

MEETING NOTES

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
SALUDA HYDRO PROJECT RELICENSING
Joint Meeting of Fish and Wildlife Technical Working Committees
October 17, 2008**

final CSB 12082008

ATTENDEES:

Vivian Vejdani, SCDNR	Prescott Brownell, NOAA Nat. Marine Fisheries Serv.
Alan Stuart, Kleinschmidt Associates	Robert Newton, NOAA Nat. Marine Fisheries Serv.
Shane Boring, Kleinschmidt Associates	Jennifer Price, Univ. of SC
Jeni Hand, Kleinschmidt Associates	Randy Mahan, SCANA Services
Will Dillman, SCDHEC	Amanda Hill, USFWS
David Eargle, SCDHEC	Bill Argentieri, SCE&G
Milton Quattlebaum, SCANA Services	Steve Summer, SCANA Services
Bob Siebels, Riverbanks Zoo (retired)	

ACTION ITEMS:

- Finalize draft Trout Feasibility Program document and distribute to TWC for review
Alan Stuart
- Update Benthic Macroinvertebrate Program document and distribute for TWC review
Shane Boring
- Coordinate kick-off of technical group to guide upstream mussel restoration efforts
Shane Boring
- Draft components of RT&E Species Awareness Program; distribute text to agencies for review
Kleinschmidt/SCE&G
- Develop list of priority NMFS diadromous fish studies for submission to Santee Fish Accord Board; provide list to B. Argentieri
Prescott Brownell
- Finalize next meeting date
Shane Boring

NEXT MEETING:

Proposed for Mid-December, 2008

MEETING NOTES

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
SALUDA HYDRO PROJECT RELICENSING
Joint Meeting of Fish and Wildlife Technical Working Committees
October 17, 2008**

final CSB 12082008

MEETING NOTES:

These notes serve as a summary of the major points presented during the meeting and are not intended to be a transcript or analysis of the meeting.

Shane Boring opened the meeting at approximately 9:00 AM. Following introductions, Shane noted that the purpose of the days' meeting was to review the three draft plans recently distributed to TWC members via e-mail: the Lower Saluda River Freshwater Mussel Restoration Program; the Lower Saluda River Benthic Macroinvertebrate Monitoring and Enhancement Program; and the Saluda Hydro Rare, Threatened and Endangered Species Management Program. It was noted that, if consensus could be reached on the programs, it was SCE&G's intent to propose these as PM&E measures under a new license for Saluda Hydro and that they would hopefully be included in the settlement agreement for project relicensing. Alan Stuart noted that, in addition to reviewing the documents associated with the above proposed programs, he would like to present a draft framework for trout monitoring in the lower Saluda River (LSR) under a new project license. He noted that the purpose of this trout monitoring program would be to address previous request for an adaptive management strategy to evaluate long-term potential for a self-reproducing trout population downstream of the project. It was noted that Prescott Brownell would also be leading a discussion to gather ideas on appropriate long-term monitoring/enhancement efforts for shortnose sturgeon and other diadromous species under a new license.

Freshwater Mussel Restoration Program

Shane opened the discussion by reviewing the results of the freshwater mussel survey conducted by John Alderman in 2006. Specifically, it was noted that significant mussel fauna had been documented in Lake Murray and its tributaries, downstream of the project in the Congaree River and in the adjacent Broad River, but that no mussels were found directly downstream of the project in the LSR. Shane added that resource agencies, in their comments on the Draft License Application, had requested mitigation for the lack of mussels and that the draft Program had been developed pursuant to that request. Shane added that the draft program was not set in stone and that it was mostly intended as a starting point to facilitate a dialogue.

Jennifer Price then gave a brief review of her research on mussel in the Congaree and Broad Rivers. As it pertains to the Saluda Hydro vicinity, Jennifer noted patterns similar to those observed by Alderman in 2006, with mussels being much more abundant on the Broad River side of the Congaree than the Saluda side. She also noted that preliminary investigations of gravidity this past summer found abundant gravid mussels in the Broad River upstream of the confluence of the LSR (and thus upstream of the influence of Saluda Hydro) and very few gravid mussels below the confluence with the LSR (at Blossom St Bridge). She noted that it is unclear why there are not mussels in the LSR, but that potential influencing factors might include: historic low DO issues, shear forces associated with high flow release event (particularly for easily-displaced juveniles), low water temperatures below the dam, and low flow events during non-generation that might result

MEETING NOTES

SOUTH CAROLINA ELECTRIC & GAS COMPANY SALUDA HYDRO PROJECT RELICENSING Joint Meeting of Fish and Wildlife Technical Working Committees October 17, 2008

final CSB 12082008

in stranding. Jennifer added that, considering the recent improvements in DO levels in Project releases she did not think that DO is currently a limiting factor. She added she felt that temperature was likely a much more limiting factor, with several recent studies demonstrating significant impacts of coldwater dam releases on downstream mussel fauna.

Amanda Hill noted that she had discussed the temperature issue with Lora Zimmerman, the USFWS mussel expert in their office, and that Lora had serious concerns about whether reintroduction of mussels in the LSR would be successful due to low water temperatures, shear forces associated with project generation, and other issues. Following a brief discussion of the temperature regime in the LSR, the group agreed that reintroduction of mussels to the LSR would likely meet with little success and suggested scrapping the current plan. Amanda suggested that focusing efforts on upstream areas (above Lake Murray) might be more fruitful. After some additional discussion, it was agreed that a small technical working group should be formed to develop a strategy for freshwater mussels upstream of the Project dam, specifically in Lake Murray and its tributaries. It was agreed that a conference call would be the best method for a kick-off meeting. Group members identified a preliminary list of potential participants including: John Alderman, Jennifer Price, Shane Boring, Lora Zimmerman, David Eargle, and Milton Quattlebaum. Alan and Bill noted it would be best to have a Program for upstream areas finalized in time for inclusion in the relicensing Settlement Agreement, and as such, requested that the group be mobilized as soon as possible. Shane Boring was tasked with coordinating the group.

Rare, Threatened and Endangered (RTE) Species Management Program

Shane noted that this plan deals with three of the species that agency staff and other participating in the RTE TWC had identified as being in need of a management plan under a new FERC license for Saluda Hydro: bald eagle, wood stork, and rocky shoals spider lily. The group then addressed each of the species.

Bald Eagle

Shane noted that the proposed measures merely codify those items already required under the USFWS (1997) Bald Eagle Guidelines, which ensure compliance with the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act. In general, the guidelines require that a buffer of 660 ft be maintained around nest trees during the nesting season and 330 ft during non-nesting. Shane noted these requirements were implemented in 1997 following de-listing of the bald eagle. He added that, according to Tommy Boozer, SCE&G was notified of the change by letter several months ago, and that they were already following the new measures as part of shoreline permitting activities. Steve Summer noted that SCANA has a Raptor Protection Policy and enquired whether it had been integrated with the plan being discussed. Shane indicated that adherence to the Raptor Protection Plan is referenced in the Program and that Laura Blake-Orr had reviewed and approved the bald eagle section of the RTE Program. The group agreed that the bald eagle management measures were acceptable.

Wood Stork

MEETING NOTES

SOUTH CAROLINA ELECTRIC & GAS COMPANY SALUDA HYDRO PROJECT RELICENSING Joint Meeting of Fish and Wildlife Technical Working Committees October 17, 2008

final CSB 12082008

Shane briefly reviewed the measured proposed in the Program for Wood Stork, including:

- Documentation of any wood storks observed during fall/winter waterfowl surveys on Lake Murray
- Inclusion of wood stork in an RTE Species Public Awareness Program, including a mechanism to report stork sightings.
- Coordination with SCDNR Endangered Species staff to ensure that SCE&G has most current information on whether storks have been observed recently on Lake Murray.
- Report any new sightings of wood storks to SCDNR and USFWS staff.

The group agreed that the measures proposed for wood stork appeared acceptable.

Rocky Shoals Spider Lily

Shane explained that there are no RSSL plants in the LSR directly downstream of the project, and that the RSSL population referred to in the Program is located in the Saluda/Broad confluence area. He added that this population is currently managed under the Columbia Hydro Project RSSL Enhancement Plan, which SCE&G, the City of Columbia, Riverbanks Botanical Gardens and other partners began implementing in 2007. He added that the measures included in the RTE Management Program are intended to mirror those already implemented in the existing Columbia Hydro RSSL Enhancement Plan. The group generally agreed that using the RTE Management Program as a means to tie Saluda Hydro to the existing restoration efforts in the confluence was acceptable. Amanda indicated that she would like to have Lora Zimmerman have a look at the draft RSSL measures, but that she did not anticipate there being issues.

RTE Awareness Program

Several attendees enquired as to whether all of the RTE species occurring in the Saluda Project vicinity would be a part of the RTE Species Public Awareness Program (RSSL, Bald Eagle, Wood Stork, Shortnose Sturgeon). Alan and Bill indicated that these four species would be included. Amanda and Vivian requested that their agencies be allowed to review the program materials prior to implementation. Alan and Bill agreed. Shane enquired as to whether it would be acceptable to send the raw information (in MS Word format) for review and then allow SCE&G to handle the graphic design without further review. The group was agreeable to this approach.

LSR Benthic Macroinvertebrate Monitoring and Enhancement Program

Steve Summer noted that SCE&G has been conducting some type of macroinvertebrate monitoring on the LSR on an almost yearly basis since approximately the late 1990's. Shane noted that the proposed program would be a continuation and expansion of this monitoring effort under a new license for the project. Specifically, it was noted that the proposed program would include a bi-annual (twice yearly) Rapid Bioassessment for a period of 6 years following issuance of the new license, as well as bi-annual Hester-Dendy sampling during alternate years. It was noted that sampling would be conducted at 4 locations: the project tailrace, Oh Brother/Ocean Blvd rapids, Corley Island and adjacent to Riverbanks Zoo. Amanda asked whether there was anything special about the 6 year sampling period and enquired if any follow up sampling was planned. Noting that

MEETING NOTES

SOUTH CAROLINA ELECTRIC & GAS COMPANY SALUDA HYDRO PROJECT RELICENSING Joint Meeting of Fish and Wildlife Technical Working Committees October 17, 2008

final CSB 12082008

SCE&G would likely continue sampling beyond the 6 years anyway, Bill proposed a commitment in the plan to consult with the agencies and if there is a need for additional information, initiate a 2-year follow-up survey cycle (2 years of Rapid Bioassessment and 1 year of Hester-Dendy sampling) 10 years following completion of the initial 6 years. The group concluded that this was acceptable. Shane Boring was tasked with updating the draft program document and distributing it to the TWC for review.

Proposed LSR Trout Monitoring Framework

Alan Stuart noted that, at the request of Trout Unlimited, a Trout White Paper had been prepared as part of relicensing to determine potential for a self-reproducing and/or self-sustaining trout fishery. He added that, while this early assessment determined that trout reproduction was unlikely in the LSR under current conditions, SCE&G committed to establishing an adaptive management strategy for trout to allow for reproductive potential to be re-examined once aquatic enhancements, such as minimum flows and DO enhancements, have been implemented under a new license. Alan then presented a proposed Trout Monitoring Framework.

Alan noted the proposed trout program would likely include formation of a technical committee to meet periodically to review pertinent data and guide management recommendations. Pertinent data to be considered for decision making will likely include a number of existing programs, including: water quality (DO and temp), flow (USGS gages), macroinvertebrate (from the SCE&G macroinvertebrate program described above), and electrofishing data (SCDNR, SCE&G). In addition to existing data, the program will likely include ichthyoplankton sampling in the Ocean Blvd./Oh Brother Rapids area during the potential window for rainbow trout spawning (May), as well as visual searches for redds during the preceding weeks. It was noted that ichthyoplankton sampling and redd searches will likely be conducted for a period of 6 years (concurrent with the macroinvertebrate sampling). Alan noted the program will likely include a replication of the trout growth study (originally performed in 2003) following completion of the initial 6 years of macroinvertebrate, ichthyoplankton and redd monitoring (see macroinvertebrate program described above). Finally, the program will likely include an annual report summarizing the data collected during each year of the program.

Alan indicated that the program had not been fully developed, but that he wanted to present an outline today to get a feel of whether the TWC felt it was heading in the right direction. The group concluded that the program seemed generally acceptable. Alan noted that the plan would be further refined and distributed to the TWC for review in the near future.

Diadromous Fish Needs Under a New Saluda Hydro License

Shane noted that, in the comments on the Draft License Application, NMFS alluded to some long-term monitoring that might be appropriate for shortnose sturgeon under a new license term for Saluda. Prescott clarified the NMFS position, noting that some additional measures to promote sturgeon conservation would likely be needed considering the length of the license, the importance

MEETING NOTES

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
SALUDA HYDRO PROJECT RELICENSING
Joint Meeting of Fish and Wildlife Technical Working Committees
October 17, 2008**

final CSB 12082008

of the Santee Basin to the recovery of shortnose sturgeon and other diadromous species, and the pending implementation of minimum flows and other enhancements. Prescott urged the group to not just focus on sturgeon, but on all diadromous species.

Bill A. asked if Prescott had specific monitoring in mind. Prescott mentioned a number of potential long-term monitoring efforts with potential to contribute to diadromous fish recovery, including: water quality/chemistry studies, fish population dynamics studies, and telemetry studies to better document fish movement and habitat use. Prescott noted that these are just a few potential studies and that, as with several other relicensing issues, some sort of adaptive management approach would likely be best. Prescott noted specifically the need for telemetry work in the confluence area to understand movement at the Broad/Saluda interface and that potential influence of newly-established fish passage on the Broad. He also noted a need for telemetry work in the upper Santee-Cooper Lakes to determine basin preferences (use of Wateree versus Congaree, etc.).

Amanda noted that much of what Prescott mentioned is already planned as part of the Santee Basin Diadromous Fish Accord. Bill enquired as to whether those measures being proposed under the Accord would satisfy the NMFS request for additional monitoring. Prescott noted that they might, but not being a signatory to the Accord, they would need to have a closer look at exactly what is being proposed. Bill noted that he would send Prescott the 10 year plan for the Accord and suggested that Prescott review the actions being proposed and pass along any additional requests he might have. Prescott agreed with this general approach. He added that an ideal approach would be to develop a mechanism to ensure they are kept abreast of developments in the Accord process and occasionally meet to discuss any items not addressed by the Accord. Bill suggested that SCE&G take the lead in letting NMFS know when Accord technical meetings are taking place and that NMFS could potentially attend as observers. Prescott noted that being kept informed of meetings would be very helpful, as attendance at these meetings would help them develop ideas regarding monitoring needs/studies. Bill indicated that he would notify the Accord Board that NMFS will likely be attending as an observer.

Amanda noted that sturgeon studies under the Accord are slated to start in 2010, but that specific studies have not been identified. She advised that NMFS should let SCE&G know of what studies they would like to see performed as soon as possible. Prescott then expanded a bit on a few of the studies NMFS feels might be most worthwhile, including: sturgeon telemetry studies, population dynamics, and characterization of spawning habitat. Bill proposed that SCE&G could present these ideas to the Accord group to ensure that they are addressed as part of the process. Prescott noted that he would like to get together with other agency staff from his agency, as well as possibly USFWS and SCDNR, to further refine the list of requested studies. Prescott indicated that he would try to have the list of studies to SCE&G by Friday, October 31. Bill noted that SCE&G and Kleinschmidt would incorporate the study recommendations into a draft PM&E Program once they are received from NMFS. Bill reiterated that SCE&G would work with NMFS to address any of the study requests not addressed under the Accord. Amanda noted that they would assist SCE&G in recommending the NMF requested studies to the Accord group.

MEETING NOTES

***SOUTH CAROLINA ELECTRIC & GAS COMPANY
SALUDA HYDRO PROJECT RELICENSING
Joint Meeting of Fish and Wildlife Technical Working Committees
October 17, 2008***

final CSB 12082008

The meeting adjourned at approximately 2:45 PM.