

**Virginia Fishery Resource Grant Final Report**

**FRG 2008-03**

**Hedgingless Pound Net**

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1. The hedgingless pound net is a style of trap that I have been wanting to experiment with for several years. When this project was approved for funding by VIMS, I was excited to get started with a type of trap that I really did think would be very productive.

We got off to a good start in the spring of 2008, completing all of the net and chain work in time to set the trap by early April. However, I was unable to find the buoys needed to support the net of the large funnel until mid-summer which postponed the project until April of 2009.

Once set in April, the trap did catch fish, but never really caught anywhere near as many fish as the floating hedging control trap. On occasion, the hedgingless trap did outcatch the control trap for a day or two, but never seemed to be very consistent.

The hedgingless trap stayed in good fishing condition until late September when one of several powerful wind storms finally damaged the pocket of the trap, leaving it non-fishable. With only a few weeks left in the season, I decided to take the trap up because the damage was too severe to repair and reset by the end of the season.

2. The purpose of a hedgingless pound net is to simplify pound netting one step further than the floating hedging did. My idea is to eliminate the hedging of a pound net by changing the direction that the net was set. Ordinarily, pound nets are set cross-tide in the Bay. This makes the fish traveling around the trap to change directions and swim offshore into a falsepound and then into a pocket where they can't escape. I felt that by setting the pound net with the tide, I could eliminate the hedging and turn the falsepound into an extended funnel with an opening that is about 400-500 feet wide at the mouth. This would cover almost the same amount of area as a hedging would, but instead of having to turn and swim offshore, the fish could just keep swimming against the tide and still end up in the pocket of the trap.

If this style of pound net did work, I estimated that supply and labor costs of pound netting would be lowered by an additional 25% or more per year on top of the 20% per year that the floating hedging has already saved. The initial costs to set different styles of pound nets for the first year are pretty close:

1. Traditional Chesapeake Bay pound net-\$25,000
2. Floating hedging pound net-\$21,000
3. Hedgingless pound net-\$16,000

These figures are based on what it would cost to set a 16 ft. deep pound net at 2010 supply prices. The real savings come after the first year. The traditional style trap using all poles to support the net has to almost be completely replaced after about 3 years of operation, including 200 poles. The floating hedging style trap only needs about 1/3 of the net and 60 poles replaced every three years. The net of the floating hedging project that I supported by buoys is on season number five and isn't showing any signs of wear at all. My original prediction on that project was that I could get 10 years of use out of the same net. However, I am starting to realize that this same net may never have to be replaced. This alone will save me around seven to eight thousand dollars every

three years in supply and labor costs while maintaining the same fish harvests.

Finally, if the hedgingless pound net was successful then the only major yearly expense would be the copper paint needed to keep the net clean. Since 80% of the net would be supported by buoys, there would be almost no wear at all. The pocket net would be the only net to be replaced every three years. Also, with only 20 poles in the entire trap, labor costs would be at a minimal.

Something needs to be done to keep pound netting from disappearing on the Chesapeake Bay. Fish prices in our area are about the same on average as they were 20 years ago. However, supply costs have skyrocketed. I've been pound netting for eight years, and in that time copper and net prices have almost doubled. If this continues I really do believe that there won't be any pound nets left in the Bay. This project could prevent just that from happening with successful results.

3. The total poundage of fish caught in the hedgingless pound net was 16,544 pounds. The control trap had a total harvest of 46,316 lbs. of fish. However, the value per pound of the hedgingless net was .62 cents compared to the control traps .46 cents per pound. The reason for this was that the hedgingless net overall caught just as many edible fish as it did bait fish. The control traps harvest was 67% bait fish. To me, this suggests one possible problem with the hedgingless net. Being that the funnel of the trap is set with the tide, I feel that maybe the menhaden that stay near the surface of the water are swimming back out when the tide changes. All of the edible fish that I catch are considered as bottom fish, which are trapped easier because once they enter the pocket they go back to the bottom. When the tide changes these fish are below the funnel and cannot escape as easy as the menhaden.

Although the hedgingless traps value per pound was a little higher, it still did not yield enough total pounds to justify changing designs. The control trap still outcaught the hedgingless trap a little more than 2 to 1 valuewise.

One other major problem with the hedgingless traps design was the sea nettles. During the months of June, July and August sea nettles in the area of the trap were funneled directly into the pocket. While sea nettles around the control trap seemed to be pushed through or over the floating hedging, the design of the hedgingless trap directed the sea nettles right into the pocket of the trap. This trap caught more sea nettles than I have ever seen a trap catch. On several occasions, I had to drop the top line and roll out the sea nettles.

I was glad to get the opportunity to experiment with this design of trap. Unfortunately, I do not feel that the money saved with this style of trap offsets the amount of money lost by low harvest amounts. However I feel that this design could be a simple and effective way to test a new location for fish populations before committing a more permanent fish trap design to a certain new area. Even though this design did not catch enough fish to continue

its use, I learned that fish do travel through this particular area and that a traditional style trap will probably be effective in the same location.