Shoreline Erosion: A Growing Concern

by Cassie Pilgrim

As a senior in Wildlife and Fisheries Biology at Clemson University, I was posed the question of what focus I wanted to take in the Keowee Lake Island Project. Growing up in Six Mile, I was practically raised on Lake Keowee and took a personal interest in the project. I can remember going out to the islands as a child for recreational purposes. There was always something special about going to them. They were worlds all to themselves, and now they are slowly disappearing.

Shoreline erosion is a natural process that affects all riparian systems. Erosion occurs from a variety of factors including wave action, wind, rain, ice and loss of vegetative structure. Wind-driven wave action is the main contributor to island erosion on the lake. Islands are especially susceptible to shoreline erosion because they are generally in areas of high energy.

Heavy boat traffic creates large waves that crash into island shorelines, causing banks to be undercut, which leads to loss of vegetation. It is a cycle really; a cycle that can be broken if stabilization methods are put into place.

When considering techniques, you have to observe how susceptible the area is to erosion, what factors are contributing primarily to the erosion and what vegetation already exists. Areas that are highly eroded, like the islands, require stabilization methods that use both vegetation and rock. Switch grass, maiden cane, water willow, buttonbush, silky dogwood, river birch, pond cypress and many other native plant species can be used.

Rock is pricey and difficult to install, so it is important that measures are taken now to not only make stabilization less expensive but also ensure that the islands are available for future use by all species.

Lake Keowee Island Erosion Study: Yes, Cassie, there is a Santa Clause

by Ben Turetzky

Regarding Cassie Pilgrim's article on Lake Keowee Island Erosion, I am very pleased to report that, through FOLKS' insistence, additional comments and concerns from Upstate Forever, and more than a little assistance from the U.S. Fish and Wildlife Service, the FERC final decision on studies to be done in the relicensing process includes a study of the Island Erosion on Lake Keowee.

In their final determination, the FERC Staff directed that: the Goals and Objectives of the Erosion Study should be modified to include Lake Keowee and its islands.

The study should be designed to: (1) characterize the overall erosion at each lake; (2) identify project-induced erosion sites; (3) quantify the level of erosion occurring at those sites; and (4) collect adequate data on the erosion issue and the project effect to evaluate potential needs or opportunities for erosion-related PME (protection, mitigation and enhancement) and monitoring measures at those sites.

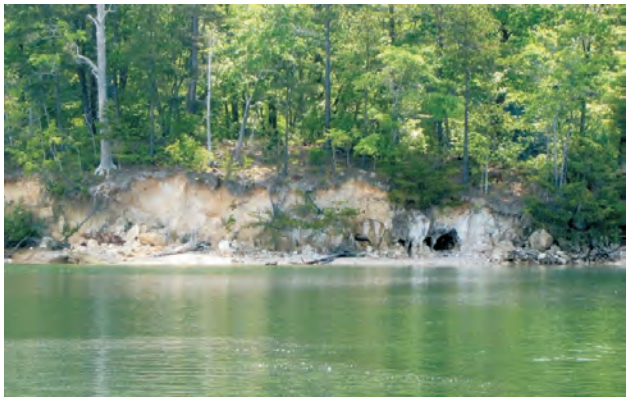
FOLKS is very pleased with the FERC Final Study Plan determination and the consultant conducting these studies has already started the work.

Islands are beneficial to people, wildlife and fishes. Islands are used for recreation, havens and habitats. Of people surveyed, 82% said that they had rather use the beach on an island than those on the mainland. The majority of which said they valued the privacy they offer.

Islands create safe-havens for wildlife species and shoreline techniques that use vegetation, create wildlife habitat. Migrating bird species would utilize grasses as cover. Resident ground nesting birds would also benefit from native bunch grasses. Vegetation also provides habitat for fishes as spawning beds and a place to rear their young. Small fishes utilize submerged plants for protection. Whitetail deer use the islands as a safe place to birth and raise their young.

These are just a few examples of how islands are important to the ecosystem. If the islands continue to erode at current rates, they will fail to continue providing the resources that are available now.

Island on Lake Keowee



Example of Shoreline Erosion

Another example of Shoreline Erosion