



Chelsey Parks-Medhus
High School Science
Seymour Community School
DNR Rathbun Fish Hatchery

Part I: Overview of Business

The mission of the Iowa DNR is "to conserve and enhance our natural resources in cooperation with individuals and organizations to improve the quality of life in Iowa and ensure a legacy for future generations."

Part II: Job Specifics

The Rathbun fish hatchery is tasked with finding the most efficient way of raising fish to meet stocking requests across the state, as well as in some neighboring states. I worked on increasing survival rate of the fish, which improves efficiency.

Part III: Introduce the Problem

At the hatchery, it is important to keep fish healthy in order to meet production quotas. In the past, antibiotics have been used to keep fish healthy. However, the use of these chemicals has come under scrutiny in the past few years, and the DNR may no longer be able to use them. This means the best way to keep the fish healthy is to prevent stress. But how can we do that?

Part IV: Background

Physical/Environmental stressors, prior practices when moving fish, available materials that could be used in the transport process, what fish need

- DO in water
- Amount of Handling
- Time out of water
- pH
- Rathbun Fish Hatchery Map Handout

Part V: Business Solution

The DNR at Rathbun Fish Hatchery decided to use tubs to transport the fish instead of using a large tank truck. This meant that the fish were check-weighed at the pond, put in a tub and then taken directly to their tank in the tank room. This reduced the handling of the fish, which reduced stress.

Part VI: Student Solutions

Students may come up with the idea to check-weigh at the pond so the fish do not need to be handled again once they reach the tank room. They may come up with a new way to count the fish that does not require them to leave the water. They may devise some sort of slide/pipe system that would allow the fish to get to the tanks in the tank room without trucks or tubs, which would eliminate a handling. They may come up with the idea to sedate the fish so they are less aware of their predicaments as they are being handled.