

THE ENVIRONMENTAL HISTORY OF BANKS LAKE

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Banks Lake is a shallow, macrophyte-dominated lake located in South Georgia that originated in the mid-1800's as a dammed wetland. Other shallow lakes in the southeastern US have been shown to exist as either macrophyte-dominated or algal-dominated systems. Changing between the two states can occur rapidly and is typically caused by environmental factors such as nutrients and water level. In order to determine where Banks Lake lies on this continuum between the alternative ecosystem states, a sediment core was collected prior to the most recent drainage period. We analyzed organic matter, nutrients, stable isotopes and photosynthetic pigments on lake sediments to reconstruct the environmental history of the lake. Results show an increase during recent periods of management in organic material and nutrients as well as changes in isotopic and pigment signatures. These stratigraphies will be used to better assess the effectiveness of the current management practices.