Urban Rivers as Social-Ecological Systems: An Examination of History & Ecology in the Miami River **Daniela Brigitte Daniele, Florida International University** Research Mentor: Dr. Elizabeth Anderson



Goals

- To examine the Miami River as a socioecological system, tracing the interactions through time between human populations and the river
- To compile a comprehensive environmental history, bridging historical conditions and the current status, of the Miami River
- To investigate how public perception of the Miami River as well as its change in quality over time
- To examine the social connectivity of the Miami River in a longitudinal, lateral, and vertical dimensions from a historical perspective



The Miami River before the Miami Canal





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Preliminary Findings

- The Miami River was essential to the formation of the city of Miami and played an important role in many historical events and developments
- Due to the development and establishment of Miami as a city, the Miami River is now a severely degraded system because of urban development and years of use as a dumping area
- Complete alteration of the river's ecosystem disrupted connectivity of this urban river



Image: Florida Memory, year unknown

http://crestcache.fiu.edu



Image: Daniela Daniele, 2018



- landscape
- dimension emerged



The Miami River after the Miami Canal



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Expected Results

• Our changed perception of the Miami River enabled permanent ecological damage and a changed socioeconomic

 As the river's ecosystem services became less valued, people's view of the river changed, decreasing the river's water quality due urbanization

• Through time, people's relationship to the river changed as new ways of interacting with the river on the spatial