

Committee on Resources

resources.committee@mail.house.gov

[Home](#) [Press Gallery](#) [Subcommittees](#) [Issues](#) [Legislation](#) [Hearing Archives](#)

Gerrit J. Jöbsis
Rivers Project Director
Coastal Conservation League

Testimony

Before the Subcommittee on Water and Power
United States House of Representatives

Oversight Field Hearing on Reviving Hydroelectric Power on the Savannah River:
A Clean and Renewable Resource for Generations
September 27, 2004

Good morning Mr. Chairman, members of the committee. I am Gerrit Jöbsis and I work as the Rivers Project Coordinator for the Coastal Conservation League. I work on river conservation issues in South Carolina and selected waters of North Carolina and Georgia. The primary focus of my work is on hydropower projects. It is an honor to be here and I thank you for your time.

All energy comes at a cost and no energy source has had a greater cost to the nation's river resources than hydroelectric power.

Hydroelectric dams have numerous negative consequences some more apparent than others. Unfortunately, the Savannah River serves as an example of many of these hydroelectric impacts.

- **Rivers Lost:** In the Savannah basin more than 100 miles of the river have been lost, impounded and flooded by hydropower dams. Nationwide thousands of river miles have been drowned. Virtually all of the Savannah River upstream of Augusta has been drastically altered from natural riverine ecosystems to reservoirs. These impoundments no longer support native fish communities. Thousands of acres of bottomlands forests and farmlands have been inundated, no longer available for public and private uses.
- **Water Quality:** Dams can lead to low dissolved oxygen concentrations, water temperature alterations, increased channels scouring and erosion, and other water quality degradation. This problem is most severe for large, deep reservoirs with long retention periods. At the Corps of Engineers dams in the Savannah, low dissolved oxygen concentrations in waters drawn from the lake bottoms are the biggest concern directly below the dams. At the Thurmond Dam, for example, water discharged from the dam with low oxygen levels has resulted in water quality violations up to 15 miles downstream of the dam. Measures are underway to enhance oxygen in water coming from the Thurmond Dam and Hartwell Dam. This progress should not be derailed by efforts to maximize power production at the expense of other river values.

Water quality problems resulting from large dams are not always local, not only limited to areas immediately below such facilities. Lack of high, flushing flows due to Corps of Engineers' dam operations have contributed to severe water quality problems in the Savannah Harbor, more than 200 miles downstream of the J. Strom Thurmond Dam.

- **Instream Flow Alteration:** Hydropower dams release water on schedules and in quantities best for manufacturing electricity. It is unusual for these schedules to also be best for river resources. Dams change the magnitude, duration, frequency, timing and rate of change for stream flow. The greater the departure from the natural flow regimen, the greater the impact on the river and its public values. In the Savannah, three large Corps of Engineers Dams store water from winter rains and spring freshets, and then release these waters during the peak electric demand period of the summer, normally a low flow period. Such flow alterations limit native fish fauna that evolved in synchrony with natural flow patterns.
- **Floodplain Forests and Wetlands:** Impacts of dams occur not only within the stream channel. Floodplain forests and wetlands are integral components of large river systems, especially in the Southeast. Flow alterations of hydropower dams, especially the changes in the timing, magnitude and duration of high flow events, reduce tree growth rates and impair successful recruitment of new trees of bottomland forests.

In the Savannah, a collaborative study among the Corps of Engineers, The Nature Conservancy and many other stakeholders has identified the impacts of existing dam operations and the means to remedy those impacts. A key component to this restoration is the return of high flow pulses during winter and spring months to rejuvenate floodplains of the lower basin.

- **Migratory Fishes:** Dams block fish migrations from their native habitats. This is especially true for diadromous fish, those that require access to both freshwater and saltwater habitats to complete their lifecycles. Most famous of these are salmon species of the Pacific. We also have diadromous fish in the Savannah and most other East Coast streams. American shad, blueback herring, hickory shad, American eel as well as shortnose and Atlantic sturgeon all occur in the Savannah. They are also all blocked from part of their historic range by dams within the basin. American shad historically migrated up the Savannah to Tallulah Falls some 384 miles from the Atlantic Ocean. They are now blocked by dams from more than 150 miles of this native range. Commercial catches have plummeted some 90% since the early 1900's. Federal agencies charged with managing diadromous species point to dams as a major factor for their decline and are actively seeking to establish fish passage at dams in the Savannah.
- **Rare Species:** Because dams block access to historic spawning areas, cause water quality degradation, alter stream flows, etc., they can cause species to become imperiled or have dire consequences for species already at risk. An example lies just out the door at the Augusta Shoals. The Augusta Shoals is a four-mile long series of rapids and cascades and represents the last of this type habitat in the Savannah River. Once abundant in the Piedmont and Fall Line regions of the river, all of this habitat type, except the Augusta Shoals, now lies beneath impoundments created for hydroelectric power. (A case study of the Augusta Shoals is attached.)

The Augusta Shoals harbor three endangered species - the federally endangered shortnose sturgeon; and the rocky shoals spider lily and robust redhorse, both listed as endangered by the State of Georgia. These shoals are frequently dewatered by the combined operation of the Corps of Engineers dams and the City of Augusta's diversion dam. The diversion dam shunts water from the river into a seven mile long canal that has three mills with hydroelectric facilities, including the Enterprise Mill at which we meet today. Two of the mills and the City are now seeking new operation licenses from the Federal Energy Regulatory Commission. We are hopeful changes in project operations resulting from these new licenses will assure sufficient stream flow in the Augusta Shoals and enhance these rare species. While the mills and the City have alternative sources of power that can be used during low flow periods, fish and wildlife do not have another source of water if it is all diverted from the Augusta Shoals.

- **Recreation:** Finally, hydroelectric dams can have great negative effects on water-based recreation and public access to our rivers. Impacts to water quality, instream flow, and fish and wildlife listed above are not compatible with public recreation values. Opportunities for fishing, boating, swimming and other recreational activities can all be taken away from the public if we do not assure hydroelectric dams are operated in a responsible manner.

The above impacts are evident here at the Savannah River. I am certain there are similar impacts on rivers nationwide where Corps of Engineers and Bureau of Reclamation dams have been built. Examples are dams on the Columbia and Snake rivers in the Pacific Northwest, California's Central Valley Project, the Missouri River dams in the country's heartland, and the Southwest's Glen Canyon dam. All of these dams and their power production have hugely constrained other interests including water-based recreation, fish and wildlife, and water quality.

H.R.5044 envisions optimizing hydroelectric production at federal dams. It should also assure that such optimization would minimize impacts to the public's rivers and their beneficial values. The bill should be absolutely clear that optimization measures would not be implemented without full compliance with the National Environmental Policy Act, the Clean Water Act and other environmental statutes.

We only ask that hydropower be held to the same level of accountability as any other industry. No factory would be allowed to violate water quality standards, impact threatened and endangered species, or curtail public recreation opportunities for the purpose of producing more "widgets". Neither should we allow such results through optimization of federal hydroelectric operations to manufacture more electricity.