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Phase II Protecting Juvenile Flounder from Becoming a Crab Pot By-Catch

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Phase II Protecting Juvenile Flounder from Becoming a Crab Pot By-
Catch

Final Report

FRG 2015-02-JOSLIN

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This study is an attempt to discover new methods to reduce the by-catch of juvenile flounder when using conventional crab pots. An escape panel for the juvenile flounder was constructed and inserted into 20 crab pots, known as "treated" pots. To ascertain the validity of the project, 20 "untreated" pots were fished alternating with the 20 "treated" pots. On three rotations of exactly the same number of days being fished, data was collected to determine if the panels were effective as an escape for the juvenile flounder and if the panels had an impact on the number of crabs caught.

Purpose:

The purpose of this project was to employ a device that would reduce the number of juvenile flounder trapped in the conventional crab pot without having an effect on the number of legal crabs harvested.

Methodology employed:

Three investigations were performed over a nine month period to determine if the panels were reducing the number of juvenile flounder caught in the conventional crab pot. In the "treated" pots, according to scale, a panel of 7/16" x 5" was constructed for 20 crab pots using conventional crab pot wire. This panel was inserted in the upstairs of each crab pot, exactly 9 1/2" from the corner. Twenty "untreated" pots were also used in the experiment as the control group. These pots were fished every other day totaling 18 days. This investigation was conducted 3 times. (April, October, November)

Summary of data collection and analysis:

In April, data supports that the panels were effective. The treated pots had absolutely zero juvenile flounder, while the controlled pots had juvenile flounder present.

The investigations in October and November revealed similar findings. Although the total number of juvenile flounder caught was relatively small in the investigation, there were zero flounder present in the treated pots.

Results:

Data supports that the cull panels were effective in April, October, and November with no impact on the number of crabs harvested.

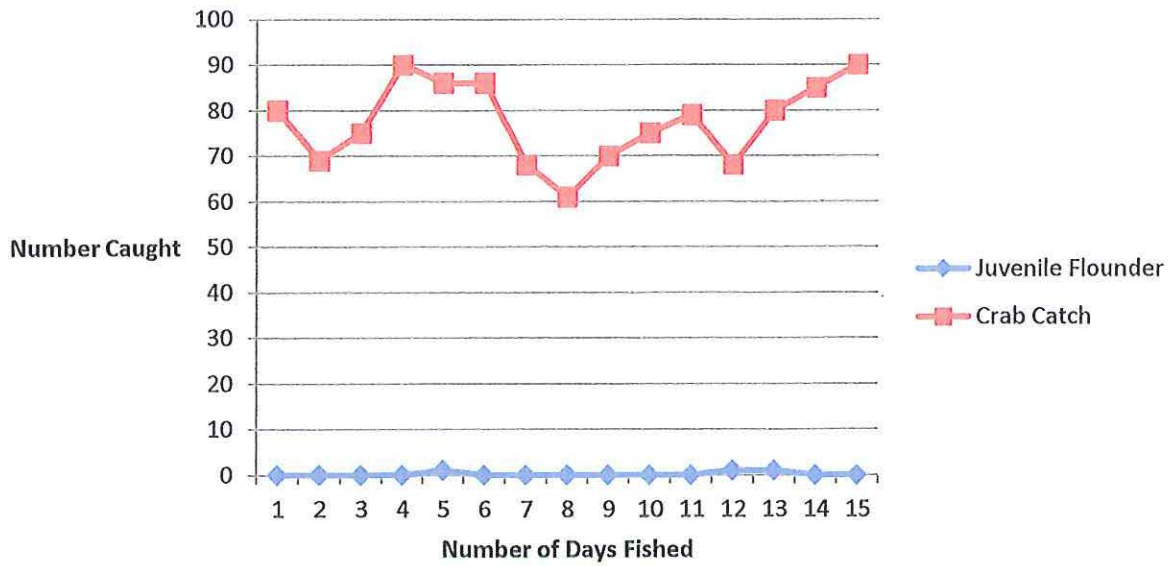
Conclusions:

1. Cull panels are effective in the safe release of juvenile flounder.
2. The cull panels have no impact on the number of legal crabs harvested.
3. The investigation needs to be expanded to a larger number of treated pots because the presence of flounder is sporadic and unpredictable. This is possibly due to various factors such as water temperature, depth, salinity, and the type of river bottom.
4. The shape of the cull panels also allows a safe release for other species such as jellyfish and hogchoke.
5. A "vertical cull panel" would allow the safe release of other juvenile finfish due to their vertical swimming.

Recommendations:

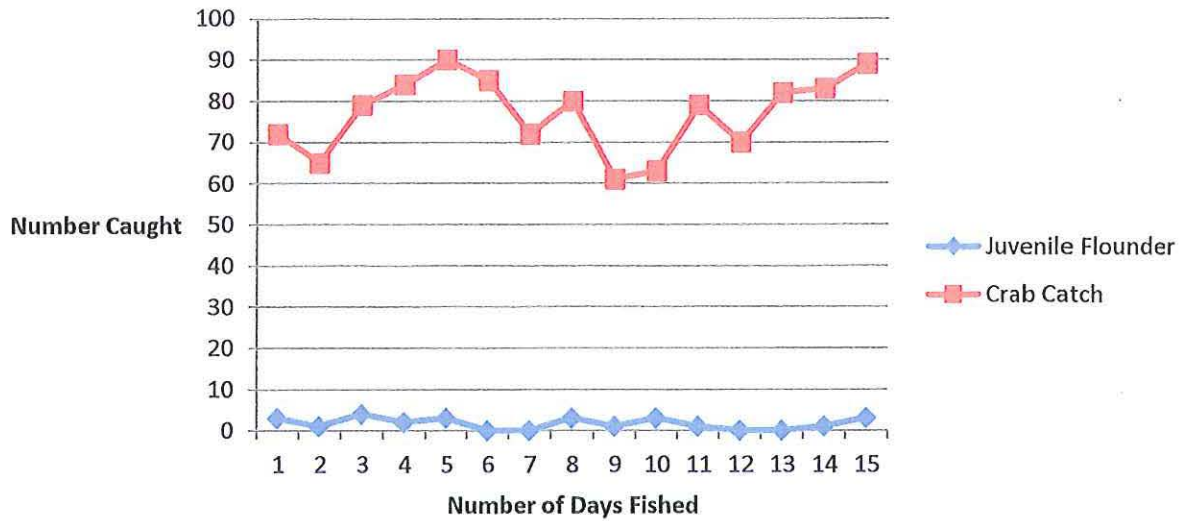
I recommend expanding the number of treated pots to allow for more juvenile flounder to be released and more data to be collected.

Treated Juvenile Flounder and Crab Catch Set J (April)



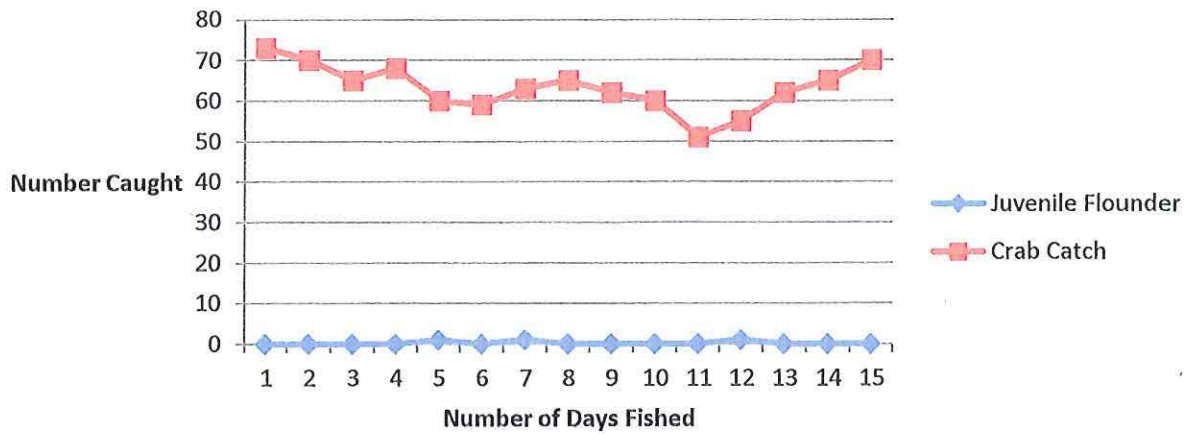
Day	Juvenile Flounder	Crab Catch
1	0	80
2	0	69
3	0	75
4	0	90
5	1	86
6	0	86
7	0	68
8	0	61
9	0	70
10	0	75
11	0	79
12	1	68
13	1	80
14	0	85
15	0	90

Untreated Juvenile Flounder and Crab Catch Set J (April)



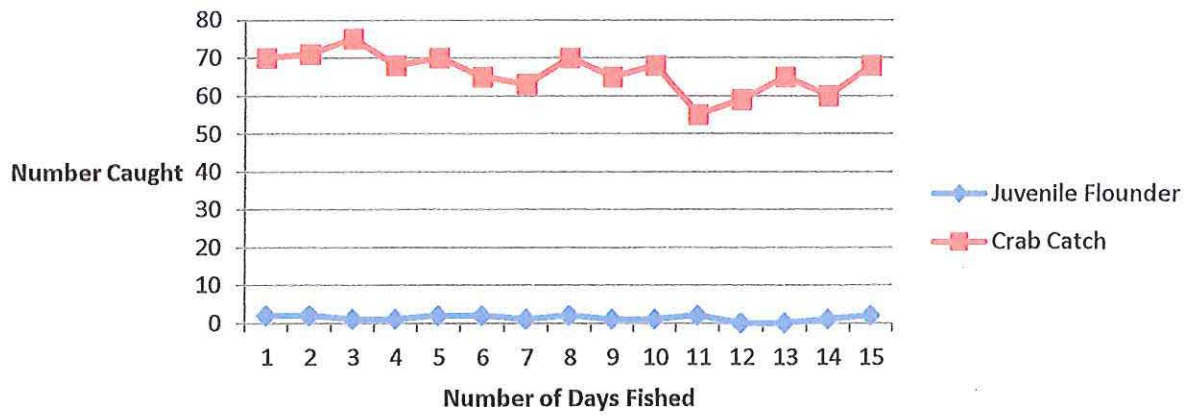
Day	Juvenile Flounder	Crab Catch
1	3	72
2	1	65
3	4	79
4	2	84
5	3	90
6	0	85
7	0	72
8	3	80
9	1	61
10	3	63
11	1	79
12	0	70
13	0	82
14	1	83
15	3	89

Treated Juvenile Flounder and Crab Catch Set N (April)



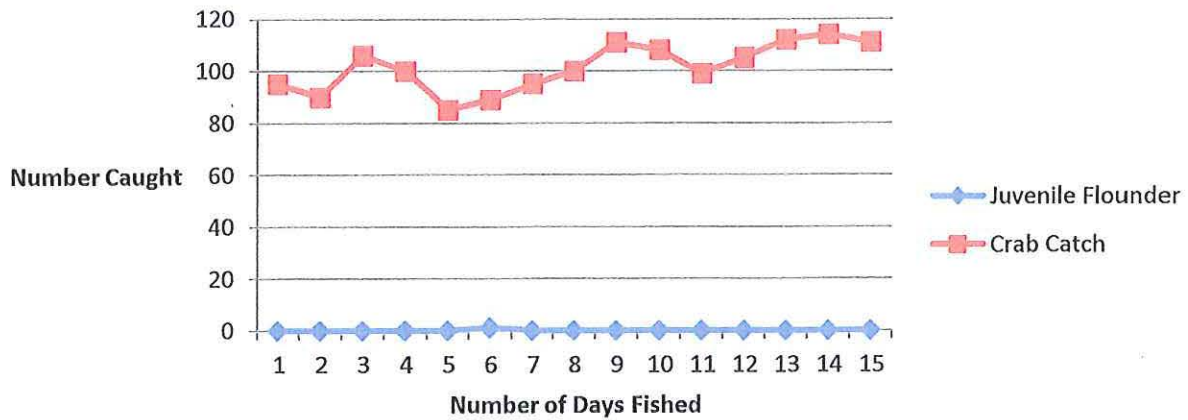
Day	Juvenile Flounder	Crab Catch
1	0	73
2	0	70
3	0	65
4	0	68
5	1	60
6	0	59
7	1	63
8	0	65
9	0	62
10	0	60
11	0	51
12	1	55
13	0	62
14	0	65
15	0	70

Untreated Juvenile Flounder and Crab Catch Set N (April)



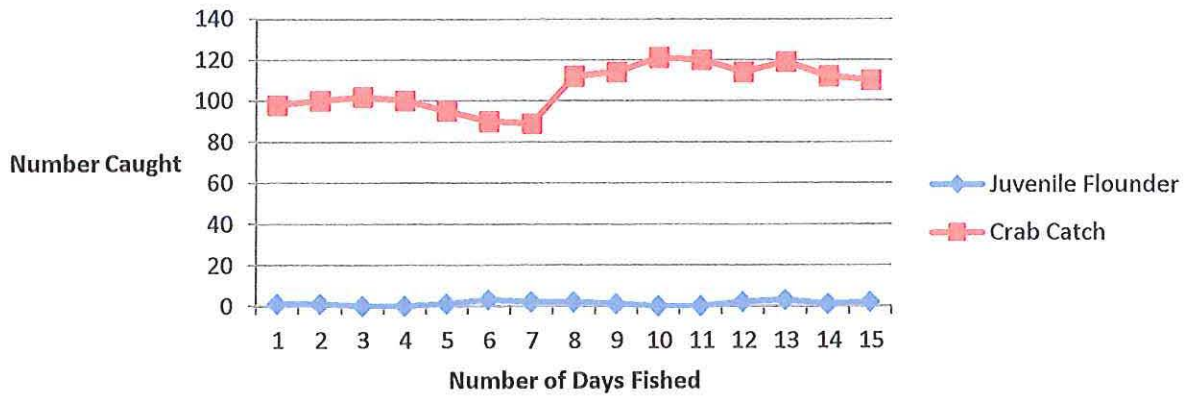
Day	Juvenile Flounder	Crab Catch
1	2	70
2	2	71
3	1	75
4	1	68
5	2	70
6	2	65
7	1	63
8	2	70
9	1	65
10	1	68
11	2	55
12	0	59
13	0	65
14	1	60
15	2	68

Treated Juvenile Flounder and Crab Catch Set J (October)



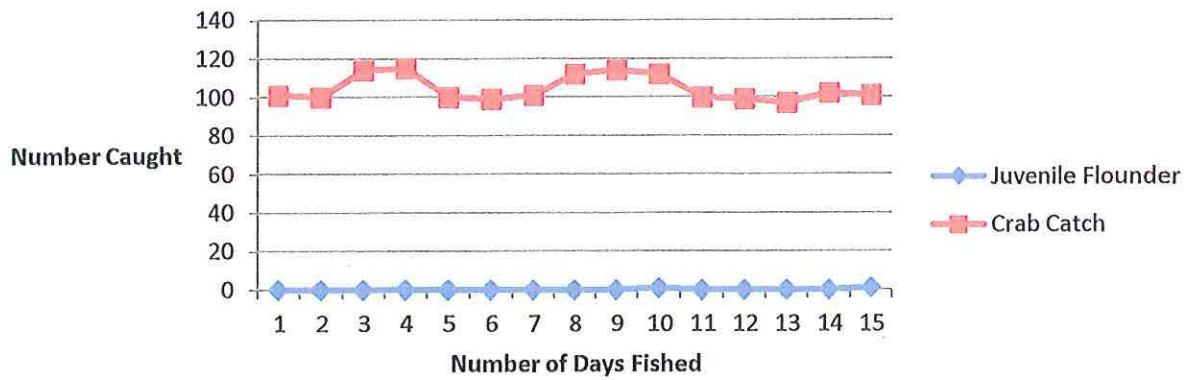
Day	Juvenile Flounder	Crab Catch
1	0	95
2	0	90
3	0	106
4	0	100
5	0	85
6	1	89
7	0	95
8	0	100
9	0	111
10	0	108
11	0	99
12	0	105
13	0	112
14	0	114
15	0	111

Untreated Juvenile Flounder and Crab Catch Set J (October)



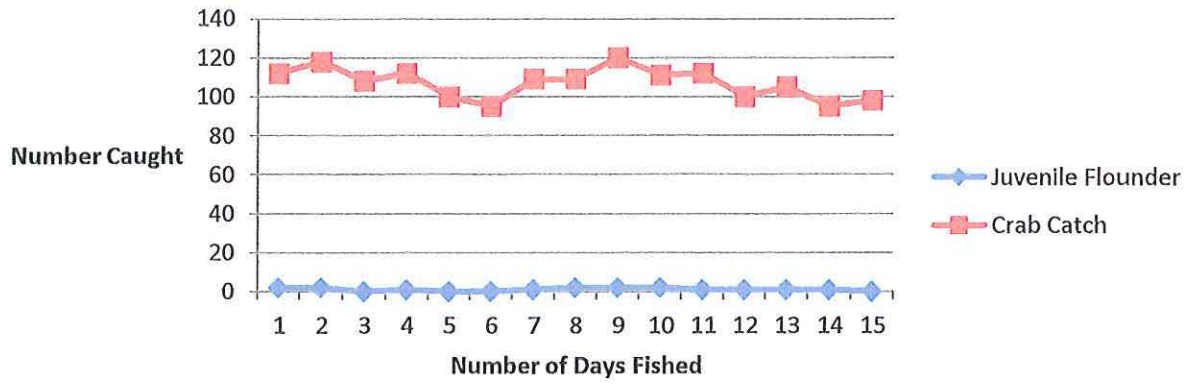
Day	Juvenile Flounder	Crab Catch
1	1	98
2	1	100
3	0	102
4	0	100
5	1	95
6	3	90
7	2	89
8	2	112
9	1	114
10	0	121
11	0	120
12	2	114
13	3	119
14	1	112
15	2	110

Treated Juvenile Flounder and Crab Catch Set N (October)



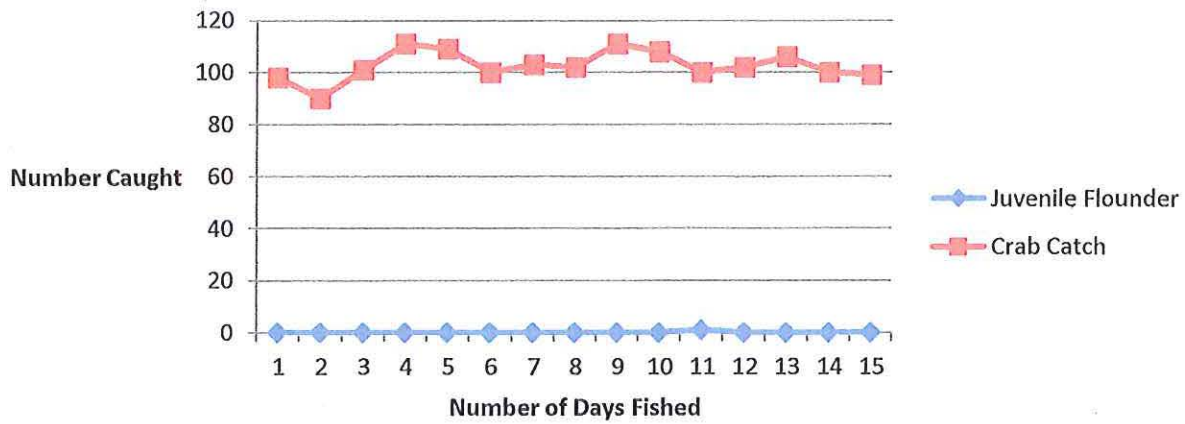
Day	Juvenile Flounder	Crab Catch
1	0	101
2	0	100
3	0	114
4	0	115
5	0	100
6	0	99
7	0	101
8	0	112
9	0	114
10	1	112
11	0	100
12	0	99
13	0	97
14	0	102
15	1	101

Untreated Juvenile Flounder and Crab Catch Set N (October)



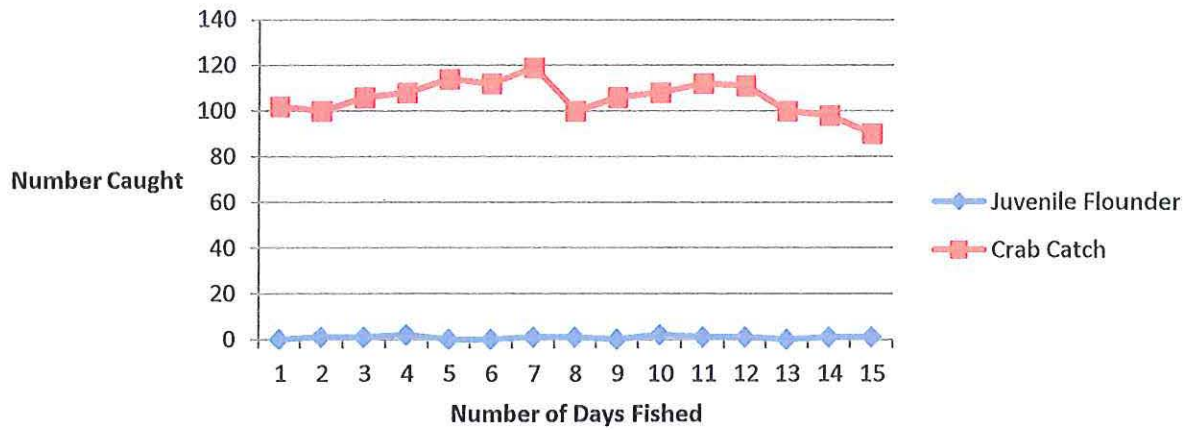
Day	Juvenile Flounder	Crab Catch
1	2	112
2	2	118
3	0	108
4	1	112
5	0	100
6	0	95
7	1	109
8	2	109
9	2	120
10	2	111
11	1	112
12	1	100
13	1	105
14	1	95
15	0	98

Treated Juvenile Flounder and Crab Catch Set J (November)



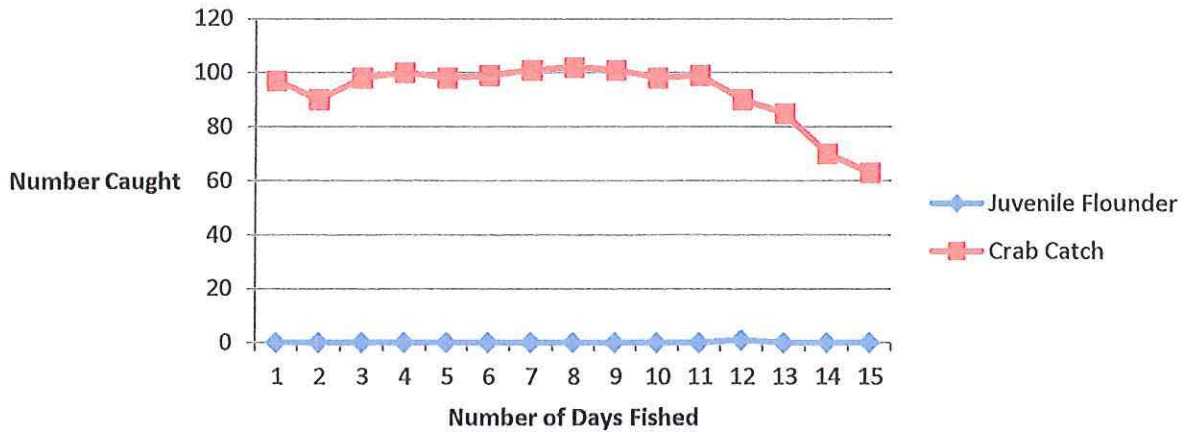
Day	Juvenile Flounder	Crab Catch
1	0	98
2	0	90
3	0	101
4	0	111
5	0	109
6	0	100
7	0	103
8	0	102
9	0	111
10	0	108
11	1	100
12	0	102
13	0	106
14	0	100
15	0	99

Untreated Juvenile Flounder and Crab Catch Set J (November)



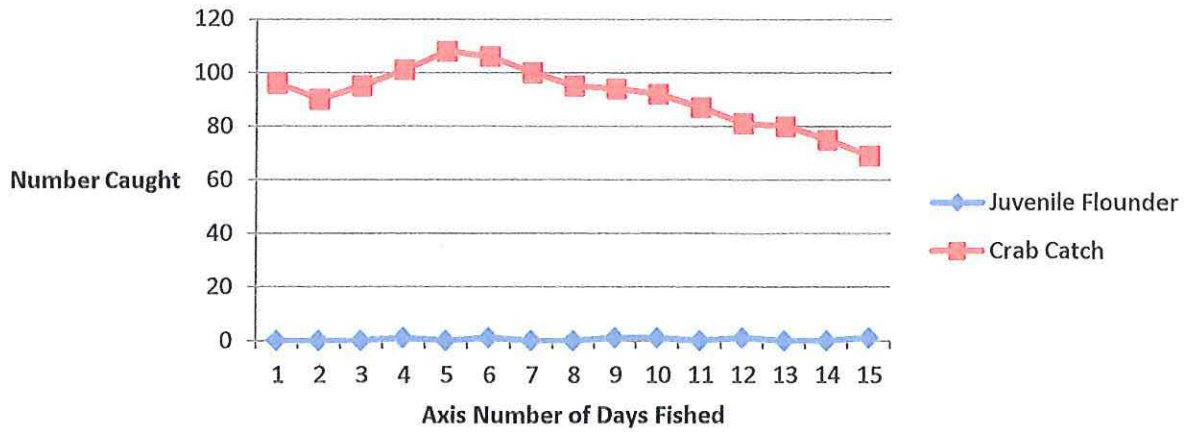
Day	Juvenile Flounder	Crab Catch
1	0	102
2	1	100
3	1	106
4	2	108
5	0	114
6	0	112
7	1	119
8	1	100
9	0	106
10	2	108
11	1	112
12	1	111
13	0	100
14	1	98
15	1	90

Treated Juvenile Flounder and Crab Catch Set N (November)



Day	Juvenile Flounder	Crab Catch
1	0	97
2	0	90
3	0	98
4	0	100
5	0	98
6	0	99
7	0	101
8	0	102
9	0	101
10	0	98
11	0	99
12	1	90
13	0	85
14	0	70
15	0	63

Untreated Juvenile Flounder and Crab Catch Set N (November)



Day	Juvenile Flounder	Crab Catch
1	0	96
2	0	90
3	0	95
4	1	101
5	0	108
6	1	106
7	0	100
8	0	95
9	1	94
10	1	92
11	0	87
12	1	81
13	0	80
14	0	75
15	1	69