

Operations 07 - Recreation Flow Communication Report

I. Executive Summary

Stakeholders in the Catawba-Wateree relicensing process and other interested recreationists have developed desired criteria for an efficient and effective flow and lake level communication system for the Catawba-Wateree project area. This system will utilize both the Internet and an Interactive Voice Response (IVR) phone system as means of communication. The Internet and IVR communication systems will be implemented by Duke Power (Duke). It will be field tested by stakeholders in the Catawba-Wateree relicensing process and other interested recreationists and refined by Duke if needed.

II. Introduction

Duke is in the process of relicensing its hydropower facilities on the Catawba River in North and South Carolina (Catawba-Wateree Project – FERC # 2232) with the Federal Energy Regulatory Commission (FERC). Duke is using an enhancement of the FERC Traditional Licensing Process (TLP) that provides significant collaborative opportunities through the use of Study Teams, Resource Committees, Regional Advisory Groups, and State Relicensing Teams. The Recreation Flow Communication Study Team (Operations 07) is responsible for the scope of this study and the review of the study findings (the Recreation Flow Communication Study Plan Scope Document is available on the Duke relicensing web site (www.catawbahydrolicensing.com)). Participants in the Recreation Flow Study (Recreation 02) field evaluations also provided input to this study, as did various members of the stakeholder relicensing teams. The Operations Resource Committee (Operations RC) has provided general oversight for the study and has received periodic updates on the study progress. Key findings and resource improvement alternatives from this study will be incorporated in the Operations RC Report.

This study was requested by American Whitewater, Carolina Canoe Club, Davidson College, North Carolina Division of Water Resources (NCDWR), North Carolina Division of Parks and Recreation (NCDPR) and South Carolina Department of Parks, Recreation and Tourism (SCPRT).

This study reviewed the needs of the general public for information about the operations of the Catawba-Wateree project for the purpose of participating in various water-based recreational activities on the project reservoirs and in the regulated river reaches. This study report also provides recommendations for how the desired information can be communicated to the public.

III. Methodology

Phase One:

A discussion of communication needs related to participation in recreation activities in the Catawba-Wateree project area was conducted at one meeting of each Advisory Group (Foothills, Piedmont, Metro, Lower Catawba) and the two State Relicensing Teams (North Carolina and South Carolina). During the discussions with each of these groups the current lake level and river flow communication practices were reviewed and additional communication options were explored. These stakeholders were also asked to review the recently-implemented phone and Internet communication capabilities being utilized in the Duke Power Nantahala Area and to provide a report on their findings. The current Duke Power Nantahala Area recreation communication system is outlined in Settlement Agreements that were developed in the stakeholder process for relicensing Duke hydropower facilities in the Nantahala Area (Nantahala Settlement Agreement, 2003, Section 3.3, page 9; Tuckasegee Settlement Agreement, 2003, Section 3.3, page 15). Information was also solicited from the recreationists participating in the Recreation Flow Study (Recreation 02).

Phase Two:

Based on the recommendations from Phase One, Duke will develop an efficient, effective, and appropriate communication protocol to provide public access to flow release and lake level information.

Phase Three:

Interested recreation user groups including the interested individuals and groups who participated in Phase One will test the communications protocol developed in Phase Two. These stakeholder groups will be contacted after the IVR and Internet systems have been developed and tested internally by Duke. The Stakeholders will be asked to use the two systems for their recreational information needs over a period of two to four weeks and then report whether it meets or does not meet their information needs. The test will result in appropriate adjustments and refinements to the two communication systems as needed.

IV. Results and Discussion

Phase One

Recreationists and other stakeholders want to be able to obtain the following information over the telephone (IVR System) and via the Internet for both river flows and lake levels.

River Flows:

River recreationists would like access to the following information for the river sections downstream from Bridgewater, Oxford, Wylie and Wateree Developments and the two channels of the Great Falls Bypass:

1. A yearly calendar (Recreation Flow Calendar) of the scheduled flows from generation (including amount in cfs) agreed upon through the Catawba-Wateree relicensing process or other processes (Available on the Internet)
2. Provide a three-day projection of flows that are on the Recreation Flow Calendar including the amount (cfs) and the time (duration) of flow (Available on the Internet and IVR)
3. Provide a three-day projection of flows from generation on days / times not on the Recreation Calendar including the amount (cfs) and the time (duration) of flow during daylight hours (Available on the Internet and IVR)
4. An approximate schedule of when flows from generation will arrive and recede at four locations downstream from Wylie (Available on the Internet and IVR)
5. Information that would help the recreationist determine if there is enough water flow in the Great Falls bypass sections for recreational paddling activities (Internet and IVR)
6. Special messages to inform the recreationist of any river situation that might affect the safety and quality of the recreational experience (Internet and IVR)
7. A link from the website to all applicable USGS gages so that real time river flow can be obtained and historical patterns can be reviewed (Website)

Lake Levels

Lake recreationists and homeowners would like the following information for all the Project reservoirs:

1. A graph showing annual minimum, maximum, and target elevations for each lake (Internet)
2. Real time lake levels, the difference between full pond and current level, and whether the lake level is rising or falling as compared to the day prior (IVR)
3. Graph and/or table showing lake levels for the current day, a 7-day and 3-month forecast, and a 7-day and 3-month history (Internet)
4. Special messages to inform the recreationist of any lake situation that might affect the safety and quality of the recreational experience (Internet and IVR)

Phase Two

Part of the information desired by stakeholders with regard to lake levels is currently available on the Duke website (www.dukepower.com/community/lakes/). Comparable information regarding lake levels and flow levels is currently available on the Duke Power Nantahala Area website (www.nantahalapower.com/nantahala/lakes/schedules/), which provides a template that can be used to develop the format to present the information for the Catawba-Wateree project area. It appears that an efficient and effective communications protocol can be provided for many of the lake level information items identified in Phase One via the Internet and the VRU.

It is feasible to provide most of the river flow information identified in Phase One River Flows. One exception is a three-day projection of flows from generation on days / times not on the Recreation Calendar including the amount (cfs) and the time (duration) of flow during daylight hours (Number 3 above under River Flows). This information can be provided in the regulated river reach downstream of the Bridgewater Development but will be very difficult to provide for the river sections downstream of the Wylie and Wateree Developments due to the complexity arising from the increasingly integrated nature of the hydro facilities downstream from Lake Rhodhiss in providing both efficient production of electricity and effective water management for current municipal and business water needs. However this does not affect Duke Power's ability to deliver agreed-upon recreation releases (rated "Acceptable" in the Recreation Flow Study).

Flow levels (cfs) into the Great Falls bypass channels will be discerned through tailrace elevation measurements that can be correlated to flow in cfs. Special messages will also be provided estimating how long floodgates at the Fishing Creek Development will be open and how much water (cfs) will be released during high flow events.

Phase Three

Interested recreation user groups including the interested individuals and groups from Phase One of this study will test the communications protocols prior to final implementation. The information derived from the test will result in appropriate adjustments and refinements to the two communication systems as needed.

After Phase Three is completed there will be an efficient, effective and appropriate flow and lake communication system for recreationists utilizing the waters in the Catawba-Wateree Project area.

V. Literature Cited

Draft Recreation Flow Study for the Catawba-Wateree Project 2232. 2005.
Available via the internet at www.catawbahydrolicensing.com.

Nantahala Settlement Agreement 2003. Available at www.nantahalapower.com.

Tuckasegee Settlement Agreement 2003. Available at www.nantahalapower.com.