Title

Name Dave Millis

Teaching content area(s) Environmental Science, Biology

School - Edgewood Colesburg School

Extern host site: State Trout Hatchery Manchester Iowa

Part I: Overview of Business

The State Trout Hatchery Manchester Ia. Is responsible for spawning all trout supplied to Iowa hatcheries and rearing enough to catchable size for stocking some close locations. To aid in this they survey angler pressure and expectations to determine stocking rates

Part II: Job Specifics

One of the goals of the Manchester hatchery is to provide a reliable supply of catchable trout to area streams at reasonable cost of production(currently around $3/lb. The fish need to be fairly uniform in length and weight and preferably free from deformities to be reared and grown in a cost efficient manner as well as satisfying angler preferences

Part III: Introduce the Problem

Gathering data on the fish through their development currently is done by determining their average weight through periodic random sampling. It might be beneficial to asses the variation in weight and length at these stages of development in order to maximize feed conversion during production and angler satisfaction with the final product

Part IV: Background

The students need an understanding of how and why to take a random sample, how to record plot the number and kind of variations and how to spot & document deformities in 2 species of trout
The Hatchery wants to learn how much variation there is within a population of trout at different stages of development in order to determine a strategy to reduce it.

Part V: Business Solution

The solution is for the hatchery is to initially gather more data on variations on length and weight throughout the hatchery lifespan. With limited staff hours available, reliable work by volunteers is necessary.

Part VI: Student Solutions

- Separation of fish into more groups based on more narrowly defined parameters of length & weight
- Selecting the most rapidly gowing fish for special rearing as brood stock(size matters)