NCDER

North Carolina Department of Environment and Natural Resources- Division of Parks and Recreation

Michael F. Easley, Governor William G. Ross, Jr., Secretary Dr. Philip K. McKnelly, Director

January 9, 2002

Sharon F. Haggett

U.S. Army Corps of Engineers, Wilmington District P.O. Box 1890
Wilmington, NC 28402-1890

Dear Ms. Haggett:

The Division of Parks and Recreation (Division) appreciates the opportunity to participate in the John H. Kerr 216 Project. The Division's mission includes both providing public outdoor recreation opportunities and protecting the state's natural diversity. In as much, the Division would like to see the 216 study address both the recreational aspects of the reservoir and the environmental values of the lower Roanoke watershed. The comments contained within this letter have been provided in a previous letter (Hall, April 28, 2000), relating to the recreational values of the reservoir, and operational aspects of Kerr Lake State Recreation Area and leased properties.

Recommended Studies

A number of studies have been conducted on the impacts of the altered flood regimes on the lower Roanoke ecosystems. Under the current pattern of releases, for example, the higher alluvial ridges within the floodplain are no longer being flooded at all, allowing the invasion of flood-intolerant species, such as beech'. Lower-lying areas, in contrast, are flooded for more prolonged periods than is normal, again inducing alterations of the native vegetation. Animals as well as plants are affected by these changes, both directly and indirectly'. In general, much of the biological diversity present in this system may be at risk.

These studies have raised a number of questions that still need to be addressed. We would like to see the following issues be considered for the 216 Study:

Vegetational Impacts

- How has the altered flood regime affected tree recruitment and growth rates in the floodplain forests of the lower Roanoke basin?
- What are the effects of changed erosional processes and sediment transport on the floodplain forests?

Rice, S.K. and Peet, R.K. 1997. Vegetation of the Lower Roanoke River Floodplain. Report to the Nature Conservancy; Durham, NC.

Townsend, P.A. 1997. Environmental gradients and vegetation patterns on the Roanoke River Floodplain, North Carolina. Ph.D. Dissertation, University of North Carolina -- Chapel Hill.

Hall, S.P. 1999. Inventory of the macro-lepidoptera of the devil's gut preserve. North Carolina Natural Heritage Program, Division of Parks and Recreation.

1615 Mail Service Center, Raleigh, North Carolina 27699-1615 Phone: 919-733-4181 \ Fax: 919-715-3085 \ Internet: www.ncsparks.net

Terrestrial Faunal Impacts

- What are the effects of vegetational changes on the distribution and abundance of forest arthropods and vertebrates?
- What are the direct impacts of the altered flooding on ground-nesting birds, forest floor arthropods, and other key components of the floodplain fauna?

Water Quality Impacts

- How has water quality in the backswamps been affected by prolonged flooding in the spring and by the massive defoliation of tupelos by the forest tent caterpillar?
- Has the severity and duration of defoliation by the forest tent caterpillar been affected by the altered flood regime?
- What are the impacts of anoxic conditions in the backswamps on crayfish, aquatic amphibians, and spawning fish?
- How does build-up of anoxic waters in the backswamps affect water and habitat in the main channel of the Roanoke and downstream in the sounds?

Recreational/Operational Impacts

- How do changing lake elevation levels affect the use of the State Recreation Areas at Kerr Reservoir? Boater and camper users comprise up to 80 percent of use at the State Recreation Area. Impacts on lake levels severely reduce park visitation for boaters and campers accessing boat ramps.

How can the reservoir level be maintained to avoid severe impacts on boat access, cancellation of events such as fishing tournaments, sail boat regattas, and day users inability to gain lake access for boating?

How can impacts on swimming areas be minimized during low water conditions?

How can impacts on private marina owners leasing property through the State of North Carolina be minimized during drought/low water conditions? Private owners are impacted by low water conditions through loss of business and structural damage to dock facilities. Impacts to private concessions results in loss of state revenue.

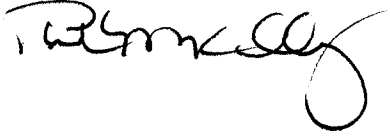
Evaluation of Alternative Operations

One alternative we would particularly like evaluated is run-of-the-river operation for all three reservoirs (Kerr, Gaston, and Roanoke Rapids). Run-of-the-river operation should help stabilize lake levels. A particular target level could be selected that optimizes shoreline use by the adjoining land owners or land-managing agencies, including the Division. Run-of-the-river operation should also help restore the natural flood regime to the lower Roanoke floodplain. Such restoration is critically needed if the natural features of this system are to be preserved.

We realize that the optimum operation must also take into account the needs for flood control, water supply, and power generation. However, we believe that some change in releases towards a more natural flow offer the only solution to the problems outlined above. We are highly unlikely to support alternatives that involve engineered, structural changes to the floodplain.

Again, the Division appreciates the opportunity to serve on the John H. Kerr 216 committee. Any comments or questions concerning these study area recommendations should be directed to Brian Strong at (919) 715-8711.

Sincerely,



Philip K. McKnelly,

bls/PKM

cc: David Coburn, Superintendent Kerr Lake State Recreation Area Brian Strong, Resource Management Specialist