ENV 110 Future of Natural Resources
Fisheries Project

From our studies of fisheries issues and *The Perfect Protein*, we know that fisheries often need to be managed. [Remember, fisheries involve many aspects; a fishery includes the people involved, species or type of fish, area of water, method of fishing, class of boats, purpose of the activities, or a combination of all of the above, engaged in raising or harvesting seafood.[1]] And remember that every fishery has its own unique issues and variables to consider. For our project related to this biologic natural resource, we will study the fish population of a local water body, namely Rider's own Centennial Lake. Fishing is actually not permitted but many of us have seen people casting lines into the water. In essence, Rider's lake is a fishery since some people are harvesting finfish. We began studying the fish population in 2014 to determine the health of the lake fishery. The 2014 class determined that there were multiple issues with the fishery just from a single project, and was able to intervene to address some of the issues. With our partners at the NJ DEP Marine Fisheries and Fish and Wildlife, we will decide on how the 2015 class can contribute to the management of Centennial Lake fishery. No matter what we do, expect that we will collect a unique data set that will help us better characterize the lake fishery. As such, our results will add new knowledge to the world and your job will be to analyze the data, draw conclusions from that analysis using methods we are learning in the class, and make recommendations to the university about the fishery management.

Each student will complete their own report on the results (even if you work in groups for some part of this project!). As a guide for report format, consider the format used in the two example reports for Fox Lake[2,3,4] and Lake Brittle[5] considered in class. For our reports, include more relevant background information; we will discuss in class.

*Note: All conclusions, interpretations, and recommendations should come from data collected, background information, and other basic principles of fisheries science provided in class, F&W experts, &/or from readings

The following areas should be addressed in a report:

Introduction: context for investigation
Background: Brief description and history of lake and summary of what is already known
    about area investigated
Methods: Brief description of methods used to collect data
Data & analysis: include in appropriate forms (tables, graphs; descriptive statistics if
    appropriate)
Summary of results: text describing all results (individual data sets and combined)
Interpretation of results: explain what data collected reveal about the lake fishery using
    evidence and scientific principles to support claims made; if different data sets are
    collected, claims should consider multiple data sets when appropriate

Conclusions and Recommendations for the fishery with explanations including evidence and relevant scientific

Questions you think would be worth investigating next and why they should be (they need to be investigate-able!)

Appropriate Citation of resources used & Ref list

Note: Wherever appropriate throughout the report, you should incorporate information from:
  -text
  -other readings provided in classes (e.g. lake report examples)
  -content summarized during classes (ppt files can serve as a guide)
    (e.g. what kind of fish do we have; where do they fall in the food chain/web)
  -information provided by NJ DEP F&W staff

[1]http://sanctuaries.noaa.gov/education/voicesofthebay/glossary.html#fishery

[2]Fisheries Lake Survey, Fox Lake, Minnesota Department of Natural Resources, 2015, http://www.dnr.state.mn.us/lakefind/showreport.html?downum=46010900

[3]Fox Lake 2002-2013 Fall Electrofishing Summary Reports , Fox Lake Inland Lake Protection and Rehabilitation District, http://flilpard.org/lake-management/fall-electrofishing

[4]Fox Lake 2013 Electrofishing Summary Report, Fox Lake Preservation Organization, http://foxlakeflpo.org/uploads/ckfiles/files/FLPO%202013.pdf

[5]Lake Brittle, Biologist Reports, Virginai Department of Game and Inland Fisheries, 2015, http://www.dgif.virginia.gov/fishing/waterbodies/display.asp?id=22

Challenges for students
  • Selecting relevant background to include; synthesizing background information
  • Incorporating science principles into explanations
  • Using multiple data sets to build reasoning for claim made
  • Providing sufficient reasoning for claim made
  • Data summary
  • Graphing data