

## HarrisCOLEIS Resource

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**From:** John Sutherland [john.sutherland@ncmail.net]  
**Sent:** Thursday, July 17, 2008 5:21 PM  
**To:** HarrisCOLEIS Resource  
**Cc:** Tom Reeder; Tom Fransen; Linwood Peele; Jim Mead; Phil Fragapane; Fred Tarver; Steve Reed  
**Subject:** Comments on Scoping for Harris Nuclear Units 2 and 3  
**Attachments:** harris units 2 and 3 eis scoping comments.doc

Please find attached scoping comments from the North Carolina Division of Water Resources regarding the proposed Harris Nuclear Units 2 and 3.



North Carolina Department of Environment and Natural Resources  
Division of Water Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary  
Thomas A. Reeder, Director

July 17, 2008

Chief  
Rulemaking, Directives, Editing Branch  
Division of Administrative Services  
Office of Administration  
Mailstop T-6D59  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Subject: Progress Energy Carolinas, Inc.; Shearon Harris Nuclear Power Plant, Units 2 and 3;  
Combined License Application; Notice of Intent to Prepare an EIS and Conduct Scoping  
Docket Nos. 52-022 and 52-023.  
Federal Register: May 22, 2008 (Vol. 73, No. 100), pages 29785-29787.

Dear Sir or Madam:

The North Carolina Division of Water Resources (DWR) offers the following scoping comments for consideration during the preparation of the environmental impact statement (EIS) for Progress Energy's (PE) proposed two new nuclear units at the Shearon Harris Nuclear Power Plant, located near the Town of New Hill, in Wake County, North Carolina.

1. DWR has participated in the scoping meeting and environmental audit.
2. DWR is the agency within the North Carolina Department of Environment and Natural Resources (DENR) charged with water supply planning and river basin hydrologic modeling. DWR is also involved in conducting studies and recommending instream flow regimes to maintain aquatic habitat and other relevant instream uses downstream of reservoirs and water withdrawals.
3. DWR has been the lead agency within DENR for Federal Energy Regulatory Commission (FERC) hydropower relicensing, as well as advising DENR's Division of Water Quality regarding flow requirements to include in the associated federal Clean Water Act Section 401 water quality certifications. DWR anticipates that we will play the same role in licensing of the proposed expansion of the Shearon Harris facility.

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4. DWR's water management concerns revolve primarily around the proposed withdrawal of water, called "make-up" water, from the Cape Fear River to the Harris Reservoir to raise the water surface elevation 20 feet and maintain the reservoir at a new, full pool elevation of 240 feet, mean sea level.

5. DWR is also concerned about what flow regime will be maintained in Buckhorn Creek, located downstream of the expanded Harris Reservoir.

6. Addressing DWR's flow concerns will require analysis of hydrology and ecological responses to changes in flow.

7. The Cape Fear River Basin Hydrologic Model is a basinwide model for the Cape Fear River basin which should be used to evaluate the hydrological effects of various project operation scenarios. This model is in the public domain and has been accepted for use by stakeholders in the basin. Using the model will allow simulation of various flow thresholds for the withdrawal of make-up water from the Cape Fear River, as well as various flow regimes downstream of Harris Lake reservoir. The model will also allow consideration of the hydrologic effects of the discharge by the proposed Western Wake wastewater treatment plant to Harris Lake versus a discharge to the Cape Fear River.

8. The state owns a portion of the water supply storage in the US Army Corps of Engineer's (Corps) Jordan Reservoir, located on the Haw River upstream of the proposed Cape Fear River withdrawal site. The state also manages recreation sites and environmental lands around the Jordan Lake. In addition, DWR is responsible for overseeing allocation of Jordan's water supply storage, and works closely with the Corps and water users (both downstream and reservoir withdrawals) to manage releases and reservoir levels during drought. The Corps manages Jordan releases to meet target flows on the Cape Fear River downstream of the proposed Harris withdrawal site. Use of the Cape Fear River Basin Hydrologic Model to evaluate withdrawal scenarios will allow examination of any potential effects on how Jordan Reservoir would need to operate to maintain downstream flow targets - and the resulting effects on the water quality and water supply storage pools in the reservoir.

9. Determining how changes in the Cape Fear River's hydrology will affect the downstream aquatic ecosystem will necessitate additional studies and habitat modeling. A first step might be to use the Index of Hydrologic Alteration (IHA) to evaluate the effect of the withdrawal of make-up water from the Cape Fear River. Then it may necessary for PE to conduct a site-specific study of the relationship between instream flows and aquatic habitat - probably using the Instream flow Incremental Methodology. PE will need to work closely with review agencies, starting with study planning and continuing through data collection, model calibration, habitat modeling (including time series analysis) and evaluation of results. Fortunately, DWR recently completed a similar study with PE for the relicensing of its hydroelectric project on the Pee Dee River.

10. The dam for Harris Reservoir presently has no minimum release requirement downstream to Buckhorn Creek. Expansion of the reservoir could increase the duration and frequency of conditions when the reservoir level is below the spillway crest and there is no flow provided downstream. PE will also need to conduct a site-specific study of the relationship between instream flows and aquatic habitat for this stretch of stream so that an appropriate downstream flow regime can be determined.

July 17, 2008

Thank you for the opportunity to submit these comments and for their consideration during the preparation of the EIS. If DWR can be of further assistance, please contact Tom Fransen at 919/715-0381, or [tom.fransen@ncmail.net](mailto:tom.fransen@ncmail.net), concerning basin modeling, or Jim Mead at 919/715-5428, or [jim.mead@ncmail.net](mailto:jim.mead@ncmail.net), concerning aquatic habitat.

Sincerely,

John Sutherland  
Water Projects Section Chief

cc: Tom Fransen, Jim Mead, DWR  
Todd Ewing, Wildlife Resources Commission  
Gil Vinzani, Division of Water Quality  
John Dorney, Division of Water Quality  
Paul Snead, Progress Energy