Action: Fish Passage Feasibility Study **Prerequisite Actions:** Fish Survey, Macroinvertebrate Survey

Action Description:

Fish passage feasibility study – Phase 1: determination of need for fish passage, Phase 2: determination of feasibility of fish passage relative to engineering feasibility and cost/benefit, at any stations with a substantiated need from Phase 1.

Applicable Hydro Projects/Developments:

Nantahala (2692), Thorpe (Glenville-2686), Tuckasegee (Little Glenville-2686), Cedar Cliff (2698), Bear Creek (2698), Tennessee Creek (2698), and Wolf Creek (2698), Bryson (2601), Dillsboro (2602), Franklin (2603), and Mission (2619).

I. Objective(s)

The objectives of the fish passage feasibility study are:

(1)Determine the actual biological need for fish passage (within context of FPA, Section 18).

(2)Determine if habitat fragmentation for native fish species has occurred and, if so, the extent of any adverse biological impacts to those species.

(3)If passage need is documented, evaluate feasibility of fish passage from the logistical/engineering perspective.

(4)If passage need is documented, evaluate feasibility of fish passage from the economic perspective, including a cost benefit assessment.

II. Basis

The bases for this study are:

(1)FPA, Section 18 (16 U. S. C. 811), which provides the USFWS and NMFS with mandatory conditioning authority to prescribe fishways for non-federal hydropower projects,

(2) Endangered Species Act, Section 7 consultation requirement relative to any rare, threatened, or endangered species that may occur in the vicinity of the project, (3) FPA 10j process, through which state and federal fish and wildlife agencies provide their recommendations for license terms and conditions for the protection of project-related biological resources, (4) FPA, Section 4e, which provides the USFS mandatory conditioning authority where project works are located on federal lands.

III. Geographic and Temporal Scope

The geographic region encompassed under this action would include areas downstream and upstream of projects' dams. Projects of primary focus will be the run-of-river projects, Bryson, Dillsboro, Franklin, and Mission. The temporal scope would encompass the new license period.

IV. Approach and Analysis

The feasibility study will be based upon the results of Action's Fish Survey and Macroinvertebrate Survey. These study results will be jointly reviewed by Duke and the agencies for a determination of need and to identify the specific project(s) for which a clear passage need is demonstrated. This demonstrated need will be based upon (1) the documented presence of a

migratory species for which the project dam has blocked upstream and/or downstream passage, resulting in the preclusion of some portion of that species life cycle and (2) the documented presence of a resident/native species for which the project dam has blocked upstream and/or downstream passage, resulting in a definable and demonstrated population impact resulting from habitat fragmentation for that species. If a demonstrated need is documented, then cost/benefit and engineering feasibility analyses will be conducted for the applicable project(s).

V. Schedules and Required Conditions

The feasibility study is scheduled to be conducted during 2002. The prerequisite studies, (Fish Survey and Macroinvertebrate Survey) are scheduled to be conducted in 2001 and early2002, depending upon the appropriate timing for various biological surveys. The studies' plans for prerequisite studies will incorporate mutually agreed upon consultant services with NPL project management and oversight.

VI. Results

Study results will determine the need, or lack thereof, for any fishways for NPL projects. Because of the substantial economic implications of any Section 18 fishway prescriptions, the following criteria for demonstration of need will have to be clearly met: (1) the documented presence of a migratory species for which the project dam has blocked upstream and/or downstream passage, resulting in the preclusion of some portion of that species life cycle and (2) the documented presence of a resident/native species for which the project dam has blocked upstream and/or downstream passage, resulting in a definable and demonstrated population impact resulting from habitat fragmentation for that species.

VII. Participants

	Organization	Name	Phone #	E-Mail
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Duke Supporting Consultant	TBD			
Other Participants	N/A			

VIII.Expected Benefits

The expected benefits of the study will be an evaluation of the demonstrated need for fish passage at NPL projects. This study should adequately address the issue and preclude the need for any future studies of fish passage.

IX. List of Attachments

N/A

X. List of References

N/A