

Proposed Biological monitoring Plan for Gulf Power Company's Scholz
Electric Generating Plant

The purpose of this investigation is to assure that the thermal discharge from the Scholz Plant is not causing substantial damage or harm to the aquatic life or vegetation or interfering with the beneficial uses of the receiving water. The proposed monitoring plan will allow for a comparison of biological community health between a control station and a test station. The use of artificial substrates was selected because there is little available natural habitat for macroinvertebrates in this area. The locations of the test and control sample stations are shown on the attached aerial photograph. The control station is located downstream of the plant intake canal because the area of the river just above the intake canal is too shallow due to limestone outcrops, and because the overall habitat more closely matches the test station.

The biological monitoring will take place in the year prior to permit renewal during the months of June, July or August. Three Hester-Dendy artificial substrates will be suspended from galvanized electrical conduit pipe driven into the Apalachicola River streambed for a 28-day period. The substrates will be placed approximately 30.4 cm (1 ft) above the streambed at a water depth of approximately 1.5 m (5 ft). The location of the artificial substrate samplers in the vertical water column, instead of using surface floating platforms, is primarily to reduce the problem of vandalism. Following the 28-day submersion period, samplers will be retrieved in wide mouth containers and sealed before bringing to the surface. All containers will be preserved in a 10 percent formalin solution and transported to a taxonomy lab for processing.

The samples will be examined for total number of species, total number of animals per unit area, total number of each species of animal per unit area, (species composition), and total wet weight of organism per unit area. The data will be calculated into species diversity numbers (Shannon-Weaver Index). Values will be considered acceptable if the Shannon Weaver Index at the discharge canal is not reduced to less than 75% of the control location.

The physical parameters, dissolved oxygen, pH, temperature and specific conductance will be measured on the day the substrates are deployed and on the date they are retrieved.

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