

Environmental Assessment for the Charles R. Lowman Energy Center Bridge Replacement Project



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3/24/2023

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Prepared for:

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Rural Utilities Service
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ACRONYMS AND ABBREVIATIONS

- ACAMP Alabama Coastal Management Program
 ACHP Advisory Council on Historic Preservation
 ADCNR Alabama Department of Conservation and Natural Resources
 ADECA Alabama Department of Economic and Community Affairs
 ADEM Alabama Department of Environmental Management
 ALNHP Alabama Natural Heritage Program
 APE area of potential effect
 BMPs best management practices
 CBMPP Construction Best Management Practices Plan
 CEQ Council on Environmental Quality
 CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
 CFR U.S. Code of Federal Regulations
 CO carbon monoxide
 dB decibel
 dBA A-weighted decibels
 EA Environmental Assessment
 EO Executive Order
 EPA U.S. Environmental Protection Agency
 EPCRA Emergency Planning and Community Right-to-Know Act

| | |
|-------------------|---|
| FEMA | Federal Emergency Management Agency |
| FONSI | Finding of No Significant Impact |
| GSA | Geological Survey of Alabama |
| IPaC | Information for Planning and Consultation |
| MBTA | Migratory Bird Treaty Act |
| NAAQS | National Ambient Air Quality Standards |
| NEPA | National Environmental Policy Act |
| NFIP | National Flood Insurance Program |
| NO ₂ | nitrogen dioxide |
| NOAA | National Atmospheric and Oceanic Administration |
| NPDES | National Pollutant Discharge Elimination System |
| NRHP | National Register of Historic Places |
| NWI | National Wetland Inventory |
| OSHA | Occupational Safety and Health Administration |
| Pb | lead |
| PCN | Pre-construction notification |
| PM ₁₀ | particulate matter 10 microns or less in diameter |
| PM _{2.5} | particulate matter 2.5 microns or less in diameter |
| PowerSouth | PowerSouth Energy Cooperative |
| Project | proposed Charles R. Lowman Energy Center Bridge Replacement |
| RCRA | Resource Conservation and Recovery Act |
| RUS | Rural Utilities Service |
| SHPO | State Historic Preservation Office |
| SO ₂ | sulfur dioxide |
| THPOs | Tribal Historic Preservation Officers |
| TSCA | Toxic Substances Control Act |
| USACE | U.S. Army Corps of Engineers |
| USC | U.S. Code |
| USDA | U.S. Department of Agriculture |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |

1.0 PURPOSE AND NEED

1.1 Introduction

PowerSouth Energy Cooperative (PowerSouth) is proposing to replace an aging access bridge (Project) to the Lowman Energy Center (LEC), a critical energy facility that provides and serves the energy needs of rural consumers in Alabama and northwest Florida. PowerSouth is seeking financial assistance for the Project under the Rural Electrification Act, as amended (7 U.S. Code [USC] § 904) which authorizes the Secretary of Agriculture to make loans to nonprofit cooperatives and others for rural electrification projects. A loan request has been made through the Rural Utilities Service (RUS) an agency in the United States Department of Agriculture (USDA). A primary mission of RUS is to carry out this electric loan program (7 USC § 6942).

This Environmental Assessment (EA) was prepared in accordance with Title 7 of the Code of Federal Regulations (CFR) Part 3100 (7 CFR 3100), which prescribes the policies and procedures of the U.S. Department of Agriculture (USDA) for implementing the National Environmental Policy Act (NEPA) of 1969, as amended, the regulations of the Council on Environmental Quality, 40 CFR parts 1500 through 1805, and the USDA Rural development guidance document 1970-C. Guidance document 1970-C serves as a guide for preparing EAs under NEPA. An EA is a concise public document used by the USDA to determine whether impacts associated with a project justify a finding of no significant impact or if preparation of an Environmental Impact Statement is needed. This EA will serve as a comprehensive record of the environmental analyses performed for the project and to ensure compliance with the following federal statutes and Executive Orders (E.O.s) deemed relevant to this assessment:

- National Historic Preservation Act (NHPA) (16 USC § 470 *et seq.*)
- Endangered Species Act (16 USC § 1531 *et seq.*)
- Farmland Protection Policy Act (7 USC § 4201, *et seq.*)
- Clean Water Act (33 USC § 1251, *et seq.*)
- Migratory Bird Treaty Act (16 USC § 703 *et seq.*)
- Bald and Golden Eagle Protection Act (16 USC § 1251, *et seq.*)
- E.O. 11988, Floodplain Management
- E.O. 11990, Protection of Wetlands
- E.O. 12898, Environmental Justice
- E.O. 13084, Consultation and Coordination with American Indian Tribes

The EA serves as a comprehensive record of the environmental analyses performed for the Project, and should provide sufficient information to the approving official at RUS to determine if the proposed federal action has significant environmental impacts. This determination will fulfill obligations under NEPA and other aforementioned federal directives. RUS's financial decision for the Project is based on funds available in the agency's budget. Therefore, publication of the EA and execution of environmental findings does not constitute an approval of funds for the Project. Challenges to RUS's determinations made regarding the EA and decision to finance the Project may be filed in federal court under the Administrative Procedure Act. No construction activities are allowed before RUS has concluded the environmental review process and the owner has received all necessary permits, easements, and/or authorizations for the project.

1.2 Project Description

The Project will be constructed adjacent to the existing bridge on PowerSouth's existing 313-acre LEC site in Leroy, Washington County, Alabama (Figure 1-1). The existing bridge, a wooden pile supported structure constructed in the 1970s, is the sole access point for workers to enter the plant. The bridge is inspected on an annual basis, and any wooden piles showing signs of decay are inspected quarterly and replaced as necessary. Based upon these inspections, the original wood piles are degrading at an increasingly rapid rate, with over a quarter of the total piles currently requiring quarterly inspections. Additionally, many piles have been previously deemed beyond repair and replaced. It has been noted by inspectors that the lifespan of the replacement wood piles is much shorter than that of the original piles; therefore, wood piles are not as suitable for use in this manner as they once were. After the most recent annual inspection, conducted on February 1-3, 2022, PowerSouth concluded that total bridge replacement was the safest and most cost-effective option. PowerSouth is proposing the construction of a new access bridge to replace the existing aging infrastructure and to ensure a safe and structurally sound access route to the LEC for approximately 75 years, which is the estimated lifespan of the proposed bridge.

The Project will consist of the construction of a new 960-ft. access bridge and the removal of the existing bridge. The entirety of the Project location is located within the 100-year floodplain and will require approximately 0.36 acres of wetland fill, which is necessary to bring the bridge embankment to elevation on the northwest end of the bridge. The southeast end of the bridge will tie into the existing embankment, located in an upland area. The Project will be constructed out of concrete piles, reinforced concrete girders, and a poured in place concrete deck. Concrete piles will be driven into the ground at varying depths (estimated average of approximately 35 ft.) dependent upon hydrology and soil conditions of the site placement, at approximately 80 ft. spans. and pre-stressed concrete girders installed. Concrete decking and side railing will be installed, and a new asphalt road will be constructed on each end of the Project. The

realignment will tie back into the existing access road to the LEC. Once the new bridge is opened to plant traffic, the existing bridge will be removed and disposed of according to state and federal regulations. The construction of the proposed Project is estimated to take approximately two years to completion. Additionally, PowerSouth will prepare a Construction Best Management Practices Plan (CBMPP) that will describe the best management practices (BMPs) that will be utilized throughout the construction and demolition processes. Project maps are available in Appendix A.



Figure 1-1 Aerial view of the LEC bridge replacement Project area, showing the proposed bridge corridor (in yellow) and potential environmental impact area (in red), including laydown areas.

1.3 Purpose and Need for the Proposed Action

The purpose of the Project is to replace LEC's existing aging access bridge in order to guarantee a safe and reliable access point to the plant, a critical energy facility. Due to its age, the existing bridge is in poor condition despite costly annual maintenance, and needs to be replaced. If the existing access bridge is not replaced, it will inevitably continue to deteriorate, which could lead to significant safety hazards, resulting in road closures that prevent workers from accessing the plant.

2.0 ALTERNATIVES EVALUATED INCLUDING THE PROPOSED ACTION

RUS has evaluated several different alternatives for this Project, taking into account environmental impacts, cost effectiveness, longevity, and reliability. The alternatives reviewed, as well as the proposed action, are discussed in more detail below. See Appendix B for detailed descriptions and drawings of all alternatives.

2.1 Alternative A: Proposed Action

PowerSouth is proposing to replace the existing access bridge to the LEC by constructing a bridge of similar length adjacent to the existing bridge. The proposed Project will be constructed just north of the existing bridge and will be approximately 960 ft. in length. The Project will require the extension of the northwest abutment to the northeast, while the existing southeast abutment will not require extension. The Project will consist of concrete piles, reinforced concrete girders, and a poured in place concrete deck. Concrete piles will be driven into the ground, capped, and pre-stressed concrete girders will be installed. Lastly, the concrete decking and side railing will be installed. A new asphalt road will be constructed on each end of the Project; the realignment will tie back into the existing access road to the LEC. The proposed Project will result in less than a half-acre impacts of wetlands and will utilize a U.S. Army Corps of Engineers (USACE) Nationwide Permit 14 (NWP-14). The entirety of the proposed Project location is within the 100-year floodplain, and approximately six acres of floodplain will be occupied because of the proposed Project. The replacement bridge will have fewer pile supports and a higher elevation than the existing bridge, which should result in more flow and thereby less impediment in the floodplain. Additionally, the results of a hydraulic analysis study resulted in a “no-rise” scenario to floodplain impacts. This alternative is anticipated to result in the least environmental impacts of all of the alternatives, which is why RUS is considering the Project selection as the preferred alternative.

2.2 Alternative B: No Action

Under the no-action alternative, RUS will not provide financial assistance to PowerSouth to build the Project. Under this scenario, there are no RUS-driven federal action requirements. The no-action alternative does not address the need of this project to secure a long-term stable access for the LEC. Under this alternative, continual maintenance and repair of the existing bridge would be needed. Not only would maintenance costs become an increasing concern, but the aging bridge would continue to create access and safety issues, which could result in decreased reliability for the LEC and disrupt services to the PowerSouth service territory and its members. Therefore, this is not a feasible alternative.

2.3 Alternatives Considered but Eliminated from Detailed Analysis

2.3.1 Alternative Bridge Replacement Scenario 1

In Alternative Bridge Replacement Scenario 1, a new 320-ft. bridge would be constructed immediately to the north of existing bridge. This alternative would require the extension of both the northwest and southeast abutments by approximately 640 feet. This alternative would result in approximately 2.67 acres of wetland fill, which would require the procurement of an Individual Permit from the USACE and analysis under the CWA Section 404(b)(1) Guidelines. Additionally, this alternative would result in the occupancy of approximately six acres of floodplain. Although the results of a hydraulic analysis study determined this alternative would result in a “no-rise” scenario to floodplain impacts, this alternative would result in greater wetland impacts. Because of these factors, this alternative has been eliminated and dismissed from further analysis.

2.3.2 Alternative Bridge Replacement Scenario 2

In Alternative Bridge Replacement Scenario 2, a new 320-ft. bridge would be constructed approximately 500 feet to the northeast of the existing bridge. This alternative would also utilize a new 320-ft. bridge, but would require major additions to both the northwest and southeast abutments. This alternative would result in greater wetland impacts, requiring the procurement of an Individual Permit with the USACE and analysis under the CWA Section 404(b)(1) Guidelines. Additionally, this alternative would result in the occupancy of approximately six acres of floodplain. Although the results of a hydraulic analysis study determined this alternative would result in a “no-rise” scenario to floodplain impacts, this alternative would result in approximately 3.77 acres of wetland impacts. Because of these factors, this alternative has been eliminated and dismissed from further analysis.

2.3.3 Alternative Cast-In-Place Concrete Culvert Scenario 3

This alternative consists of replacing the existing bridge with a new cast-in-place culvert adjacent to the existing bridge. The culvert would consist of twenty-five 12 ft. x 14 ft. x 45 ft. barrels. This alternative would require a new abutment on the northwest side and an extended abutment of approximately 640 feet on the southeast end. This alternative would result in greater wetland impacts, requiring the procurement of an Individual Permit with the USACE and analysis under the CWA Section 404(b)(1) Guidelines. Additionally, this alternative would result in the occupancy of approximately six acres of floodplain. Although the results of a hydraulic analysis study determined this alternative would result in a “no-rise” scenario to floodplain impacts, this alternative would result in approximately 2.98 acres of wetland impacts. Because of these factors, this alternative has been eliminated and dismissed from further analysis.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section provides a description of the existing natural and human resources present in the vicinity of the Project area and the potential impacts to them from Project construction and operation. Chapter 4.0, Cumulative Impacts, discusses the potential cumulative environmental impacts resulting from implementation of the Proposed Action.

3.1 Land Use and Ownership

3.1.1 General Land Use

PowerSouth's proposed Project will be located on its existing 313-acre LEC site in southwest Alabama. The Project area is located in Washington County near the unincorporated community of Leroy on the west bank of the Tombigbee River. The town of Jackson, Alabama is located across the Tombigbee River in Clarke County, Alabama. Large areas of undeveloped land and woodlands are common in the vicinity of the Project area. The area is sparsely populated with scattered residential, industrial, and commercial structures, and agricultural land uses.

3.1.1.1 Affected Environment

The Project corridor is located on PowerSouth property that is devoted to industrial uses associated with power generation. There are no zoning restrictions for Washington County, Alabama. Major developments in the vicinity include the Packaging Corporation of America Paper Mill, located on the east bank of the Tombigbee River. The surrounding area is primarily unincorporated small communities. Forestry and related activities are common in the area. The entirety of project area is owned by PowerSouth and is currently maintained on a consistent schedule by mowing. Upon completion of the new bridge, the existing bridge will be removed.

3.1.1.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action) - No changes to the existing land use will result as the construction footprint is adjacent to the existing access bridge and consists of open area on an industrial site. The area will be temporarily disturbed during construction, but following construction of the new bridge, the existing bridge will be removed and the area will return to open area.

Alternative B (No Action)- Alternative B will have no effect on the current land use or further impact the general land use of the surrounding areas.

No mitigation measures are necessary for either alternative as there will be no effects to general land use.

3.1.2 Formally Classified Lands

3.1.2.1 Affected Environment

Formally classified lands in the area include Pine Grove Cemetery, located on County Road 34 approximately three miles west of the Project area. Additionally, there are two wildlife game sanctuaries within 10 miles of the Project area. The Fred T. Stimpson Community Hunting Area is located approximately seven and one-half miles to the southeast of the Project area. The sanctuary covers approximately 5,500 acres of wildlife habitat and provides managed hunts. Additionally, a restricted access wildlife game sanctuary, owned and managed by the Alabama Department of Conservation and Natural Resources (ADCNR), is located approximately four miles northwest of the Project area. There are no formally classified lands immediately adjacent to the Project area (Appendix C) (EPRI, 2022; NPS, 2020; NPS, 2022; U.S. EPA, 2022; USGS, 2022; Wilderness Connect, 2022).

3.1.2.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Alternative A is not anticipated to have any effects on formally classified lands as there are no formally classified lands within or immediately adjacent to the Project area.

Alternative B (No Action)- Alternative B will have no effect on formally classified lands.

No mitigation measures are necessary for either alternative as there will be no effects to formally classified lands.

3.1.3 Geology

3.1.3.1 Affected Environment

The Project area is located near Leroy, Alabama on the Tombigbee River. Geologic map data from the U.S. Geological Survey (USGS) National Geologic Map Database (USGS, 2022a) was used to determine the geology of the Project area (Appendix C). According to the map and accompanying data, Holocene alluvial and low terrace deposits occupy the area along the river. These deposits contain unconsolidated, detrital sedimentary rock. Clastic sediments such as fine to coarse quartz sand with lenses of clay and gravel constitute most of the lithology. The gravel is composed of pebbles of quartz and chert, in addition to metamorphic and igneous rock fragments.

3.1.3.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Potential ground disturbing activities are anticipated to be minimal and limited to the construction period, and potential impacts associated with geology are anticipated to be localized within the area where ground disturbing activities may occur.

Alternative B (No Action)- Under Alternative B, ground disturbing activities may result from continued routine maintenance such as periodic replacement of piles.

No mitigation measures are necessary for either alternative as there will be no effects to geology.

3.1.4 Soils

3.1.4.1 Affected Environment

Web Soil Survey, the USDA Natural Resources Conservation Service's (NRCS) website, was referenced for soil data for the Project area (NRCS, 2022). Web Soil Survey reveals that the Project area has two soil classifications: 1) Ut: Urban land-anthropogenic udorthents complex, 0 to 8 percent slopes, industrial, and 2) Uub: Urbo-Mooreville-Una complex, 0 to 3 percent slopes, frequently flooded. The primary soil type (94.9%) of the Project area is Ut, which are those soils defined as "human transported material over loamy marine deposits" (i.e. filled wetlands).

3.1.4.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Observed soils were consistent with mapped descriptions as most of the project area has been substantially altered and filled during the course of previous construction and landscaping (Appendix C). Therefore, no impacts to soils are expected as a result of the proposed Project.

Alternative B (No Action) - Alternative B will have no effect on soils.

No mitigation measures are necessary for either alternative as there will be no permanent effects to soils.

3.1.5 Farmland

3.1.5.1 Affected Environment

The Project area and surrounding areas are not classified as prime farmland or farmland of statewide importance (Appendix C) (NRCS, 2022). Because soils do not support classification of prime farmland or farmland of statewide importance, selection of either the proposed alternative or the No action will have no effect on farmlands.

3.1.5.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Alternative A will have no effect on prime farmland.

Alternative B (No Action) - Alternative B will have no effect on prime farmland.

No mitigation measures are necessary for either alternative as there will be no effects to prime farmland.

3.2 Floodplains

3.2.1 Affected Environment

Inspection of Federal Emergency Management Agency (FEMA) FIRM panel number 01129C0350D indicates that the entirety of the proposed Project area is located in FEMA Flood Zone A, which is located within the 100-year floodplain (Appendix B) (FEMA, 2021). E.O. 11988 requires federal agencies to avoid to the maximum extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid floodplain development where there are practicable alternatives. This order outlines an eight-step decision making process to be used for any action involving construction in a floodplain. PowerSouth completed the eight-step process to evaluate impacts associated with occupancy of the floodplain, which included the consideration of several alternatives in the hydraulic analysis, private party notifications, and associated public notices (Appendix B).

3.2.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Alternative A will result in the occupancy of approximately six acres of floodplain. The results of a hydraulic analysis, completed by a third-party consultant, indicate that the proposed Project “will not create any increase to the 100-year base flood elevations, floodway elevations, and floodway widths at published sections in the Flood Insurance Study for Washington County, Alabama, dated October 2012, and will not create any increase in 100-year flood and floodway elevations and floodway widths at unpublished cross sections in the vicinity of the project.”

Public notice of PowerSouth’s intent to occupy a floodplain was posted to the PowerSouth website and published in two local newspapers: The *South Alabamian* and the *Washington County News*. No substantial comments related to the Project were received. Letters describing the proposed Project and providing opportunity for comment were mailed to all adjoining landowners and no responses were received. Additionally, PowerSouth notified the State National Floodplain Insurance Program (NFIP) Coordinator with the Alabama Department of Community Affairs (ADECA), and the local Floodplain Administrator for Washington County about the Project. Neither party had any objections to the proposed Project.

PowerSouth will obtain all necessary permits for this Project and will abide by all State and Federal regulations. All correspondence and documents pertaining to floodplains may be found in Appendix B.

PowerSouth has received a “no-rise” certification from a third party engineering/consulting firm that has reviewed the details of the proposed Project and the proposed alternatives (Appendix B).

Alternative B (No Action) - Alternative B would not further permanently alter or impact floodplains. If selected, temporary impacts could result during routine maintenance activities.

No mitigation measures are necessary for either alternative as there will be no permanent effects to floodplains. Under Alternative A, there would be temporary occupation of the floodplain during construction. Once constructed, the replacement bridge will be a foot higher in elevation and contain less pilings than the existing bridge, and allow for more flow and less potential for impediment of floodwaters. Additionally, once the replacement bridge is constructed, the existing bridge will be demolished.

3.3 Wetlands

3.3.1 Affected Environment

The U.S. Fish and Wildlife Service’s (USFWS) National Wetland Inventory (NWI) identified three types of palustrine wetland areas: 1.) seasonally-flooded, freshwater, unconsolidated shore (PUSC) wetland habitat, 2.) seasonally-flooded, freshwater forested/shrub (PFO1C) wetland habitat, and 3.) semi-permanently flooded, freshwater forested/shrub wetland habitat comprised of $\geq 50\%$ deciduous trees (PF06F). Other wetlands in the area include palustrine forested wetlands associated with tributaries to the Tombigbee River and associated floodplains and riverine wetlands associated with the Tombigbee River (USGS, 2022a).

A wetlands delineation was completed by Wetland Sciences, Inc. in August 2022. The report may be found in Appendix D.

3.3.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action) – Alternative A would result in approximately 0.36 acres of wetland fill within bottomland hardwood forested wetlands. The fill is required to support the northwestern bridge abutment and provide scour protection.

Alternative B (No Action) – Alternative B would not further permanently alter or impact wetlands. If selected, temporary impacts could result during routine maintenance activities, but impacts would be expected to be under 1/10th of an acre.

Under Alternative B, a USACE NWP 3 – Maintenance would be utilized and no mitigation measures would be necessary as impact would be expected to be under one-tenth of an acre and no long-term temporal loss associated with those maintenance activities would be expected. Alternative A would result in less than a half-acre of impacts to wetlands and meets the 2021 NWP terms and conditions for NWP 14 – Linear Transportation Projects. NWP 14 authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project. A Pre-Construction Notification (PCN) must be submitted to the district engineer prior to commencing the activity if the loss of waters of the United States exceeds one-tenth of an acre. Since construction of this Project will consist of approximately 0.36 acres of fill within a wetland, a PCN was submitted to the USACE for verification on December 11, 2022. PowerSouth will abide by all permit provisions set forth by the USACE and will purchase the required 0.24 bottomland hardwood credits from Alabama River Mitigation Bank, with additional credits being purchased at the time of NWP verification if needed and required by USACE. Because the project is not located in the primary service area of the bank, a proximity factor of 1.65 was applied (provided by Westervelt). The Wetland Rapid Assessment Procedure (WRAP) evaluation has been provided to support the credit calculation (Appendix D).

3.4 Water Resources

3.4.1 Surface Waters

3.4.1.1 Affected Environment

The most prominent surface water resource in the vicinity of the Project area is the Tombigbee River. The Tombigbee River begins to the northwest in Itawamba County, Mississippi and flows for approximately 440 miles southeast into the Alabama River in Baldwin County, Alabama. The Tombigbee River drains approximately 19,120 square miles with an annual mean flow of 26,233 cubic feet per second (USGS, 2022b). Bassetts Creek, located west of the Project area, flows into the Tombigbee River about one and one-half miles to the south. Other surface features include several intermittent streams and natural swamps associated with the Tombigbee River in the vicinity of the Project area. The Project area is seasonally inundated from the adjacent Tombigbee River. This proposed Project would not require a water supply and would not have any water discharges.

3.4.1.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Alternative A will not have any direct effects to surface waters.

Alternative B (No Action) - Alternative B not have any direct effects to surface waters.

Both Alternative A and B would utilize temporary and permanent construction BMPs in order to protect all waters of the state. BMPs may include, but are not limited to: silt fence, wattles, erosion control blankets, seeding, mulching, hydroseeding, minimizing stockpiling, construction phasing, installation of construction exit pads, and inlet protection. Under Alternative A, PowerSouth will apply for the appropriate ADEM NPDES Construction Stormwater Permit (prior to commencement of construction) and will follow all requirements of the permit.

3.4.2 Groundwater

3.4.2.1 Affected Environment

Groundwater is located within soil and rock formations beneath the ground surface, and is described in terms of depth to aquifer, aquifer or well capacity, and surrounding geologic composition. Aquifers have sufficient permeability to allow for the flow of groundwater to provide a source of water to man-made wells and natural springs.

The Project area is located on river deposits composed of interbedded sands and gravels that constitute the Quaternary-age Alluvial Aquifer (~8 ft.). This aquifer is not used for drinking water due to the high organic content in some of the beds, but it does yield sufficient quantities of water for livestock and irrigation. Below that are the Tertiary-aged marine sedimentary units that all dip to the southwest, including the Oligocene Series (~250 ft.), which consist of a lot of clays and limestones that would tend to act as confining units for the deeper underlying Gosport Sand/Lisbon aquifer (Tg/t). The proposed construction methods for this Project do not require disturbance to the depth of the Oligocene series and therefore impacts to the underlying aquifer are not anticipated. The geologic units that constitute the Miocene-Pliocene aquifer outcrop further to the south of the facility and thereby would not be affected by site activities (Appendix E). None of the aforementioned aquifers are sole source aquifers, defined as an aquifer supplying at least 50 percent of the drinking water for its service area and where there are no reasonably available alternative drinking water sources should the aquifer become contaminated.

3.4.2.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Alternative A is not likely to result in any effects to confining unit to drinking water aquifers as construction methods do not dictate disturbances to those depths. Construction methods such as pile driving could temporarily affect the shallow Alluvial aquifer, which is not suitable for drinking water due to high organic content. This aquifer is used as water for livestock and irrigation and therefore any disturbance due to construction activities would not deem the water unsuitable for these uses. Additionally, there is no known use of this aquifer within a one-mile radius of the Project area.

Alternative B (No Action) - Alternative B will not result in any effects to drinking water aquifers. Maintenance activities could affect the shallow Alluvial aquifer, which is not suitable for drinking water due to high organic content. This aquifer is used as water for livestock and irrigation and therefore any disturbance due to construction activities would not deem the water unsuitable for these uses. Additionally, there is no known use of this aquifer within the known surrounding area of the Project area.

No mitigation measures are necessary for either alternative as there will be no permanent effects to groundwater.

3.4.3 Water Quality

3.4.3.1 Affected Environment

The Tombigbee River is listed on the Alabama Section 303(d) List of Impaired Water Bodies for mercury from atmospheric deposition (ADEM, 2022) (Appendix E). Impaired water bodies are defined as those that do not meet the water quality standards established by the Clean Water Act and require federal regulations for remediation. Construction of the proposed Project would not create any additional point source discharges and no impacts to water quality are anticipated.

3.4.3.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Alternative A construction methods will require the use of fill material and surface disturbance and grading, causing the potential for sedimentation into adjacent seasonal surface waters.

Alternative B (No Action) - Alternative B would not further permanently alter or impact water quality. If selected, temporary impacts could result during routine maintenance activities.

Both Alternative A and B would utilize temporary and permanent construction BMPs in order to protect all waters of the state. BMPs may include, but are not limited to: silt fence, wattles, erosion control blankets, seeding, mulching, hydroseeding, minimizing stockpiling, construction phasing, installation of construction exit pads, and inlet protection. Under Alternative A, PowerSouth will apply for the appropriate ADEM NPDES Construction Stormwater Permit (prior to commencement of construction) and will follow all requirements of the permit.

3.5 Coastal Resources

3.5.1 Affected Environment

LEC is located in a region of Alabama well to the north of lands classified as Coastal Barrier Resources (USFWS, 2022) (Appendix F). Additionally, the Alabama Coastal Management Program (ACAMP), as approved by the National Atmospheric and Oceanic Administration (NOAA) in 1979, defines the coastal area as all areas from the ten-foot contour seaward to the three-mile limit (Alabama Department of Conservation and Natural Resources [ADCNR], 2018). The Project is not located within the coastal area as defined in the ACAMP nor will it affect any coastal resources.

3.5.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Alternative A will not have any effects to coastal resources.

Alternative B (No Action) - Alternative B will not have any effects to coastal resources.

No mitigation measures are necessary for either alternative as there will be no permanent effects to coastal resources.

3.6 Biological Resources

3.6.1 General Fish, Wildlife, and Vegetation Resources

3.6.1.1 Affected Environment

The proposed Project area is located at the single roadway access to the facility and is comprised of a routinely managed (mowed) bahia grass (*Paspalum notatum*). The wetland areas consist largely of alligator weed (*Alternanthera philoxeroides*) and can be classified as Freshwater Forested/Shrub Wetland habitat (PFO1C) (USFWS, 2022c). The area on the northeast end of the bridge contains a sparse population of

mature water oaks (*Quercus nigra*), laurel oaks (*Quercus laurifolia*) and sweetgums (*Liquidambar styraciflua*).

The Alabama Natural Heritage Program (ALNHP) maintains a list of plant and animal species that are considered endangered, threatened, or an Alabama species of concern for all counties in the state. Alabama does not have a state law equivalent to the federal Endangered Species Act, so species do not have regulatory protection as state endangered or threatened species. However, state-protected species were taken into account during this evaluation and will be avoided to the maximum extent possible.

Table 3-1 State Protected Species that may Occur in Washington County, Alabama.

| Species | Status | Notes |
|--|-----------------|--|
| Red-Cockaded Woodpecker (<i>Dryobates borealis</i>) | State Protected | There is no suitable habitat to support the life cycle of this species and no evidence of the species was present during the initial surveys. |
| Gopher Tortoise (<i>Gopherus Polyphemus</i>) | State Protected | There is no suitable habitat to support the life cycle of this species and no evidence of the species was present during the initial surveys. |
| Black-Knobbed Map Turtle (<i>Graptemys nigrinoda</i>) | State Protected | There is no suitable habitat to support the life cycle of this species and no evidence of the species was present during the initial surveys. |
| Alabama Map Turtle (<i>Graptemys pulchra</i>) | State Protected | There is no suitable habitat to support the life cycle of this species and no evidence of the species was present during the initial surveys. |
| Alligator Snapping Turtle (<i>Macrochelys temminckii</i>) | State Protected | Dependent upon the season, there may be suitable habitat to support the life cycle of this species; however, no evidence of the species was present during the initial surveys. |
| Little Brown Bat (<i>Myotis lucifugus</i>) | State Protected | There is no suitable habitat to support the life cycle of this species and no evidence of the species was present during the initial surveys. |
| Paddlefish (<i>Polyodon spathula</i>) | State Protected | The development of this Project will require no construction within the Tombigbee River and is not anticipated to result in any effects to water quality during construction. Construction BMPs will be used to protect surrounding waterbodies. |
| Alabama Red-Bellied Turtle (<i>Pseudemys alabamensis</i>) | State Protected | Dependent upon the season, there may be suitable habitat to support the life cycle of this species; however, no evidence of the species was present during the initial surveys. |

| Species | Status | Notes |
|--|-----------------|--|
| Alabama Sturgeon (<i>Scaphirhynchus suttkusi</i>) | State Protected | The development of this Project will require no construction within the Tombigbee River and is not anticipated to result in any effects to water quality during construction. Construction BMPs will be used to protect surrounding waterbodies. |

3.6.1.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Alternative A is not anticipated to have any long-term effects to general fish, wildlife, and vegetation resources. The alternative will require the removal of a few hardwood trees, but overall the vegetative conditions within the Project area will be the same. Construction may result in short-term, temporary displacement impacts to wildlife species foraging in the area. The reduced frequency of maintenance activities associated with the proposed bridge will result in less potential disturbance to wildlife.

Alternative B (No Action)- Alternative B is not anticipated to have any effects to general fish, wildlife, and vegetation resources. This alternative will potentially result in annual disturbances to wildlife to facilities yearly maintenance and repairs.

As construction and operation of the proposed Project will have only minimal temporary impacts to general wildlife and vegetation resources, no mitigation measures are necessary.

3.6.2 ESA-Listed Threatened and Endangered Species

3.6.2.1 Affected Environment

The USFWS is responsible for monitoring the status of federally listed species within the state and across the U.S. The USFWS's Information for Planning and Consultation (IPaC) was utilized to determine threatened and endangered species and critical habitats known to occur in the vicinity of the Project (Appendix G).

A review of the IPaC species report (USFWS, 2022a) indicated that no endangered species of vegetation are likely to occur within the vicinity of the Project area (Appendix G). Through evaluation of current land use and vegetation within the proposed Project area, as well as habitat preferences for the IPaC species, specific areas were identified that could possibly support the species. Field verification of the parameters below and a comprehensive field evaluation were conducted on August 22, 2022. The field evaluation focused on habitats that could potentially support listed species. The survey was performed within all

habitats encountered with the sole purpose of determining habitat status by concentrating on signs suggesting species presence. A biological report was submitted to USFWS on September 19, 2022. The USFWS returned a stamped reply concurring with the Project on October 12, 2022 (Appendix G). Table 3-2 provides a summary of the federally listed and candidate species that were provided by the USFWS via the IPaC report that was completed on September 6, 2022, and an updated report that was generated on January 23, 2023, and lists notes from the on-site survey and desktop research for all federally listed species and species of concern.

Table 3-2 Federally Threatened and Endangered Species (IPaC).

| Species | Critical Habitat | Status | Notes |
|---|------------------|----------------------|--|
| Wood Stork (<i>Mycteria americana</i>)* | No | Federally Threatened | There are no known nesting colonies or core foraging areas within or near the vicinity of the Project Area. The area surrounding the Project area presents a potential habitat (cypress swamp); however, there are no recorded historic sightings in the area. |
| Black Pinesnake (<i>Pituophis melanoleucus lodingi</i>) | Yes | Federally Threatened | No evidence of the species or its habitat was present during the initial surveys. PowerSouth will institute a “no kill” policy and other BMPs during the construction of this Project to protect the species. |
| Eastern Indigo Snake (<i>Drymarchon couperi</i>) | No | Federally Threatened | No evidence of the species was present during the initial surveys. PowerSouth will institute a “no kill” policy and other BMPs during the construction of this Project to protect the species. |
| Gulf Sturgeon (<i>Acipenser oxyrinchus desotoi</i>) | Yes | Federally Threatened | The development of this Project will require no construction within the Tombigbee River and is not anticipated to result in any effects to water quality during construction. Construction BMPs will be used to protect surrounding waterbodies. |

| Species | Critical Habitat | Status | Notes |
|--|------------------|----------------------------|--|
| Inflated Heelsplitter (<i>Potamilu inflatus</i>) | No | Federally Threatened | The development of this Project will require no construction within the Tombigbee River and is not anticipated to result in any effects to water quality during construction. Construction BMPs will be used to protect surrounding waterbodies. |
| Southern Clubshell (<i>Pleurobema decisum</i>) | Yes | Federally Endangered | The development of this Project will require no construction within the Tombigbee River and is not anticipated to result in any effects to water quality during construction. Construction BMPs will be used to protect surrounding waterbodies. |
| Monarch Butterfly (<i>Danaus plexippus</i>) | No | <i>Candidate</i> | There is no suitable habitat to support the life cycle of this species. |
| Alligator Snapping Turtle (<i>Macrochelys temminckii</i>) | No | <i>Proposed Threatened</i> | There is no suitable habitat to support the life cycle of this species. |

**In the January 23, 2023 IPaC report, the wood stork was no longer listed as a species of concern for this Project.*

3.6.2.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- For Alternative A, RUS' determination is that the proposed Project May Affect, but is Not Likely to Adversely Affect (NLAA) the Black Pinesnake and the Eastern Indigo Snake. For all other listed species identified in the official IPaC species list, RUS has made a determination of No Effect. USFWS was consulted and concurred with the determinations on March 8, 2023. Ongoing maintenance for this alternative will be less frequent than for Alternative B, and therefore will result in less disturbance over time.

Alternative B (No Action)- Alternative B will have similar potential to affect listed species as the aforementioned alternative. Maintenance activities associated with Alternative B will occur more frequently and therefore over time have the potential for more disturbance.

For either alternative, sediment and species BMPs provided by USFWS will be utilized to protect the resource. PowerSouth intends to implement the following BMPs to protect both the Eastern Indigo Snake

and Black Pinesnake: 1.) Provide construction staff with species information and BMPs, 2.) Maintain low speeds at the work site to avoid snakes that may be present in or near the roadway, 3.) Check for snakes underneath equipment prior to moving in the morning, 3.) Observe a no-kill snake policy on site. Additionally, in the event of a live or dead Eastern Indigo Snake or Black Pinesnake encounter, the USFWS Daphne Field Office will be contacted.

3.6.3 Migratory Bird Treaty Act

3.6.3.1 Affected Environment

The Migratory Bird Treaty Act (MBTA) (as amended 1998) implements conventions between the United States and four other countries (Canada, Mexico, Japan, and Russia) for the protection of migratory birds (16 USC 703). E.O. 13186, signed January 10, 2001, imposes procedural requirements on evaluating project level effects on migratory birds with emphasis on state designated priority species.

The proposed Project is located within areas previously developed and utilized for power generation. Certain migratory birds may utilize these disturbed areas. An on-site field evaluation of impacts to migratory birds was conducted. The study concluded the proposed action will not result in unintentional take and is unlikely to have a measurable negative effect on migratory bird populations.

3.6.3.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Alternative A may result in temporary disturbance to migratory birds during construction. Following construction, the replacement bridge will have the potential to provide nesting structure for some species of migratory birds. Ongoing maintenance for this alternative will be less frequent than for Alternative B, and therefore will result in less disturbance over time.

Alternative B (No Action)- Alternative B may result in temporary disturbance to migratory birds during maintenance activities. Under this alternative, inspections would be conducted quarterly and annually, and some maintenance items may require immediate attention. As maintenance activities associated with Alternative B will occur more frequently, there is a greater potential for disturbance over time.

For either alternative, PowerSouth will make every effort to schedule future maintenance activities outside of the active nesting season. Upon completion of construction, Alternative A would result in less frequent maintenance, which would result in less disturbance to any migratory birds that may be utilizing the structure.

3.6.4 Bald and Golden Eagle Protection Act

3.6.4.1 Affected Environment

The Bald and Golden Eagle Protection Act (Eagle Act), originally passed in 1940, prohibits the take, possession, sale, purchase, barter, offer to sell, purchase, or barter, transport, export, or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit (16 USC 668(a) - 668(d); 50CFR 22). “Take” is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb” a bald or golden eagle. The term “disturb” under the Eagle Act was recently defined via a final rule published in the Federal Register on June 5, 2007 (72 FR 31332). “Disturb” means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.

An on-site field evaluation found there are no golden or bald eagle nest sites near the Project area. The proposed Project is located in an area subject to historic disturbance from the development and operation of a power generation plant. Based on these evaluations, PowerSouth has determined the proposed efforts within the Project area will not result in a take of golden or bald eagles.

3.6.4.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Alternative A is not anticipated to have any effects to bald or golden eagles.

Alternative B (No Action)- Alternative B is not anticipated to have any effects to bald or golden eagles.

No mitigation measures are proposed for bald or golden eagles.

3.6.5 Invasive Species

3.6.5.1 Affected Environment

The proposed Project area can be described as upland turf grass and hardwoods. The proposed Project area is located at the single roadway access to the facility and is comprised of a routinely managed (mowed) grass. The site currently contains small isolated areas of invasive alligator weed that is restricted to wetland areas. It is not expected that construction-related disturbance will provide an opportunity for the establishment of any additional invasive species.

3.6.5.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- Alternative A is not anticipated to result in an increase of invasive species beyond those that are currently established in the vicinity.

Alternative B (No Action)- Alternative B is not anticipated to result in an increase of invasive species beyond those that are currently established in the vicinity.

No mitigation measures are proposed for invasive species.

3.7 Historic and Cultural Resources

3.7.1 Affected Environment

In accordance with Section 106 of the National Historic Preservation Act and 36 CFR Section 800.1, federal agencies are required to consider the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. If there is more than one federal agency, a lead federal agency may be designated to act for all of the federal agencies. The federal agency or lead federal agency is responsible for coordination with consulting parties, which may include the State Historic Preservation Office (SHPO), Tribal Historic Preservation Officers (THPOs) if tribal land is involved, Indian Tribes, the public, the ACHP, local governments, and applicants. The following investigations have been completed to assist the federal agency in their compliance with Section 106.

A search of the National Register of Historic Places (NRHP) and the state historical archives revealed that the Jackson Historic District and the Loranz-McCrary House are located approximately one and one-half miles northeast of the Project. No other properties of state or national significance were located within one and one-half miles of the Project.

On August 29, 2022, a cultural resource survey was conducted by Tray Earnest (principal investigator) of TG Earnest and Associates. During the assessment, the physical area of potential effect (APE) was visually inspected by systematic pedestrian transect for the presence of historic structures, historic ornamental vegetation, and surficial evidence of cultural resources. Additionally, seventeen shovel tests measuring 30-x-30 cm were conducted at 30 meter intervals within uplands. Excavated soils were sifted through portable screens composed of ¼ inch hardware cloth. All shovel tests were excavated to the depth of clay subsoils or the water table and were backfilled upon completion. Areas with exposed clay subsoils, erosion, and wetlands were visually inspected only.

During the assessment, no cultural resources were observed on the surface or from shovel tests. Additionally, it was noted that the overwhelming majority of the project area contains fill material and clay subsoils at the surface or immediately below the grass layer, and that conditions within the Project area are extensively disturbed from previous construction and fill. The conclusions and recommendations from that report were as follows: “Assessment results indicate the proposed project will have *no effect* upon historic properties and should be allowed to proceed with no further archaeological investigations.”

On October 7, 2022, the cultural resource assessment (CRA) and consultation letter were sent to the SHPO. The SHPO responded on November 1, 2022, with a letter concurring with the determination of “*no effect to historical properties.*”

On November 8, 2022, Project consultation letters were sent to the Alabama-Coushatta Tribe of Texas, Alabama-Quassarte Tribal Town, Coushatta Tribe of Louisiana, Choctaw Nation of Oklahoma, and the Mississippi Band of Choctaw Indians. The only response received was from the Choctaw Nation of Oklahoma, who requested report copies for the previously conducted cultural resource surveys cited within the CRA. Copies of the reports were provided to the tribe on January 30, 2023. The Choctaw Nation of Oklahoma responded on March 3, 2023, concurring with the finding. Additionally, they requested that, if human remains or Native American artifacts are discovered, work is stopped and their office is contacted immediately.

3.7.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action) – The conclusions and recommendations from the CRA were as follows: “Assessment results indicate the proposed project will have no effect upon historic properties and should be allowed to proceed with no further archaeological investigations.” The SHPO responded to the report with a letter concurring with the determination of “no effect to historical properties.” RUS has concluded that a finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1) is appropriate for this undertaking. While there are no additional conditions to which PowerSouth and the SHPO agreed to, to support this finding, RUS will include an inadvertent discovery provision developed in accordance with 36 CFR § 800.13(b) and (c).

Alternative B (No Action) – Alternative B will not affect cultural resources as the area is already heavily disturbed from prior agricultural and industrial practices in the area. Previous cultural surveys conducted on the site have resulted in no cultural resources being discovered.

As construction and operation of the proposed Project will have no impacts on historic or cultural properties, no mitigation measures are necessary. For either alternative, should any material of historical significance be discovered during construction/maintenance activities, appropriate steps will be taken. If archaeological materials are encountered, the procedures codified at 36 CFR 800.13(b) will apply. If human remains are encountered, the provisions of the Alabama Burial Act (Code of Alabama 1975, §13A-7-23.1, as amended; Alabama Historical Commission Administrative Code Chapter 460-X-10 Burials) will be followed. All PowerSouth contractors will be notified of these stipulations by contract.

3.8 Aesthetics

3.8.1 Affected Environment

The Project area is located on PowerSouth's existing 313-acre LEC site in Leroy, Alabama, which is surrounded by woods and undeveloped areas to the west and the Tombigbee River to the east. The Packaging Corporation of America Paper Mill is located directly across the Tombigbee River from the LEC. There are no neighboring parks, or designated natural or recreational areas in the immediate vicinity of the Project area. Man-made features in the area include the power plant and associated buildings, isolated residences, a paper mill, and overhead transmission lines. No designated scenic overlooks, areas, or roadways occur in the Project vicinity. The Project area is a previously disturbed area that is maintained by routine mowing.

3.8.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action) - Alternative A may result in temporary changes to the aesthetics of the area. During construction, temporary visual features will likely include cranes and other heavy equipment and activity consistent with typical roadway construction. The new bridge will have similar visual impacts as the existing bridge.

Alternative B (No Action) – Alternative B will not result in changes to the visual characteristics of the area.

While construction of Alternative A will have temporary visual impacts, no long-term aesthetic changes will occur as a result of construction and operation of this Project. Therefore, no mitigation is necessary.

3.9 Air Quality

3.9.1 Affected Environment

The vast majority of southern Alabama, including the Project area, is in attainment, meaning that these areas are in compliance with federal clean air standards (Appendix H) (U.S. EPA, 2022a). The community of Leroy is mainly residential with a few commercial and industrial businesses, including the LEC. Agricultural activities also occur within the area. Jackson, Alabama is directly across the Tombigbee River to the east and contains several industrial sources and commercial and residential areas.

3.9.2 Environmental Consequences and Mitigation

Alternative A (Proposed action) – Alternative A may result in minor greenhouse gas emissions from construction equipment and fugitive dust emissions may occur during the construction and demolition phases. Air emissions from construction are minimal, localized, and temporary in nature, fall off rapidly with distance from the construction site, and will not result in any long-term impacts. Once construction activities are complete, construction-related emissions will end. The replacement bridge will have the same capacity as the existing bridge; therefore, there will be no increase in vehicular traffic and therefore vehicular emissions are likely to remain the same. This Project will have no cumulative impacts on air quality in the region.

Alternative B (No Action) – Alternative B will result in minimal air emissions during annual maintenance activities. Air emissions from maintenance activities are minimal, localized, and temporary in nature, fall off rapidly with distance from the construction site, and will not result in any long-term impacts.

Fugitive dust control measures will be utilized to mitigate temporary impacts during construction and maintenance, including but not limited to the following:

- Applications of water;
- Reduction in speed on unpaved roadways to 15 miles per hour or less;
- Use of sweepers or water trucks to remove mud at points of public street access; and
- Stabilization of dirt storage piles by seeding and mulching, tarps, or barrier fencing.

3.10 Socioeconomic Impact Assessment and Environmental Justice

3.10.1 Affected Environment

In order to identify general socioeconomic patterns in the Project area, various socioeconomic characteristics have been reviewed, including population growth trends, racial and ethnic characteristics, employment data, and economic indicators.

3.10.1.1 Population Growth Trends

The Project area is located in Washington County, Alabama, a rural county that has experienced a slow and steady decline in population over the past 21 years. The surrounding counties have also experienced a similar decline in populations. Table 3-3 presents the population trends near the Project.

Table 3-3 Washington County Population Trends

| | Alabama | Clarke County | Washington County |
|--------------------|----------------|----------------------|--------------------------|
| 2010 Census | 4,779,736 | 25,833 | 17,581 |
| 2020 Census | 5,024,279 | 23,087 | 15,388 |
| 2021 Estimate | 5,039,877 | 22,760 | 15,147 |
| % Change 2010-2021 | 13.3 % | -18.3 % | -16.3 % |

Source: U.S. Census Bureau, 2021.

3.10.1.2 Racial and Ethnic Characteristics

The U.S. Census Bureau has published 2021 demographic data for all Alabama counties and the state as a whole. The state of Alabama and Washington County estimates are presented in Table 3-4 below.

Table 3-4 Washington County Racial Characteristics (2021)

| | State of Alabama | Washington County |
|--|-----------------------------|------------------------------|
| Total Population | 5,039,877 | 15,147 |
| White | 3,472,475 | 10,058 |
| Black or African American | 1,350,687 | 3,484 |
| American Indian and Alaskan Native | 35,279 | 1,197 |
| Asian | 80,638 | 121 |
| Native Hawaiian and Other Pacific Islander | 5,040 | 15 |
| Hispanic or Latino | 241,914 | 257 |
| Total Minority | 1,713,558 | 5,074 |
| Percent Minority | 34.0% | 33.5% |

Source: U.S. Census Bureau, 2021.

Based on these estimates, the 2021 racial makeup of Washington County is composed of 66.4% white, 23.0% Black or African American, 7.9% American Indian and Native Alaskan, and 2.7% other races. The total population of Alabama in 2021 was composed of 68.9% White, 26.8% Black or African American, 0.7% American Indian and Native Alaskan, and 3.6% other races. The total percent minority for Washington County (33.5%) is very similar to that of Alabama as a whole (34.0%).

3.10.1.3 Employment and Income

The U.S. Census Bureau has published 2020 employment estimates for all Alabama counties and the state as a whole. The Alabama and Washington County estimates are presented in Table 3-5 below.

Table 3-5 Washington County Employment Data (2020)

| | Alabama | Washington County |
|--|---|---|
| In Civilian Labor Force (Population 16 years and over) | 2,245,329 | 6,073 |
| Total Employment (Civilian Labor Force) | 2,119,986 | 5,663 |
| Total Unemployed (Civilian Labor Force) | 125,343 | 410 |
| Not in Civilian Labor Force | 1,666,862 | 7,331 |
| Percent unemployed (Civilian Labor Force) | 5.3% | 6.8% |
| Top Occupation | Management, business, science, and arts occupations | Management, business, science, and arts occupations |
| Top industry | Educational services, and health care and social assistance | Manufacturing |

Source: U.S. Census Bureau, 2020.

In 2020, Washington County's resident labor force, defined as the population aged 16 and over, was 6,073 individuals, or 45.3% of the total population (15,147); 5,663 of these workers were employed, resulting in an annual unemployment rate (for the civilian labor force) of 6.8%. This rate is slightly higher than the annual unemployment rate for Alabama (5.3%). The primary industry for Washington County is manufacturing, followed by educational services, health care, and social services.

Table 3-6 Washington County Income and Poverty (2020)

| | Alabama | Washington County |
|---|----------------|--------------------------|
| Median household income in 2020 dollars | \$52,035 | \$42,331 |
| Persons in poverty percent | 16.1% | 17.5% |

Source: U.S. Census Bureau, 2021.

The 2020 median household income in Washington County (\$42,331) is lower than the statewide median household income (\$52,035). Additionally, the percent of persons in poverty is slightly higher for Washington County (17.5%) than that of Alabama as a whole (16.1%).

3.10.1.4 Housing

Reports from the U.S. Census Bureau show that in 2020, Washington County had 7,712 housing units, consisting of 6,321 owner-occupied housing units (82.0%) and 1,391 vacant housing units (18.0%). The rental vacancy rate for Washington County is 12.4%. The median value of owner-occupied housing for Washington County was \$88,100, whereas the state-wide median value was \$149,600 (U.S. Census Bureau, 2020).

3.10.1.5 Area Public Service and Utilities

Educational Facilities

Washington County has two elementary schools, no middle schools, five high schools, and one Career Technical Center, according to the Washington County School Board (Washington County Public Schools, 2022). Leroy High School is the closest school, located approximately three and one-half miles west/northwest of the Project area in Washington County. It serves approximately 650 students, ranging from kindergarten to 12th grade.

Medical Facilities

The closest medical facility to the Project is in Jackson, Alabama, about 10 miles by car from the Project area. The Jackson Medical Center is a non-profit organization located on U.S. Route 43, to the northeast of Leroy. Jackson Medical Center has a 24-hour emergency room with physicians trained in advanced trauma life support and advanced cardiac life support. The medical center also has cardiopulmonary services, a radiology department, and an urgent care clinic (Jackson Medical Center, 2022).

Fire Protection

Jackson Fire Department is located approximately four miles east of the Project area, and is served by 55 firefighters. Additionally, Leroy Volunteer Fire Department is located approximately five miles to the west of the Project area and is served by 14 volunteer firefighters. The LEC site has an emergency fire pump, water storage tanks, and hydrants as a part of its onsite fire protection system. The Project will use this existing equipment for emergency scenarios.

Police Protection

Leroy, Alabama does not have its own police department. It is served by the Washington County Sheriff Department, located in Chatom, Alabama, approximately 25 miles to the west of the Project area. The nearest city with a designated police force is Jackson, Alabama in Clarke County.

Potable Water, Sanitary Sewer, Electricity, Gas, and Solid Waste

The Project area is located in Leroy, Alabama and uses the Leroy Water Authority for potable water supply. An onsite packaged sewage treatment plant is in service. Solid waste will be disposed of by Ecosouth Services and Republic Services, commercial solid waste vendors. Electricity to the Project area is supplied by the PowerSouth grid.

Recreation and Open Space

The public land closest to the Project area is the HW Pearce Junior Memorial Park, which is located approximately one mile to the northeast of the site. The HW Pearce Junior Memorial Park includes the Jackson Links golf course, community center, play grounds, picnic areas, volleyball nets, baseball fields, and a public swimming area.

3.10.1.6 Environmental Justice

Environmental justice concerns may arise from human health or environmental effects of a Project on minority or low-income populations. The need to identify environmental justice issues is stated in E.O. 12898, entitled “Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations.” The E.O. states “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” A Presidential Memorandum accompanying the E.O. directed agencies to incorporate environmental justice concerns into their NEPA processes and practices.

Environmental justice issues are identified by first determining whether minority or low-income populations are present. If so, then disproportionate effects on these populations would be considered. The Council on Environmental Quality (CEQ) guidance states that minority populations should be identified when the percentage of minority residents in the affected area exceeds 50 percent or is meaningfully greater than the percentage of minority residents in the general population. The CEQ guidance also states that the low-income populations should be identified based on poverty thresholds, as reported by the U.S. Census Bureau (CEQ, 1997).

Environmental justice review must include an analysis of impacts to qualifying communities near the Project area (i.e. within one-quarter to one-half mile). Google Earth and the EPA’s Environmental Justice Screening and Mapping Tool (EJScreen) were used to search for communities near the Project location. Based upon this review, there are zero residences located within one mile of the Project area (Appendix I) (U.S. EPA, 2022). Since there are no residents located within one mile of the Project area, Washington

County was chosen to represent the local population. For the purpose of this analysis, if the percentage of minority residents of the county exceeds the statewide level by more than 10 percent, it is considered to be “meaningfully greater.” Additionally, if the poverty rate for the population of the county exceeds the statewide poverty rate by more than 10 percent, it is considered an area of environmental justice concern for the purposes of this analysis.

Table 3-7 Minority and Low-Income Populations near the Project (2021)

| | Washington County | Alabama |
|-----------------------------|------------------------------|----------------|
| Minority Population | 33.6% | 31.1% |
| Persons in poverty, percent | 17.5% | 16.1% |

Source: U.S. Census Bureau, 2021.

Also identified in Table 3-7, the minority population and poverty rates for Washington County are slightly higher than those of the state. Therefore, the proposed Project area is not considered to be an area of environmental justice concern.

3.10.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action) – Alternative A will require a construction labor force of less than 100 employees. The length of employment will range from a few weeks to several months, depending on skill or specialty. Construction of the proposed Project will not require highly specialized expertise and workforces, and therefore it is unlikely that any of the construction contractors and workers will relocate to the area due to the proposed Project. Therefore, no impacts to the availability of housing are expected as a result of the proposed Project. Hotels, RV Parks, gas stations, convenience stores, and restaurants in communities such as Leroy and Jackson could experience slight increases in business during the construction period in response to activity from construction workers. Purchases of construction materials (lumber, concrete, hardware, etc.) will be made locally when possible and practical.

The proposed Project will be located in a rural area with no nearby neighborhoods and relatively few homes and businesses within close proximity to the proposed Project. Potential human impacts from the construction of the proposed Project may include additional noise and traffic and temporary visual impacts during construction.

There are no residents located within one mile of the Project area, and the local area is not characterized by a high minority or low-income population; therefore, no disproportionate impacts will occur to minority or low-income populations as a result of the proposed Project.

Alternative B (No Action) - Alternative B will not result in any socio-economic or environmental justice impacts.

No mitigation measures are proposed for socioeconomic or environmental justice impacts.

3.11 Miscellaneous Issues

3.11.1 Noise

3.11.1.1 Affected Environment

The Project area is located in a rural area near Leroy, Alabama in Washington County. The Project area is surrounded by several other industrial sources, with scattered residential areas. The closest residence is over one mile from the proposed construction activity. Natural forest cover provides a partial buffer between the LEC site and the surrounding areas. Primary noise sources in the area include the existing power plant, traffic on nearby roads, wildlife, and other nearby industrial sources. Noise regulations, standards, and guidelines were reviewed for the area. No numerical noise standards were found for the State of Alabama, Washington County, or Leroy, Alabama.

The types of equipment listed in Table 3-9 below may be used at various times and for various amounts of time. The impacts that various construction-related activities might have will vary considerably based on the proximity to the property line. Generic sound data ranges are available for various types of equipment at certain distances. Table 3 9 lists generic activities and their minimum and maximum instantaneous sound levels at 50 feet.

Table 3-8 Range of Typical Construction Equipment Noise Levels (dBA)

| Generic Construction Equipment | Minimum Noise at 50 feet | Maximum Noise at 50 feet |
|---------------------------------------|---------------------------------|---------------------------------|
| Backhoes | 74 | 92 |
| Compressors | 73 | 86 |
| Concrete Mixers | 76 | 88 |
| Cranes (movable) | 70 | 94 |
| Dozers | 65 | 95 |
| Front Loaders | 77 | 96 |
| Generators | 71 | 83 |
| Graders | 72 | 91 |
| Jack Hammers and Rock Drills | 80 | 98 |
| Pumps | 69 | 71 |
| Scrapers | 76 | 95 |
| Trucks | 83 | 96 |

Source: Federal Highway Administration, 2018.

Noise from construction is expected to be localized and temporary. The actual noise levels generated by construction will vary on a daily and hourly basis, depending on the activity that is occurring, and the types and number of pieces of equipment that are operating. Noise resulting from construction will vary with equipment type and age, type of work being done, distance from receptor, and meteorological conditions. It is expected that construction will be done during the daytime when receptors are less sensitive to noise and that the noise will be intermittent. Any excessive construction noise should be of short duration and have minimal adverse long-term effects on land uses or activities associated with the Project area

3.11.1.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action) - Construction of Alternative A is expected to last approximately 14 months, and will involve site preparation, installation of concrete piles, reinforced concrete girders, and a poured in place concrete deck. Construction schedules are anticipated to be on a 6-day per week schedule, generally during the hours of 7:00 a.m. to 6:00 p.m., in order to minimize the length of calendar time that temporary construction impacts affect the area. There are certain operations that, due to their nature or scope, must be accomplished in part outside the specified working hours. Such work generally consists of activities that must occur continuously, once begun (such as pouring concrete).

Changes in ambient noise levels as a result of the proposed Project will be minimum, and should largely go unnoticed due to the distance of the surrounding population from the Project area. Temporary changes in

noise levels may be observed during the construction period. There will be no increase in vehicular traffic as a result of the construction of the proposed Project. Therefore, post-construction ambient noise levels will be similar to pre-construction noise levels.

Alternative B (No Action) – Alternative B would not affect current noise levels.

No mitigation measures are proposed for noise impacts.

3.11.2 Transportation

3.11.2.1 Affected Environment

The proposed Project area is served by an existing network of paved and gravel roads and is located on the east side of County Road 34, three miles east of U.S. Route 43, which is the major traffic artery in eastern Washington County. During construction, it is anticipated that there will be a temporary marginal increase in traffic to this area.

Existing county roads will be used to provide site access during construction. Within the LEC property boundary, the existing access road will be used as the primary construction access road. Traffic will include equipment and material deliveries and the construction labor force. The frequency of onsite vehicular traffic will be proportionate to the onsite construction labor projections.

3.11.2.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action)- The labor force, along with equipment and material deliveries in support of the Project, is expected to increase daily vehicle and truck traffic. Construction material deliveries may occur during the day during off-peak travel times and will typically not interfere with worker shift changes and commuter traffic. Although additional vehicular traffic will occur during construction of the proposed Project, the impacts will be temporary. The roadway capacity of any route and level of service to the traveling public will not be substantially impacted in all other areas. Based on current projections, the roads, bridges, and crossings in the area are sufficient for the Project's delivery and transportation needs.

Alternative B (No Action)- Alternative B will not result in any impacts to transportation.

No mitigation measures are proposed for transportation.

3.12 Human Health and Safety

3.12.1 General Construction Hazards

3.12.1.1 Affected Environment

A core value of PowerSouth is the safety of its employees and contractors. PowerSouth has identified some potential human health and safety concerns to be considered during the construction of the proposed Project. The primary safety hazards with the highest potential to occur would include general construction hazards such as slips, trips, falls, noise, moving objects including heavy equipment and trucks, working at heights, and collapse.

3.12.1.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action) – Alternative A could present potential human health and safety concerns in the form of general construction hazards, including slips, trips, falls, noise, moving objects including heavy equipment and trucks, working at heights, and collapse.

Alternative B (No Action) – Alternative A could present potential human health and safety concerns in the form of general construction hazards, including slips, trips, falls, noise, moving objects including heavy equipment and trucks, working at heights, and collapse.

For either alternative, general safety hazards would be mitigated by compliance with all applicable federal and state regulations, Occupational Safety and Health Administration (OSHA) guidelines, and PowerSouth's own comprehensive safety program. Safety briefings are required monthly for employees and upon entry for contractors. Adequate training for human health and safety concerns will be mandatory for all construction workers on the Project area. Personal safety equipment such as hard hats, ear and eye protection, and safety boots will be required for all workers onsite. Any accidents and injuries that do occur will be reported to the designated safety officer onsite.

3.12.2 Electromagnetic Fields and Interference

3.12.2.1 Affected Environment

Electric and magnetic fields (EMFs) are invisible areas of energy, often referred to as radiation, that are associated with the use of electrical power and various forms of natural and man-made lighting. EMFs are typically grouped into one of two categories by their frequency: 1.) Non-ionizing: low-level radiation which is generally perceived as harmless to humans, and 2.) Ionizing: high-level radiation which has the potential for cellular and DNA damage. Examples of sources that may emit EMF include microwave ovens,

computers, cell phones, power lines, radio and television waves, etc. Nearby sources of non-ionizing EMF could include the power plant and associated power lines. Construction of this Project would not affect these sources or create any additional sources that emit EMFs (Electric Power Research Institute, Inc. (EPRI), 2022).

3.12.2.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action) – Alternative A would not require the construction of any EMF sources and therefore will have no effect on EMFs.

Alternative B (No Action) – Alternative B would not require the construction of any EMF sources and therefore will have no effect on EMFs.

No mitigation measures are necessary for either alternative as there will be no effects to EMFs.

3.12.3 Environmental Risk Management

3.12.3.1 Affected Environment

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 USC 9601 et seq.) established the federal Superfund program, which the EPA administers. The Superfund program supports the investigation and cleanup of sites contaminated with hazardous substances. There are no Superfund sites in or near the analysis area. Additionally, there are no EPA Non-Attainment Areas or Brownfield sites (ACRES) within the action area. Permits for the power plant include a Major Source Operating Permit for air emissions and an NPDES Water Discharge Permit. The LEC is designated as a Very Small Quantity Generator of Hazardous Waste under the Resource Conservation and Recovery Act (RCRA) and is a Toxic Substances Control Act (TSCA) regulated facility. The LEC is also subject to the Emergency Planning and Community Right-to-Know Act (EPCRA), which requires industries to report on the storage, use, and releases of hazardous substances to federal, state, and local governments. These processes are not located in or adjacent to the Project footprint, and would not impact the proposed Project or its construction and implementation. Additionally, the proposed Project is not anticipated to pose an environmental threat to any of these plant processes.

During the construction phase of the proposed Project, the potential pollutants that may be found onsite include: motor oil, diesel fuel, gasoline, and other petroleum products used in vehicles and heavy construction equipment. The vast majority of these products will be contained within the vehicles and heavy construction equipment located on site and will be in relatively small quantities. No onsite fuel

storage tanks will be utilized during the construction or operation of the proposed Project. Additionally, no hazardous materials/wastes are anticipated to be stored, generated, or accumulated onsite.

Onsite investigations and desktop evaluations of the site do not indicate any potential environmental issues with selecting this site for the proposed Project. Following numerous onsite assessments performed by environmental and cultural professionals, the conclusion has been drawn that the parcel of property is in acceptable condition for the construction of the proposed Project.

3.12.3.2 Environmental Consequences and Mitigation

Alternative A (Proposed Action) – Alternative A would not result in impacts from hazardous waste or other related environmental conditions.

Alternative B (No Action) – Alternative B would not result in impacts from hazardous waste or other related environmental conditions.

No mitigation is necessary for either alternative as there is no expectation of environmental consequences regarding Environmental Risk Management.

4.0 CUMULATIVE IMPACTS

The CEQ defines cumulative impacts (40 CFR 1508.7) as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Reasonably foreseeable projects that could contribute to the cumulative effects of this Project include capital improvements to industrial sites, which are ongoing and anticipated to continue after this Project is complete. No substantial cumulative effects are anticipated due to the implementation of the Project.

4.1 Region of Influence

To determine the contribution of the proposed Project to cumulative effects, impacts on each resource are analyzed for a geographic scope that includes a wider area than the footprint of the proposed Project. Various areas of Washington county were analyzed for regional cumulative impacts. These cumulative impacts are described in the following sections.

4.2 Past, Present, and Reasonably Foreseeable Future Actions

Past, present, and reasonably foreseeable future actions that have affected or could affect the resources of the area include:

- Temporary increases in traffic to the area
- Wetland fill
- Capital improvements and long-term maintenance on the existing LEC facility

A desktop review of reasonably foreseeable future actions revealed no upcoming major construction projects in Washington County, Alabama. This is likely due to the rural nature of the county and the declining population.

4.2.1 Land Use and Ownership

Historically, much of this region of the state has been rural and underdeveloped, consisting mostly of agriculture and timber lands. This region began to see industrialized growth with the discovery of large salt domes on the opposite end of Washington County in the 1950s. Presently, the northern section of Washington County remains focused on use of the available land for the production of forestry products and cash crops, depending largely on the geology and fertility of soils. The LEC site was primarily forested with a small agricultural field prior to construction.

The Project area is currently a developed area, used exclusively for energy production, surrounded by undeveloped land and agricultural land. The Project area is located within the existing power plant site. Once the replacement bridge is constructed, the existing bridge will be removed. Therefore, no changes to the existing land use will occur as a part of the Project and no cumulative impacts are expected. The Project area is not within any prime farmland, and no changes to soils or geology are expected as a result of this Project. Additionally, there are no formally classified lands within or adjacent to the LEC facility. In summary, there are no cumulative effects to land use and ownership anticipated as a result of the proposed Project.

4.2.2 Floodplains

The original construction of the power plant had relatively minor impacts to floodplains of the region. Over the course of the last 50 years, no additional expansion of the power plant site has occurred. The construction of this Project will take place within the existing floodplain. The replacement bridge will have fewer pile supports and a higher elevation than the existing bridge (which will be removed upon completion of construction), and therefore will result in more flow and less impediment in the floodplain. The Project has received a floodplain “no-rise” certificate from a third-party engineering firm, and therefore no cumulative impacts to the floodplain are anticipated.

4.2.3 Wetlands

A significant amount of wetland area likely existed on and near the LEC site prior to its development as a power generation facility in the 1960s. That development likely had an adverse impact on some wetland areas. Measures were taken during planning for the proposed Project to identify and reduce impacts to wetland resources. This Project will unavoidably result in the fill of 0.36 acres of palustrine wetlands. PowerSouth will purchase the required amount of mitigation bank credits needed to offset the wetland impacts for this Project and will abide by all permit provisions set forth by the USACE. Thus, construction of the proposed Project will have minimum cumulative effects on wetlands.

4.2.4 Water Resources

Prior to the development of the LEC site for industrial activity, impacts were likely limited to stormwater runoff due to agricultural and forestry practices. PowerSouth will utilize BMPs during construction of this Project and therefore cumulative effects to nearby water resources are not anticipated. Construction of the proposed Project will provide reliable ingress/egress to the LEC for approximately 75 years, therefore no additional impacts to surrounding water resources are expected for the foreseeable future.

4.2.5 Coastal Resources

The proposed Project is not located in an area near any coastal resources and therefore there will be no cumulative effects to any coastal resources.

4.2.6 Biological Resources

During the field surveys, no threatened or endangered species were observed and minimal suitable habitat for IPaC-listed species was observed. The determination was made that the proposed Project is Not Likely to Adversely Affect the Black Pinesnake and Eastern Indigo Snake, and will have No Effect on any other listed species. Thus, construction of the proposed Project will have minimum cumulative effects on threatened and endangered species. No cumulative effects to migratory birds or bald and golden eagles are expected as a result of the Project.

Vegetation prior to development of the LEC site consisted of native forest and a small agricultural field. The whole site was cleared for development in the late 1960s. Since that time, it has been maintained by mowing on a regular basis and has not provided appreciable suitable habitat for native vegetation to grow and flourish. The Project will require minor removal of approximately one dozen mature hardwood trees along the northwest portion of the Project area. Construction of the proposed Project will not allow for the introduction of invasive species. No long-term cumulative impacts to the vegetation of the surrounding area is expected as a result of the proposed Project.

Prior to construction of the power plant, the area likely provided suitable habitat for wildlife. Portions of the LEC site likely still provides food and useful habitat for wildlife. Construction may result in short-term, temporary displacement impacts to wildlife species foraging in the area. Following completion of construction, the wildlife species are likely to return. The proposed Project is not anticipated to result in any cumulative impacts to wildlife species.

4.2.7 Historical and Cultural Resources

Washington County is the oldest county in the state and home to many known historic and cultural resources. A cultural resource assessment for the Project area was completed and SHPO concurred with the Agency's finding that no historic properties will be affected by the construction of the proposed Project. Additionally, Project consultation letters were sent to the following tribes: Alabama-Coushatta Tribe of Texas, Alabama-Quassarte Tribal Town, Coushatta Tribe of Louisiana, Choctaw Nation of Oklahoma, and the Mississippi Band of Choctaw Indians. None of the tribes contacted had any objections to the proposed Project.

Construction of the proposed Project is not anticipated to have any physical or visual impacts to existing historic structures or cultural sites in the area. Therefore, no cumulative impacts are expected.

4.2.8 Aesthetics

The proposed Project will be constructed on an existing power plant site that has been in operation since the 1960's. Although the area is very rural in nature and semi-isolated, there is currently an existing access bridge that serves as a single point of entry to the LEC site. After construction of the replacement bridge and removal of the existing bridge, the Project area will look similar to preconstruction state. Therefore, no cumulative impacts to the aesthetics of the area are expected.

4.2.9 Air Quality

Construction of the proposed Project will take place within an attainment area, and will have similar air emissions to surrounding agricultural and silvicultural practices. Cumulative effects to air quality from construction will be minimal, localized, and temporary in nature, fall off rapidly with distance from the construction site, and will not result in any long-term impacts. Once construction activities are complete, construction-related emissions will end.

4.2.10 Socioeconomic Impacts and Environmental Justice

The area surrounding the existing Project area is in a rural setting that saw growth and development of community resources beginning in the first part of the 20th century when the area started to experience industrial growth. Over the past 20 years, the area has seen a steady population decline. Gas stations, convenience stores, hotels, RV parks, and restaurants in communities such as Leroy and Jackson may experience minor temporary increases in business during the construction period due to activity by construction workers. Following construction, the Project will likely have no long-term cumulative effects.

There are no residents located within one mile of the Project area, and the local area is not characterized by a high minority or low-income population. The Project will not be located in an environmental justice area and therefore there will be no cumulative effects to environmental justice communities. This proposed Project will help to ensure the continued operation of the LEC as a critical energy center that serves the needs of the surrounding rural populations.

4.2.11 Noise

Prior to the development of the existing power plant site, the natural sounds of wildlife in the area combined with early farming and forestry practices likely dominated the landscape. The site has had established industrial activity since 1969, and the Packaging Corporation of America Paper Mill across the river has

been in operation for the last 51 years. Both of these are large contributors of anthropogenic noise in the area. During construction, there will be a temporary increase in the level of noise to the surrounding environment. It is expected that construction will be completed during daytime hours and thereby minimize noise impacts in the area surrounding the Project. The Project will not have any cumulative impacts to noise levels in the area.

4.2.12 Transportation

There are very few federal roads within Washington County. Most roads are constructed and maintained by state and county governments. U.S. Route 43 was the first federal highway in the County, is the main thoroughfare, has ample capacity, and can support the traffic of the local area. Any increased traffic issues associated with the construction of the Project are not anticipated to be significant. Additionally, the county road that provides access to the LEC site will return to normal vehicular traffic levels following completion of construction. Therefore, there will be temporary cumulative impacts to transportation due to the Project.

4.2.13 Human Health and Safety

As is the case with any construction activity, the proposed Project may result in potential health and safety hazards for construction personnel from heavy equipment operation, overhead materials, and cranes, and the use of construction tools. Any of these potential hazards will be mitigated by compliance with all applicable federal and state occupational safety and health standards and OSHA guidelines, in addition to PowerSouth's already existing company safety policies.

All construction will be managed to prevent harm to the general public. The general public will not be allowed to enter any construction areas associated with the proposed Project. The major risk to the general public will be from increased traffic volume on the roadways near the proposed Project as a result of commuting construction workers and transportation of equipment and materials.

There will be no construction of new sources or work with existing sources emitting EMF, and construction will not affect any nearby sources of hazardous waste, toxic substances, air pollution, or water discharges. No cumulative impacts to human health and safety are anticipated for the region from construction of the Project.

5.0 SUMMARY OF MITIGATION

Table 5-1 Summary of Mitigation

| Resource | Potential Environmental Consequences | Mitigation Measures Required | Intensity of Residual Effects |
|------------------------|---|--|-------------------------------|
| Land Use and Ownership | Land use within the area is not expected to change due to the Project. No impacts to soils or geology are expected. There are no formally classified lands or prime farmland within the Project area. | None | None |
| Floodplains | The proposed Project will occupy a floodplain. | A “no-rise” certification has been issued by a third-party. The replacement bridge will be a foot higher in elevation and contain less pilings than the existing bridge, thereby allowing for more flow and less potential for impediment of floodwaters. | Minimal |
| Wetlands | Construction will occur in a wetland area and will result in approximately 0.36 acres of wetland fill. | PowerSouth has applied for a USACE NWP 14, and will follow all requirements of the permit and purchase the required mitigation credits. | Minimal |
| Water Resources | Soil erosion and stormwater runoff into nearby streams and rivers may impact waterways during construction. | Before construction activities commence, PowerSouth will apply for the appropriate ADEM NPDES Construction Stormwater permit, and will follow all requirements of the permit. PowerSouth will prepare a CBMPP that will describe the BMPs to be implemented during construction. | Minimal |
| Coastal Resources | The Project is not located near any Coastal Zone Management Areas or Coastal Barrier Resources. | None | Not Applicable |

| Resource | Potential Environmental Consequences | Mitigation Measures Required | Intensity of Residual Effects |
|------------------------------------|--|--|-------------------------------|
| Biological Resources | Construction of the Project will not have any long-term effects to general fish, wildlife, and vegetation resources. The Project will require the removal of a few hardwood trees, but overall the vegetative conditions within the Project area will be the same. Construction may result in short-term, temporary displacement impacts to wildlife species foraging in the area. | None | None |
| | Construction of the Project is Not Likely to Adversely Affect the Black Pinesnake and Eastern Indigo Snake, and will have no effects to other federally listed species. | No mitigation measures are anticipated. PowerSouth will institute a “no kill” policy and other BMPs during the construction of this Project. | Minimal |
| | Construction of the Project could result in temporary disturbance to migratory birds. | None | None |
| | Construction of the Project will not result in any effects to bald or golden eagles, as there are no know nests to occur in the immediate area of the Project. | None | None |
| | It is not expected that construction related disturbances will provide an opportunity for the establishment of invasive species as the area will not be conducive to the growth of vegetation. | None | None |
| Historical and Cultural Properties | Construction will occur on previously disturbed soils; no historic or cultural resources were previously found. | None | None |

| Resource | Potential Environmental Consequences | Mitigation Measures Required | Intensity of Residual Effects |
|---------------------------------------|---|---|-------------------------------|
| Aesthetics | The proposed Project will remain consistent and compatible with the existing views in the area. | None | None |
| Air Quality | Air emissions from construction are low and temporary in nature, fall off rapidly with distance from the construction site, and will not result in any long-term impacts. | Fugitive dust control measures will include, but are not limited to, the following: <ul style="list-style-type: none"> • Applications of water; • Paving or watering of roadways after completion of grading; • Reduction in speed on unpaved roadways to 15 miles per hour or less; • Use of sweepers or water trucks to remove mud at points of public street access; and • Stabilization of dirt storage piles by seedling and mulching, tarps, or barrier fencing. | Minimal |
| | Emissions from construction activities are dependent on the number and type of construction vehicles in operation at any given point during construction, the number of construction workers driving to and from the Project area, and the number and type of construction activities occurring, etc. Air emissions from construction equipment are low and temporary in nature, fall off rapidly with distance from the construction site, and will not result in any long-term impacts. | None | Minimal |
| Socioeconomic and Community Resources | Project is not located in an environmental justice area. | None | Not Applicable |

| Resource | Potential Environmental Consequences | Mitigation Measures Required | Intensity of Residual Effects |
|-------------------------|---|--|-------------------------------|
| Noise | Noise will be produced from the construction equipment and activities. Actual noise levels generated by construction will vary on a daily and hourly basis, depending on the activity that is occurring, and the types and number of pieces of equipment that are operating. Any construction noise should be of short duration and have minimal adverse long-term effects on land uses or activities associated with the Project area. | None | Minimal |
| Transportation | Construction of the Project will cause a temporary increase in traffic in the area surrounding the Project. | None | Minimal |
| Human Health and Safety | General construction hazards include fire, slips, trips, falls, electrical hazards, confined space entry, etc. The general public will not be allowed to enter any construction areas associated with the proposed Project. | A comprehensive safety program is in place at PowerSouth, including regular safety briefings for employees and contractors, training, and use of personal safety equipment such as hard hats, ear and eye protection, and safety boots. All federal and state government and OSHA regulations will be adhered to. Perimeter fences and controlled access will remain in place throughout the construction and future operation of the Project. | Minimal |
| | Construction of the Project will not include any work with EMF sources or the addition of any new sources emitting EMF. | None | Not Applicable |
| | Construction of the Project will not result in any impacts to or from hazardous waste, toxic substances, air pollution, or water discharges. | None | None |

6.0 COORDINATION, CONSULTATION, AND CORRESPONDENCE

The following sections detail the agency and tribal coordination efforts completed for the Project and public involvement plan.

6.1 Agency Coordination

Project description letters were mailed to federal and state agencies in the summer and fall of 2022. The letters included an overview of the Project and a location map of the Project, and requested assistance in identifying specific resources and issues that should be investigated during the environmental review of the Project. The letters sent, as well as copies of the responses received, are included in the applicable appendices. The agencies responding had no substantial comments. The following is a brief overview of responses:

- The USFWS provided a list of protected species in the Project area. The agency also pointed out that there are no critical habitats in the Project region. The agency replied with a stamped letter and no additional comments on October 12, 2022. A *May Affect, Not Likely to Adversely Affect* determination for the Black Pinesnake and the Eastern Indigo Snake was submitted to USFWS on March 1, 2023. USFWS replied with a letter concurring with the determination on March 8, 2023.
- The SHPO responded on November 1, 2022, with a letter concurring with the determination that the Project will have “no effect to historical properties.”
- The Alabama NFIP Coordinator with ADECA and the local Floodplain Administrator for Washington County responded on February 18, 2022 and stating that they had no objections to the proposed Project.
- A PCN was submitted to the USACE on December 11, 2022. PowerSouth is currently awaiting a response, and will follow all requirements of the NWP and purchase the required mitigation credits.

6.2 Tribal Coordination

Pursuant to 36 CFR § 800.2(c)(4) and 7 CFR § 1970.5(b)(2), RUS has initiated Section 106 of the National Historic Preservation Act to meet its responsibilities to solicit and consider the views of agencies, tribal entities, and the public during review of the Project.

On November 8, 2022, Project letters were submitted to the THPOs and other tribal officials of the Alabama-Coushatta Tribe of Texas, Alabama-Quassarte Tribal Town, Coushatta Tribe of Louisiana, Choctaw Nation of Oklahoma, and the Mississippi Band of Choctaw Indians to determine their interest in and take their comments on the proposed Project. The only response received was from the Choctaw Nation of Oklahoma, who requested report copies for the previously conducted cultural resource surveys cited

within the CRA. Copies of the reports were provided to the tribe on January 30, 2023. The Choctaw Nation of Oklahoma responded on March 3, 2023, concurring with the Project. Additionally, they requested that, if human remains or Native American artifacts are discovered, work is stopped and their office is contacted immediately.

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