PMHarrisCOL PEmails

From: Vann Stancil [vannstancil@gmail.com]
Sent: Friday, August 29, 2008 5:11 PM
To: HarrisCOLEIS Resource; Donald Palmrose
Subject: comments on Progress Energy's Harris Nuclear Plant COLA from NC Wildlife Res. Comm.
Attachments: Harris NP COLA Scoping Comments NCWRC 8-29-08.doc

Donald,

Here are comments from the NC Wildlife Resources Commission regarding the Harris Plant COLA. You'll recall that the NCWRC had an extended period of time to comment on the project because the official letter from the NRC was not sent to us when it was sent to other resource agencies. Also note that Todd Ewing has received a promotion and will no longer be the lead on this project. Going forward I will be the main point of contact for the NCWRC on this project. Please let me know if I can be of further assistance.

Thank you,
Vann

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From: Vann Stancil

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Recipients:
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Tracking Status: None
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North Carolina Wildlife Resources Commission

Gordon Myers, Executive Director

29 August 2008

Mr. William Burton, Branch Chief
Environmental Projects Branch

Subject: Scoping Comments for the Shearon Harris Nuclear Power Plant, Units 2 and 3 Combined License Application Review

Dear Mr. Burton:

This letter is in response to your letter dated 30 July 2008 seeking scoping comments on the above referenced project. Biologists with the North Carolina Wildlife Resources Commission (NCWRC) are familiar with this project and the natural resources in the area. The NCWRC offers the following comments in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

Progress Energy proposes to add two nuclear power units to its existing Shearon Harris Nuclear Plant in southwestern Wake County. Additional makeup water will be needed to supply the two new units. To meet this increased demand, Progress Energy proposes to raise the water level of Harris Reservoir by 20' from 220' to 240'. Progress Energy plans to construct a water intake on the Cape Fear River just upstream of the Buckhorn Dam to supply makeup water because the watershed for Harris Reservoir is not large enough to supply all of the makeup water needed for three nuclear units.

The expansion of Harris Reservoir will provide positive outcomes for fishery and recreational resources but at the same time will negatively affect other natural and recreational resources. Positive outcomes include increased reservoir surface area which will accommodate a greater number of anglers and boaters. Also, for several years after the reservoir expansion, the fishery should improve due to the "new reservoir" effect. As the reservoir is raised, the following concerns need to be addressed to ensure the continued integrity of the Harris Reservoir fishery. Most of the game fish in Harris Reservoir are nest spawners (largemouth bass *Micropterus salmoides*, crappie *Pomoxis* sp., and various sunfish *Lepomis* sp.) and spawn adjacent to the shoreline during the Spring. These species could adjust to a gradual change in water level, yet sudden

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changes could be detrimental and should be avoided, particularly from March to June. A better understanding of the rate of water level rise considering withdrawal from the Cape Fear River, Unit 1 operation, and water release into Buckhorn Creek during dry and wet conditions would help when developing plans to minimize impacts on spawning fish.

The majority of Harris Reservoir's current shoreline habitat is wooded and natural. This should be maintained as much as possible, as the lake is expanded to a new shoreline. Where possible, woody debris and standing timber should remain in place to enhance fish and wildlife habitat. However, timber should not be left standing in areas where it might compromise boater safety. When logging operations and any land disturbing activities are carried out, Best Management Practices should be in place and sedimentation should be contained as much as possible.

Expansion of the reservoir will result in the inundation of 78,438 m of stream channel resulting in a loss of the biological functions and habitat that these stream channels provide. The conversion of this lotic habitat to lentic habitat should be mitigated for, preferably by restoring and permanently protecting lotic habitats in the proximity of the project. Also, approximately 47 hectares of wetlands along the perimeter of the reservoir will be inundated by the Harris Reservoir expansion. However, the reservoir expansion also has the potential to create new wetlands. Any difference between the amount of lost wetlands and the created wetlands should be mitigated either by restoring or permanently protecting existing wetlands in the proximity of the project.

If Harris Reservoir is raised to 240', 1619 ha 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. Flooding of this 1619 ha will also mean the loss of approximately 818 hectares of Game Lands, some of which were set aside as mitigation for the construction of the original reservoir. As mitigation for loss of habitat and Game Lands, Progress Energy should permanently protect a comparable area of land in close proximity to the project.

Ecologically significant upland areas that will be flooded include portions of three Significant Natural Heritage Areas (SNHAs). According to the COLA Environmental Report, the lake level rise will inundate 36% of the Holleman's Crossroads Slopes SNHA, 8% of the Jim Branch/Buckhorn Creek forests SNHA, and 1% of the Utley Creek slopes SNHA. The greatest impacts will occur to Holleman's Crossroads slopes, a site of county significance that contains "shaly," mafic soils that support the rare chalk maple (*Acer leucoderme*) that is not known from elsewhere in Wake County. The lake level rise will also impact one known Bald Eagle nest near the Utley Creek Slopes SNHA, and a heron rookery near the Jim Branch/Buckhorn Creek forests SNHA. To mitigate for loss of these unique ecological features, Progress Energy should fund the permanent protection (through acquisition or purchase of conservation easement) of unprotected Significant Natural Heritage Areas in close proximity to the project.

As the reservoir level is raised, both boating access areas operated by the NCWRC will be flooded. These boating access areas represent the only access for motorized boating to

Harris Reservoir. Progress Energy should replace both of these boating access areas and ensure that capacity at each at least matches what is available now. A recreational study and comparison with other reservoirs may help anticipate access needs for the enlarged reservoir and help determine if another boating access area is needed. Such a scenario is likely because the increased surface area of the reservoir will likely lead to an increase in motorized boating use. Plans will also need to be developed to provide recreational access to Harris Reservoir during the transition period when the water level rises and existing access areas are no longer usable.

Many of the environmental impacts of this project are caused by inundating streams, wetlands, and upland habitat. One way to minimize these impacts is by raising the lake to a new elevation that is less than 240'. The NCWRC understands the need to raise the water level at Harris Lake to support two additional nuclear units. However, we would like to see the effect of other lake levels on plant operations and natural resources evaluated as well.

The NCWRC is also concerned about effects of Harris Nuclear Plant expansion downstream from the project. Currently, Buckhorn Creek, which is impounded by Harris Reservoir, has no minimum instream flow. An instream flow study should be performed to determine a suitable instream flow for Buckhorn Creek and that instream flow regime should be implemented. The instream flow regime should provide a minimum release from the Harris Reservoir dam and provide seasonal variation like that expected for an unregulated stream. Currently the remains of a hydroelectric plant on Buckhorn Creek serve as a barrier between the reach of Buckhorn Creek below Harris Reservoir dam and the Cape Fear River. Improved fish passage and implementation of an appropriate instream flow regime would greatly improve conditions in Buckhorn Creek.

This project has the potential to impact the Cape Fear River because Progress Energy proposes to pump makeup water from the river to Harris Reservoir. The Cape Fear shiner (*Notropis mekistocholas*) is endemic to the Piedmont portion of the Cape Fear River basin and is found in the Deep, Rocky, and Haw river systems upstream of Buckhorn Dam. Additionally, one Cape Fear shiner was collected from the Cape Fear River downstream of Buckhorn Dam near Erwin in 2007. The Cape Fear River is also home several state listed mussel species. Two mussel species found in the upper Cape Fear River are classified as Federal Species of Concern: Atlantic pigtoe (*Fusconaia masoni*) and yellow lampmussel (*Lampsilis cariosa*); these species are also listed as State Endangered. Four additional mussel species found in the upper Cape Fear River are listed as State Threatened: creeper (*Strophitus undulatus*), eastern lampmussel (*Lampsilis radiata radiata*), Roanoke slabshell (*Elliptio roanokensis*), and triangle floater (*Alasmidonta undulata).* The notched rainbow (*Villosa constricta*) is a State Special Concern species and the eastern creekshell (*Villosa delumbus*) is a State Significantly Rare species.

An instream flow study is needed to determine the effects of water withdrawal from the Cape Fear River. The NCWRC anticipates varying withdrawal limits based on existing flows in the Cape Fear River. For example, more water could be withdrawn from the river during high flow periods with minimal effect on the river while no water should be withdrawn

from the river during low flow periods. We encourage Progress Energy to consider pumps of varying sizes to maximize flexibility in withdrawing water at varying water levels. The NCWRC also suggests that various maximum withdrawal rates be assessed. For instance, the overall ecological and hydrological impacts may be less if more water (e.g., 250 cfs) is removed from the Cape Fear River during high flow events (i.e., > 5,000 cfs) if this results in reduced need to withdraw water during average or low flow periods.

The Cape Fear River intake location should be configured in a way that minimizes environmental impacts during construction, operation, and maintenance. The proposed intake is located where Gulf Creek joins in the impounded Cape Fear River. Gulf Creek typically carries a higher sediment load than the Cape Fear River as indicated by the turbidity of Gulf Creek and sediment deposition in the river at the confluence. Water quality effects on Harris Reservoir from the Cape Fear River makeup water should be evaluated.

The NCWRC appreciates the opportunity to comments on this project. Should you have any questions feel free to contact me at vannstancil@gmail.com or 919-284-5218.

Sincerely,

Vann F. Stancil
Special Project Coordinator

ec: Todd Ewing, NCWRC
Jacquelyn Wallace, NCWRC
Kirk Rundle, NCWRC
Ryan Heise, NCWRC
Jim Mead, NCDNR-DWR
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