



*Marshall Steam Station  
Coal Ash Impoundment Closure Plan*

Public Hearing  
February 26, 2020



# Current View



## *Marshall Steam Station*

- Located in Catawba County
- Owned by Duke Energy Carolinas
- Four-unit, 2,090-megawatt coal fired plant
- Units 1 and 2 began operation in 1965, 1966
- Units 3 and 4 began operation in 1969, 1970
- Currently in active operation
- Ash basin construction completed in 1965
  - 360 acres
  - Currently contains 16.8 million tons of ash



## *Coal Ash Management Act – House Bill 630 – July 2016*

- January 2019 – DEQ held public information sessions regarding closure options for the ash basins at Allen, Belews Creek, Cliffside, Marshall, Mayo and Roxboro (excavate, hybrid or cap in place)
- April 1, 2019 – DEQ directed Duke to fully excavate all the ash basins
- April 26, 2019 – Duke filed Petitions for Contested Case Hearing in the Office of Administrative Hearings challenging DEQ's decision for closure method
- December 31, 2019 – Duke submitted Closure Plans for closure by excavation
- December 31, 2019 – Duke, DEQ and several community environmental groups entered into a Settlement Agreement ending the appeal litigation
- January 31, 2020 – Consent Order incorporating the terms of the Settlement Agreement filed with Wake County Superior Court
- February 5, 2020 – Consent Order entered by Judge Paul Ridgeway



# *Final Consent Order*

- Covers coal ash impoundments at Allen, Belews Creek, Cliffside, Marshall, Mayo and Roxboro
- Identifies nine ash impoundments to be excavated
- More than 80 million tons of impoundment ash will be excavated and stored in newly constructed, onsite lined landfills
- 4 million tons of impoundment ash will be left in place
  - Located beneath pre-existing permitted landfills and structural fills
  - Covered with a synthetic closure cap system to prevent water infiltration
  - Stability features installed to prevent ash movement
  - Additional groundwater monitoring may be required
  - Duke must demonstrate corrective action measures will clean up groundwater by December 31, 2029



## *DEQ Closure Plan Action Timeline*

- December 31, 2019 – DEQ received proposed Closure Plans for Allen, Belews Creek, Cliffside, Marshall, Mayo and Roxboro
- CAMA requires DEQ to conduct public hearings within 60 days of receipt of proposed closure plan
- Public allowed at least 20 days after public hearings to submit written comments
- Final decision (approval or disapproval) by DEQ due 120 days of receipt of complete closure plans
- Within 60 days of approval, Duke Energy must begin implementation of the closure plan



## *Closure by Excavation*

- One impoundment will be excavated
  - 16,836,000 tons of ash
  - 14 years to complete excavation
- Ash within Phase I of the Dry Ash Landfill will also be excavated
- Excavated ash will be placed in a lateral expansion of the existing onsite permitted double-lined landfill (1812-INDUS-2008)
- Portions of the ash basin beneath existing Phase II of the Dry Ash Landfill (1804-INDUS-1983) and PV Structural Fill (CCB0031) will not be excavated
- Proposed new landfill details
  - Approximately 134 acres
  - Final elevation of 1110 feet (200 feet above Island Point Road)





- Yellow dashed line depicts boundary of former ash impoundment. Most of ash within this boundary will be excavated.
- Red line depicts boundaries of the existing closed landfill and structural fill.
- Yellow areas depict portions of the former ash impoundment to be left in place (not excavated) because they are underneath the existing closed landfill and structural fill.





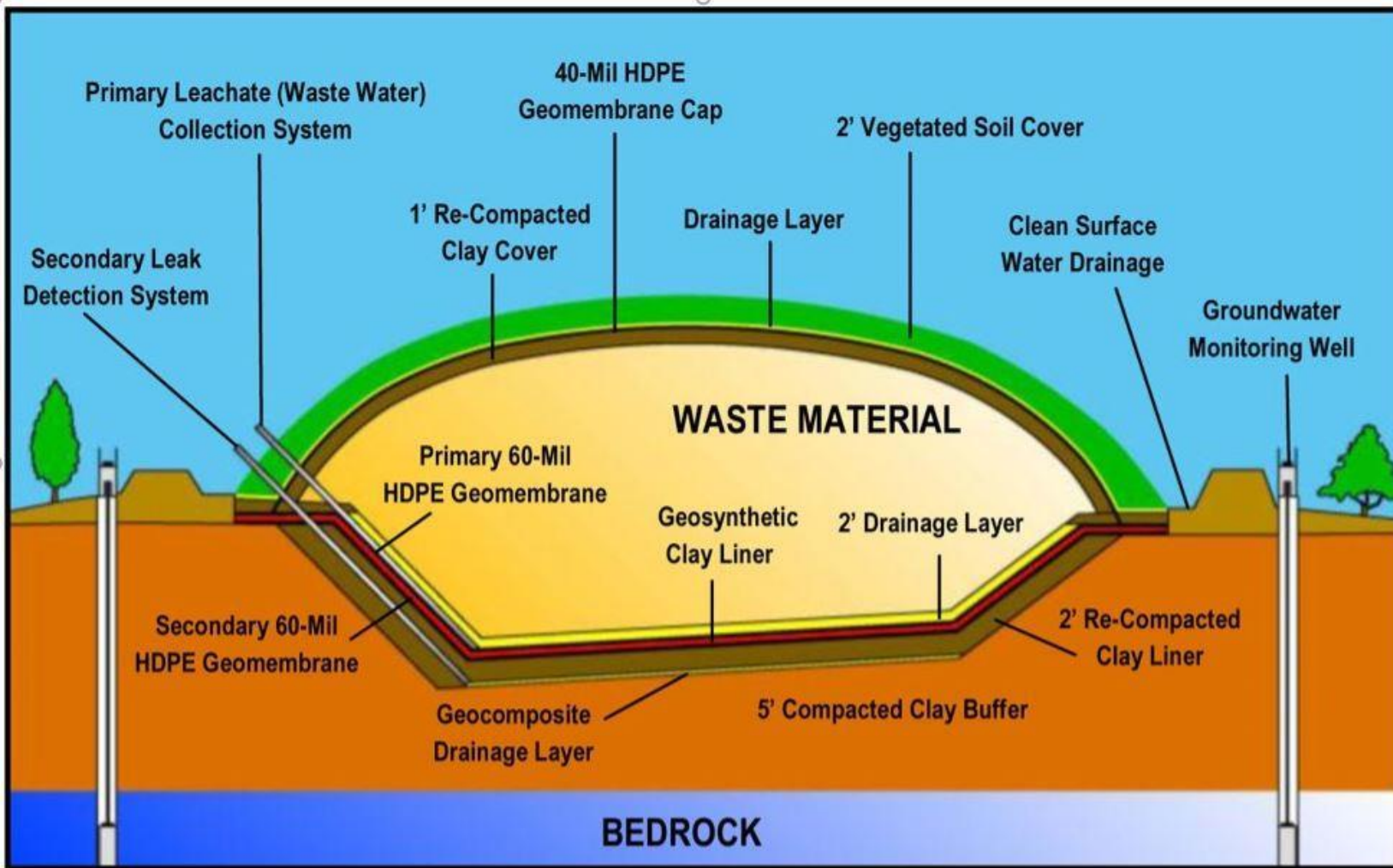
## *Estimated Project Schedule*

- Begin coal ash excavation – 1<sup>st</sup> Quarter of 2021
- Begin landfill construction – 4<sup>th</sup> Quarter of 2021
- Complete coal ash excavation – 4<sup>th</sup> Quarter of 2034
- Complete final closure of landfill – 4<sup>th</sup> Quarter of 2035
- Complete final site vegetative cover – 4<sup>th</sup> Quarter 2036





# Landfill Cross Section





Current View





Post Closure View



Submit comments by mail to:

**Louise Hughes**  
**N.C. Department of Environmental Quality**  
**1601 Mail Service Center**  
**Raleigh, North Carolina 27699-1601**

Submit comments by email to:

[marshallcomments@ncdenr.gov](mailto:marshallcomments@ncdenr.gov) - Include Closure Plan in the subject

The Closure Plan may be found at:

<https://deq.nc.gov/news/key-issues/coal-ash-excavation/marshall-steam-station-coal-ash-closure-plan>

