

YADKIN-PEE DEE RIVER HYDROELECTRIC PROJECT

FERC NO. 2206

ISSUE EVALUATION –FINAL STUDY PLAN

WATER RESOURCES WORKING GROUP

ISSUE NO. 4

SUPPORT DEVELOPMENT OF DIADROMOUS FISH RESTORATION PLAN

January 2004

PROGRESS ENERGY

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YADKIN-PEE DEE RIVER PROJECT
WATER RESOURCES WORKING GROUP
ISSUES EVALUATION TEMPLATE**

Issue No. 4: Support development of diadromous fish restoration plan

1. Description of Issue

The USFWS is the lead resource agency for development of the diadromous restoration plan for the Pee Dee River. NMFS, SCDNR, and NCWRC are cooperating agencies for the plan development. Because of the potential direct effect on relicensing of the Project, Progress Energy has a need to be fully informed and up to date on current restoration plan development throughout the relicensing process and beyond.

2. Project Effects

If the restoration plan includes expansion of the current range of diadromous fish to portions of the Pee Dee watershed above Blewett Falls or Tillery Dams, which currently have no functional upstream or downstream fish passage facilities, then the existing Project would prevent fish passage to upstream waters. At RWG Meeting No. 2, USFWS stated their interest was to get American shad and American eel upstream of Blewett Falls Dam, but not above Tillery Dam, at this point in time.

3. Applicable Existing Information

Progress Energy data on fish, water quality, habitat and river hydraulics/hydrology will be valuable information with direct bearing on the feasibility of fish restoration above the Project dams. Progress Energy has requested any and all studies conducted by or for resource agencies in the development of their migratory fish restoration plan. To date, no studies have been provided/identified.

4. Study Needs

The first step in restoration planning is to determine if, and how much, suitable spawning, incubation/nursery, and juvenile habitat exists above Blewett Falls Dam. It was specifically mentioned and agreed in the November 12, 2003 RWG meeting that it was the agencies responsibility to verify the availability of habitat upstream of Blewett Falls and Tillery, and to provide that information to Progress Energy. This in turn would lead to a calculated escapement requirement, which would be the number of fish that may need to be passed at Blewett Falls Dam in order to fully utilize available habitat. Once escapement is estimated, fish passage facilities can be designed and the cost estimated to meet those goals. Resource agencies (USFWS, NMFS, and NCWRC) have also suggested that a phased approach to fish passage may

be appropriate for the site, to see if a self-sustaining run can be maintained, before development of permanent fish passage facilities to maximum capacity. Progress Energy would like the opportunity to be involved and review work products at all stages of restoration plan development, to assure its relicensing studies and application are consistent with the Diadromous Fish Restoration Plan.

5. Final Study Plan

5.1 Purpose

The purpose of this study is to evaluate those aspects of diadromous fish restoration that are under direct influence and control of the Yadkin-Pee Dee Project. There are two primary project effects on diadromous fish restoration: (1) the effects of project flows on diadromous fish habitat, which will be evaluated as part of Issue 5, instream flow assessment; and (2) barriers to diadromous fish migration. This study will evaluate the feasibility of providing diadromous fish passage facilities around project structures.

5.2 Objectives

The objective of this study will be to develop conceptual level design options and rough order of magnitude cost estimates for achieving diadromous fish passage at Blewett Falls and Tillery Dams. The study will focus on the two target species resource agencies have expressed interest in passing at the Project—American shad and American eel.

5.3 Methodology

The first step of this study will be to gather relevant engineering, hydraulic, hydrologic, and target species biological data for the Project. Most of this information is readily available in existing and ongoing relicensing documents and studies. One key piece of information that may not be available, however, are resource agency estimates of available habitat, restored populations, and escapement requirements for fishway sizing. It was specifically mentioned and agreed in the November RWG meeting that it was the agencies responsibility to verify the availability of habitat upstream of Blewett Falls and Tillery and provide that information to Progress Energy.

The second step will be the development of desktop concept sketches of potential fish passage options at each project dam. These concepts will layout the general location(s), configuration(s), and type(s) of fishways on a simple site plan and note key site suitability constraints that should be further investigated on site.

The third step is a site visit to the Project to evaluate site-specific conditions at each dam. The site visit should be attended by resource agencies (USFWS, NMFS, NCWRC, and SCDNR), a fishway design engineer and biologist, and Project owner representatives that are familiar with Project design and operations. The fishway concept sketches will be evaluated for suitability and

practicality during the site visit. Issues and concerns about fish passage design and operation at each site will be discussed and noted.

The final step will be to revise the concept sketches, taking into consideration what was learned during the site visit. The sketches will be revised accordingly and concept drawings and rough order of magnitude cost estimates will be developed. The design information will then be documented in a design memorandum.

5.4 Location and Duration

The tasks described above will be performed in 2004, with a draft design memorandum expected to be complete by December 2004.

Resource Working Group Overlap (check if applicable)

Water Resources Issues # 1, 3, 5, 13, 14, and 16

Land Use and Recreation Issue # ____

Terrestrial Resources Issue # ____

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