

Kingdom Dam

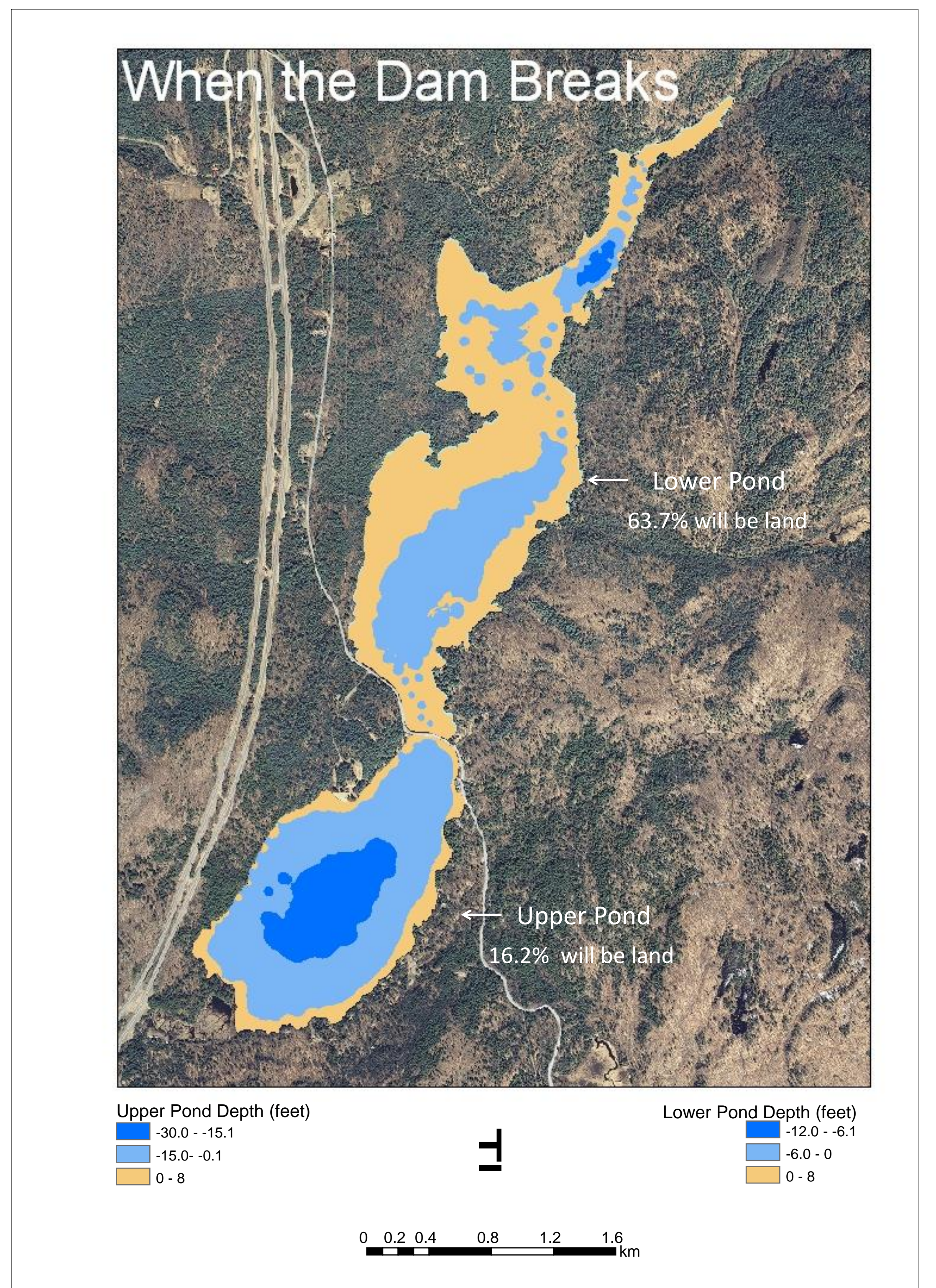
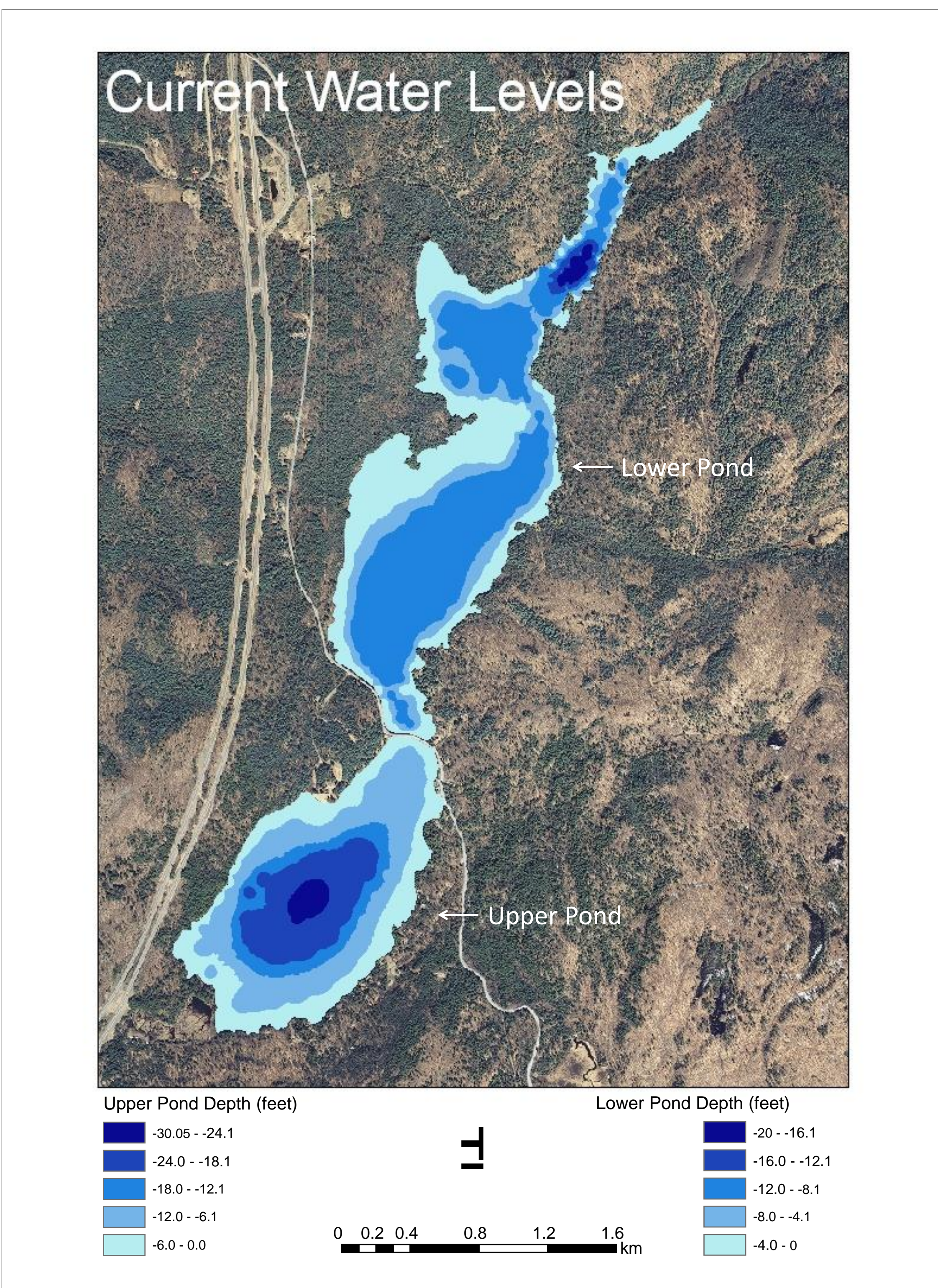
Lincoln Pond Elizabethtown, NY

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Objective:

Lincoln Pond, located in Elizabethtown, NY is a small 652 acre pond in the Adirondack Park. Lincoln Pond is a relatively shallow pond, with an average depth of 15 feet. It is split into Upper and Lower Ponds by Lincoln Pond Road (County Highway 7). The roadway was created by filling the pond from both sides and then placing a pre-cast poured concrete conduit in the center. The conduit is a 10 ft by 10 ft square with a two foot water depth. Kingdom Dam, a buttressed Concrete Gravity Dam owned by the state of New York and managed by the DEC, was built in 1911 and is located at the northern tip of the pond. Currently, it is in poor condition and is classified as a Class "B" - intermediate hazard dam. If reconstructive measures do not take place soon, the dam could potentially break wreaking havoc for those who live there and those living downstream. My project aims to showcase what would happen to Lincoln Pond when the dam breaks at a level of eight feet below the high water level.

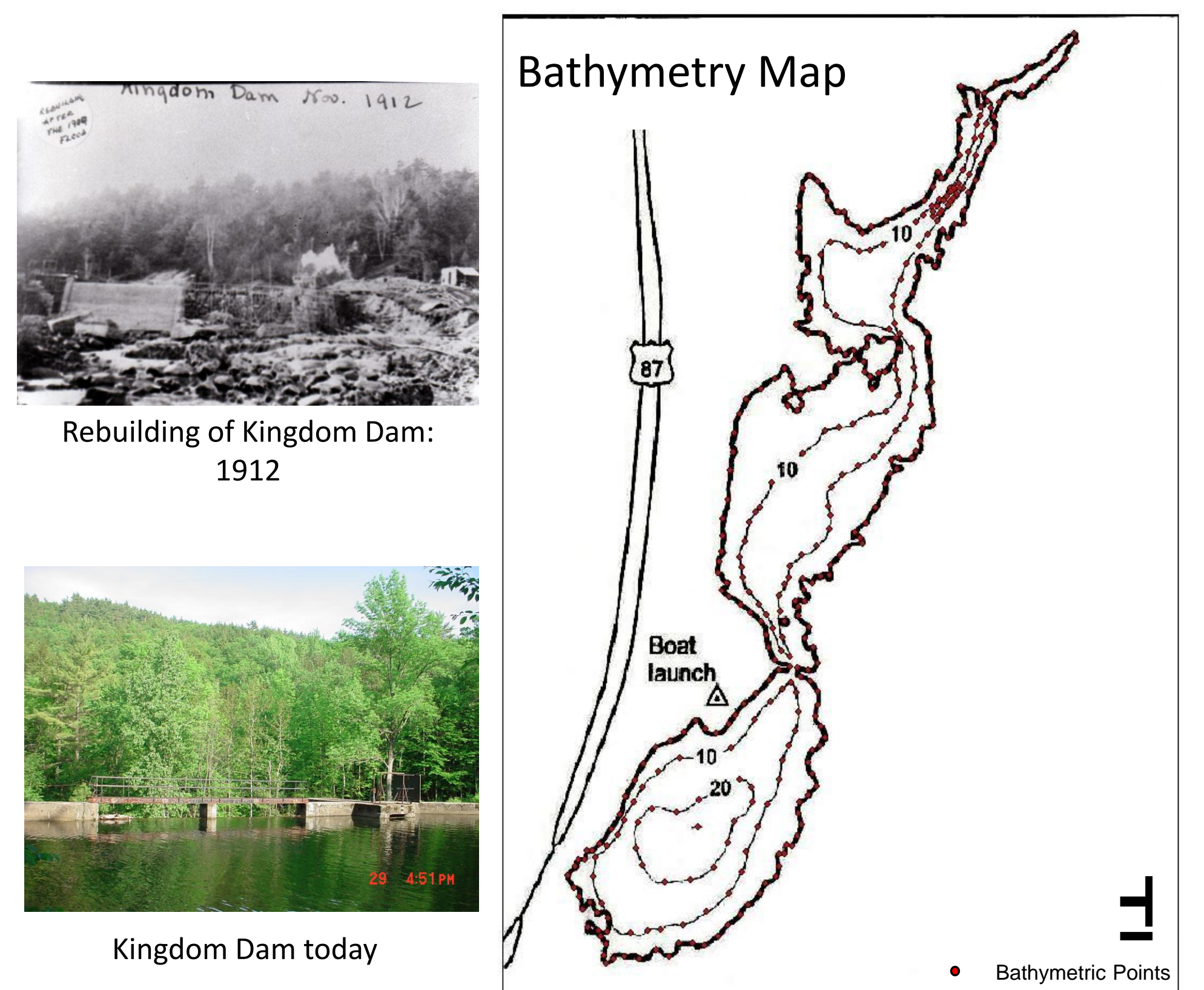
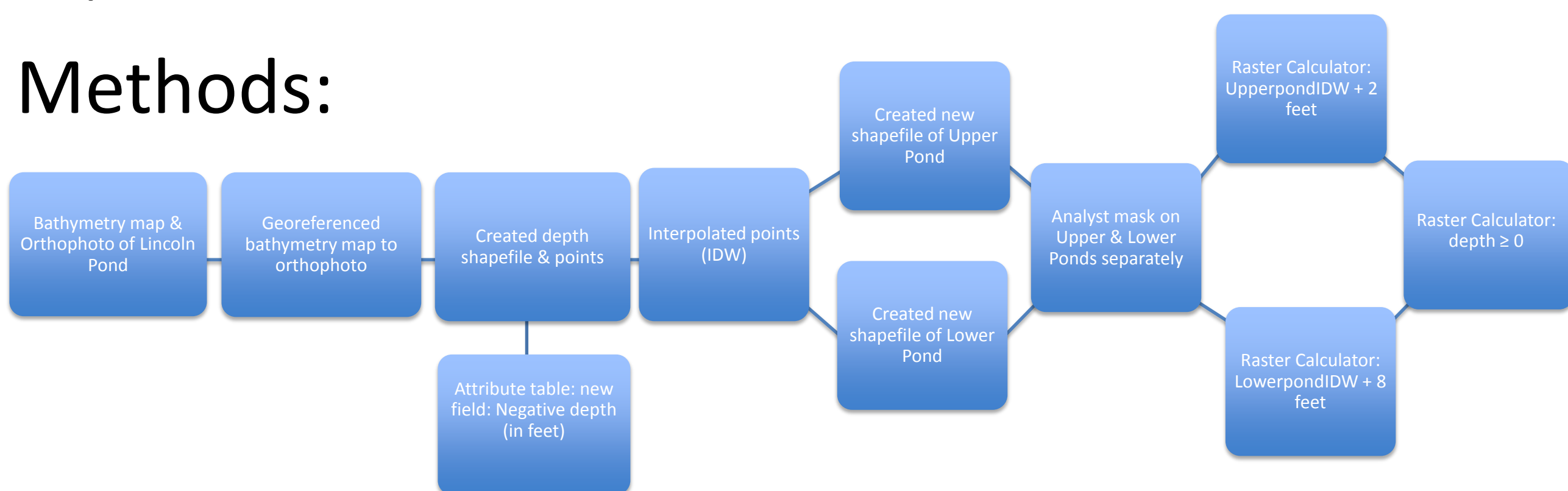
Results:



Conclusion:

When Kingdom Dam breaks Lincoln Pond will be severely compromised. Lower Pond will have an immediate loss of 63.7% of its water surface and Upper Pond will lose 16.2% of its water surface. This catastrophic event may cause the rush of water to further degrade the outlet to a greater depth than assumed in the calculations resulting in an even larger water loss then reported. This water loss shows a best case scenario if the dam breaks and therefore action needs to be taken to ensure that Lincoln Pond is preserved.

Methods:



Work Cited: Title Photo: "Lincoln Pond: Pictures, photos and Images from Mineville NY" <http://www.topix.com/album/detail/mineville-ny/KFSFLTR0336JLA4> . Orthophoto of Lincoln Pond: NYSGIS Clearing house. "Digital Orthoimagery Application." <http://www.nysgis.state.ny.us/gateway/mg/> . Bathymetry Map: "Lincoln Pond." Information Leaflet: NY State Department of Environmental Conservation Division of Fish & Wildlife: Region 5. Objective: "Phase Two Investigation Report." Department of Environmental Conservation. Rebuilding of Kingdom Dam Photo: "Lincoln Pond: Elizabethtown, New York: Historical and Contemporary Photograph Archive" Lincoln Pond Association. <http://lincolnpond.org/photographs.html> . Kingdom Dam Today Photo: "Adirondack Country Homes Realty Inc. <http://www.adirondackcountryhomes.com/LF0201.htm> . Special Thanks to Jim Reagan at the Department of Environmental Conservation in Albany and Gerry Zahavi, President of the Lincoln Pond Association.