

Fishery Resource Grant Final Report Statement

Project Title: growing oysters in suspended bags using ropes, anchors and buoys.

Project Investigator: Curtis B. Jenkins

Project Dates: May 2002 – December 2003

The purpose of this project was to see if it is feasible to grow oysters suspended off the river bottom in bags by using ropes, anchors and buoys. Growing oysters in this manner would allow oysters to be grown on oyster ground with bottom not suitable to grow oysters.

We started with oyster seed that was about 5mm in August 2002 and by December 2003 most of the oysters averaged about 50mm in diameter.

Most of the problems we encountered were from excessive algae growth. Trying to keep the bags suspended at a certain depth seemed to be impossible because of the algae growth. Also the oysters could not get adequate water flow because they were so fouled. Cleaning the bags and the oysters needed to be done weekly.

The oyster seed was picked up from the hatchery on July 25, 2002. The hatchery owner called us the next day and said that he had observed extreme mortality in the remaining oysters that he picked our batch from. We checked our oyster seed and noted the same. He arranged for us to pick up another batch. We picked up the second batch on August 13, 2002.

The oyster seed was in small mesh bags like onion sacks with one thousand oysters in each bag. We put these bags in floating wire cages for three weeks. We then transferred them to 3/16" mesh plastic bags that were 18X36" for six to eight weeks until they grew large enough to be put in 5/8" mesh plastic bags that they would remain in until they reached market size. We put about 200 oysters in each bag and had 200 bags of oysters.

After we had all of the oysters in the 5/8" mesh plastic bags we started experimenting with different floats attached to the bags. Originally we planned to use PVC pipe but we found that small plastic bottles and corks attached with plastic ties worked best. They were easy to add or take off.

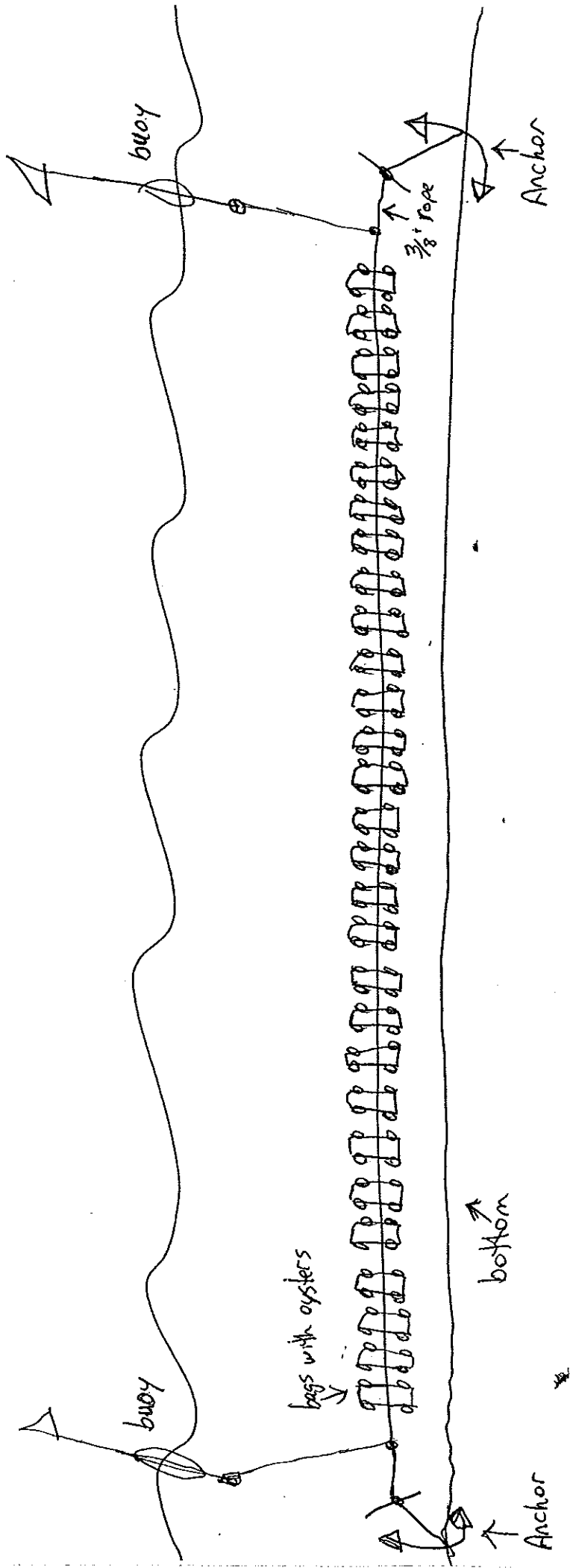
When we found out how much floatation it took to just keep the bags from sinking, we then attached them to 120' of 3/8" rope that we anchored on each end and attached marker buoys on each end of the rope. We had 5 sections with 40 bags on each section, the growth of the oysters slowed considerably over the winter but most of them were living and doing well.

When the water started to warm up in the spring of 2003 we realized that excessive algae growth was weighing down the bags and causing them to sink to the bottom. We could not seem to find the right amount of floatation to keep the bags at neutral buoyancy. They either floated or sank because the algae growth occurred so fast. The oysters grew much faster when the bags were floating but they needed to be cleaned about once a week. We removed the floats and let the oysters sink to the bottom. The algae on the bottom of the bags died this way and we would turn the bags over about every three to four weeks.

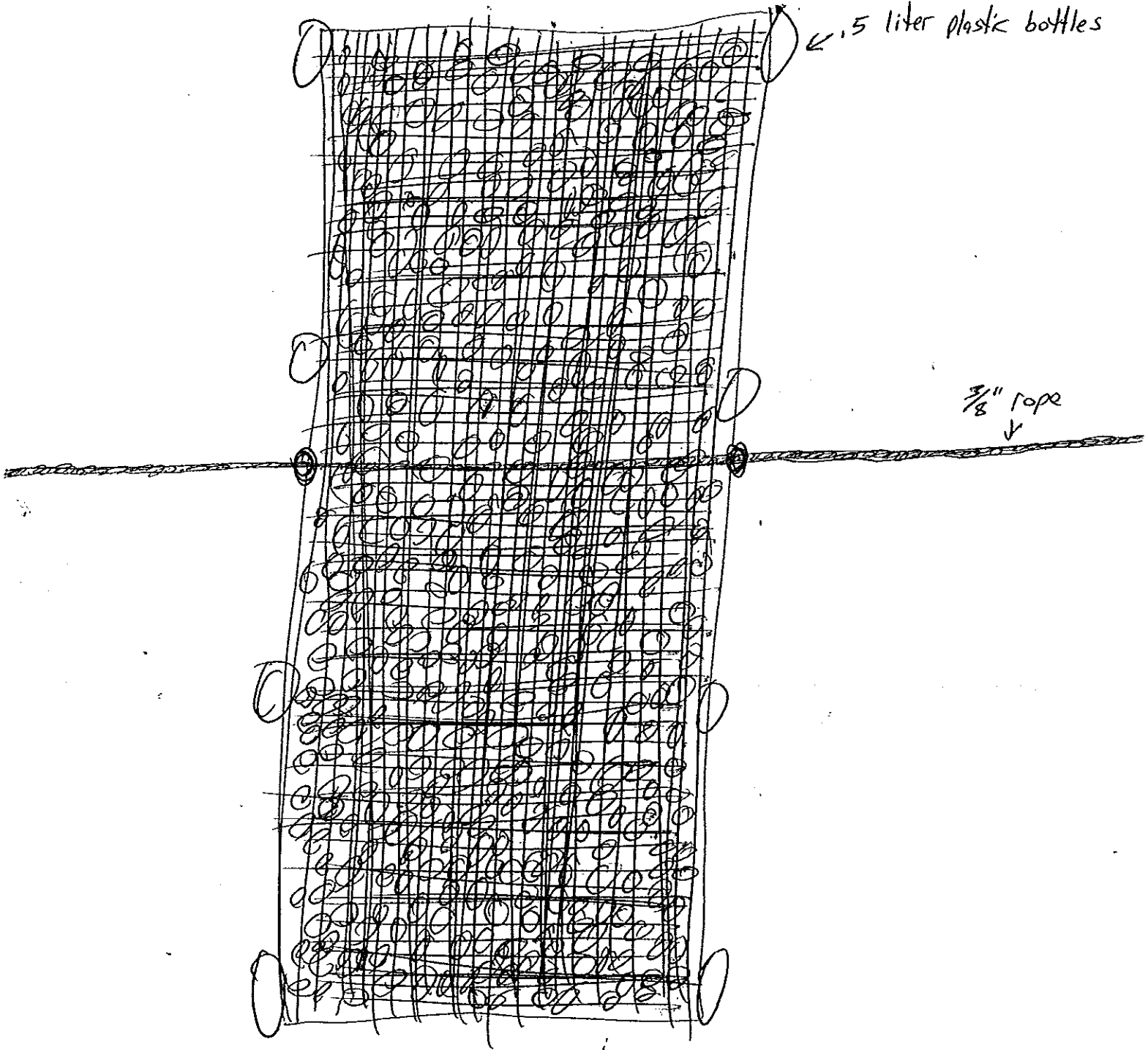
The mortality of the oysters was about one percent during the project.

Growth Rate of Oysters:

	Average Diameter
1. August 13, 2002	5mm
2. December 2002	12mm
3. March 2003	14mm
4. June 2003	18mm
5. September 2003	35mm
6. December 2003	50mm



$\frac{5}{8}$ " mesh plastic bag filled with oysters



We were not able to grow the oysters in suspended bags because of the excessive algae growth. Growing oysters in this manner may be possible but the time and effort required would not make it worthwhile and I would not recommend it. To grow oysters in any kind of cages or bags, floating or on the bottom, you need to be able to control the algae growth that has gotten out of control from all of the excessive nutrients in the bay.