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COMPLETION REPORT

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MANAGEMENT PROGRAM

Period Covered: 09/01/97 - 08/31/98

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- Oyster Disease Research
- Saltonstall-Kennedy
- Unallied Industry Projects
- Unallied Science Projects
- ACFCMA

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Fish, Game and Wildlife

Marine Fisheries Administration

Bureau of Marine Fisheries

**ATLANTIC COASTAL FISHERIES
COOPERATIVE MANAGEMENT PROGRAM**

Date Submitted: December 1998

Period of Study: September 1, 1997 through August 31, 1998

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This project was supported by the Atlantic Coastal Fisheries Cooperative Management Act of 1993 (P.L. 1103-206) administered by the National Marine Fisheries Service, Project 3-ACA-042.

With the passage of the Atlantic Coastal Fisheries Management Act of 1993 (Act) and later certification of \$176,030 of Federal funds to New Jersey for fiscal year 1998, a number of new planning, research, monitoring and enforcement activities were continued or initiated to address compliance issues of several Atlantic States Marine Fisheries Commission (ASMFC) inter-state fisheries management plans (FMP).

The New Jersey Division of Fish, Game and Wildlife (Division) identified several finfish species, horseshoe crabs and enforcement needs that qualified under the priorities identified in Section 804 of the Act and would benefit the inter-state management process.

For the current project segment, New Jersey continued and expanded several research, monitoring and enforcement activities which were initiated during previous fiscal years under the Act, and also initiated new additional jobs resulting from ASMFC FMP developments. The implementation schedule of the recently adopted tautog FMP required the development of management measures to achieve a target $F=0.24$ for 1998 and 1999. The development of an ASMFC horseshoe crab FMP was initiated and scheduled for adoption in October 1998. Amendment 1 to the American Shad FMP, Amendment 1 to the Atlantic Sturgeon FMP and Amendment 3 to the American Lobster FMP received considerable attention during this project segment.

The \$176,030 appropriated to the State of New Jersey under the Act for fiscal year 1998 was budgeted under two separate jobs:

JOB 1 - Monitoring, Research and Management of Finfish Species	\$110,021
JOB 2 - Enforcement of Marine Regulations	\$ 66,009

In order to present comprehensive, continuing management developments under Job 1, the report will deal with each species separately. The Bureau of Marine Fisheries' (Bureau) Port Sampling Program and the Marine Enforcement Unit's activity report will follow the species accounts under separate headings.

TAUTOG

Addendum 1 to the Tautog FMP adopted May 19, 1997, required the implementation of management measures for both recreational and commercial fisheries designed to achieve the interim target $F=0.24$ during 1998 and 1999. New Jersey's tautog proposal to the ASMFC demonstrated the need for a 49% reduction in exploitation based on 1995-1997 fishing mortality rates calculated using State-specific data, annual age-based catch curve analysis.

Consequently, the following management measures for tautog were developed and adopted for the years 1998 and 1999:

Commercial -- Annual quota reduced from 113,000 pounds to 61,680 pounds, minimum size limit of 14 inches maintained. To monitor the commercial quota, anyone selling tautog must possess a tautog permit, either a directed fishery permit (established in 1996) or a non-directed fishery permit (established in 1997).

Recreational -- Minimum size limit increased from 13 inches to 14 inches. Also adopted was a one fish possession limit during the period of June 1 through October 9 and a ten fish possession limit during the period of October 10 through May 31.

During 1997, monitoring of the commercial quota accounted for 32,092 pounds. Commercial landings reported by the NMFS for 1997 were 48,321 pounds. This disparity in landings was partly due to non-permitted individuals landing less than 100 pounds per day, a by-catch allowance. Hence, a non-directed tautog permit system was instituted for 1998 to better monitor the commercial harvest. To date, 31 directed tautog permits and 4 non-directed tautog permits have been issued. Commercial landings through December 15, 1998 amounted to 28,094 pounds, well below the annual commercial quota of 61,680 pounds.

Bureau personnel continue to serve as observers aboard party and charter boats to gather size frequency distribution data on this recreational fishery mode. Opercular bones are collected from the party and charter boat trips as well as the New Jersey Ocean Stock Assessment Program to develop annual length at age keys.

A coastwide, updated tautog stock assessment is under development by the ASMFC Tautog Stock Assessment Subcommittee. All recently collected New Jersey tautog data will be incorporated into the ASMFC tautog stock assessment.

ATLANTIC MENHADEN

New Jersey continued to sample the Atlantic menhaden bait fishery as part of the coastwide Bait Sampling Program developed by the Atlantic Menhaden Advisory Committee (AMAC) of the ASMFC. Atlantic menhaden are sampled in 10 fish lots each sampling event for size and the collection of scales for aging. Fish sampling is conducted in accordance with the port sampling protocol of the NMFS Beaufort Menhaden Team. Scale samples and associated data are sent to the NMFS for aging.

During the 1997 fishing season, 11 separate sampling events took place. The result of bait fish sampling in 1997 produced the following age-length matrix:

Fork Length (cm)	A G E						Total (n)
	2	3	4	5	6	7	
22	1	-	-	-	-	-	1
23	4	1	-	-	-	-	5
24	6	1	-	-	-	-	7
25	3	1	-	-	-	-	4
26	1	7	2	-	-	-	10
27	-	5	1	-	-	-	6
28	2	7	12	4	-	-	25
29	-	8	16	4	-	-	28
30	-	5	8	2	-	-	15
31	-	-	4	-	1	1	6
32	-	-	-	3	-	-	3
All (n)	17	35	43	13	1	1	110
All (%)	15	32	39	12	1	1	100%

Throughout the 1998 fishing season, 19 separate sampling events (190 fish) occurred, data and samples were sent to the NMFS where analysis is on-going.

AMERICAN SHAD

The ASMFC American Shad and River Herring Technical Committee finalized the stock assessment for American shad in preparation for the development and adoption of Amendment 1 to the FMP.

The original stock assessment and questions on natural mortality rates used for different stocks were reviewed by a Peer Review Committee convened in March 1998. The Peer Review Committee commented on the status of stocks, specifically, the seven river-specific populations for which adequate data were available. They concluded that ocean intercept fisheries threaten small shad stocks and could hinder restoration efforts of hatchery-supplemented stocks.

Amendment 1 to the ASMFC American Shad FMP was approved by the Management Board in August 1998 on condition of a few changes in the document. Amendment 1 provides for the phase out of ocean intercept fisheries and requires the implementation of bag limits in the recreational fishery.

ATLANTIC STURGEON

The ASMFC Atlantic Sturgeon Plan Development Team finalized a Draft Amendment 1 to the FMP, scheduled for adoption by June 1998. The Draft Amendment 1 was reviewed by the NMFS and the USFWS in connection with an Endangered Species Act listing petition.

The Atlantic Sturgeon Technical Committee and the Stock Assessment Subcommittee met to finalize the Atlantic sturgeon stock assessment which was reviewed by a Peer Review Panel convened by the ASMFC. The Peer Review Panel concurred with the stock assessment's recommendation for a moratorium on the harvest of Atlantic sturgeon until 20 year classes of adult females could be documented. They further agreed to prohibit ocean intercept fisheries and gather more data on by-catch mortality.

Amendment 1 to the ASMFC Atlantic Sturgeon FMP was subsequently adopted.

AMERICAN LOBSTER

Amendment 3 to the ASMFC American Lobster FMP was developed to enhance egg production and reduce fishing effort. The American Lobster Stock Assessment Subcommittee reviewed and improved the Egg Production Model prior to the adoption of Amendment 3. The Technical Committee further refined and reviewed runs of the egg per recruit model, discussed protocol for biological parameters for sea and dock sampling data collections and laboratory holding studies.

The Draft Environmental Impact Statement for Federal Lobster Management in the Exclusive Economic Zone was reviewed and a public hearing was held in New Jersey where fishermen voiced concerns regarding the restrictive pot limits and designated management areas.

Members of the New Jersey lobster industry were submitted as candidates to serve on the ASMFC Lobster Conservation Management Teams for Areas 3, 4 and 5. Lobster pot fishermen from New York and New Jersey met to develop regional management measures for Area 4 to end overfishing of area stocks. A later meeting of Lobster Conservation Management Team for ASMFC Area 4 focused on the need to cap effort, limit entry into the trap fishery and assess the potential for various management measures to increase egg production.

AMERICAN EEL

The New Jersey Legislature debated a bill introduced to establish several management measures to govern the springtime glass eel fishery in 1998. The bill was never passed and there was no glass eel fishery in New Jersey in 1998.

To provide biological data to the developing ASMFC FMP for the American Eel, Bureau personnel sampled two creeks in April 1998 to acquire data on length frequency of glass eels (Figures 1 and 2).

WEAKFISH

Gill Net Mesh Exemption Program -- Under this program gill net fishermen may apply for a permit to fish gill nets with a mesh of a least 2.75 inches and less than 3.25 inches within two nautical miles of the mean high water line. The program was instituted to allow continuation of a traditional multi-species fishery that was eliminated in 1992 when the minimum gill net mesh size of 3.25 inches was implemented in keeping with the L₂₅ retention for a 13 inch weakfish. The primary species targeted by this fishery are butterfish, northern kingfish, spot and Atlantic menhaden in the summer and white perch and river herring in the winter.

In 1997, 21 individuals applied for and were issued permits. Eleven reported no activity for the year.

Eight species, other than weakfish, with a total weight of 39,232 pounds were landed (Table 1). Atlantic menhaden accounted for 64 percent of the total and "herring" 20 percent. Fishermen reported taking 1,556 weakfish, 90 percent of which were of legal size. The majority of these fish were landed since only 207 weakfish were reported during the closed season, when all weakfish had to be returned to the water.

HORSESHOE CRABS

During the project segment, New Jersey developed and adopted two amendments to its Horseshoe Crab Rule, N.J.A.C. 7:25-1816, containing several measures designed to reduce fishing pressure on the horseshoe crab resource and establish eligibility criteria for obtaining a permit to harvest horseshoe crabs in future years.

The ASMFC Horseshoe Crab Technical Committee (TC) was formed and met for the first time on April 8, 1998. The TC, working with the Plan Development Team and the Stock Assessment Subcommittee was charged by the Management Board with developing a horseshoe crab FMP for adoption by the ASMFC in October 1998.

A draft FMP was produced for Management Board review, separate preferred management options were advanced by the TC and the Advisory Panel.

The two bi-annual reports covering this project segment chronicle the many meetings and workshops required to meet the ambitious schedule of producing a horseshoe crab FMP for adoption in such a short period of time.

PORT SAMPLING

Following appropriate NMFS protocol, commercial fishing ports were visited by Bureau personnel to collect length frequency data and age samples dockside on selected commercial species. Twenty three samples were collected for six species: summer flounder, bluefish, scup, winter flounder, sea herring and Atlantic mackerel. Table 2 lists the number of samples collected by species, market category and port for the project segment. All data sheets and age samples were forwarded to the NMFS for incorporation into their port sampling database. Bi-weekly sampling reports were also provided listing vessel, species, market category, gear, number of lengths and number of age samples.

MARINE ENFORCEMENT

State Conservation Officers expended 8,110 hours enforcing fisheries regulations consistent with the compliance standards established by the management plans of the ASMFC. New Jersey's 128 miles of coast and inshore marine areas were patrolled by vehicle, boat, and aircraft. Patrols are tailored to maximize recreational and commercial contacts. During this project segment, 674 inspections of commercial fishermen and 8,942 inspections of recreational fishermen were conducted. Commercial patrols are concentrated among the commercial docks at Belford, Point Pleasant, Long Beach Island, Atlantic City, and Cape May. Recreational patrols are conducted both dockside and by patrol vessel, both in uniform and covertly in civilian attire. During commercial patrols, commercial vessels are routinely inspected for compliance with logbook and reporting requirements, fish sizes and/or bag limits, net types, mesh sizes, and open/closed seasons. Recreational patrols typically inspect coolers and vessels for compliance with open/closed seasons and bag and/or size limits.

During the period of September 1, 1997 through August 31, 1998, the Marine Enforcement Unit issued the following summons for the listed violations:

1. Over limit on blackfish	3
2. Take sublegal blackfish (<13")	31
3. Possess sublegal sea bass (<9")	30
4. Possess sea bass parts	4
5. Over limit on fluke	2
6. Land fluke in excess of trip limit	3

7. Possess sublegal fluke (<14 1/2")	128
8. Possess parts of fluke (recreational)	20
9. Fail to notify fluke offload	1
10. Possess sublegal striped bass	46
11. Possess over limit of striped bass	8
12. Possess parts of striped bass (<28")	1
13. Possess striped bass during closed season	7
14. Possess sublegal weakfish (<14")	34
15. Take over the limit of weakfish (>14)	14
16. Possess weakfish parts	5
17. Sublegal Codfish	2
18. Land over trip limit of scup	2
19. Dealer accept over limit of scup	1
20. Failure to keep accurate commercial records	9
21. Possess sublegal sea bass for sale	1
22. Land sublegal lobsters	9
23. Take bluefish over the 10 fish limit	10
24. Use <4" stretched mesh while possession >100 lbs of sea bass	1
25. Lobsters with eggs	3
26. No lobster pot license	1
27. Offload fluke during unauthorized hours	1
28. Remove skin from fluke fillets	2
29. Sell striped bass	2
30. Land weakfish by otter trawl during closed season	1
31. Short monkfish tails	1

A detailed accounting of 30 specific cases is presented in the bi-annual reports covering this project segment.

TABLE 1. POUNDS OF EACH SPECIES TAKEN UNDER THE GILLNET MESH EXEMPTION PROGRAM IN 1997

MONTH	ATL. MENHADEN	SPOT	BUTTERFISH	KINGFISH	BLUEFISH	WH. PERCH	RIVER			NUMBER of WEAKFISH	
							HERRING	CROAKER		ALIVE	DEAD
FEBRUARY	245	0	0	0	0	430	1380	0	0	0	0
MARCH	970	0	0	0	0	1245	4930	0	0	0	0
APRIL	1613	0	0	0	0	485	1611	0	174	25	
MAY	4600	0	0	0	10	0	0	0	114	2	
JUNE	4898	30	0	0	307	0	0	0	12	3	
JULY	1180	0	0	0	0	0	0	0	20	0	
AUGUST	8360	36	155	210	208	0	0	205	86	16	
SEPTEMBER	675	245	123	505	135	0	0	90	880	58	
OCTOBER	2380	178	200	238	1064	0	0	26	156	10	
NOVEMBER	250	0	15	0	0	0	0	0	0	0	
TOTAL	25171	489	493	953	1724	2160	7921	321	1442	114	

Table 2. Number of samples by species, market category and port collected by State of New Jersey port samplers, September 1, 1997 to August 31, 1998.

Species and Market Category	Cape May	Point Pleasant
Summer Flounder		
Medium	2	7
Large	2	5
Bluefish		
Medium		1
Scup		
Medium		2
Large	1	
Winter Flounder		
Large		1
Sea Herring		
Unclassified	1	
Atlantic Mackerel		
Small	1	

Figure 1. LENGTH FREQUENCY OF GLASS EELS TAKEN FROM PATCONG CREEK DURING APRIL 1998

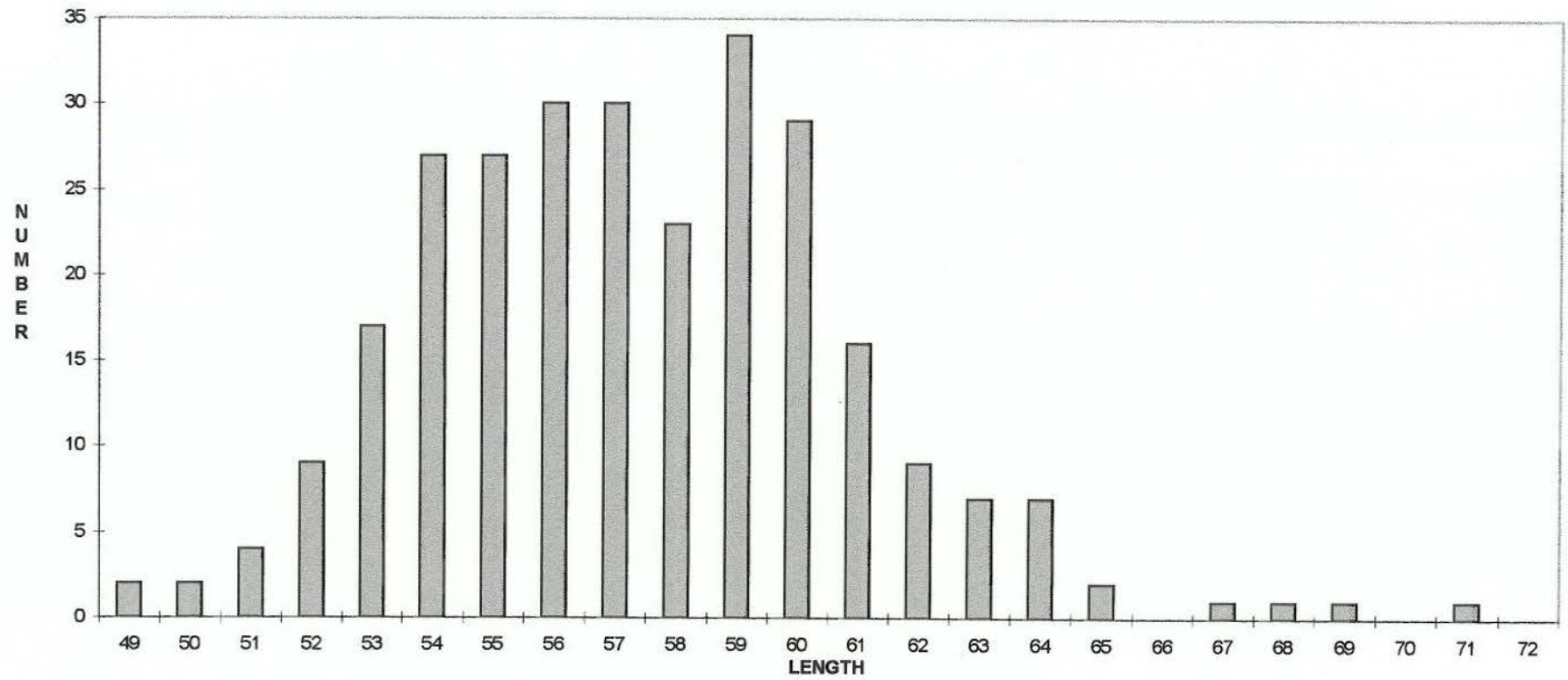


Figure 2. LENGTH FREQUENCY OF GLASS EELS TAKEN FROM NACOTE CREEK DURING APRIL 1998

