# POTENTIAL IMPLICATIONS FOR FISH POPULATIONS OF A RESTORED FREE-FLOWING OCKLAWAHA RIVER

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Dams and their associated impoundments have a myriad of impacts to native aquatic communities of lotic ecosystems. Adverse effects include habitat loss and fragmentation, altered flow regimes, impaired water quality, disrupted sediment deposition, barriers to migratory species, and focal points for the introduction and establishment of non-native plants and animals. Most of these factors apply to the impounded Ocklawaha River, largest tributary of the St. Johns River drainage in northeastern Florida. There are concerns among a sector of the boating and angling community that breaching of Kirkpatrick (=Rodman) Dam might eliminate or greatly reduce a world-class recreational fishery for Florida Bass (*Micropterus salmoides*) and Black Crappie (*Pomoxis nigromaculatus*). Many scientists agree that there would be shifts in the diversity, abundance, and local distribution of some fish species, resulting in a different aquatic community than currently established. However, improved habitat integrity and water quality would be expected to provide a viable angling environment with novel opportunities for anglers, including increased abundance of currently less-targeted species. Restoration of natural flows would reestablish the important functional relationship between the floodplain and the mainstem river during flood pulses. Moreover, hydrologic restoration would reduce the need for drawdowns and herbicide applications in the impounded pool to control noxious aquatic plants, thereby also contributing to improved water quality. A restored free-flowing system would benefit both game and nongame lotic species that have experienced historic declines from habitat alterations, including several uncommon taxa. Another expected positive outcome of improved fluvial connectivity would be greater access to upriver segments and tributaries, including the Silver River, for diadromous fishes, manatees, and other species that make long migrations between the Atlantic Ocean, estuaries, and freshwater habitats that are critical for phases of their life cycles.

PRESENTER BIO: Dr. Walsh is a retired research biologist and served over 30 years in the U.S. Geological Survey and U.S. Fish and Wildlife Service. He has extensive experience studying the effects of hydrologic alteration on fish and invertebrate populations in springs, streams, and rivers of the southeastern U.S.