

Saluda Hydroelectric Project (FERC No. 516)

Study Plan: Reconnaissance Survey of the Freshwater Mussel Fauna of the Lower Saluda and Congaree River, Lake Murray, and Selected Tributaries

Freshwater Mussels/Benthic Macroinvertebrate Technical Working Committee
May 25, 2006

I. Study Objective

The study objective will be to determine whether freshwater mussels occur in the Saluda Hydroelectric Project vicinity, and if so, provide a qualitative measure of species diversity, spatial distribution, and abundance.

II. Geographic and Temporal Scope

Qualitative mussel surveys will focus on Lake Murray and selected major and minor tributaries (including the Saluda and Little Saluda rivers at the reservoir headwaters); the LSR from downstream of Saluda Hydro Dam to its confluence with the Broad River; and the Congaree River from its origin at the confluence of the Saluda and Broad rivers to approximately the I-77 bridge.

The study will be conducted during Spring 2006 (late May through early June).

III. Methodology

Qualitative surveys to determine the presence of freshwater mussels will be conducted at suitable habitat sites downstream of Saluda Hydro Dam in the Lower Saluda and Congaree rivers (see Section II above for geographic scope), as well as above Saluda Dam in Lake Murray and selected tributaries. Surveys in Lake Murray will focus on tributary mouths and associated coves that have been identified through prior surveys as providing potential habitat for Savannah lilliput (*Toxolasma pullus*), a high priority federal species of concern with few remaining extant populations in GA, SC, and NC (J. Alderman, pers. comm.). These tributaries include: Beaver Dam Creek, Bush River, Big Creek, Buffalo Creek, Camping Creek, Bear Creek, Little Hollow Creek, Hollow Creek, Clouds Creek, Little Saluda River, Indian Creek, and Saluda River (Figure 1). Surveys at reservoir tributary sites will range in duration from 10 minutes to 2 hours, depending on available habitat, and will extend into lotic (free-flowing) tributary reaches where suitable habitat exists (estimated 4 total survey days). Additional reservoir habitat may be surveyed opportunistically as survey crews move between the tributary sites. The survey area for the Lower Saluda and Congaree rivers will encompass all river reaches within the study area indicated in Section II (estimated 6 total survey days).

All surveys will be led by John Alderman of Alderman Environmental Services, Inc. (Pittsboro, NC), with assistance from Kleinschmidt and/or SCE&G staff. Surveys will be conducted from a canoe, boat, or by wading, and will utilize mask and snorkel, tactile, visual, and/or SCUBA methods to search for mussels. At each survey site, potential mussel habitat will be identified, photographed, and Geographic Information System (GPS) coordinates recorded. When found, mussels will be identified to species, length measured (sample measured when high abundances present), and a catch-per-unit-effort determined. All live mussels will be returned to the collection site.

IV. Schedule and Required Conditions

Surveys will begin in late May/early June 2006 and will take a maximum of two weeks to complete. Study methodology, timing, and duration may be adjusted based on consultation with the resource agencies and interested stakeholders. A final report summarizing the study findings will be issued within 90 days of completion. All data collected will be provided in electronic format to agencies and interested stakeholders.

V. Use of Study Results

Study results will be used as an information resource during discussion of relicensing issues with the SCDNR, USFWS, Wildlife and Fisheries RCG, Freshwater Mussels/Benthic Macroinvertebrate TWC, and other relicensing stakeholders.

VI. Study Participants

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VII. List of Attachments

Figure 1: Map of Lake Murray Mussel Sampling Sites

Figure 1. Lake Murray Mussel Sampling Locations

