



May 26, 2013

Dr. Bennett Bearden
AWAWG Chairman
Alabama Water Agencies Working Group
Geological Survey of Alabama
P.O. Box 869999
Tuscaloosa, Alabama 35486-6999

Dear Sir:

I am writing to you on behalf of the Alabama Chapter of the Sierra Club, with approximately 2500 members. All residents of the state are stakeholders who should have access to safe, affordable, and reliable water for personal use, and for recreational opportunities in clean, unpolluted natural waterways. As a major environmental organization in Alabama, we are dedicated to the protection and conservation of our diverse natural areas in the state, including our abundant rivers, streams, and lakes. We are pleased that your agencies are now developing a water management plan for the state. As you know, Alabama is blessed with an abundance of water, but our water supplies are not unlimited. We wish to voice our support for producing a water management plan and also provide comments as to important issues that need to be addressed in the plan.

A major priority should be to maintain natural flows in our rivers and streams in order to protect populations of our diverse aquatic fauna. Our abundance of water also contributes to a rich biodiversity, among the richest in North America. Of the 50 states of the U.S., Alabama ranks fifth for biodiversity (behind four much larger western states - California, Texas, Arizona, and New Mexico). The greatest diversity is associated with our aquatic habitats.

Maintaining natural flows in our waterways is necessary to prevent further loss of our biological diversity. Alabama leads the nation in number of species of several aquatic groups. Alabama and Tennessee have traditionally competed for top ranking for number of freshwater fish species, but Alabama is the unchallenged leader (with more than 330 species) if the many marine and estuarine species that move up into freshwater rivers are included. In addition, Alabama has more species of aquatic turtles (23), mussels (190), snails (195), crayfish (77), and caddisflies (342) than any other state. Many other invertebrate groups and some habitats (such as the numerous cave systems) have never been adequately studied but also contribute to our aquatic diversity.

Some might think that Alabama's numerous lakes and reservoirs, created by dams built primarily for electric power generation, have also contributed to its biodiversity. In contrast however, these lakes have actually reduced our biodiversity. Although a few species of lake-dwellers such as bass and sunfish became abundant, those that required fast-flowing, riverine habitat were displaced, and some ultimately became extinct or rare. In fact, Alabama ranks second only to Hawaii in the number of its species which have become extinct. It is third in the number of species federally listed as threatened or endangered. As might be expected, this loss of species has primarily involved aquatic species. Many which have been able to survive have become rare and are considered "at risk", or threatened or endangered. Almost half (45%) of Alabama's fish

species are considered "at-risk". Of the 23 species of freshwater turtles occurring in Alabama, 14 (or 61%) are considered at risk. Of 190 species of mussels known to have occurred at one time in Alabama, over 50 no longer occur in the state and at least 12 and possibly as many as 28 have become extinct. Of those remaining, more than 75% are considered at risk. Freshwater snails have experienced similar declines. Of 195 species, 64 no longer occur in Alabama, and at least 12 and possibly as many as 58 are now extinct. Of the remaining species in the state, 67% are at risk. Among crayfishes, half of the 77 species are considered at risk.

Most of the decline in Alabama's freshwater biodiversity can be attributed to the damming of rivers and streams, but water quality degradation, stream channelization, and wetlands destruction have also been significant factors. The water management plan should address each of these threats, and recommend policies to prevent further destruction of our natural areas, and restore those which have been impacted. Certainly one important recommendation should be a ban on any future damming of free-flowing rivers and streams. Existing dams that no longer serve important functions should be considered for removal.

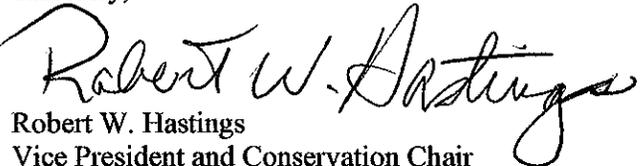
Alabama also has abundant ground water and aquifers that should be protected. One immediate threat is hydraulic fracturing or fracking for oil and gas production, which has been shown to contaminate ground-water supplies. This practice has been banned in some states. Serious consideration should be given to a ban on hydraulic fracturing in Alabama.

The Alabama Department of Environmental Management should be mandated to strictly enforce requirements of the Clean Water Act to prevent further pollution of our surface waters, and also to restore our many rivers and streams that have been polluted. The abundant waters of our state are a treasure and should be protected as such. Our environment, economy, and quality of life require the most stringent plan to protect our waters.

Sierra Club members in Alabama are pleased that the important issue of water management is being addressed by the diverse agencies charged with overseeing and protecting our natural resources. As stakeholders, we look forward to receiving the draft recommendations to be provided by your Public Information Subcommittee.

Thank you for your consideration of these comments.

Sincerely,



Robert W. Hastings
Vice President and Conservation Chair
Sierra Club, Alabama Chapter