



US Army Corps  
Of Engineers  
Wilmington District

# PUBLIC NOTICE

Issue Date: March 12, 2019  
Comment Deadline: April 11, 2019  
Corps Action ID Number: SAW-2015-01381

The Wilmington District, Corps of Engineers (Corps) received an application for a modification to an existing Department of Army (DA) permit from Duke Energy seeking Department of the Army authorization to discharge dredged or fill material into waters and wetlands in Hydrologic Unit Code (HUC) 03010103 (Roanoke River Basin), associated with activities related to the excavation and disposal of coal combustion residual (CCR) materials from areas of coal ash fill, and closure of the primary and secondary coal ash basins, at the Duke Energy Dan River Steam Station, in Rockingham County, North Carolina.

Specific plans and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at  
<http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx>

**Applicant:** Mr. Steve Cahoon  
Duke Energy  
410 South Wilmington Street  
Raleigh, North Carolina 27601

**Agent:** Mr. Richard Harmon  
Wood Environment & Infrastructure, Inc.  
4021 Stirrup Creek Drive, Suite 100  
Durham, North Carolina 27703

## Authority

The Corps evaluates this application and decides whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures of the following Statutory Authorities:

- Section 404 of the Clean Water Act (33 U.S.C. 1344)
- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)

## **Location**

Location Description: The project area is located at the Duke Energy Dan River Steam Station property, located south and east of South Edgewood Road, and north of the Dan River, in Eden, Rockingham County, North Carolina.

Project Area (acres): 597

Nearest Town: Eden

Nearest Waterway: Dan River

River Basin: Roanoke

Latitude and Longitude: 36.489064° N, -79.715908° W

## **Existing Site Conditions**

The proposed project area is located within the Piedmont Physiographic Province, between two of the ten belts of the Piedmont and the Triassic Basin. It is geologically complex. The belts to either side of the Triassic Basin are the Inner Piedmont to the west and the Milton Belt to the east. The Inner Piedmont is metamorphosed rocks, primarily amphibole, which dates from the Cambrian period/late Proterozoic Era, and several forms of schist, which date from the same period. The Milton Belt is metavolcanic rock, felsic and intrusive rocks from the Cambrian period/late Proterozoic Era, 680 to 710 million years before present. Some granitic rocks from the Silurian period (429 million years before present) are also found locally. The Triassic Basin, dating from 290 to 200 million years before present, runs through the middle of the Eden area. According to the Rockingham County Soil Survey, the topography of the Triassic Basin is 50 to 300 feet lower than the surrounding topography of earlier age. The Triassic Basin is predominated by sandstones, conglomerates and unmetamorphosed shale. Streams of Triassic age carried silt, sand and gravel to an environment much like the Holocene East African rift valley.

Site geomorphology generally includes an upland ridge in the northern section of the project area, part of which is an existing dry stack landfill. Three stream drainages run through the project area generally north to south, with an additional drainage running east to west along the northeastern project area boundary, all draining toward the Dan River which runs along the southern project area boundary. The “dredge basin” is located in the middle of the project area, and is a decades-old coal ash disposal area that appears to have been placed in a natural topographic drainage and then bermed at the downstream end along the north side of the two existing coal ash basins, located within the Dan River floodplain. Elevation across the site ranges from approximately 490 to 630 feet above mean sea level (MSL). Soils mapped on site are presented in the table below:

Soil Type	Map Unit Symbol	Hydric / Non-hydric
Ayersville gravelly loam, 4 to 15 % slopes	AyC	Non-hydric
Ayersville gravelly loam, 15 to 45 % slopes	AyF	Non-hydric
Clover sandy loam, 2 to 8 % slopes	CmB	Non-hydric
Clover sandy loam, 8 to 15 % slopes	CmD	Non-hydric
Dan River loam, 0 to 2 % slopes, frequently flooded	DaA	Hydric
Pinkston fine sandy loam, 15 to 45 % slopes	PnF	Non-hydric
Stoneville loam, 2 to 8 % slopes	SvB	Non-hydric
Stoneville loam, 8 to 15 % slopes	SvD	Non-hydric
Stoneville-Urban land complex, 2 to 10 % slopes	SwC	Non-hydric
Udorthents, loamy	Ud	Non-hydric

Among the 11 soil types that occur within the steam station property, only one (DaA) is listed as a hydric map unit. This hydric map unit occurs at the southwest corner of the station and along the southern/southeastern boundary abutting the Dan River. Average annual precipitation for Rockingham County is 41.66 inches.

Since 1948 the project area has been part of the Dan River Steam Station (Station). Prior to current land use, the property was presumably used for farming, with forested areas on the steeper slopes and bottomlands. Currently, the project area is bounded on the north by an electrical power transmission line and forested areas beyond, to the west by an unnamed tributary to the Dan River, to the south by the Dan River and associated floodplain, and to the east by the shuttered coal-fired power plant (demolished in 2016) and new combined-cycle gas turbine power plant that comprises the remainder of the Station property. General area land use outside of the property includes commercial and residential development to the east in the vicinity of Eden, mixed residential-commercial land to the north and west, and agricultural and forested land to the south of the Dan River.

The dominant terrestrial communities on site are comprised of pine forest, upland hardwood forest, and mixed pine-hardwood upland forest. Shrub and brushland and open, maintained (grassed) areas occur on the disturbed/altered land within the station property. The pine forest community occurs to the north and west of the complex. This community is dominated by Virginia pine (*Pinus virginiana*) in the canopy and shrub strata. The upland hardwood forest community includes white oak (*Quercus alba*), northern red oak (*Quercus rubra*), American elm (*Ulmus americana*), sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), mockernut hickory (*Carya alba*), and black cherry (*Prunus serotina*). The mixed pine-hardwood upland forest community is interspersed between the pine and upland hardwood forest areas and contains plant species common to both communities. The central portion of the complex includes an electrical power transmission line (corridor). This periodically maintained corridor is vegetated with a mixture of grasses, forbs, vines, shrubs and tree seedlings; silverberry (*Elaeagnus umbellata*), an invasive shrub species, is also fairly common.

Amec Foster Wheeler Environment & Infrastructure, Inc., now Wood Environment & Infrastructure, Inc., consultant for the applicant, conducted a jurisdictional delineation of the site in 2015. The jurisdictional boundaries, including 12 streams and 17 wetlands were field verified by the Corps on November 13, 2015. An Approved Jurisdictional Determination (AJD) was issued for Stream 3 in the DR 134 and 131 project area, attached to the Nationwide Permit (NWP) 33 verification letter for Action ID: SAW-2016-00331, dated May, 2, 2016. An AJD was issued for wetlands A, D, F, and the dredge basin area, as well as Stream 1 in the Stormwater Diversion area, on August 18, 2017. All streams on the site carry the North Carolina Division of Water Resources (NCDWR) best usage classification of “C”; this classification refers to those waters protected for uses such as secondary recreation, fishing, wildlife, fish consumption, aquatic life including propagation, survival and maintenance of biological integrity, and agriculture. Secondary recreation includes wading, boating, and other uses involving human body contact with water where such activities take place in an infrequent, unorganized, or incidental manner. There are no designated Outstanding Resource Waters (ORW), High Quality Waters (HQW), Water Supply I (WS-I), or Water Supply (WS-II) waters within 1.0 mile of the project area. The wetlands within the project area are all of the Headwater Forest wetland type, according to the North Carolina Wetland Assessment Method (NCWAM). These features contain a mix of plant assemblages, with forested wetland areas generally dominated by an overstory of sweetgum, red maple and sycamore (*Platanus occidentalis*), and saplings and shrubs of the same species. The vegetation in the non-forested wetlands are dominated by herbaceous species due to the disturbance activities within the maintained areas which prevents development of the canopy and shrub strata. The vegetation includes soft rush (*Juncus effusus*), panicgrass (*Panicum spp.*), sawtooth blackberry (*Rubus argutus*), broomsedge (*Andropogon virginicus*), and bladder sedge (*Carex intumescens*). Soils within these features are primarily loamy with a low chroma (10YR 5/2) matrix and bright (10YR 5/6) redoximorphic concentrations. Typical of wetlands in topographic drainages, these wetlands display hydrology indicators such as water-stained leaves, seasonal saturation, and occasional flooding.

Notably, the “dredge basin” contains CCR material throughout its entire area. The dredge area occurs within a natural topographic drainage, is semi-permanently inundated, has naturalized to be completely vegetated, and is hydrologically connected to Wetland D. The areas were determined to be jurisdictional since they were not covered under any Clean Water Act Section 402 permit. This area is dominated by phragmites (*Phragmites australis*), a non-native perennial wetland grass.

Additional details regarding existing site conditions can be found on the District Website at <http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx>.

## **Applicant's Stated Purpose**

The purpose of the proposed project, as stated by the applicant, is the following:

The purpose of the stormwater diversion project is to divert stormwater to facilitate the excavation and disposal of CCR materials from areas of ash fill within the Station. This purpose is based on the following needs: address North Carolina regulatory requirements related to diverting stormwater away from the Primary Ash Basin and Secondary Ash Basin and disposal of CCR materials; provide separation between water that has contacted CCR material (contact water) and water that has not contacted CCR material (non-contact water); increase safety by improving site access. The proposed activities for the permit modification are necessary to meet the requirements set forth by North Carolina regulatory requirements (i.e., Coal Ash Management Act). With respect to the Ash Basin Closure action, the project purpose is to close the Primary Ash Basin (PAB) and Secondary Ash Basin (SAB). This action would include the excavation of ash from the basins and the subsequent grading and seeding of these areas.

## **Project Description**

The Corps issued the original DA permit on October 20, 2017, for impacts associated with the Stormwater Diversion Project, DR 134, and DR 131.

**Stormwater Diversion Project:** The implementation of stormwater diversion required removal of ash from an existing dredge basin (located between the current footprints of Ash Fill 1 and Ash Fill 2), construction of a soil divider berm, and construction of five pipelines. The diversion of stormwater was necessary for the overall process of excavation and removal of CCR materials from the Station. This portion of the project required the permanent discharge of fill material and dredging of 1.89 acres of riparian, non-riverine wetlands, and overflowing/conversion of 393 linear feet of perennial streams and 0.41 acre of riparian, non-riverine wetlands to open waters.

**DR 134:** This project involved the permanent installation of a culvert and rip rap, necessary to facilitate vehicle and equipment access to the northern shoreline of the Dan River and stabilize eroding streambank between the two previously authorized temporary road crossings respectively. This action resulted in the permanent discharge of fill material into 43 linear feet of perennial stream for the culvert and 130 linear feet of perennial stream for the rip rap, as well as the temporary discharge of fill material into 20 linear feet of perennial stream for construction access and dewatering.

DR 131: This portion of the project is located at the DR 134 project area, and included the extension of the culvert pipe downstream to raise the elevation of the crest of the road crossing. This action was required to provide a permanent and safe access to the northern shoreline of the Dan River necessary for scarp repair, as needed, during the closure of the ash basins and the transport of coal ash from the Station via a barge loadout area. This project resulted in the permanent discharge of fill material into 15 linear feet of perennial stream.

Impacts proposed as part of the DA permit modification request include the permanent and temporary discharge of dredged or fill material into approximately 48 linear feet (0.025 acre) and 0.125 acre, respectively, of riverbank/open water (Dan River). Compliance with the Coal Ash Management Act (CAMA) requires Duke Energy to excavate and transport Coal Combustion residual (CCR) materials to the on-site Dan River Landfill; this work has been ongoing for several years. The applicant states that CAMA requirements also necessitate decommissioning of the on-site Primary and Secondary Ash Basins (PAB and SAB), which is dependent on modifications to the Stormwater Diversion Project authorized as part of the DA permit dated October 20, 2017.

After the removal of the CCR materials, the PAB and SAB would be graded and planted with a grass seed mix. The existing embankment that extends along the southern boundary of PAB and SAB would be removed. Water draining from streams and wetland areas north of the basins, which are currently routed around the basins, would be routed across the historical footprint of the PAB and SAB via piping and rip-rap lined channels, which would then outfall into the Dan River at four proposed gabion locations. These gabions, constructed of woven steel wire mesh and filled with rocks, would be established along the northern bank of the Dan River during this action, resulting in permanent impacts to 48 linear feet (0.025 acre) of riverbank/open water habitat. The applicant states that the gabions, by their design, would prevent or reduce river bank erosion at these four outfall locations along the Dan River. The 0.125 acre of temporary impacts to open waters would occur from the construction corridor established to allow access to the proposed gabion locations.

The proposed activity would result in a change in topography in the footprint of the PAB and SAB and the existing embankment along the Dan River. However, the embankment is an artificial feature, historically constructed from the placement of fill material. Grading activities and the removal of the embankment would result in an impact to the 100-year floodplain. The applicant states; however, that the proposed action is not expected to increase flood heights and a “no-rise” scenario is presumed. The project would be reviewed by the City of Eden Floodplain Administrator and the required certification(s) would be obtained prior to the initiation of construction activities. The applicant states that the removal of the embankment and the residual ash deposits would be expected to improve flood storage capacity.

Other activities proposed by the applicant upon completion of CCR unit closure include the removal of the stormwater divider berm and five pipe lines, the installation of which were authorized by the DA permit dated October 20, 2017. These activities entail the following:

- 1) Re-grading of the footprint of the stormwater divider berm and Water Supply Area 1 (WSA-1) to promote gravity drainage to an existing reinforced concrete pipe (RCP) located at the southern edge of WSA-1. The work may also require the installation of a headwall at the pipe inlet. The RCP would convey flow from the historical WSA-1 area to the historical PAB and SAB footprint;
- 2) Re-grading the WSA-2 footprint to a depth of 18 inches or less below existing grade to remove accumulated CCR material (if any) and promote gravity drainage to the existing plugged 36-inch pipe. The pipe plug would be removed to restore flow from the historical WSA-2 area to the historical PAB and SAB footprint. The work may also require the installation of a headwall at the pipe inlet. Note that the area defined as WSA-2 in the Stormwater Diversion Project is the same area impounded by the 36-inch Pipe Closure Project (see Action ID: SAW-2014-01477).
- 3) Re-grading the pipe closure area to a depth of 18 inches or less below existing grade within the footprint of the 48-inch Pipe Closure Project (see Action ID: SAW-2015-01670) to remove accumulated CCR material (if any) and promote gravity drainage to a proposed 48-inch pipe. The work may also require the installation of a headwall at the pipe inlet. The proposed pipe would convey flow from the historical 48-inch pipe closure area to the historical PAB and SAB footprint.
- 4) Restoring flow from WSA-3 to a pipe temporarily plugged as part of the Stormwater Diversion Project. Gravity drainage would be restored by removing the temporary pipe cap. The work may also require re-grading to a depth of 18 inches or less below existing grade to remove accumulated CCR material (if any) and to promote drainage, and/or installation of a headwall.

The above activities 1 through 4, intended to allow gravity flow from stream and wetland areas north of the PAB and SAB footprint to flow into the proposed re-graded PAB and SAB footprint, are not proposed by the applicant to result in new or additional impacts to wetlands or other waters of the US. Note that the footprint of potential re-grading for described above for the WSA-1, WSA-2, WSA-3, and 48-inch pipe closure areas, were all previously authorized as permanent impacts to wetlands and/or streams under Nationwide Permits 18 (Action ID: SAW-2014-01477) and 39 (Action ID: SAW-2015-01670) or as part of the DA permit dated October 20, 2017.

The applicant submitted additional descriptive information about the proposed project and project history. This supplemental information, as well as a project proposal narrative and plans, can be found on the District Website at <http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx>.

### **Avoidance and Minimization**

The applicant provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment: No CCR contact water would be discharged into jurisdictional wetlands and streams; therefore, the water quality of downstream receiving waters, specifically the Dan River, would not be impaired. All work activities to be completed under the proposed IP modification would be conducted in a manner to minimize the potential for erosion and sedimentation. Best management practices would be used pursuant to Erosion & Sediment Control (E&SC) Plan guidelines.

### **Compensatory Mitigation**

For the previously authorized DA permit, the applicant provided compensatory mitigation by providing payment to the North Carolina Division of Mitigation Services (NCDMS), for 1,162 Warm Water Stream Mitigation Units and 2.71 Riparian Wetland Mitigation Units within the Roanoke River Basin (Cataloging Units 03010103, 03010104, or 03010102). Stream mitigation was provided at a 2:1 mitigation to impact ratio for all fill and overflowing impacts to Stream 1 (393 linear feet total), and all culvert fill and rip rap impacts to Stream 3 (188 linear feet total) related to the DR 134 and 131 Projects. Wetland mitigation was provided for permanent riparian wetland losses at a 2:1 mitigation to impact ratio for all fill and overflowing impacts to Wetlands A, D and F (0.41 acre total), and at a 1:1 mitigation to impact ratio for all dredging, cut/fill, and overflowing impacts to wetlands in the dredge basin area (1.89 acres total) related to the Stormwater Diversion Project.

The applicant offered the following compensatory mitigation plan to offset unavoidable functional loss to the aquatic environment for modifications to this permit: No compensatory mitigation is proposed for the 48 linear feet (0.025 acre) of permanent impacts and 0.125 acre of temporary impacts to riverbank/open waters (Dan River) under the Ash Basin Closure action, as specifically occurring from the construction of the four gabion structures.

### **Essential Fish Habitat**

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, this Public Notice initiates the Essential Fish Habitat (EFH) consultation requirements. The Corps' initial determination is that the proposed project would not effect EFH or associated fisheries managed by the South Atlantic or Mid Atlantic Fishery Management Councils or the National Marine Fisheries Service.

## Cultural Resources

Pursuant to Section 106 of the National Historic Preservation Act of 1966, Appendix C of 33 CFR Part 325, and the 2005 Revised Interim Guidance for Implementing Appendix C, the District Engineer consulted district files and records and the latest published version of the National Register of Historic Places and initially determines that:

- No historic properties, nor properties eligible for inclusion in the National Register, are present within the Corps' permit area; therefore, there will be no historic properties affected. The Corps subsequently requests concurrence from the SHPO (or THPO).

The District Engineer's final eligibility and effect determination will be based upon coordination with the SHPO and/or THPO, as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps-identified permit area.

## Endangered Species

Pursuant to the Endangered Species Act of 1973, the Corps reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information:

- The Corps determines that the proposed project would not affect federally listed endangered or threatened species or their formally designated critical habitat.

Based on an email from John Ellis (USFWS), dated March 6, 2017, the previously authorized project would have No Effect on smooth coneflower (*Echinacea laevigata*), based on surveys conducted by the applicant's agent on November 2, 2016, which found no individuals or remnants of this species. The project area of the modification proposed includes the project area surveyed by the applicant's agent referenced above.

- The Corps determines that the proposed project may affect federally listed endangered or threatened species or their formally designated critical habitat.

The Corps reviewed this project in accordance with (IAW) the NLEB Standard Local Operating Procedures for Endangered Species (SLOPES) between the USACE, Wilmington District, and the Asheville and Raleigh USFWS Offices, and determined that the action area for this project is located outside of the highlighted areas/red 12-digit HUCs and activities in the action area do not require prohibited incidental take; as such, this project meets the criteria for the 4(d) rule and any associated take is exempted/excepted.

The Corps determines that the proposed project may affect, not likely to adversely affect federally listed endangered or threatened species or their formally designated critical habitat.

The Corps initiates consultation under Section 7 of the ESA and will not make a permit decision until the consultation process is complete. This determination is made specific to the Roanoke logperch (*Percina rex*) and James spiny mussel (*Pleurobema collina*).

### **Other Required Authorizations**

The Corps forwards this notice and all applicable application materials to the appropriate State agencies for review.

**North Carolina Division of Water Resources (NCDWR):** The Corps will generally not make a final permit decision until the NCDWR issues, denies, or waives the state Certification as required by Section 401 of the Clean Water Act (PL 92-500). The receipt of the application and this public notice, combined with the appropriate application fee, at the NCDWR Central Office in Raleigh constitutes initial receipt of an application for a 401 Certification. A waiver will be deemed to occur if the NCDWR fails to act on this request for certification within sixty days of receipt of a complete application. Additional information regarding the 401 Certification may be reviewed at the NCDWR Central Office, 401 and Buffer Permitting Unit, 512 North Salisbury Street, Raleigh, North Carolina 27604-2260. All persons desiring to make comments regarding the application for a 401 Certification should do so, in writing, by **April 2, 2019** to:

NCDWR Central Office  
Attention: Ms. Karen Higgins, 401 and Buffer Permitting Unit  
(USPS mailing address): 1617 Mail Service Center, Raleigh, NC 27699-1617

Or,

(Physical address): 512 North Salisbury Street, Raleigh, North Carolina 27604

### **North Carolina Division of Coastal Management (NCDWM):**

Based upon all available information, the Corps determines that this application for a Department of Army (DA) permit does not involve an activity which would affect the coastal zone, which is defined by the Coastal Zone Management (CZM) Act (16 U.S.C. § 1453).

## **Evaluation**

The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

## **Commenting Information**

The Corps of Engineers is soliciting comments from the public; Federal, State and local agencies and officials, including any consolidated State Viewpoint or written position of the Governor; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing will be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

The Corps of Engineers, Wilmington District will receive written comments pertinent to the proposed work, as outlined above, until 5pm, **April 11, 2019**. Comments should be submitted to David E. Bailey, Raleigh Regulatory Field Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, North Carolina 27587, at (919) 554-4884 extension 30, or [David.E.Bailey2@usace.army.mil](mailto:David.E.Bailey2@usace.army.mil).