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Maryland's 2007 Tautog (*Tautoga onitis*) Compliance Report to the Atlantic States Marine Fisheries Commission

I. Introduction

The ASMFC adopted the Tautog FMP in March 1996. The FMP required states to implement a minimum possession size to increase Spawning Stock Biomass (SSB) and yield to the fishery. It also included fishing mortality targets intended to rebuild the stocks and prevent overfishing. The Tautog Management Board approved Addendum I to the FMP in May 1997.

Addendum I required all states to implement management measures to reach an interim fishing mortality target ($F=0.24$) and a 14 inch size limit by April 1, 1998. Additionally, all states were required to implement management measures to reduce the fishing mortality target to $F=M=0.15$ by April 1, 2000. The Addendum also included *de minimis* requirements and corrected several typographical errors in the original FMP.

In the fall of 1999, the Board requested that Addendum II be developed to adjust the compliance schedule and compile a list of issues to be address in a later addendum. Addendum II was approved November 1999 and extended the compliance schedule to April 2, 2002. Addendum II also introduced the following issues to be addressed in a subsequent addendum: (1) set the target fishing mortality rate (F) equal to the natural mortality rate (M) for tautog, (2) clarified the fishing mortality targets in the FMP with respect to individual state management program flexibility, (3) established monitoring requirements in the FMP, and (4) standardized data requirements to analyze management options by fishing modes within commercial and recreational fisheries.

Addendum III, approved February 2002, addressed the four issues above as well and updated information pertaining to tautog habitat and data collection provisions under the Atlantic Coastal Cooperative Statistics Program. Addendum III revised the plan target and compliance requirement of $F=M=0.15$ to $F_{40\%}$ SSB.

Addendum IV established SSB target and threshold reference points allowing the ASMFC to determine whether or not the stock is overfished. This Addendum also established a new rebuilding fishing mortality rate of $F = 0.20$ to initiate rebuilding to the SSB threshold and target levels. However, as plans were initiated to reach the target F , it became apparent that in some states the perceived 90/10 recreational/commercial harvest split was not correct. Therefore, Addendum V was approved in August 2007 to provide states management flexibility between the user groups so that reductions may be taken in a manner that reflects the fishery in a particular state.

II. Request for *De Minimis*

Not applicable.

III. Fishery and Management Programs

A. Fishery Dependant Monitoring

In 2007, 259 tautogs were captured in fish pots by commercial fishermen and purchased by MDNR for biological data collection. All tautogs sampled were measured for Total Length (TL) in millimeters (mm) and weighed in grams (g). Additional data collected included sample date, age, sex, and gear type.

Commercial fishermen were provided with permission letters which allowed them to harvest sublegal tautogs. Sampled fish lengths ranged in size from 233 mm TL (9.2 in.) to 552 mm TL (21.7 in.; Figure 1) and averaged 337 mm TL (± 7.2 ; 13.6 in.) with a mode of 350 mm (13.8 in.). Weights ranged from 244 g (0.5 lb.) to 3366 g (7.4 lbs.) with a mean of 872 g (± 63 ; 1.9 lbs.) and a mode of 843 g (1.8 lbs.).

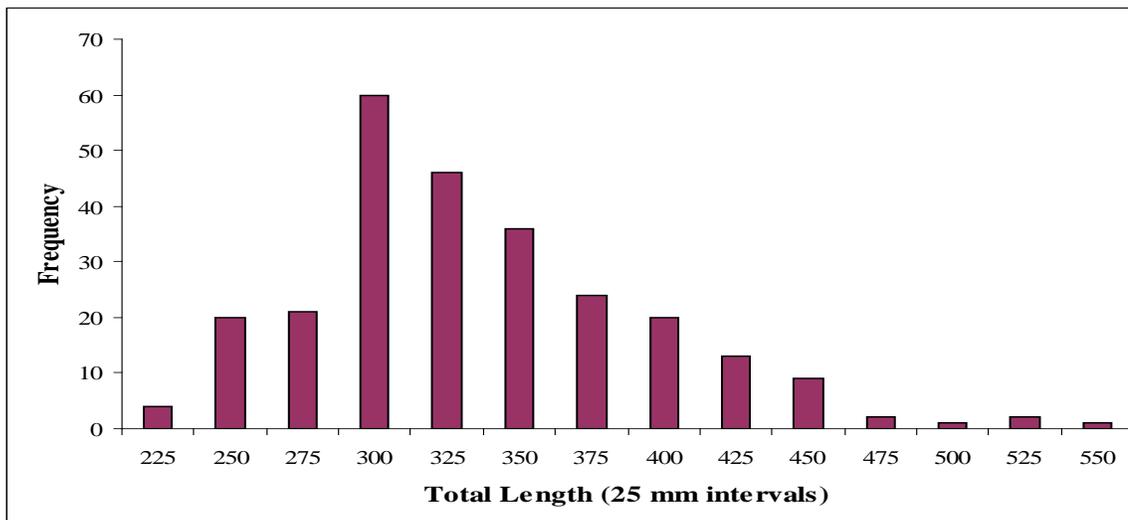


Figure 1. Length histogram of permitted tautog catches using black sea bass pots fishing out of Ocean City, MD from April through August 2007, n=259.

Females comprised 51% of the samples and averaged 331 mm TL (± 8.8 mm; 13 in.) with a mode of 313 mm in TL (12.3 in.; Figure 2). Mean female weight was 730 g (± 68.7 ; 1.6 lbs.) with a mode of 843 g (1.8 lbs.; Figure 3). Males made up 48% of the sampled tautogs and were longer (363 mm TL (± 11 ; 14.1 in.) and weighed more (1024 g (± 104.6 ; 2.3 lbs.) on average when compared to the females (Figures 2-3). This may be due to the gear limitations on the larger sized females.

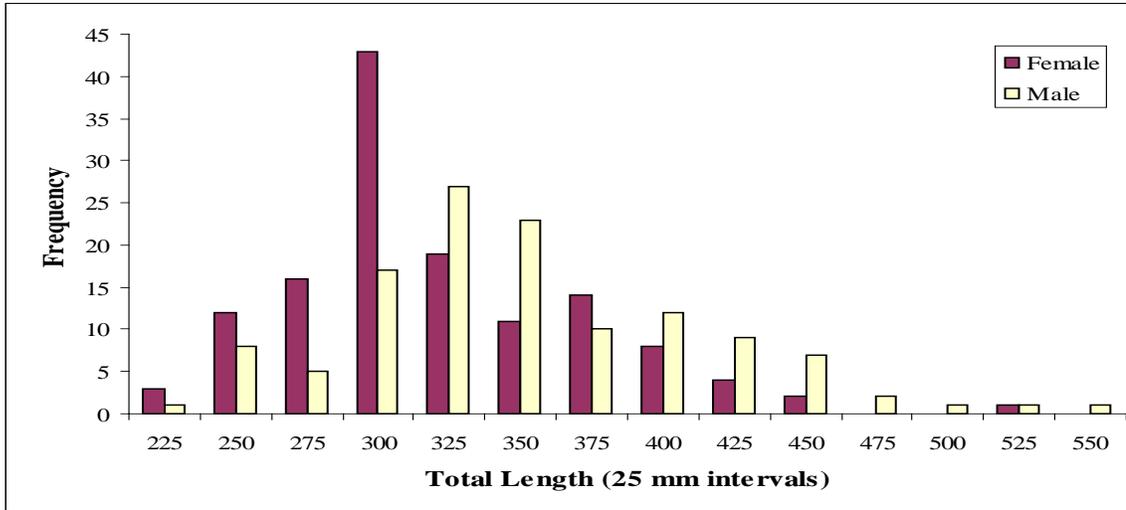


Figure 2. Length histogram of permitted tautog catches using black sea bass pots fishing out of Ocean City, MD from April through August 2007 by sex, n=257. Gender was not determined for two fish.

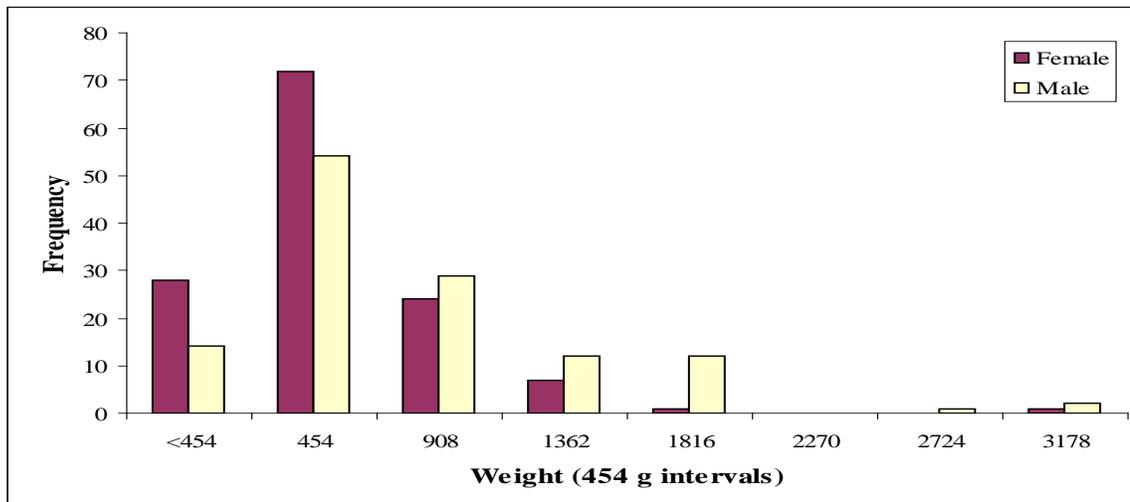


Figure 3. Weight histogram of permitted tautog catches using black sea bass pots fishing out of Ocean City, MD from April through August 2007 by sex, n=257. Gender was not determined for two fish.

B. Fishery Independent Monitoring

Juveniles were captured in the Maryland Department of Natural Resources (MDNR) annual trawl and beach seine survey, which were components of the Investigation of Maryland’s Coastal Bays and Atlantic Ocean Finfish Stocks. Tautogs were captured in one of 140 (0.7%) trawls and in three of 38 beach seines (7.9%, MDNR Unpublished). A total of 12 tautogs were collected in trawl (one fish) and beach seine (11 fish) samples conducted on Maryland’s Coastal Bays in 2007. The trawl and beach seine CPUEs were 0.06 fish/hectare and 0.3 fish/haul, respectively.

Regression analysis was performed on the 1989-2007 data to determine if there was a trend in the annual relative abundance over the time series. Trawl catch data [$\log_e(x+1)$] showed no significant trend ($P=0.8839$, Figure 4). Regression of beach seine catch data [$\log_e(x+1)$] indicated a significant trend in relative abundance ($P=0.0409$, Figure 5, MDNR Unpublished).

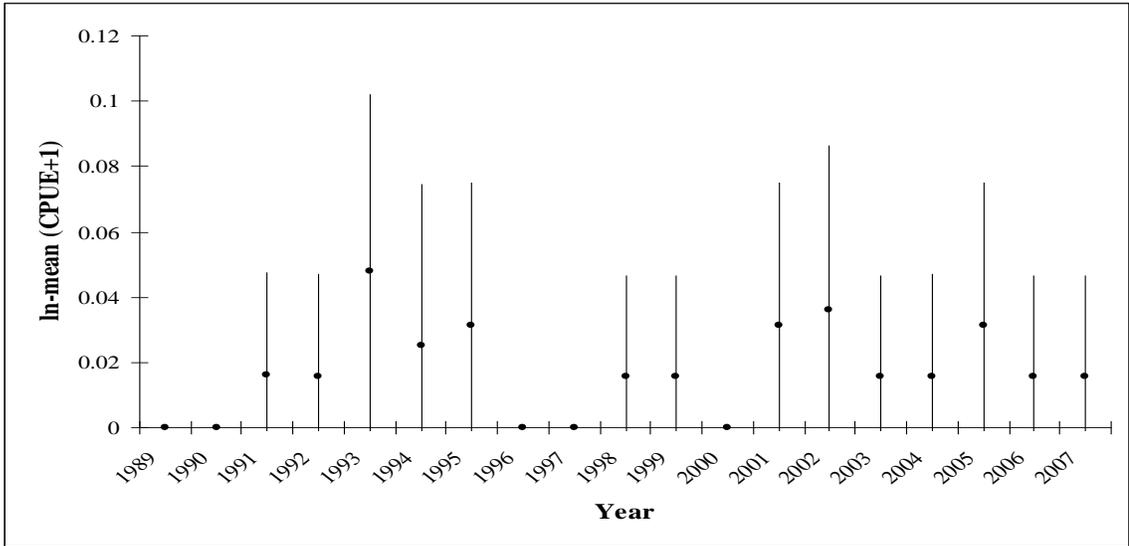


Figure 4. MDNR Coastal Bays Fisheries Investigation tautog trawl relative abundance (ln-mean CPUE+1) with 95% confidence intervals (1989–2007).

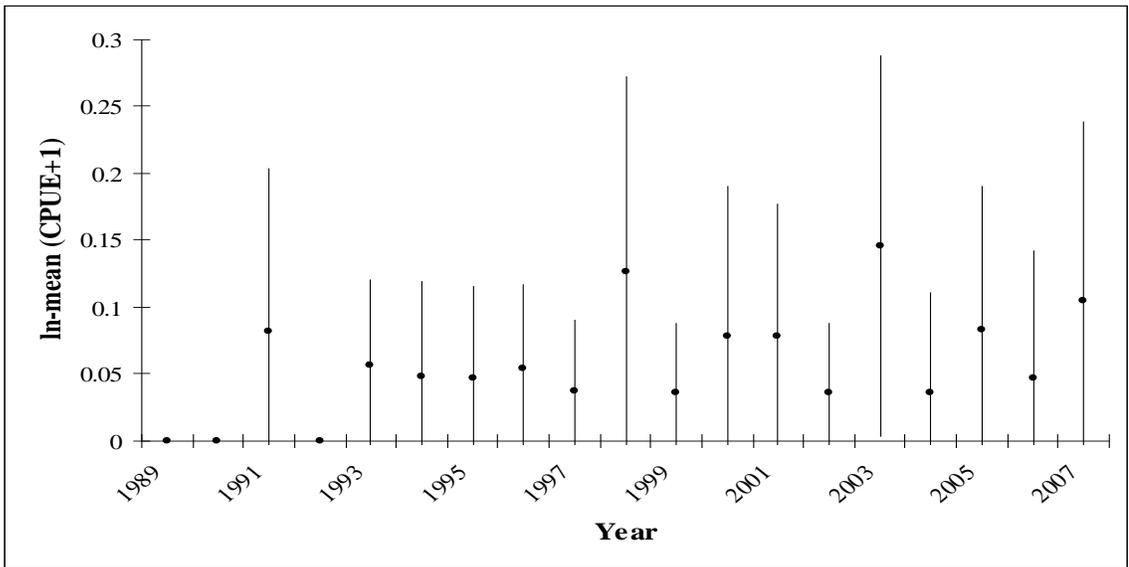


Figure 5. MDNR Coastal Bays Fisheries Investigation tautog beach seine relative abundance (ln-mean CPUE+1) with 95% confidence intervals (1989–2007).

C. Previous Year’s Fishery and Management Program

The online Code of Maryland Regulations (COMAR) pertaining to tautog (section 08.02.05.20) is online at URL: <http://www.dsd.state.md.us/comar/08/08.02.05.20.htm>.

1. An individual may not catch or possess:
 - a. A tautog less than 14 inches total length;
 - b. More than five tautog per day; and
 - c. A tautog in the month of December.
2. Gear Restrictions. A pot and trap used to catch tautog shall have hinges or fasteners on one panel or door made of one of the following degradable materials:
 - a. Untreated hemp or jute string of 3/16 inch in diameter or smaller;
 - b. Magnesium alloy fasteners; or
 - c. Ungalvanized or uncoated iron wire of 0.094-inch diameter or smaller.

D. Harvest by Gear Type

1. Commercial Landings

Commercial fishermen in MD were required to report all tautog harvests on monthly fishing reports. Fishermen landed 3,213 pounds of tautog in 2007, which was the second lowest out of the past 11 years (Figure 6). The majority of the harvest (93%) was from fish pots (Table 1).

Table 1. 2007 Tautog Commercial Harvest by Gear Type in Maryland as of February 13, 2007, n=3,213 pounds.

Gear	Landings (lbs)	Percent of Landings
Gill Net - Drift		
Hook and Line	85	2.65
Otter Trawl	27	0.84
Pots - Conch		
Pots - Fish	2982	92.81
Pots - Lobster	108	3.36
Total	3,213	100

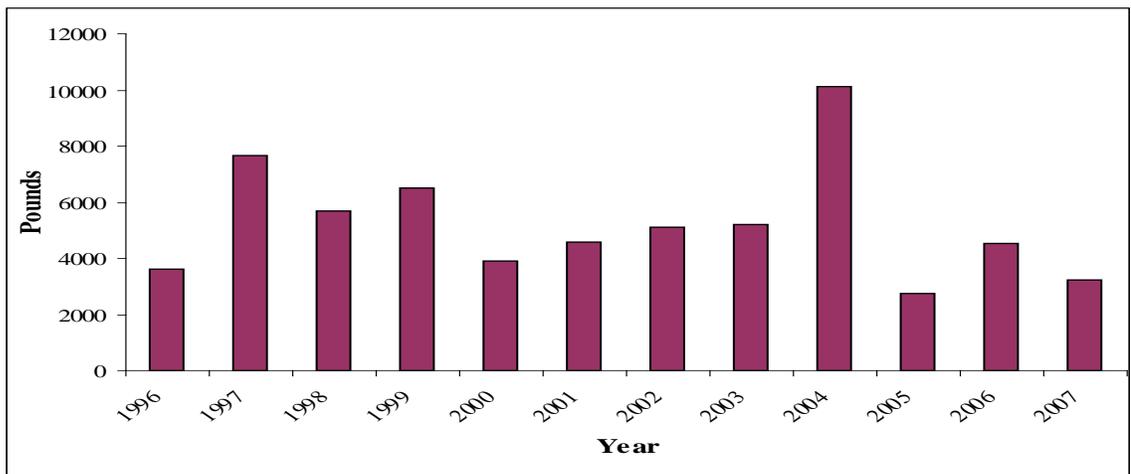


Figure 6. Commercial tautog landings in Maryland from 1996-2007 as of February 13, 2007, n=62,859 pounds.

2. Recreational Landings

The Marine Recreational Fisheries Statistics Survey (MRFSS) determined that recreational fishermen harvested 107,062 tautogs during the 2007 fishing season. According to MRFSS sampling, party/charter boat anglers accounted for 9% (9,417 fish) of the recreational harvest, while shore based anglers harvested 32% (34,057 fish) of the total recreational harvest. Private/Rentals accounted for 60% (63,588 fish) of the harvest. The 2007 MRFSS harvest number is the highest estimate for the past seven years and an investigation will be conducted to determine the cause.

E. Progress in Implementing Habitat Recommendations

There were no habitat recommendations in the plan.

IV. Planned Management for 2008

A. Summary of Regulations that will be in Effect

Commercial watermen and recreational anglers will only be allowed four tautogs per person per day from January 1 – May 15 and for the month of November. Creel limits decrease to 2 tautogs per person per day from May 16th – October 31.

B. Summary of Monitoring Programs that will be in Effect

Commercial fishermen will continue to supply tautogs for biological characterization of the fishery. MDNR will continue to monitor juveniles as part of the Investigation of Maryland's Coastal Bays and Atlantic Ocean Finfish Stocks.

C. Highlights of Changes from the Previous Year

No changes were necessary to bring the state maintain compliance with regulatory requirements. All regulations are outlined in the section labeled, Previous Year's Fishery and Management Program.

V. Plan Specific Requirements

None

VI. Law Enforcement Requirements

None

References

Bolinger, Angel, Steve Doctor, Allison Luettel, Mike Luisi, and Gary Tyler. Unpublished. *Investigation of Maryland's Coastal Bays and Atlantic Ocean Finfish Stocks 2007Report*. Maryland Department of Natural Resources. Federal Aid Project Number F-50-R-16. Annapolis, MD.