meetings were open to both communities. Notice of the meetings were published in two newspapers of local distribution (see the Plan [Appendix A] for list) approximately one week in advance of the meetings[2] and on Duke Energy's Project website. A Spanish-speaking interpreter was in attendance for both meetings.

There was no attendance of either meeting by members of the EJ communities. Duke Energy was prepared to present the material included in Appendix D. Additionally, comment cards were available for attendees to fill out and submit to Duke Energy should they wish (Appendix E). There were also printed copies of the informational document available for distribution (see Appendix B).

[2] Notice of the public meetings was published in The Transylvania Times on December 2, 2024, and in The Journal on December 3, 2024. Previous documents may have referred to publishing in Upstate Today. Both Upstate Today and The Journal refer to the same newspaper.

APPENDIX A

COMMUNITY OUTREACH PLAN

TECHNICAL MEMORANDUM

To: Duke Energy

From: Kleinschmidt Associates

Cc:

Date: September 25, 2024

Re: Environmental Justice Community Outreach Plan

1.0 BACKGROUND

Duke Energy conducted an Environmental Justice Study[1] to identify the presence of environmental justice communities that may be affected by the relicensing of the Bad Creek Project, including construction of the Bad Creek II Complex. Although disproportionately high or adverse effects to EJ communities surrounding the Project were not identified through desktop analyses, FERC has indicated in comments during the Initial Study Report (ISR) meeting that they would recommend outreach to engage the identified environmental justice communities in the relicensing process. The following methods describe a detailed environmental justice outreach plan for the Bad Creek Project relicensing and proposed Bad Creek II Complex.

2.0 OUTREACH PLAN

2.1 POTENTIAL OUTREACH PARTNERS

Within the Study Area there are a total of three EJ communities: two in Transylvania County, NC (minority and low income), and one in Oconee County, SC (low income). To achieve the highest level of EJ engagement possible, outreach efforts will be focused on those two geographic areas. Organizations playing a role in supporting and securing resources for members of EJ communities will serve as contact points that may be able to distribute information. Those organizations are identified in Table 1-1. In addition to charitable and municipal organizations, faith leadership and faith-based organizations are often trusted sources for information and may serve as key leaders in vulnerable and underserved communities. Faith-based organizations in the counties with EJ communities near the Bad Creek Project are also identified in Table 1-1.

[1] Submitted with Initial Study Report on January 4, 2024 (Accession No. 20240104-5044).

Table 1-1 Organizations Working with Members of EJ Communities

Organization	Website	Contact	Address	Phone Number	Email Address
Oconee County Dept. of Social Services	Oconee County Contact Information - South Carolina Department of Social Services (sc.gov)	Stephanie Gentry	Oconee County DSS 223A Kenneth St. Walhalla, SC 29691	(864) 638-4400	OconeeWebsite@dss.sc.gov
St. Luke's Methodist Church Food Pantry	St. Luke UMC Walhalla – A place where it's ok, to not be ok. (stlukewalhalla.org)	Kevin Lindley	St. Luke UMC 607 E Main St, Walhalla, SC 29691	(864) 638-3628	stlukeumc@stlukewalhalla.org
United Way of Oconee County	| United Way of Oconee County (oconeeunitedway.org)	Durecelle "Dee" Henderson *(Special Programs Manager)*	Street Address: 4 Leas Courtyard Dr. Seneca, SC 29672 Mailing Address: PO Box 1693 Seneca, SC 29679	(864) 882-9743	dhenderson@oconeeunitedway.org
Christ Central Ministries (Oconee County)	Oconee County, SC - Mission Station | christcentral (christcentralministries.org)	Ashley & Tiffany Williams	North Walhalla Church of God 426 Deaton Rd, Walhalla, SC 29691	(864) 638-3322	ccmoconee@gmail.com
Transylvania Social Services	Social Services | Transylvania County	Amanda Vanderoef *(Director)*	106 East Morgan St,, Suite 101, Brevard, NC 28712	(828) 884-3174	amanda.vanderoef@transylvaniacounty.org
Transylvania Public Health	ABOUT US | Transylvania Public Health (transylvaniahealth.org)		106 East Morgan Street	(828) 884-3135	public.health@transylvaniacounty.org

2.2 OUTREACH METHODS AND MATERIALS

Outreach will consist of direct contact via email or phone with the organizations in Table 1-1. The discussion will include informing the organization contact about the relicensing and proposed construction, and requesting they distribute information to EJ communities they may have contact with. Distribution may be tailored to the individual organization and may include methods that the organization thinks will serve their community the best (i.e. posted bulletin, flyers that can be taken, emailed digital copies, etc.). Several organizations have been identified with the understanding that some may be unable to participate. The distribution materials will be developed by Kleinschmidt consultants with the aid of Kleinschmidt marketing specialists for the design. Additionally, plain language will be used for the distribution materials to ensure accessibility and understandability of the proposed project expansion and relicensing. The dates and locations of public meetings, and instruction for how to submit comments on the FERC docket will be included.

In addition to the informational materials for distribution, there will be two town hall style public meetings. One meeting will be held in or around Sapphire, NC, and another in or around Salem, SC. Each meeting will be held at a different time of day to achieve the highest level of participation possible. Notice of the meetings will be published in a newspaper of local circulation, and on Duke Energy's Facebook page.

A summary of the public outreach conducted by Duke Energy will be compiled into a summary for filing with the Draft License Application (DLA). Participants will be directed to the FERC docket to submit comments through the official channels within the appropriate specified periods of time.

APPENDIX B

ONE-PAGE INFORMATIONAL DOCUMENT

Bad Creek Pumped Storage Relicensing & Expansion

DUKE ENERGY

The Federal Power Act requires non-federal hydroelectric projects to be relicensed as existing license terms expire.

Duke Energy started the formal relicensing process by filing a pre-application document with the Federal Energy Regulatory Commission (FERC) on February 23, 2022. The Final License Application must be filed no later than July 31, 2025.

Applying for a new license from the FERC is a multi-year process that includes Duke Energy working collaboratively with:

- **Local, State, and Federal Agencies**
- **Nearby Environmental Justice Communities**
- **Members of the Public and Environmental Organizations**
- **Tribes**

The goal is to create outcomes that consider power generation with other benefits, such as the protection and enhancement of recreation and natural resources.

Overview

Additional energy storage and renewable energy capacity are needed to help Duke Energy meet their goal of net zero carbon emissions by 2050. To help achieve this goal, Duke Energy has proposed a potential expansion of the Bad Creek Project: The Bad Creek II Power Complex. This expansion would take advantage of typically unused storage capacity in the upper reservoir to roughly double the energy generation and storage pumping capacity of the current project.

Duke Energy's Commitment
Net Zero Carbon Emissions by 2050

Public participation is an important part of the relicensing process. Interested individuals and organizations are encouraged to participate by attending public meetings and submitting comments with concerns and/or support for the project. Comments can be submitted to the FERC docket at www.ferc.gov using Docket No. P-2740, or to Duke Energy at www.badcreekpumpedstorage.com/#contact.

Upcoming Public Meetings

Eagles Nest Art Center
4 Eagle Lane
Salem, SC 29676

Date: December 10, 2024
Time: 6:00 - 8:00 PM

Hampton Inn & Suites
Cashiers-Sapphire Valley
3245 US Highway 64 East
Sapphire, NC 28774

Date: December 11, 2024
Time: 10:00 - 12:00 PM

Scan the QR code for more information about the project.

Ampliación y renovación de licencias para el almacenamiento por bombeo de Bad Creek

La Ley Federal de Energía exige que los proyectos hidroeléctricos no federales renueven sus licencias a medida que expiren los plazos de las licencias existentes.

Duke Energy inició el proceso formal de renovación de la licencia presentando un documento de solicitud previa a la Comisión Federal Reguladora de la Energía (FERC) el 23 de febrero de 2022. La solicitud de licencia final debe presentarse a más tardar el 31 de julio de 2025.

La solicitud de una nueva licencia a la FERC es un proceso multinanual que requiere la colaboración de Duke Energy:

- **Agencias locales, estatales y federales**
- **Comunidades de justicia medioambientales cercanas**
- **Ciudadanos y organizaciones ecologistas**
- **Tribus**

El objetivo es crear resultados que consideren la generación de energía con otros beneficios, como la protección y mejora de las actividades recreativas y los recursos naturales.

Resumen

Se necesita más capacidad de almacenamiento de energía y de energías renovables para ayudar a Duke Energy a cumplir su objetivo de cero emisiones netas de carbono para 2050. Para alcanzar este objetivo, Duke Energy ha propuesto una posible ampliación del proyecto Bad Creek: **El Complejo Energético Bad Creek II**. Esta ampliación aprovecharía la capacidad de almacenamiento no utilizada habitualmente en el embalse superior para aproximadamente duplicar la generación de energía y la capacidad de almacenamiento por bombeo del proyecto actual.

Compromiso de Duke Energy
Cero emisiones netas de carbono para 2050

La participación pública es una parte importante del proceso de renovación de licencias. Se anima a las personas y organizaciones interesadas a participar asistiendo a las reuniones públicas y enviando comentarios con sus preocupaciones y/o su apoyo al proyecto. Los comentarios pueden enviarse al expediente de FERC a www.ferc.gov con el número de expediente P-2740, o a Duke Energy al www.badcreekpumpedstorage.com/#contact.

Próximas reuniones públicas

Eagles Nest Art Center
4 Eagle Lane
Salem, SC 29676

Fecha: 10 de diciembre de 2024
Hora: 6:00 - 8:00 PM

Hampton Inn & Suites
Cashiers-Sapphire Valley
3245 US Highway 64 East
Sapphire, NC 28774

Fecha: 11 de diciembre de 2024
Hora: 10:00 - 12:00 PM

Escaneé el código QR para obtener más información sobre el proyecto.

APPENDIX C

CONSULTATION DOCUMENTATION

Outlook

Request to Distribute Information and Meeting Details - Bad Creek Project

From Jennifer Gut <Jennifer.Gut@KleinschmidtGroup.com>
Date Fri 11/15/2024 2:20 PM
To Jennifer Gut <Jennifer.Gut@KleinschmidtGroup.com>

1 attachment (566 KB)
Bad Creek Project One-Page Pamphlet.pdf;

Good afternoon,

The purpose of this email is to request assistance with the distribution of information regarding a local project and public meetings that discuss it. In summary, Duke Energy is in the process of relicensing and expanding the Bad Creek Pumped Storage Project. Public participation is an important part of the relicensing process, and interested individuals and organizations are encouraged to participate by attending public meetings and submitting comments. Vulnerable and underserved communities have been identified near the Bad Creek Project area in both Oconee County, SC, and Transylvania County, NC. Our consulting team is working with Duke Energy to hold a public meeting in Oconee County on December 10, 2024, and in Transylvania County on December 11, 2024. I have attached a one-page pamphlet that provides additional information about the Bad Creek Project as well as meeting details. We would greatly appreciate it if you could make this pamphlet available to your members in whatever means suits you best (email, social media, posting, etc.). We would be happy to discuss this in further detail should you see the need. Please do not hesitate to reach out with any questions.

Thank you!

Best,

Jenn

Jennifer A. Güt
Regulatory Consultant
Kleinschmidt
Office: 803.904.8680
Cell: 706.294.3225
Follow us on LinkedIn
We provide practical **solutions** *for renewable energy, water, and environmental projects!*

Outlook

Re: Request to Distribute Information and Meeting Details - Bad Creek Project

From Jennifer Gut <Jennifer.Gut@KleinschmidtGroup.com>
Date Fri 11/22/2024 1:01 PM
To Jennifer Gut <Jennifer.Gut@KleinschmidtGroup.com>
Bcc oconeewebsite@dss.sc.gov <oconeewebsite@dss.sc.gov>; stlukeumc@stlukewalhalla.org <stlukeumc@stlukewalhalla.org>; dhenderson@oconeeunitedway.org <dhenderson@oconeeunitedway.org>; ccmoconee@gmail.com <ccmoconee@gmail.com>; amanda.vanderoef@transylvaniacounty.org <amanda.vanderoef@transylvaniacounty.org>; public.health@transylvaniacounty.org <public.health@transylvaniacounty.org>

1 attachment (566 KB)
Bad Creek Project One-Page Pamphlet.pdf;

Good afternoon,

I realized my first email may have found itself in your spam folder, and so I wanted to re-send this email in the hopes it is brought to your attention. On behalf of Duke Energy, we would greatly appreciate your assistance with the dissemination of information about public meetings (attached). Please do not hesitate to reach out with any questions.

Best,

Jenn

From: Jennifer Gut
Sent: Friday, November 15, 2024 2:19 PM
To: Jennifer Gut <Jennifer.Gut@KleinschmidtGroup.com>
Subject: Request to Distribute Information and Meeting Details - Bad Creek Project

Good afternoon,

The purpose of this email is to request assistance with the distribution of information regarding a local project and public meetings that discuss it. In summary, Duke Energy is in the process of relicensing and expanding the Bad Creek Pumped Storage Project. Public participation is an important part of the relicensing process, and interested individuals and organizations are encouraged to participate by attending public meetings and submitting comments. Vulnerable and underserved communities have been identified near the Bad Creek Project area in both Oconee County, SC, and Transylvania County, NC. Our consulting team is working with Duke Energy to hold a public meeting in Oconee County on December 10, 2024, and in Transylvania County on December 11, 2024. I have attached a one-page pamphlet that provides additional information about the Bad Creek Project as well as meeting details. We would greatly appreciate it if you could make this pamphlet available to your members in whatever means suits you best (email, social media, posting, etc.). We would be happy to discuss this in further detail should you see the need. Please do not hesitate to reach out with any questions.

Thank you!

Best,

Jenn

Jennifer A. Güt
Regulatory Consultant
Kleinschmidt
Office: 803.904.8680
Cell: 706.294.3225
Follow us on LinkedIn
We provide practical **solutions** *for renewable energy, water, and environmental projects!*

Outlook

Request to Distribute Information and Meeting Details - Bad Creek Project

From Jennifer Gut <Jennifer.Gut@KleinschmidtGroup.com>
Date Fri 12/6/2024 9:52 AM
To Jennifer Gut <Jennifer.Gut@KleinschmidtGroup.com>
Bcc oconeewebsite@dss.sc.gov <oconeewebsite@dss.sc.gov>; stlukeumc@stlukewalhalla.org <stlukeumc@stlukewalhalla.org>; dhenderson@oconeeunitedway.org <dhenderson@oconeeunitedway.org>; ccmoconee@gmail.com <ccmoconee@gmail.com>; amanda.vanderoef@transylvaniacounty.org <amanda.vanderoef@transylvaniacounty.org>; public.health@transylvaniacounty.org <public.health@transylvaniacounty.org>

1 attachment (566 KB)
Bad Creek Project One-Page Pamphlet.pdf;

Good morning,

This is the third correspondence regarding a request to assist with the distribution of information regarding a location project and public meetings that discuss it. In summary, Duke Energy is in the process of obtaining a New License from the Federal Energy Regulatory Commission for continued operation of the project. As part of the relicensing process, Duke energy is considering expanding the Bad Creek Pumped Storage Project. Public participation is an important part of the relicensing process, and interested individuals and organizations are encouraged to participate by attending public meetings and submitting comments. Vulnerable and underserved communities have been identified near the Bad Creek Project area in both Oconee County, SC, and Transylvania County, NC. Our consulting team is working with Duke Energy to hold a public meeting in Oconee County on December 10, 2024, and in Transylvania County on December 11, 2024. I have attached a one-page document that provides additional information about the Bad Creek Project as well as meeting details. We would greatly appreciate if you could make this information available to your members in whatever means suits you best (email, social media, posting, etc.). We would be happy to discuss this in further detail should you see the need. Please do not hesitate to reach out with any questions.

Thank you!

Best,

Jenn

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THE JOURNAL

PUBLISHER'S AFFIDAVIT

STATE OF SOUTH CAROLINA COUNTY OF OCONEE

DUKE ENERGY
IN RE: AD29339 Notice of Public Meeting

BEFORE ME *the undersigned, a Notary Public for the State and County above named, This day personally came before me, Hal Welch, who being first duly sworn according to law, says that he is the General Manager of* ***THE JOURNAL****, a newspaper published Tuesday through Saturday in Seneca, SC and distributed in* ***Oconee County, Pickens County*** *and the Pendleton area of* ***Anderson County*** *and the notice (of which the annexed is a true copy) was inserted in said papers on*

December 3, 2024

the rate charged therefore is not in excess of the regular rates charged private individuals for similar insertions.

Hal Welch
General Manager

Subscribed and sworn to before me this
12/3/2024

VELMA J. NELSON
NOTARY PUBLIC
SOUTH CAROLINA

Velma J. Nelson
Notary Public
State of South Carolina

THE JOURNAL

Ad ID: 29339
Pre-Bill

210 W. North 1st Street • Seneca, SC 29678 • 864-882-2375

Bill to:

MIKAYLA KREUZBERGER
DUKE ENERGY
7812 ROCHESTER HWY
SENECA, SC 29672

Sold to:

Account ID: 1576

MIKAYLA KREUZBERGER
DUKE ENERGY
7812 ROCHESTER HWY
SENECA, SC 29672-752

Please pay from this Pre-Bill. Return stub with payment.	Rep ID: **MW**	Terms: **Net 7**

Description

Classification of Ad: 229 – Legals
PO: AD29339 Notice of Public Meeting Text: Notice of Public Meeting Duke Energy Bad Creek Pumped S...

Zone:

Charges *from 12/3/2024 to 12/3/2024*

Date	Pub	Type	Description	Price	Discount	Applied	Due
12/3/24	TJ	Ad	Notice of Public Meeting - Duke	$110.00			$110.00
				$110.00			$110.00

Please return this portion with your payment.

Pre-Bill

Remit Payment to:
The Journal
210 W. North 1st Street
Seneca, SC 29678
Phone: 864-882-2375
Fax:

Amount Due **$110.00**

Amount Enclosed _____

Issue Date: 12/3/2024

Pre-Bill Date: 12/4/2024

Ad # 29339

Account # 1576

MIKAYLA KREUZBERGER
DUKE ENERGY
7812 ROCHESTER HWY
SENECA, SC 29672

LEGALS

Notice of Public Meeting
Duke Energy
Bad Creek Pumped Storage Project
Relicensing and Proposed Expansion
FERC No. 2740

Duke Energy hereby invites members of the public to attend informational meetings related to the relicensing and proposed expansion of the Bad Creek Pumped Storage Project (FERC No. 2740). Public participation is an important part of the relicensing process, and interested individuals and organizations are encouraged to participate by attending public meetings and submitting comments. Two informational public meetings will take place for the communities surrounding the Bad Creek facility to learn about the project and relicensing process, as well as have opportunities to ask questions. The public meetings will be held on the following dates and times: December 10, 2024 from 6:00pm – 8:00pm at the Eagles Nest Arts Center (4 Eagle Lane, Salem, South Carolina); and December 11, 2024 from 10:00am – 12:00pm at Hampton Inn & Suites – Cashiers-Sapphire Valley (3245 US Highway 64 East, Sapphire, North Carolina). To RSVP for the meeting, please email Alison Jakupca at Alison.Jakupca@KleinschmidtGroup.com.

M/12/2/1/TP-79193

STATE OF NORTH CAROLINA
COUNTY OF TRANSYLVANIA
IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
FILE NO. 24-E-001371

EXECUTOR'S – ADMINISTRATOR'S NOTICE

Having qualified as Administrator of the Estate of Frank Kelley of Transylvania County, North Carolina, this is to notify all persons having claim against the Estate of Frank Kelley to present them to the undersigned on or before February 18, 2025 or the claim will be forever barred thereafter. All persons indebted to said estate, please make immediate payment.

This the 18th day of November, 2024.

Patricia K. Green,
Admin.
175 Forest Glen Drive
Waleska, GA 30183

Attorney:
The Neumann Law Firm, PLLC
Ashley B. Fortune, Atty.
9 Park Place West, Ste. 102
Brevard, NC 28712
828-884-6575
#51194

M/11/18/4/TP-79177

STATE OF NORTH CAROLINA
COUNTY OF TRANSYLVANIA
IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
FILE NO. 24E001383-870

EXECUTOR'S —- ADMINISTRATOR'S NOTICE

Having qualified as Executor of the Estate of Marilyn Kay Carlson of Transylvania County, North Carolina, this is to notify all persons having claim against the Estate of Marilyn Kay Carlson to present them to the undersigned on or before February 25, 2025 or the claim will be forever barred thereafter.

All persons indebted to said estate please make immediate payment.

Dated: November 25, 2024.

Karin K. Hetherington
152 Paisley Cir
Pisgah Forest, NC 28768

M/12/2/4TP-79191

STATE OF NORTH CAROLINA
COUNTY OF TRANSYLVANIA
IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
BEFORE THE CLERK
FILE NO. 24E001324-870

NOTICE TO CREDITORS

IN THE MATTER OF:
CHARLES DIXON LEE, III,
Deceased.

Having qualified as Executor of the CHARLES DIXON LEE, III Estate, late of Transylvania County, North Carolina, the undersigned hereby notifies all persons, firms and corporations having claims against the Estate to present them to the undersigned on or before the 26th day of February, 2025, or this Notice will be pleaded in bar of recovery. All persons, firms and corporations indebted to the Decedent, or the Estate shall please make immediate payment to the undersigned.

This the 25th day of November, 2024.

JULIA GOODE LEE,
Executrix of the
Charles Dixon Lee, III
Estate
c/o Kirk Palmer & Thigpen, P.A.
1300 Baxter Street,
Suite 300
Charlotte, North Carolina
28204
Telephone: 704.332.8000
Facsimile: 704.332.8264

BY: Russell M. Reed

M/11/25/4/TP-79192

STATE OF NORTH CAROLINA
COUNTY OF TRANSYLVANIA
IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
FILE NO. 24E001364-870

EXECUTOR'S NOTICE

Having qualified as Executor of the Estate of Victor Keith Hoots, Jr of Transylvania County, North Carolina, this is to notify all persons having claim against the Estate of Victor Keith Hoots, Jr to present them to the undersigned on or before February 11, 2025 or the claim will be forever barred thereafter.

All persons indebted to said estate please make immediate payment.

Dated: November 11, 2024.

Sarah E. Raines
297 New Baymus Rd
Olaton, KY 42361

M/11/11/4/TP-79166

Rental assistance available for Helene survivors

Survivors of Tropical Storm Helene in North Carolina may be eligible for continued rental assistance for temporary housing through FEMA's Individual and Households program.

FEMA pays rent, including a security deposit, at a place other than your damaged home.

The rental can be a house, apartment, hotel, or recreational vehicle near your job, home, school or place of worship. The assistance may include essential utilities such as electricity and water.

The approved rental amount is based on fair market rates for your area as determined by the U.S. Department of Housing and Urban Development.

Automated phone calls will notify those who may be eligible for continued rental assistance. Less than 10% of those who registered for disaster aid met the criteria for initial rental assistance.

Extensions on rental assistance may be granted for three-month periods up to a maximum of 18 months from Sept. 28, 2024, the date of the FEMA disaster declaration.

To continue to receive rental assistance, the applicant must prove an ongoing need, which may be that suitable housing is not available or that a permanent housing plan has not been completed through no fault of their own.

Those continuing to seek rental assistance will need receipts to show previous assistance was used for rent. Survivors should keep receipts for three years.

You may qualify for continued assistance if you:

–Demonstrate your disaster-related financial need.

–Show you are developing a longer-term or permanent housing plan or demonstrate progress toward one. A contractor's estimate of repairs can point to progress.

A permanent housing plan is one that would put the applicant back into permanent safe, sanitary, and functional housing within a reasonable time frame. They must continue to work toward obtaining permanent housing to remain eligible for continued rental assistance.

If you have an ongoing need, you must ask for the help to continue receiving assistance.

If you were initially approved for rental assistance, an application for continued rental assistance is normally mailed to the rental assistance recipient 15 days after the grant is approved. If you do not receive one, please contact FEMA by calling (800) 621-3362 or visiting a disaster recovery center. You can find the hours and locations at FEMA.gov/drc.

Return the form to FEMA by either mailing the completed form to: FEMA, P.O. Box 10055, Hyattsville, MD 20782-8055, faxing it to (800) 827-8112 or uploading it to a FEMA Disaster Assistance account, available online at DisasterAssistance.gov.

To be eligible for continued rental assistance, applicants must meet the following conditions:

–You were awarded initial rental assistance and used it as intended.

–You are unable to return to your home because it cannot be accessed or is not suitable to live in due to the disaster.

–You do not have money for housing without assistance.

–You are not receiving temporary housing help from any other source.

–You provide the status of your permanent housing plan.

The completed application will require these supporting documents:

–Household income.

–Copy of the signed lease or rental agreement, utility bill and renter's insurance information.

–Rental receipts, canceled checks or money orders showing the rental assistance was used to pay for housing expenses.

OTHER ASSISTANCE

Direct temporary housing assistance is provided where there is a lack of available housing resources due to Tropical Storm Helene.

This assistance is offered as an interim solution to survivors' permanent housing needs and is provided in three forms: direct lease, multifamily lease and repair and transportable temporary housing units.

Displacement assistance is money that can be used to stay in a hotel, stay with family and friends or for other options while looking for temporary housing. It is a one-time payment.

It is important to keep FEMA updated with your contact information and housing status. FEMA may need to contact you for additional information.

If your contact information has changed, you should update your FEMA application immediately.

You can do so online at your disasterassistance.gov account or by calling (800) 621-3362.

PUZZLE ANSWERS

Sketch Artist

P	A	R	T			P	L	A	N		R	A	Y	S
A	R	E	A		C	H	I	L	E		A	L	O	T
D	I	A	L		H	O	M	E	S		B	L	U	E
	A	R	C	H	I	T	E	C	T		B	O	R	E
			E	C	O			E	D	I	T	E	D	
	O	P	E	R	A		R	I	D	E				
O	P	E	C		G	O	O	D		L	E	A	V	E
F	A	S	H	I	O	N	D	E	S	I	G	N	E	R
F	L	O	O	D		M	E	S	A		O	N	E	S
			O	R	E	O		L	A	S	E	R		
M	O	B	I	L	E			S	O	D				
A	L	A	N		T	A	T	T	O	O	I	S	T	
N	I	L	E		A	L	I	E	N		O	K	A	Y
O	V	E	R		I	T	E	M	S		T	I	R	E
R	E	S	T		L	O	S	S			A	N	T	S

Beginner Sudoku

8	3	5	7	9	6	4	1	2
6	7	2	8	4	1	5	9	3
1	9	4	3	5	2	8	6	7
5	1	9	2	6	4	3	7	8
3	2	8	5	1	7	6	4	9
7	4	6	9	8	3	2	5	1
9	6	1	4	2	8	7	3	5
4	8	3	1	7	5	9	2	6
2	5	7	6	3	9	1	8	4

Intermediate Sudoku

4	5	8	6	1	7	2	9	3
2	6	1	3	4	9	5	7	8
3	7	9	2	8	5	6	4	1
7	1	3	8	9	2	4	6	5
5	9	4	1	6	3	8	2	7
6	8	2	5	7	4	3	1	9
9	4	5	7	3	6	1	8	2
1	3	7	4	2	8	9	5	6
8	2	6	9	5	1	7	3	4

Advanced Sudoku

9	5	1	4	8	2	3	7	6
4	6	7	1	3	9	5	8	2
8	2	3	5	7	6	9	1	4
5	8	4	6	2	7	1	3	9
6	7	9	8	1	3	2	4	5
3	1	2	9	5	4	7	6	8
2	9	8	3	6	1	4	5	7
1	4	6	7	9	5	8	2	3
7	3	5	2	4	8	6	9	1

Ditto

A	C	C	T		K	R	A	U	T		A	C	E	D
G	O	R	E		A	I	O	L	I		L	A	M	A
A	M	E	N	D	M	E	N	T	S		O	M	I	T
R	E	M	O	R	A	S			A	D	H	E	R	E
S	T	E	R	I	L	E		S	P	E	A	R		
				F	A	N	M	A	I	L		A	D	O
A	S	S	E	T			E	S	T	E	E	M	E	D
C	L	O	Y		A	R	T	S	Y		M	E	N	D
H	O	M	E	B	R	E	W			A	U	N	T	S
E	W	E		P	C	B	O	A	R	D				
		T	O	O	L	S		W	E	L	F	A	R	E
C	R	I	M	E	A			C	L	E	A	N	E	D
L	I	M	E		M	E	S	M	E	R	I	Z	E	D
A	M	E	N		P	E	R	O	N		T	I	K	I
M	E	S	S		S	L	A	N	T		H	O	S	E

APPENDIX D

PUBLIC MEETING PRESENTATION

Bad Creek Pumped Storage Project

Public Meeting to Discuss the Project Relicensing and Potential Expansion

December 10th and 11th, 2024

Welcome and Introductions

Why Are We Meeting Today?

Through the relicensing process we recognized that there may be neighboring communities that have not been previously reached during outreach activities due to the rural nature of the area, so extended outreach is important.

This is termed “Environmental Justice Outreach.”

Meeting Purpose

To enhance understanding of the Bad Creek Pumped Storage Project and the Federal relicensing process while allowing Duke Energy to identify any previously unrecognized public resource needs for consideration in the new license term.

To provide a forum for all members of the public, particularly those who may face participation challenges (i.e., work schedules, technology use), to share their perspectives on the Project.

Overview of the Bad Creek Project

Bad Creek is an existing hydroelectric facility in Oconee County, South Carolina

Originally began operation in 1991

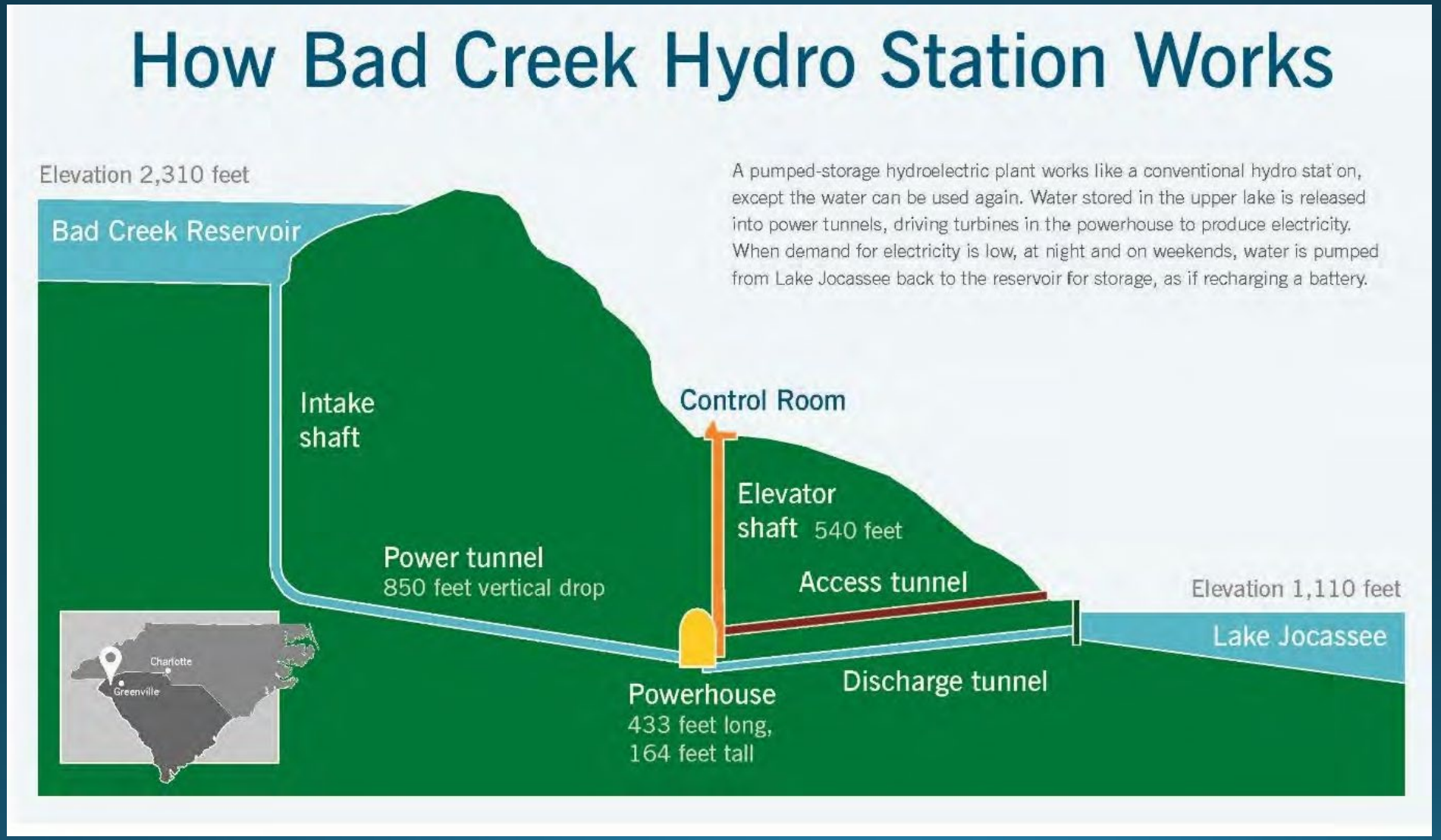
Located on Lake Jocassee

Owned and operated by Duke Energy

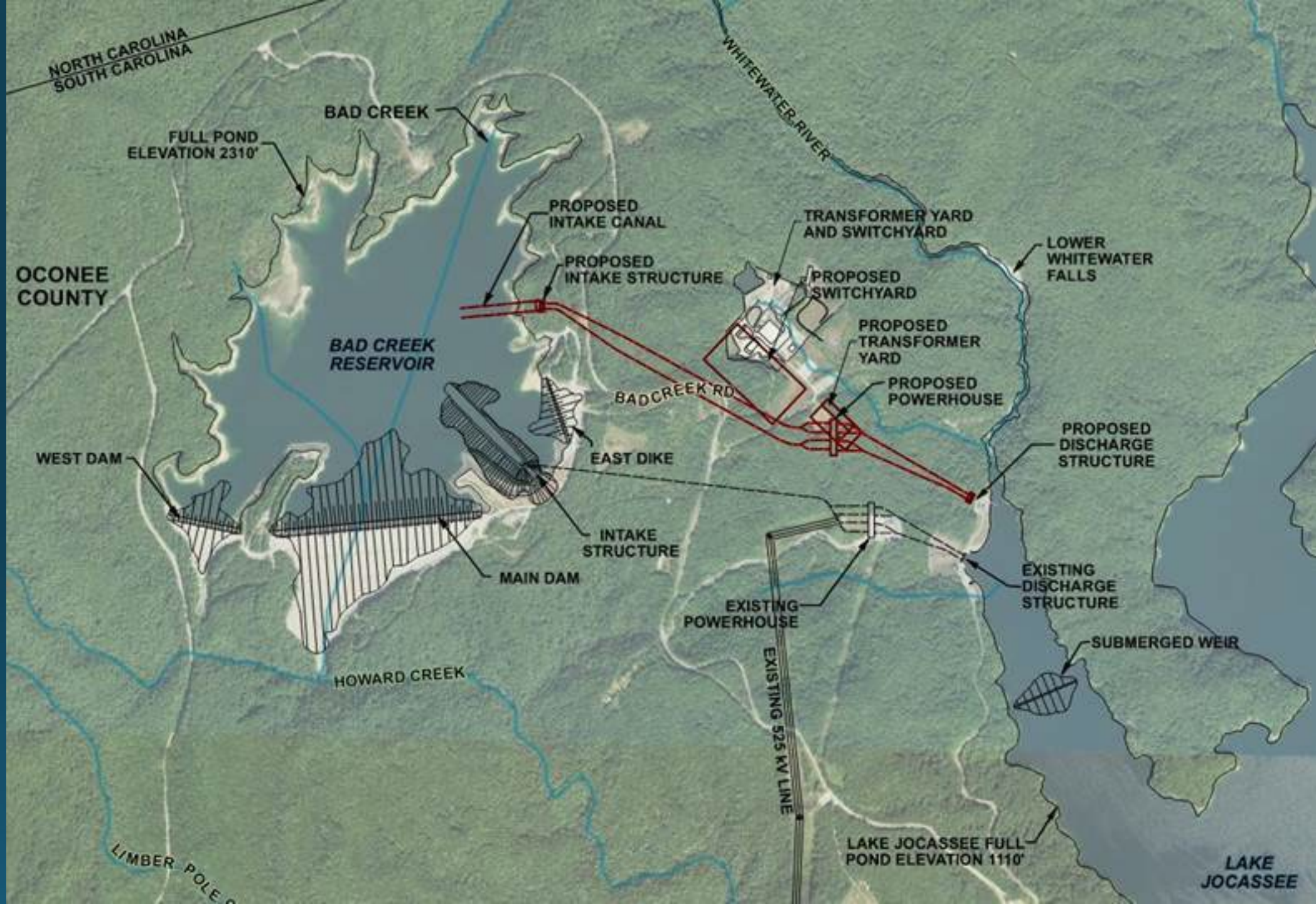
Operates as a pumped storage facility in tandem with Bad Creek Reservoir and Lake Jocassee

Is an important source of **renewable** power for the surrounding communities served by Duke Energy

What is Pumped Storage?

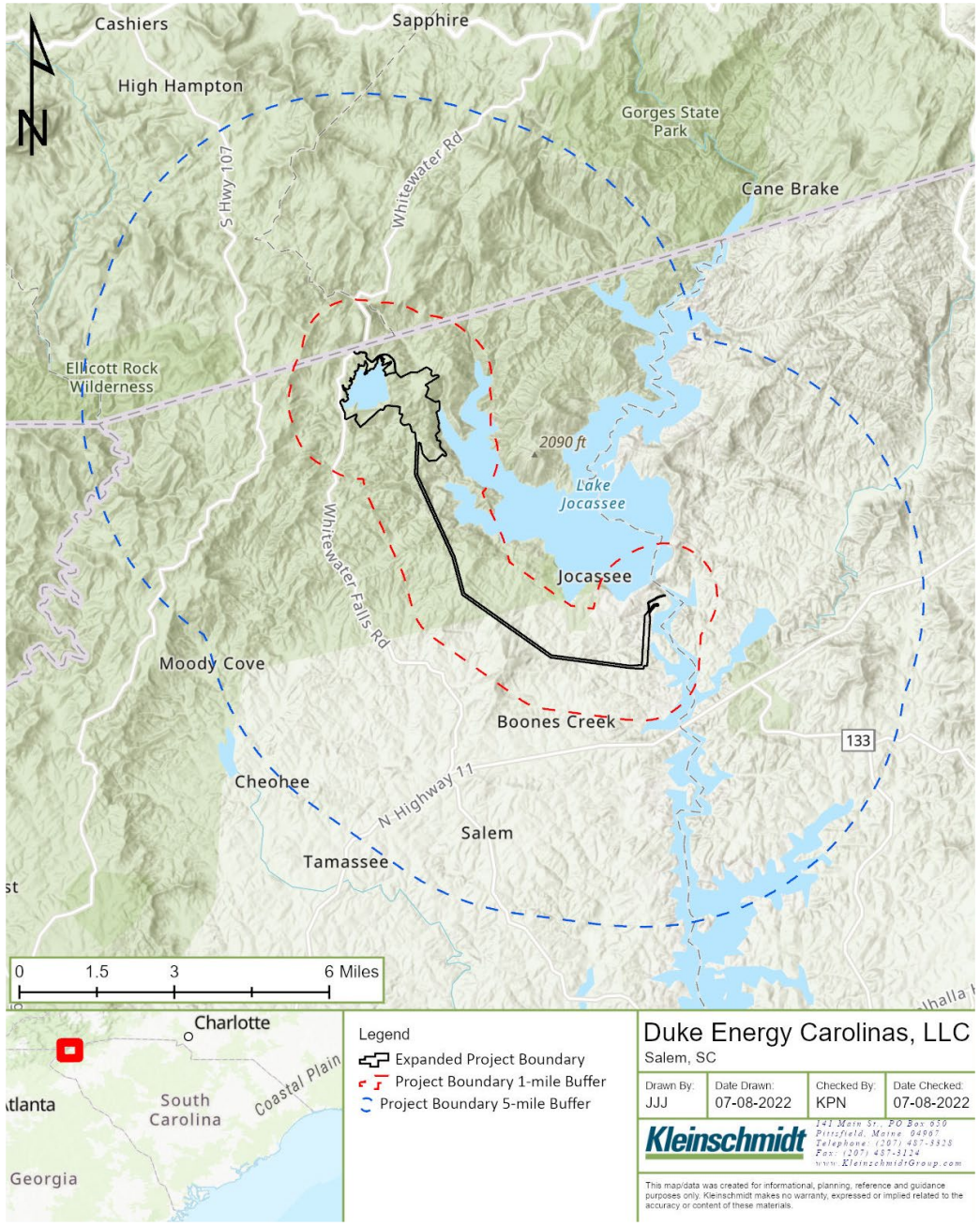


Proposed Expansion



What is Relicensing?

- **Duke Energy's Federal License**: The Bad Creek Project operates under a license issued by the Federal Energy Regulatory Commission (FERC).
- **License Duration**: Each license spans 40 to 50 years.
- **Current Status**: Duke Energy is undergoing the "relicensing" process to renew its operating license.
- **Balancing Benefits**: The relicensing process involves consideration for power generation benefits with other public resource priorities, including recreation and natural resource conservation.
- **Project Expansion**: Duke Energy is evaluating opportunities to expand the Project using existing lands and typically unused storage capacity to support renewable energy goals.


Cashiers
Sapphire
High Hampton
Gorges State Park
Cane Brake
S Hwy 107
Whitewater Rd
Ellicott Rock Wilderness
2090 ft
Lake Jocassee
Jocassee
Whitewater Falls Rd
Moody Cove
Boones Creek
133
Cheohee
N Highway 11
Salem
Tamassee
0 1.5 3 6 Miles
Charlotte
South Carolina
Coastal Plain
Georgia
Legend
Expanded Project Boundary
Project Boundary 1-mile Buffer
Project Boundary 5-mile Buffer
Duke Energy Carolinas, LLC
Salem, SC
Drawn By: JJJ
Date Drawn: 07-08-2022
Checked By: KPN
Date Checked: 07-08-2022
Kleinschmidt
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Public Resources Served By the Project

Public Participation In the FERC Process

Applying for a New FERC License

The application process is a multi-year effort involving Duke Energy's collaboration with:

- Local, State, and Federal Agencies
- Members of the Public and Environmental Organizations
- Residents of Nearby Communities
- Tribal Nations

Why is Public Participation Important

- **Identifies Community Priorities**: Helps Duke Energy identify resource issues and public concerns that matter most to community members.
- **Informs Project Enhancements**: Provides input on ways the **P**roject and surrounding resources can be**st** serve public needs during the new license term.
- **Reveals Unrecognized Concerns**: Identifies issues that may be unknown or not fully understood.
- **Fosters Long-Term Relationships**: Builds lasting partnerships and benefits that will shape the next 50 years.
- **Supports Equitable Decision-Making**: Ensures FERC incorporates public input when developing the new license, considering the public power provision with other resource benefits.

How is Public Feedback Used?

- **Informs FERC's Decision-Making**: Public feedback is compiled and submitted to FERC as part of the Final License Application.
- **Shapes License Outcomes**: FERC uses this feedback to consider public power needs with resource conservation when crafting the new license.
- **Guides Duke Energy's Services**: Helps Duke Energy better understand how to serve its customers and communities effectively.

If You Would Like to Learn More…

- Relicensing Website: www.badcreekpumpedstorage.com
- Pre-Application Document
- Initial Study Report
- ***To be issued:***
  - *Updated Study Report*
  - *Draft License Application*
  - *Final License Application*

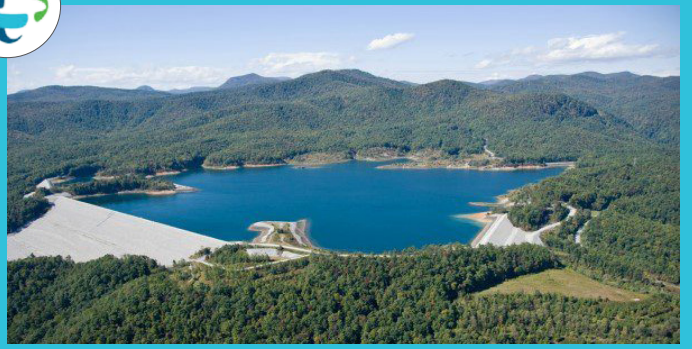
Ways to Provide Input

- Comments can be submitted via comment cards at this meeting
- Comments can also be submitted to the FERC docket at www.ferc.gov using Docket No. P-2740
- Additionally, comments can be submitted to Duke Energy at www.badcreekpumpedstorage.com/#contact

Thank You

APPENDIX E

PUBLIC MEETING COMMENT CARD



Bad Creek Relicensing and Proposed Expansion

FERC No. 2740

Date

Name

Organization

Scan the QR code for more information about the project.

Public Meeting

Please fill out this card with your comments, concerns, and/or support for the project, and give to the meeting organizers before leaving today.