

## **Aquatic Plant Community Assessment within the Littoral Zone of the Ross Barnett Reservoir, MS in 2012: An Eight Year Evaluation.**

Bradley Sartain, Ryan M. Wersal, and John D Madsen; Geosystems Research Institute, Mississippi State University, Box 9652 Mississippi State, MS 39762-9652, [sartain@gri.msstate.edu](mailto:sartain@gri.msstate.edu)

The Ross Barnett Reservoir, located in central Mississippi, is a 33,000 acre water supply reservoir that was constructed in the early 1960's. The Ross Barnett Reservoir is the largest surface water impoundment within the state, and is a popular recreation area for boaters, water skiers, anglers, campers, and other users. A point-intercept survey was conducted on a 300 meter grid during June 2012 in order to assess the distribution of aquatic plant communities within the Ross Barnett Reservoir. Points located in the littoral zone (< 10 feet) at locations previously sampled from the past seven years were surveyed. A total of 665 points were sampled in 2012. Presence and absence of plant species was collected by deploying and pulling in a weighted plant sampling rake attached to a rope and by visual observations at each survey point. Presence and absence of plant species was averaged over all points sampled and multiplied by 100 in order to obtain a percent frequency. Percent frequency was compared to data from previous years in order to assess management techniques. Mean species richness was also calculated and compared to previous years using a general linear model. The 2012 littoral survey yielded a total of 24 aquatic or riparian plant species. Since 2005, 29 plants species have been documented in the Ross Barnett Reservoir, this includes several non-native species. American lotus (*Nelumbo lutea* (Willd)), a native emergent plant species, is the dominate plant in Ross Barnett with a percent frequency of 21%. The occurrence of all non-native plant species was less than 5%.