



North Carolina Wildlife Resources Commission

Richard B. Hamilton, Executive Director

27 February 2007

Mr. Bob Kitchen
Progress Energy Carolinas, Inc
PO Box 1551
Raleigh, NC 27602

Dear Mr. Kitchen:

This letter is in response to your letter dated 10 January 2007 requesting information on listed species and important habitats related to Progress Energy's expansion of the Harris nuclear facility. This expansion includes raising the elevation of Harris Reservoir by 20 feet which will flood approximately 4000 acres, removing water from the Carpe Fear River assist in raising the reservoir elevation, and constructing associated piping. Biologists with the North Carolina Wildlife Resources Commission (NCWRC) have reviewed your letter and offer the following comments.

Terrestrial

Impacts from New Lake Level:

1. Due to the proposed new lake level, 4,000 acres of wildlife habitat in a rapidly urbanizing area will be flooded. Unfortunately, this reduction in available habitat will compound problems arising from the existing loss of habitat to residential development in Wake County.
 - Priority upland areas that will be partially flooded include:
 - Small portion of NCWRC's Urban Wildlife Conservation Corridor (shown in green on the attached map). This is a target area where the Urban Wildlife Project is working to piece together a wildlife travel corridor so species can migrate between Harris and Jordan Lakes.
 - Portion of The Nature Conservancy's Piedmont Ecoregional Portfolio Site (shown in purple hatch marks on the attached map). Most of the land to be flooded that is not presently managed as Game Land has been designated by The Nature Conservancy as part of its Ecoregional Portfolio. This designation means the area has high environmental value.
 - Priority bottomland and wetland areas that will be flooded include:
 - Wading Bird Colony (location labeled on attached map)

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- Due to the lake's higher elevation, a certain percentage of land with low elevations suitable for the presence of wetland and shoreline habitat will be permanently lost.
- 2. Harris Lake's new shoreline will move within the secondary management zone of a Bald Eagle Nest near Avent Ferry Road. The altered shoreline and additional "canal" could negatively impact individuals using this nest.
 - The nest location and secondary management zone boundary (1500 ft radius from nest) are shown on the attached map.

Impacts from Proposed Transmission Line Location:

1. Part of the transmission line will be constructed within an NC Significant Natural Heritage Area, known as Buckhorn Bluffs and Levees, which is also managed as Game Land (shown on map). Land clearing and construction activities could negatively impact the sensitive natural communities located on this site.
2. A Bald Eagle nest is located across the Deep River from Buckhorn Dam. Any construction activities or shoreline alteration could negatively impact individuals using this nest.
 - The nest location and secondary management zone boundary (1500 ft radius from nest) are shown on the attached map.

Suggested Mitigation Measures:

1. Limit negative impacts to Bald Eagle populations, and compensate for any negative impacts (such as altered shoreline) that occur by permanently protecting additional habitat. Within the Bald Eagle nest secondary management zone, the US Fish & Wildlife Service's "Eagle Habitat Management Guidelines" recommend:
 - Restricting "construction of new roads, trails, and canals which would tend to facilitate human or predator access to the nest"
 - Limiting or preventing alteration of natural shorelines where the Eagles feed
 - Limiting all land clearing and construction activities that does occur within the secondary management zone to non-nesting months (August through November)
2. Establish a buffer between the edge of Buckhorn Bluffs (bluffs within the Significant Natural Heritage Area located near Buckhorn Dam) and any land disturbing activities that will accompany transmission line construction and operation.
3. To compensate for the loss of 4,000 acres of terrestrial wildlife habitat, Progress Energy should create and/or permanently protect additional wildlife habitat. NCWRC encourages Progress Energy to consider one of the following options:
 - Progress Energy could purchase 4,000 additional acres of wildlife habitat. If additional property is purchased as mitigation, we recommend targeting parcels with high wildlife value. North Carolina's Wildlife Action Plan identifies conserving strategic parcels of wildlife habitat around urban centers as a critical

priority. NCWRC has identified the Urban Wildlife Conservation Corridor (displayed in light green on the map) as a high priority for land conservation in the Triangle region. If protected, this corridor would provide a means for wildlife to move between Jordan and Harris Game Lands. We encourage Progress Energy to consider purchasing this or a similar wildlife corridor as mitigation for the significant loss of habitat.

- Progress Energy could place a permanent conservation easement on remaining acres around Harris Lake and establish an agreement with NCWRC to manage these acres as Game Land.
- Progress Energy could establish a long-term policy for managing remaining Game Lands as high-quality early successional habitat.

Aquatic Resources

Reservoir Issues

1. Most of the game fish Harris are nest spawners (largemouth bass, crappie, various sunfish spp.) and spawn adjacent to the shoreline during the spring. These species could adjust to a gradual change in water level, yet sudden changes in the spring could be detrimental and should be avoided, particularly from March to June.
2. The majority of Harris current shoreline habitat is wooded and natural. This should be maintained as much as possible, as the lake is expanded to new shoreline. Woody debris should be left in place. When logging operations and any land disturbing activities are carried out, BMP's should be in place and sedimentation should be contained as much as possible.

Riverine Issues

1. There are historical records for the federal and state endangered Cape Fear shiner (*Notropis mekistocholas*) in the Cape Fear River. Other listed species in the Cape Fear River include the federal species of concern and state endangered Atlantic pigtoe (*Fusconaia masoni*); the federal species of concern and state special concern yellow lampmussel (*Lampsilis cariosa*); the federal species of concern and state significantly rare Carolina redhorse (*Moxostoma* sp.); the state threatened creeper (*Strophitus undulatus*), triangle floater (*Alasmidonta undulata*), and Roanoke slabshell (*Elliptio roanokensis*); and the state special concern pod lance (*Elliptio folliculata*) and notched rainbow (*Villosa constricta*). In order to assess the potential impact of this project on these species, we need more information regarding frequency, duration, and the magnitude, and seasonality of the withdrawals from the Cape Fear River. Progress Energy should consult with the NCWRC and the North Carolina Division of Water Resources (NCDWR) regarding impacts of flow on aquatic species.
2. At this time it doesn't appear that anadromous fish species would be an issue, however, in-water work (concerning installation of a water intake) should comply with sunfish moratoriums, intake mesh sizes and screens.
3. NCDWR has been working on developing a Cape Fear River Hydrologic Model. It is likely this model will be a component in the development of a Drought Management Plan for Jordan Reservoir. If Progress Energy proposes to withdraw water from the Cape Fear River to supplement Harris Lake, depending on the frequency and volume of water

withdrawn, this could significantly affect the hydrologic model and Jordan Reservoir Drought Management Plan. In addition, the Western Wake Water Reclamation Facility is a proposed wastewater treatment plant with a discharge point directly below Buckhorn Dam. It is proposed to be completed by 2011. Again, depending on frequency and volume of water withdrawn, this could impact water quality and aquatic resources in the Cape Fear River downstream of Buckhorn Dam, particularly during drought years when minimum flows from Jordan Reservoir dam are reduced and the wastewater treatment plant is constructed. Progress Energy should consult with the NCDWR on these issues.

Reservoir Access

The proposed increase of Harris Reservoir operating level from 220' to 240' will render the existing boating access facilities inoperable. Provisions should be made by Progress Energy to ensure public boating access needs are addressed.

The NCWRC appreciates the opportunity to provide comments on this issue. NCWRC staff would be happy to meet with you to discuss any of these issues. Feel free to contact me at 336-625-5257 or todd.ewing@ncwildlife.org if you have any questions.

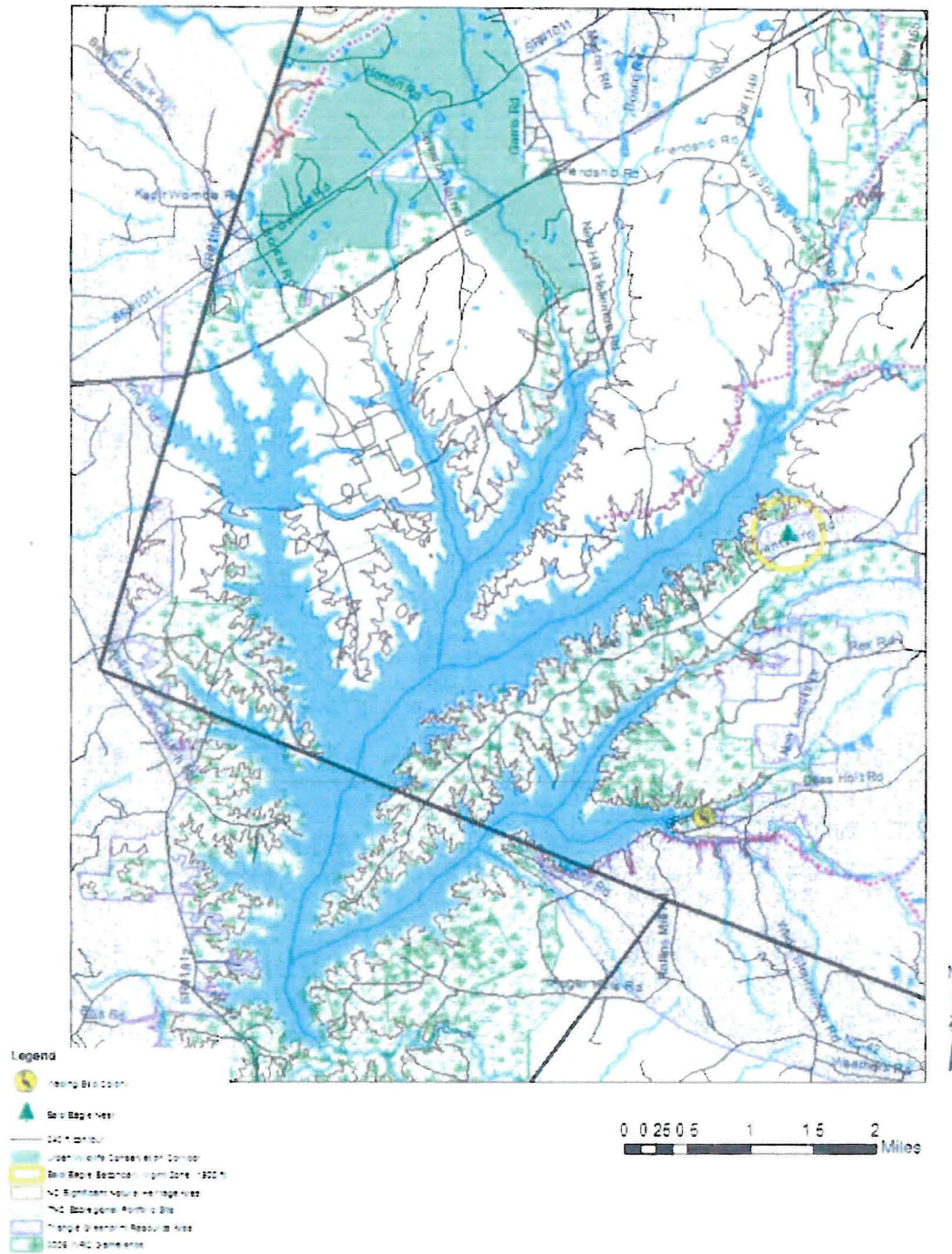
Thank you,



Todd D. Ewing

Cc: Steve Reed, NCDWR

Impacts of New Lake Elevation on Terrestrial Wildlife Habitat



Terrestrial Wildlife Habitat near New Pipeline Route

