AMENDMENT 1

TO THE

BLUEFISH FISHERY MANAGEMENT PLAN

APPENDICES

VOLUME 2

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Mid-Atlantic Fishery Management Council

and the

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in cooperation with the

National Marine Fisheries Service,

the

New England Fishery Management Council,

and the

South Atlantic Fishery Management Council

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Assessment and Projection of the Atlantic Coast Bluefish stock Using a Biomass Dynamic Model

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A Report to the
Atlantic States Marine Fisheries Commission
Bluefish Technical Committee
and
Mid-Atlantic Fisheries Management Council
Statistics and Science Committee

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Introduction

Bluefish have supported a valuable recreational fishery with landings averaging 25,559 metric tons (MT) per year from 1974 to 1996. Commercial landings during the same period averaged 5,575 MT and have increased as a proportion of the total catch in recent years. Declines in the recreational catch over the past decade have triggered concerns over stock status. The Atlantic coast bluefish stock was last assessed at the 23th SARC and found to be overfished (NEFSC 1997a). Landings from the stock had declined from a peak of 51,000 mt in 1981 to about 11,000 mt in 1996. An age structured assessment using integrated catch at age analysis (ICA) estimated F in 1995 at 0.40 relative to an F_{msy} reference point of 0.20. Spawning stock biomass had declined by 63% from 1986 to 1996. Recruitment was below average since 1990. Scientific advice to managers included reducing F to very low levels to arrest the decline in SSB. Given a pessimistic assessment, the Mid-Atlantic Fishery Management Council (MAFMC) began drafting Amendment 1 to the bluefish fishery management plan (FMP). Some managers and stakeholders have been skeptical over the need for steep F reductions. Alternative interpretations of stock status include: a decline due to natural factors or a redistribution of the stock to areas outside of the fishery and survey.

Scientists have also been troubled by several aspects of the age structured assessments. First, estimates of fishing rates from VPA have been lower than those typically associated with steep declines in other species. Second, the estimated F_{msy} reference point is very low. This stems from an unusually low S-R slope which is inconsistent with the species life history. Thirdly, age structure in the catch and estimated partial recruitment are unusual. Despite falling biomass, there is little age truncation and a "saddle shaped" PR pattern is evident. Weaknesses in the current assessment include a complete reliance on NC age-length keys to characterize the stock and limited fishery independent abundance indices. Considering that bluefish have a world wide distribution and occur along the US Atlantic coast from Maine to Florida, reliance on keys from a limited geographic area may be problematic. Gibson and Lazar (1996) assessed bluefish with a DeLury model calibrated with tagging results and found that fishing mortality rates were

generally higher than indicated by full age structured assessments. They also argued that bluefish growth rates estimated from tag data were inconsistent with aging results suggesting the possibility of aging error. The tag studies they examined however were controversial and the approach did not receive peer review at the 23rd SARC. To address some of these limitations, an assessment using a biomass dynamic model was investigated. This approach does not rely on age or tag data, and as such provides an alternate perspective on the status of bluefish.

Methods and Data Sources

Survey Abundance Indices- To index coastwide stock abundance of bluefish, the NMFS/NEFSC fall inshore trawl survey conducted from Cape Cod to Cape Hatteras was used. Stratified mean weight per tow was provided by NMFS/NEFSC from 1974 to 1996. This index was used as the fishery independent abundance input to the biomass dynamic model. An index based on the NMFS/NEFSC offshore survey was also considered. This survey represents strata outside of 30 fathom depths and was expressed in stratified mean weight per tow (kgs/ tow). A series of sensitivity runs were made using the offshore survey merged with the inshore survey with equal weighting, or exclusively. These additional runs were made at the request of the ASMFC bluefish Technical Committee out of concern that the bluefish have dispersed outside of the inshore survey area. Indices from state surveys were not considered since they are largely conducted in inshore areas and catch only young of the year bluefish.

Fishery Data- Fishery landings in weight through 1997 were obtained from NMFS/NEFSC Woods Hole. Commercial data for 1974 to 1996 were complete. Landings for 1997 are preliminary MRFSS estimates, and the allocated 1997 commercial quota. Recreational landings from 1981 to 1996 were taken from revised MRFSS statistics. Estimates for years 1979-1980 were taken from original MRFSS publications (USDOC 1984). An adjustment factor of 0.84 was computed from "revised" and "old" MRFSS data for years 1981-1986 and used to adjust 1979-1980 estimates. Recreational landings for 1974 to 1978 were taken from the Boreman (1983) report. As suggested, by Anderson (1980) they were reduced by 50% to account for recall bias

in the early recreational surveys. Recreational landings included 15% of the B2 type released catch. Landings data is summarized in Table 1.

Bluefish recreational fishing effort from 1981-1997 was taken from revised MRFSS statistics and defined as fishing trips from Maine to Florida where bluefish were indicated as the primary species. Effort estimates for years 1979-1980 were taken from old MRFSS data and adjusted in a similar manner as the catch data (scaler =0.75). Fishing effort was divided into recreational catch to produce a fishery dependent abundance index (Table 1). Catch and CPUE data were the primary inputs to the biomass dynamic model . No data were available to estimate effort for years 1974-1978 and these were treated as missing values.

Assessment Model and Biological Reference Points- We used the ASPIC biomass dynamic model of Prager (1994) to assess the status of the Atlantic coast bluefish stock. Biomass dynamic models were formerly known as surplus or stock production models and employed crude fitting methods based on equilibrium assumptions. The obsolete methods exploited the relationship between catch and effort directly and assumed that stocks could adjust instantly to fishery removals. The methods were poorly received early on but the problem has been attributed to poor data and biased estimation methods rather than to flaws with the basic approach (Hilborn 1979). Early attempts to apply the models sometimes yielded nonsensical results or worse, plausible results from nonsense data. Modern methods of parameter estimation under dynamic conditions are based on trends in biomass indices, hence the name biomass dynamic models. With methodological advances, agreement between biomass dynamic and full age-structured models has improved (Quinn et al. 1985, Punt 1988, NEFSC 1997b). Biomass dynamic models are attractive because of their simplicity and relatively limited data needs. They do not utilize age structure and provide an alternative interpretation to stock status data. Reauthorization of the Magnuson Fishery Conservation Act by Congress has provided a compelling reason to emphasize biomass dynamic modeling in fish stock assessment. The Act now requires explicit treatment of sustainable fishing rates for exploited stocks and rebuilding

plans for depleted stocks. Since biomass dynamic models provide estimates of fishing rates and stock size for maximum sustainable yield (F_{msy}, B_{msy}), they have again become attractive tools for assessment biologists.

The basis of ASPIC is the Graham-Schaefer production model. Russell (1931) algebraically formulated the mass-balance concept for fish population dynamics whereby stock abundance changes according to additions from growth and recruitment and losses from natural and fishing mortality. In differential equation form, assuming logistic growth law, the Graham-Schaefer model is:

$$dB/dt = rB(1-B/k)-C \qquad (3)$$

Where:
B= stock biomass
C= catch rate
r= intrinsic rate of increase
k= unfished stock size.

Catch rate in the fishery is assumed to be proportional to stock size so that:

$$C=qEB \qquad (4)$$

where:
C= catch rate
E= fishing effort
B= stock biomass
q= catchability coefficient.

Eq. 4 implies that catch per unit effort (CPUE) is proportional to stock abundance through a catchability coefficient. This is often referred to as the "observation model" and may be in the form of fishery or survey CPUE. The model given by eqs. 3-4 has well known properties, the most important of which is that the surplus production curve with respect to biomass is symmetrical so that production is maximized at k/2. In eq. 3 it can be seen that the term (1-B/k) is the density dependent feedback term that modulates stock growth. When B is low, the

term approaches 1 and maximum growth is realized. When B is high, the term approaches zero and and stock growth is zero. Catch rates in excess of biomass produced lead to stock declines. Conversely, in order to rebuild depleted stocks, catch must be less than production. Management quantities of interest are defined as follows:

Maximum sustainable yield (MSY)	$rk/4$
Biomass for MSY (B_{msy})	$k/2$
Fishing rate at MSY (F_{msy})	$r/2$
Effort at Fmsy (f_{msy})	$r/2q$
Maximum F rate near collapse (F_{coll})	r
Effort at maximum F (f_{coll})	r/q

Prager (1994) suggests an alternative reference fishing rate to F_{msy} which is more conservative. He argues that 90% of the F_{msy} value is analogous to the $F_{0.1}$ adjustment of F_{max}. This allows for the possibility of a dual reference system consisting of an overfishing definition (F_{msy}) and a management target ($0.9*F_{msy}$).

Parameters to the model are estimated using the "time series method" assuming measurement error in the observation model (Pella and Tomlinson 1969). Hilborn and Walters (1992) give a very understandable account of biomass dynamic models and along with Polachek et al. (1993) make a compelling case to avoid unreliable and risky fitting methods. In its simplest form, the method involves estimating a beginning abundance and with the model, predicting a time series of abundance indices (U_t). The parameters r,k,q, and U_0 are adjusted until the best fit between observed and estimated abundance is achieved. A nonlinear parameter estimation method such as the Marquadt algorithm can be used to select the parameter set (U_0, r, k, q) that minimizes the sum of squared deviations between observed indices and model predicted indices assuming measurement error or:

$$\text{minimize } \Sigma (\text{obs } U_t - \text{pred } U_t)^2.$$

Under the measurement error assumption, estimated abundance indices are a time series prediction from the startting U_0 using eq. 7 in a recursive fashion. This is quite different than predicting each U_t from the observed U_{t-1} (process error assumption).

Polachek et al. (1993) have emphasized the need to account for measurement errors in estimation, lest potentially serious biases occur. Prager's (1994) ASPIC model uses the measurement error assumption. Process (eq.3) error undoubtedly exists and more complicated estimation methods can be used that require an a priori designation of the fraction of error variance due to process (Conser and Idoine 1992) . The proportion specified controls the degree of smoothing that the population dynamics process applies to the observed abundance indices. Collie and Sissenwine (1983) give a good account of the mixed error structure problem.

Once the parameters have been estimated, absolute biomass levels can be estimated from the fitted indices and the catchability coefficient (eq. 4). Estimates of fishing mortality rate can be derived from the catch data and estimated biomass, by solution of the catch equation. Prager (1994) suggests that this should only be done if the precision on estimated parameters, particularly q, is good and model diagnostics adequate. Otherwise he suggests presenting relative F and relative biomass trends which are year specific estimates of F and B standardized by F_{msy} and B_{msy} respectively. In this way, managers can be appraised of relative stock status but imprecision associated with the catchability parameter is cancelled out.

Parameter estimation in biomass dynamic models may be difficult if there is little contrast in the abundance indices used. The models are most successfully applied to stocks which have experienced several ups and downs in abundance with good contrast in fishing effort (Hilborn and Walters 1992). When stock abundance indices change monotonically with respect to time, there will be no information about k and the fit will be imprecise. Furthermore, model fits based on fishery CPUE alone may be biased by changing catchability. Precision on parameter estimates and accuracy of estimated stock trends can be improved through the addition of

auxiliary data to the analysis. The objective function to be minimized from above can be expanded to include additional terms corresponding to observed and predicted auxiliary data:

$$\text{minimize } \Sigma (\text{obs } U_t - \text{pred } U_t)^2 + \alpha\Sigma (\text{obs } X_t - \text{pred } X_t)^2 .$$

The X_t for example might be trawl survey abundance indices while the U_t were fishery CPUE. Each additional abundance index included requires the estimation of another catchability scaler. The α parameter represents the user specified weight that the auxiliary data receives relative to the primary data. Weights may be based on the analysts confidence in the various data sources or may be adjusted iteratively. In order for the solution to be a maximum likelihood one, the weights need to be inversely proportional to the variance (Prager 1994). The ASPIC model allows for incorporation of auxiliary abundance indices A number of ASPIC runs were made on bluefish data for years 1974-1996. Both fishery CPUE and the NMFS/NEFSC trawl survey index were included in the tuning process. The final model configuration gave equal weight to the indices. The following specifications were used: MSY estimates constrained between 1,000 and 125,000 mt, the penalty for the initial biomass not to exceed K was set to 0.25, the intrinsic rate of growth (r) was constrained between 0.2 and 1.5, and both indices were assigned equal weights (Appendix A).

Although Prager (1994) suggests inverse variance weighting, the suggested weight for the CPUE index was much larger than for the NEFSC survey index. Given the possibility of changing catchability in the fisheries CPUE index, we opted for uniform weighting. Other model specifications are included in Appendix A.

Uncertainty in parameter estimates and derived management quantities was evaluated with bootstrapping (Efron 1982). Bootstrapping involves resampling of model residuals which are then randomly added to the input effort and abundance indices to create alternate realizations of the input data. The model is successively refit to the replicate input data and the parameter

estimates and derived management quantities accumulated in frequency tables. Confidence intervals can be calculated from the outputs using standard methods or empirically based on cumulative distributions. The ASPIC model computes 80% confidence bounds from the bootstrap results and uses a non parametric analogue of the coefficient of variation know as the relative inter quartile range (RIQ). For the bluefish assessment, 1000 bootstrap trials were used. All model parameters and management quantities were reported without bias correction.

Projections of Stock Recovery- The ASPIC model contains a projection module which allows stock forecasts to be made from the model fit and a specified set of target F rates in future years. Given the population dynamics model in eq 3., it is simple to project a population ahead in time given estimates of the logistic model parameters, a starting biomass level, and a stream of desired F rates. Uncertainty in the forecasts is incorporated by utilizing the bootstrap results to give different starting biomass levels and logistic parameters. For illustration purposes only, a 10 year projection of bluefish stock size was performed for a hypothetical schedule of F reductions.

A medium term projection of 10 years (1998-2007) was run so that in the 10th year the 80% lower bound of the biomass would reach the Biomass at MSY. A harvesting strategy was identified to reach this management goal by iterating a constant fishing mortality for 10 years. If this assessment and projection approach is adopted, alternative recovery scenarios suggested by managers and stakeholders can be evaluated. Naturally, the projections assume that the process in eq. 3 is without error with constant production parameters. Natural forcing factors which result in low stock production or unusually large year classes cannot be anticipated and could invalidate the projection results.

Results

Total coastwide bluefish catch (commercial and recreational) averaged 31,000 mt since 1974, with recreational catch comprising roughly 82% of the total catch (Table 1). Total catch peaked

in 1981 and 1986 to above 50,000 mt and sharply declined to the lowest level in 1995 by about 80%. This sharp decline was attributed mainly to recreational landings that fell by 85% since 1986, while commercial landing only declined by 40% during the same period.

NEFSC fall survey index was developed for the inshore strata from 1974 to 1997 (Terceiro, 1995). Generally, this index suggests the presence of a strong year class recruited in 1981, 1984, and 1989 with poor recruitment occurring thereafter (Figure 1). General trends of the biomass index increased in late 1970's and declined from the early 1980s to low levels in 1993 and 1994, then increased slightly in 1995 and 1997 (Figure 1). Trends of the fisheries CPUE peaked in 1982 and declined to low levels in 1993 and 1994, with a moderate increase in 1995 and 1997 (Figure 2). Bluefish catches were much lower in the offshore survey which showed no significant trend and high variance for the 1974-1997 period. Lowess smoothing (Cleveland, 1979) was applied to data which indicated a stable biomass with low levels in 1997 (Figure 13).

Results of the biomass dynamic model using two series of abundance (NEFSC fall inshore and fisheries CPUE) are presented in Table 2. The two indices were strongly correlated with R=0.72. The model fitted the fisheries CPUE data well with R^2=0.80, but presented a moderate fit for the NEFSC fall survey data with R^2=0.43. The variance in the survey index was largely due to several spikes which are likely related to recruitment events. The standardized residuals of the actual and model-predicted abundance series show no obvious model mis-specifications, although the fit to the fisheries CPUE presented a stream of positive residuals from 1989 to 1995.

The model indicated that a maximum sustainable yield (MSY) of 42,730 mt can be produced by the Atlantic bluefish stock when stock biomass is approximately at B_{msy}=107,500 mt and fishing mortality on total biomass is F_{msy}=0.40. The stock production model $F_{0.1}$ is estimated at $F_{0.1}$=0.36. Stock biomass approached B_{msy} in 1980-1981 but remained below the sustainable level for the entire period 1974-1997 (Figure 3). Biomass in 1997 was estimated to 24,940 mt.

The resource is estimated to be smaller than the size at which MSY is achieved (B in 1997 is only 23% of B_{msy}). Estimates of fishing mortality on total biomass ranged from 0.34 to 0.73 from 1974 to 1985, then increased to high levels (F=0.8-0.95) in 1986-1993, then gradually declined to levels approaching F_{msy} (Figure 4). Fishing mortality in 1997 was estimated to F=0.51. Although catches have been smaller than MSY since 1987 , the model suggests that fishing mortality has consistently exceed Fmsy since 1979. Catches exceeded surplus production during 1979-1993, and have been slightly less than surplus during 1994-1997. As a result, stock biomass has declined since 1979 (Figure 5). This is also reflected in the estimates of fishing mortality, which have been about double the F_{msy} value in the 1987-1993 period.

Bootstrap results indicate that all parameters of the model were moderately estimated with RIQ values ranging from 0.02 to 0.03 for MSY and B_{msy}, and 0.32 to 0.40 for terminal year estimates such as F_{1997} and B_{1997} (Table 2). Catchability parameters had an RIQ value of 0.14. The cumulative probability curve shows that there is an 80% probability that fishing mortality in 1997 is between 0.38 and 0.60 with a RIQ=0.31 (Figure 7). Similarly the 1997 biomass estimates at 80% confidence limits ranged from 20,000 to 32,000 mt with RIQ=0.40 (Figure 8). The distribution of MSY derived from the bootstrap ranged from 41,000 mt to 44,500 mt at 80% CI, and the Biomass at MSY ranged from 98,000 mt to 113,000 mt (Figure 9 and Figure 10).

Projection results showed an increase in biomass at an average rate of approximately 15% per year along with a steady rise in landings from 8,600 mt in 1998 to about 38,800 mt in 2007 (Figure 11 and Figure 12). The B_{msy} level was reached with 80% certainty for an F=0.28. The results suggest that the stock will respond well to a reduction in F to about one half the 1997 level. Although the surplus production model assumes an average long-term population growth rate, and implicitly includes a recruitment function, it has been demonstrated that the estimates of expected biomass are robust to the specification of management strategies (Punt et al., 1995). Details of these medium term projections are presented in Appendix B.

Additional ASPIC runs were made with a combination of the NEFSC inshore and offshore survey abundance indices and with the NEFSC offshore survey index only. Results of these analyses show conflicting conclusions about the status of the stock, with different levels of biomass and fishing mortality. The first run (Inshore+offshore with equal weights) indicated that a maximum sustainable yield (MSY) of 62,000 mt can be produced by the stock when stock biomass is approximately at B_{msy}=225,500 mt and fishing mortality on total biomass is F_{msy}=0.27. Estimates of F_{01} was 0.25 and the carrying capacity of the stock was more than 450,000 mt with F in 1997 about 40% above F_{msy}. The second run (offshore only) indicated that stock biomass was stable since 1974 and at much higher levels at about 7,000,000 mt. Although very large, the stock could produce about 65,000 mt at very low sustainable levels of exploitation (F_{msy}=0.018). It was clear that the influence of the offshore survey on the analysis is to increase stock size, reduce F, and reduce F_{msy} to unrealistic levels. Given the low catch rates and high variance, model results based on the offshore were considered unreliable.

Discussion

Assessment of Atlantic bluefish with the ASPIC model tuned to the inshore survey data indicates that bluefish biomass has fallen to low levels in association with fishing rates well in excess of F_{msy}. Accepting F_{msy}=0.40 from the ASPIC model as an overfishing definition, bluefish have been overfished since 1979. The stock is currently well below levels needed to deliver MSY. Recent estimates of F have moderated to near F_{msy} (F_{97}=0.51) and stock abundance has stabilized at a low level in recent years coincident to the implementation of MAFMC plan in 1991. The biomass dynamic model results are at odds with the SARC 23 VPA which shows rising fishing mortality in recent years. The production parameter from ASPIC (r=0.8) is more consistent with a highly fecund species that matures early in contrast with VPA results which indicate a very low R/S ratio. Estimates of F from the ASPIC model are also similar to tag results in Gibson and Lazar (1996) which are now independent of the assessment.

They estimated an F=0.72 during the late 1960s which increased to F=0.93 during the late 1980s.

The projection results are intended to be illustrative only. They were configured around the 10 year time horizon required by national standards. F rates after 1997 in the projection were iterated until the lower 80% confidence bound on stock biomass reached the B_{msy} level. The projections suggest that the bluefish stock can recover to former levels of abundance given a reduction in F to about 0.28. This is well below the 1997 estimate of F=0.51. Other scenarios are easy to examine and should be considered for stock rebuilding. The draft MAMFC plan amendment recognizes F_{30} and F_{20} as target and overfishing levels respectively. These were estimated in the SARC 23 assessment at 0.42 and 0.59. The ASPIC model counterparts of $F_{0.1}$=0.37 and F_{msy}=0.40 are more conservative. The SARC-23 advice included reducing F to 0.06 or less to stabilize SSB. The biomass dynamic model assessment suggests a less severe F reduction could initiate a stock rebuilding.

An important caveat to this assessment is that inshore survey is representative of bluefish relative abundance. If the epicenter of the bluefish stock has shifted to offshore waters, the inshore survey may exaggerated decline. The stock estimates in this case would be biased low and fishing mortality would be too high. A number of model refinements are possible. First, the effort series may be extended back to 1974 using results from tagging studies or the USFWS National and Hunting surveys. These data may be used to gauge relative change in missing fishing efforts . Secondly, it may be possible to develop another biomass index in absolute units from the MARMAP surveys. Bluefish egg and larval abundance were estimated from 1978-1987 by NMFS ichthyoplankton surveys along the Atlantic coast. It may be possible to expand egg or larval densities over the survey area and; with estimates of mortality rates, bluefish fecundity, and mean weight; estimate the spawning biomass of bluefish in the stock area. An absolute biomass index would be useful in better estimating catchability coefficients of the biomass dynamic model and possibly unfished stock size (k). An absolute abundance index would be

useful in resolving problems associated with the NEFSC offshore survey. More work needs to be done on interpreting F estimates from the ASPIC model, in particular how a biomass based F compares to fully recruited F from age structured assessments.

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Table 1: Estimated bluefish catch: Commercial landings, recreational landings, and 15% of recreational discards (B2). Commercial landings from Terceiro (1995); recreational 81-96 from MRFSS and 79-80 from MRFSS reports scaled for revisions by 0.839; and 74-78 from Boreman (1983) adjusted by 0.5 as suggested by Anderson (1980). Estimated recreational effort from MRFSS for bluefish directed trips, NEFSC fall and inshore trawl survey index, and the NEFSC offshore trawl survey.

Year	Recreational Catch (mt)	Commercial catch (mt)	Total catch (mt)	Recreational Effort (x1000 trips)	Recreational CPUE (mt/1000 trips)	NEFSC fall Inshore index (kgs/tow)	NEFSC fall Offshore index (kgs/tow)
1974	29,466	4,538	34,004	-	-	1.484	1.500
1975	26,677	4,502	31,179	-	-	5.587	0.900
1976	25,837	4,547	30,384	-	-	5.724	0.500
1977	25,983	4,802	30,785	-	-	6.546	0.800
1978	24,937	5,629	30,566	-	-	5.875	0.700
1979	40,793	4,983	45,776	8,503	4.797	7.443	1.103
1980	41,987	6,858	48,845	8,811	4.765	7.031	0.400
1981	43,935	7,466	51,401	5,992	7.332	13.183	0.600
1982	36,009	6,996	43,005	6,272	5.741	4.823	0.995
1983	41,217	7,166	48,383	10,012	4.117	3.958	0 670
1984	31,226	5,381	36,607	6,783	4.604	7.682	0.354
1985	24,320	6,124	30,444	7,324	3.321	3.451	0.958
1986	43,449	6,657	50,106	8,970	4.844	3.913	0.817
1987	34,961	6,579	41,540	7,738	4.518	2.703	1.075
1988	22,906	7,162	30,068	9,407	2.435	1.982	0.639
1989	18,699	4,740	23,439	11,076	1.688	9.132	0.377
1990	14,789	6,246	21,035	10,631	1.391	2.513	0 704
1991	16,190	6,160	22,350	12,946	1.251	2.063	0.298
1992	11,973	5,214	17,187	10,522	1.138	1.363	0.784
1993	9,991	4,664	14,655	10,395	0.961	0.736	0.779
1994	7,869	4,284	12,153	9,528	0.826	1.673	1.247
1995	7,242	3,594	10,836	7,243	1.000	2.054	1.144
1996	7,404	3,944	11,348	5,796	1.277	2.264	0.195
1997	7,606	4,000	11,606	6,203	1.226	1.367	0.483

Table 2: Results of ASPIC output, a non equilibrium surplus production model with NEFSC inshore inde and recreational CPUE with trips targeting bluefish.

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CONTROL PARAMETERS USED (FROM INPUT FILE)

Number of years analyzed:	24	Number of bootstrap trials:	1000
Number of data series:	2	Lower bound on MSY:	1.000E+01
Objective function computed:	ln EFFORT	Upper bound on MSY:	1.200E+05
Relative conv. criterion (simplex):	5.000E-09	Lower bound on r:	2.000E-01
Relative conv. criterion (restart):	3.000E-08	Upper bound on r:	1.500E+00
Relative conv. criterion (effort):	1.000E-04	Random number seed:	4455973
Maximum F allowed in fitting:	2.000	Monte Carlo search trials:	10000

PROGRAM STATUS INFORMATION (NON-BOOTSTRAPPED ANALYSIS) code 0

Normal convergence.

CORRELATION AMONG INPUT SERIES EXPRESSED AS CPUE (NUMBER OF PAIRWISE OBSERVATIONS BELOW)

1 RECREATIONAL CPUE	1.000	
	19	
2 NEFSC INSHORE index	0.721	1.000
	19	24
	1	2

GOODNESS-OF-FIT AND WEIGHTING FOR NON-BOOTSTRAPPED ANALYSIS

Loss component number and title	Weighted SSE	N	Weighted MSE	Current weight	Suggested weight	R-squared in CPUE
Loss(-1): SSE in yield	0.000E+00					
Loss(0) Penalty for B1R > 2	0.000E+00	1	N/A	2.500E-01	N/A	
Loss(1) RECREATIONAL CPUE	8.199E-01	19	4.823E-02	1.000E+00	1.816E+00	0.800
Loss(2) NEFSC INSHORE index	5.475E+00	24	2.489E-01	1.000E+00	3.523E-01	0.429

TOTAL OBJECTIVE FUNCTION: 6.295073 17E+00

Number of restarts required for convergence:	27
Est B-ratio coverage index (0 worst, 2 best)	0.7779
Est B-ratio nearness index (0 worst, 1 best)	0.9292

MODEL PARAMETER ESTIMATES (NON-BOOTSTRAPPED)

Parameter		Estimate	Starting guess	Estimated	User guess
B1R	Starting biomass ratio, year 1974	5.851E-01	6.000E-01	1	1
MSY	Maximum sustainable yield	4.273E+04	4.000E+04	1	1
r	Intrinsic rate of increase	7.946E-01	5.000E-01	1	1
.....	Catchability coefficients by fishery:				
q(1)	RECREATIONAL CPUE	6.965E-05	7.000E-05	1	1
q(2)	NEFSC INSHORE index	7.916E-05	8.000E-05	1	1

MANAGEMENT PARAMETER ESTIMATES (NON-BOOTSTRAPPED)

Parameter		Estimate	Formula	
MSY	Maximum sustainable yield	4.273E+04	Kr/4	
K	Maximum stock biomass	2.151E+05		
Bmsy	Stock biomass at MSY	1.075E+05	K/2	
Fmsy	Fishing mortality at MSY	3.973E-01	r/2	
F(0.1)	Management benchmark	3.576E-01	0.9*Fmsy	
Y(0.1)	Equilibrium yield at F(0.1)	4.230E+04	0.99*MSY	
B-ratio	Ratio of B(1998) to Bmsy	2.322E-01		
F-ratio	Ratio of F(1997) to Fmsy	1.288E+00		
Y-ratio	Proportion of MSY avail in 1998	4.104E-01	2*Br-Br^2	Ye(1998) = 1.754E+04
	Fishing effort at MSY in units of each fishery:			
fmsy(1)	RECREATIONAL CPUE	5.551E-03	r/2q(1)	f(0.1) = 5.096E-03

ESTIMATED POPULATION TRAJECTORY (NON-BOOTSTRAPPED)

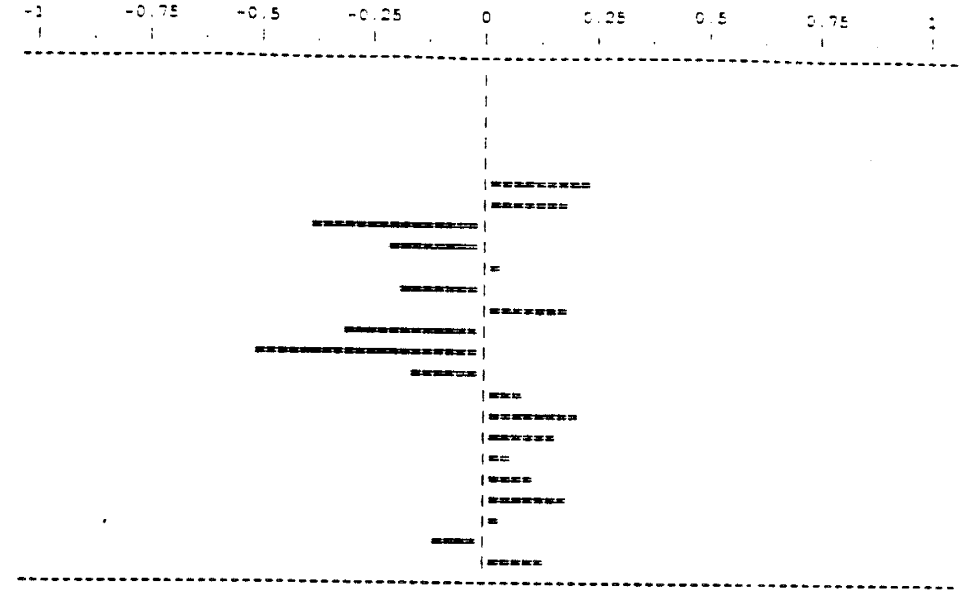
Obs	Year or ID	Estimated total F mort	Estimated starting biomass	Estimated average biomass	Observed total yield	Model total yield	Estimated surplus production	Ratio of F mort to Fmsy	Ratio of biomass to Bmsy
1	1974	0.533	6.293E+04	6.378E+04	3.400E+04	3.400E+04	3.565E+04	1.342E+00	5.851E-01
2	1975	0.462	6.457E+04	6.745E+04	3.118E+04	3.118E+04	3.678E+04	1.163E+00	6.004E-01
3	1976	0.406	7.017E+04	7.451E+04	3.022E+04	3.022E+04	3.868E+04	1.021E+00	6.525E-01
4	1977	0.368	7.863E+04	8.369E+04	3.078E+04	3.078E+04	4.060E+04	9.258E-01	7.311E-01
5	1978	0.324	8.844E+04	9.440E+04	3.057E+04	3.057E+04	4.205E+04	8.149E-01	8.224E-01
6	1979	0.467	9.993E+04	9.812E+04	4.578E+04	4.578E+04	4.240E+04	1.174E+00	9.292E-01
7	1980	0.526	9.655E+04	9.284E+04	4.884E+04	4.884E+04	4.192E+04	1.324E+00	8.977E-01
8	1981	0.614	8.962E+04	8.379E+04	5.147E+04	5.147E+04	4.061E+04	1.546E+00	8.333E-01
9	1982	0.562	7.876E+04	7.672E+04	4.308E+04	4.308E+04	3.921E+04	1.413E+00	7.323E-01
10	1983	0.703	7.489E+04	6.887E+04	4.842E+04	4.842E+04	3.717E+04	1.769E+00	6.963E-01
11	1984	0.582	6.364E+04	6.297E+04	3.668E+04	3.668E+04	3.539E+04	1.465E+00	5.917E-01
12	1985	0.467	6.235E+04	6.525E+04	3.046E+04	3.046E+04	3.611E+04	1.175E+00	5.798E-01
13	1986	0.845	6.800E+04	5.931E+04	5.013E+04	5.013E+04	3.406E+04	2.128E+00	6.323E-01
14	1987	0.930	5.192E+04	4.466E+04	4.154E+04	4.154E+04	2.807E+04	2.341E+00	4.628E-01
15	1988	0.864	3.845E+04	3.481E+04	3.007E+04	3.007E+04	2.317E+04	2.174E+00	3.575E-01
16	1989	0.780	3.155E+04	3.005E+04	2.344E+04	2.344E+04	2.054E+04	1.963E+00	2.933E-01
17	1990	0.760	2.865E+04	2.769E+04	2.104E+04	2.104E+04	1.917E+04	1.912E+00	2.664E-01
18	1991	0.935	2.678E+04	2.389E+04	2.235E+04	2.235E+04	1.687E+04	2.354E+00	2.490E-01
19	1992	0.869	2.130E+04	1.979E+04	1.719E+04	1.719E+04	1.427E+04	2.186E+00	1.980E-01
20	1993	0.844	1.838E+04	1.737E+04	1.466E+04	1.466E+04	1.269E+04	2.123E+00	1.710E-01
21	1994	0.744	1.642E+04	1.634E+04	1.215E+04	1.215E+04	1.200E+04	1.872E+00	1.527E-01
22	1995	0.634	1.626E+04	1.709E+04	1.084E+04	1.084E+04	1.250E+04	1.596E+00	1.512E-01
23	1996	0.592	1.793E+04	1.918E+04	1.135E+04	1.135E+04	1.388E+04	1.489E+00	1.667E-01
24	1997	0.512	2.046E+04	2.267E+04	1.161E+04	1.161E+04	1.611E+04	1.288E+00	1.903E-01
25	1998		2.497E+04						2.322E-01

RESULTS FOR DATA SERIES # 1 (NON-BOOTSTRAPPED) RECREATIONAL CPUE

Data type CC: CPUE-catch series Series weight 1.000

Obs	Year	Observed effort	Estimated effort	Estim F	Observed yield	Model yield	Resid in log effort	Resid in yield
1	1974	*	8.790E+03	0.5332	3.400E+04	3.400E+04	0.00000	0.000E+00
2	1975	*	7.621E+03	0.4623	3.118E+04	3.118E+04	0.00000	0.000E+00
3	1976	*	6.687E+03	0.4056	3.022E+04	3.022E+04	0.00000	0.000E+00
4	1977	*	6.065E+03	0.3678	3.078E+04	3.078E+04	0.00000	0.000E+00
5	1978	*	5.338E+03	0.3238	3.057E+04	3.057E+04	0.00000	0.000E+00
6	1979	9.543E+03	7.691E+03	0.4665	4.578E+04	4.578E+04	0.21566	0.000E+00
7	1980	1.025E+04	8.674E+03	0.5261	4.884E+04	4.884E+04	0.16700	0.000E+00
8	1981	7.020E+03	1.013E+04	0.6143	5.147E+04	5.147E+04	-0.36648	0.000E+00
9	1982	7.504E+03	9.259E+03	0.5616	4.308E+04	4.308E+04	-0.21011	0.000E+00
10	1983	1.176E+04	1.159E+04	0.7030	4.842E+04	4.842E+04	0.01455	0.000E+00
11	1984	7.966E+03	9.603E+03	0.5824	3.668E+04	3.668E+04	-0.18687	0.000E+00
12	1985	9.173E+03	7.697E+03	0.4669	3.046E+04	3.046E+04	0.17533	0.000E+00
13	1986	1.035E+04	1.394E+04	0.8453	5.013E+04	5.013E+04	-0.29758	0.000E+00
14	1987	9.195E+03	1.534E+04	0.9301	4.154E+04	4.154E+04	-0.51151	0.000E+00
15	1988	1.235E+04	1.424E+04	0.8638	3.007E+04	3.007E+04	-0.14263	0.000E+00
16	1989	1.389E+04	1.286E+04	0.7801	2.344E+04	2.344E+04	0.07662	0.000E+00
17	1990	1.512E+04	1.253E+04	0.7598	2.104E+04	2.104E+04	0.18834	0.000E+00
18	1991	1.787E+04	1.542E+04	0.9354	2.235E+04	2.235E+04	0.14706	0.000E+00
19	1992	1.510E+04	1.432E+04	0.8686	1.719E+04	1.719E+04	0.05318	0.000E+00
20	1993	1.525E+04	1.391E+04	0.8436	1.466E+04	1.466E+04	0.09208	0.000E+00
21	1994	1.471E+04	1.226E+04	0.7438	1.215E+04	1.215E+04	0.18219	0.000E+00
22	1995	1.084E+04	1.045E+04	0.6340	1.084E+04	1.084E+04	0.03596	0.000E+00
23	1996	8.886E+03	9.753E+03	0.5916	1.135E+04	1.135E+04	-0.09308	0.000E+00
24	1997	9.467E+03	8.440E+03	0.5119	1.161E+04	1.161E+04	0.11477	0.000E+00

UNWEIGHTED LOG RESIDUAL PLOT FOR DATA SERIES # 1



Year	Residual
1974	0.0000
1975	0.0000
1976	0.0000
1977	0.0000
1978	0.0000
1979	0.2157
1980	0.1670
1981	-0.3665
1982	-0.2101
1983	0.0145
1984	-0.1869
1985	0.1753
1986	-0.2976
1987	-0.5115
1988	-0.1426
1989	0.0766
1990	0.1883
1991	0.1471
1992	0.0532
1993	0.0921
1994	0.1822
1995	0.0360
1996	-0.0931
1997	0.1148

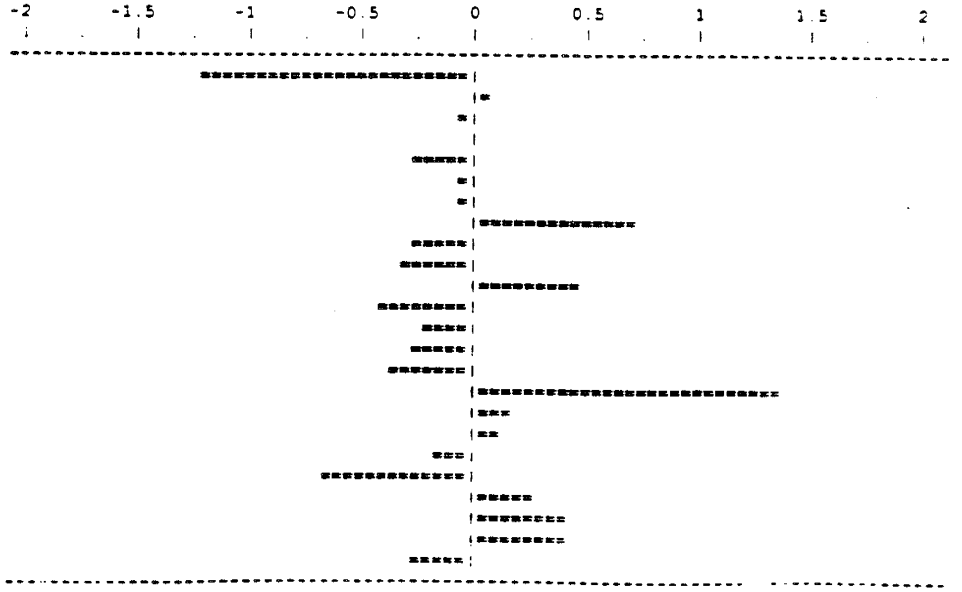
RESULTS FOR DATA SERIES # 2 (NON-BOOTSTRAPPED) NEFSC INSHORE index

Data type 11. Year-average biomass index

Series weight 1.000

Obs	Year	Observed effort	Estimated effort	Estim F	Observed index	Model index	Resid in log index	Resid in index
1	1974	1.000E+00	1.000E+00	0.0	1.484E+00	5.049E+00	-1.22438	-3.565E+00
2	1975	1.000E+00	1.000E+00	0.0	5.587E+00	5.339E+00	0.04533	2.476E-01
3	1976	1.000E+00	1.000E+00	0.0	5.724E+00	5.899E+00	-0.03005	-1.746E-01
4	1977	1.000E+00	1.000E+00	0.0	6.546E+00	6.625E+00	-0.01199	-7.897E-02
5	1978	1.000E+00	1.000E+00	0.0	5.875E+00	7.473E+00	-0.24055	-1.598E+00
6	1979	1.000E+00	1.000E+00	0.0	7.443E+00	7.768E+00	-0.04268	-3.245E-01
7	1980	1.000E+00	1.000E+00	0.0	7.031E+00	7.349E+00	-0.04427	-3.183E-01
8	1981	1.000E+00	1.000E+00	0.0	1.318E+01	6.633E+00	0.68686	6.550E+00
9	1982	1.000E+00	1.000E+00	0.0	4.823E+00	6.073E+00	-0.23043	-1.250E+00
10	1983	1.000E+00	1.000E+00	0.0	3.958E+00	5.452E+00	-0.32023	-1.494E+00
11	1984	1.000E+00	1.000E+00	0.0	7.682E+00	4.985E+00	0.43252	2.697E+00
12	1985	1.000E+00	1.000E+00	0.0	3.451E+00	5.165E+00	-0.40324	-1.714E+00
13	1986	1.000E+00	1.000E+00	0.0	3.913E+00	4.695E+00	-0.18016	-7.818E-01
14	1987	1.000E+00	1.000E+00	0.0	2.703E+00	3.536E+00	-0.26850	-8.325E-01
15	1988	1.000E+00	1.000E+00	0.0	1.982E+00	2.756E+00	-0.32951	-7.736E-01
16	1989	1.000E+00	1.000E+00	0.0	9.132E+00	2.379E+00	1.34531	6.753E+00
17	1990	1.000E+00	1.000E+00	0.0	2.513E+00	2.192E+00	0.13682	3.213E-01
18	1991	1.000E+00	1.000E+00	0.0	2.063E+00	1.891E+00	0.08685	1.716E-01
19	1992	1.000E+00	1.000E+00	0.0	1.363E+00	1.566E+00	-0.13907	-2.034E-01
20	1993	1.000E+00	1.000E+00	0.0	7.360E-01	1.375E+00	-0.62513	-6.392E-01
21	1994	1.000E+00	1.000E+00	0.0	1.673E+00	1.293E+00	0.25729	3.795E-01
22	1995	1.000E+00	1.000E+00	0.0	2.054E+00	1.353E+00	0.41753	7.011E-01
23	1996	1.000E+00	1.000E+00	0.0	2.264E+00	1.519E+00	0.39939	7.455E-01
24	1997	1.000E+00	1.000E+00	0.0	1.367E+00	1.795E+00	-0.27221	-4.277E-01

UNWEIGHTED LOG RESIDUAL PLOT FOR DATA SERIES # 2



Year	Residual
1974	-1.2244
1975	0.0453
1976	-0.0300
1977	-0.0120
1978	-0.2406
1979	-0.0427
1980	-0.0443
1981	0.6869
1982	-0.2304
1983	-0.3202
1984	0.4325
1985	-0.4032
1986	-0.1822
1987	-0.2685
1988	-0.3295
1989	1.3453
1990	0.1368
1991	0.0869
1992	-0.1391
1993	-0.6251
1994	0.2573
1995	0.4175
1996	0.3994
1997	-0.2722

RESULTS OF BOOTSTRAPPED ANALYSIS

Param name	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
Biratio	5.863E-01	5.851E-01	-0.20%	5.306E-01	8.779E-01	5.605E-01	6.739E-01	1.134E-01	0.193
K	2.150E+05	2.151E+05	0.05%	1.909E+05	2.468E+05	2.064E+05	2.240E+05	1.755E+04	0.082
r	7.909E-01	7.946E-01	0.47%	5.919E-01	8.327E-01	7.497E-01	8.098E-01	6.004E-02	0.076
q(1)	5.991E-05	6.065E-05	1.24%	4.682E-05	6.773E-05	5.517E-05	6.365E-05	8.480E-06	0.142
q(2)	8.205E-05	7.916E-05	-3.52%	7.070E-05	9.238E-05	7.627E-05	8.727E-05	1.100E-05	0.134
MSY	4.271E+04	4.273E+04	0.05%	3.855E+04	4.485E+04	4.095E+04	4.362E+04	2.665E+03	0.062
Ye(1998)	1.736E+04	1.754E+04	1.04%	1.208E+04	2.319E+04	1.466E+04	2.035E+04	5.695E+03	0.328
Bmsy	1.075E+05	1.075E+05	0.05%	9.545E+04	1.234E+05	1.032E+05	1.120E+05	8.777E+03	0.082
Fmsy	3.954E-01	3.973E-01	0.47%	2.959E-01	4.163E-01	3.749E-01	4.049E-01	3.002E-02	0.076
fmsy(1)	6.667E+03	6.551E+03	-1.74%	5.965E+03	7.654E+03	6.304E+03	7.178E+03	8.748E+02	0.131
fmsy(2)	4.854E+03	5.019E+03	3.41%	4.298E+03	5.515E+03	4.564E+03	5.188E+03	6.241E+02	0.129
F(0.1)	3.559E-01	3.576E-01	0.43%	2.663E-01	3.747E-01	3.374E-01	3.644E-01	2.702E-02	0.076
Y(0.1)	4.228E+04	4.230E+04	0.05%	3.816E+04	4.441E+04	4.054E+04	4.318E+04	2.639E+03	0.062
B-ratio	2.240E-01	2.322E-01	3.65%	1.434E-01	3.247E-01	1.822E-01	2.720E-01	8.982E-02	0.401
F-ratio	1.304E+00	1.288E+00	-1.20%	9.805E-01	1.834E+00	1.118E+00	1.553E+00	4.149E-01	0.318
Y-ratio	3.979E-01	4.104E-01	3.14%	2.663E-01	5.439E-01	3.312E-01	4.700E-01	1.388E-01	0.349
f0.1(1)	6.000E+03	5.896E+03	-1.57%	5.369E+03	6.889E+03	5.673E+03	6.461E+03	7.873E+02	0.131
f0.1(2)	4.368E+03	4.517E+03	3.07%	3.868E+03	4.964E+03	4.107E+03	4.669E+03	5.617E+02	0.129
q2/q1	1.369E+00	1.305E+00	-4.65%	1.178E+00	1.596E+00	1.272E+00	1.488E+00	2.167E-01	0.158

NOTES ON BOOTSTRAPPED ESTIMATES:

- The bootstrapped results shown were computed from 1000 trials.
- These results are conditional on the constraints placed upon MSY and r in the input file (ASPIC INP)
- All bootstrapped intervals are approximate. The statistical literature recommends using at least 1000 trials for accurate 95% intervals. The 80% intervals used by ASPIC should require fewer trials for equivalent accuracy. Using at least 500 trials is recommended.
- The bias corrections used here are based on medians. This is an accepted statistical procedure, but may estimate nonzero bias for unbiased, skewed estimators

Trials replaced for lack of convergence	24
Trials replaced for MSY out-of-bounds	0
Trials replaced for r out-of-bounds	6
Residual-adjustment factor	1.0638

Figure 1: Observed and model fitted NEFSC trawl survey index (fall 1974-1997)

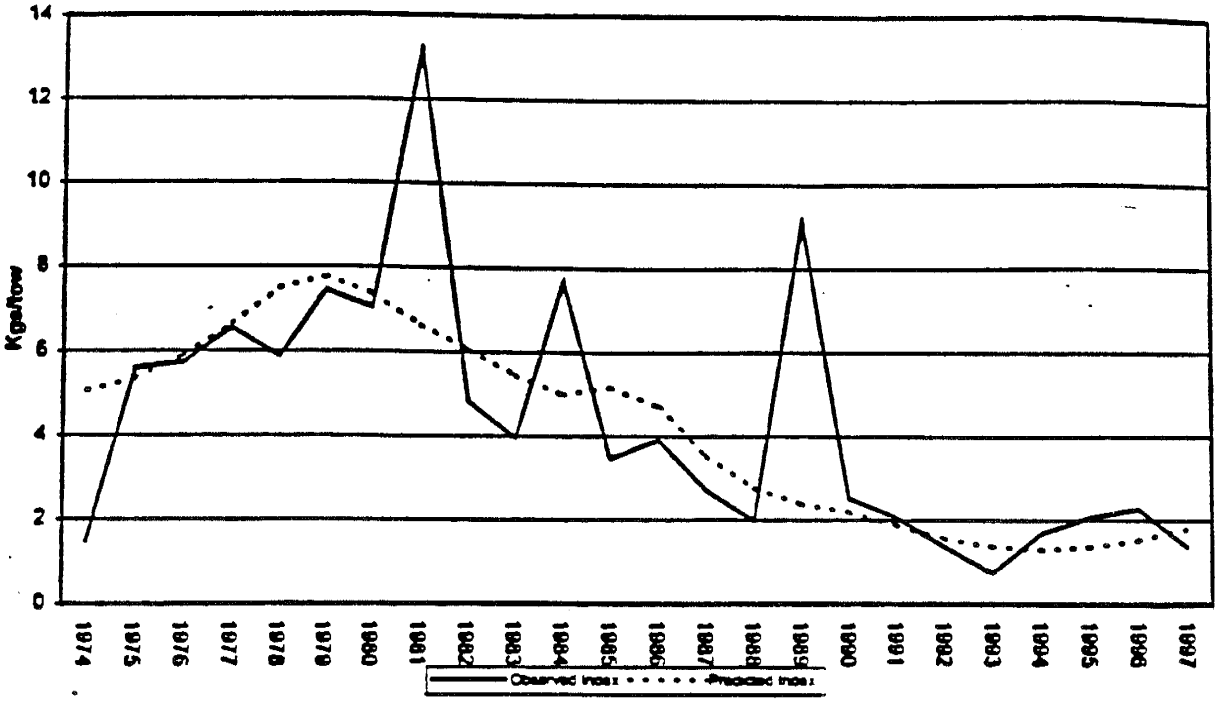


Figure 2: Observed and model fitted fisheries CPUE (Recreational only)
Data between 1974 and 1978 were missing

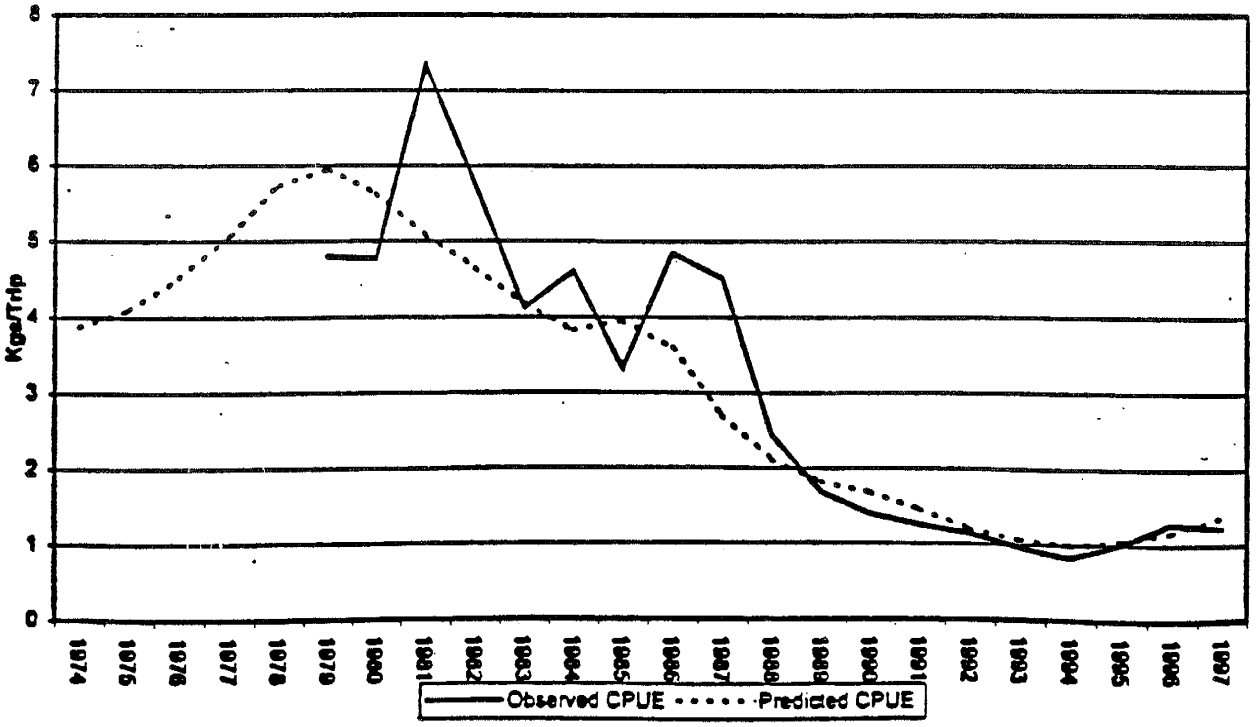


Figure 3: Bluefish stock biomass estimates from ASPIC model

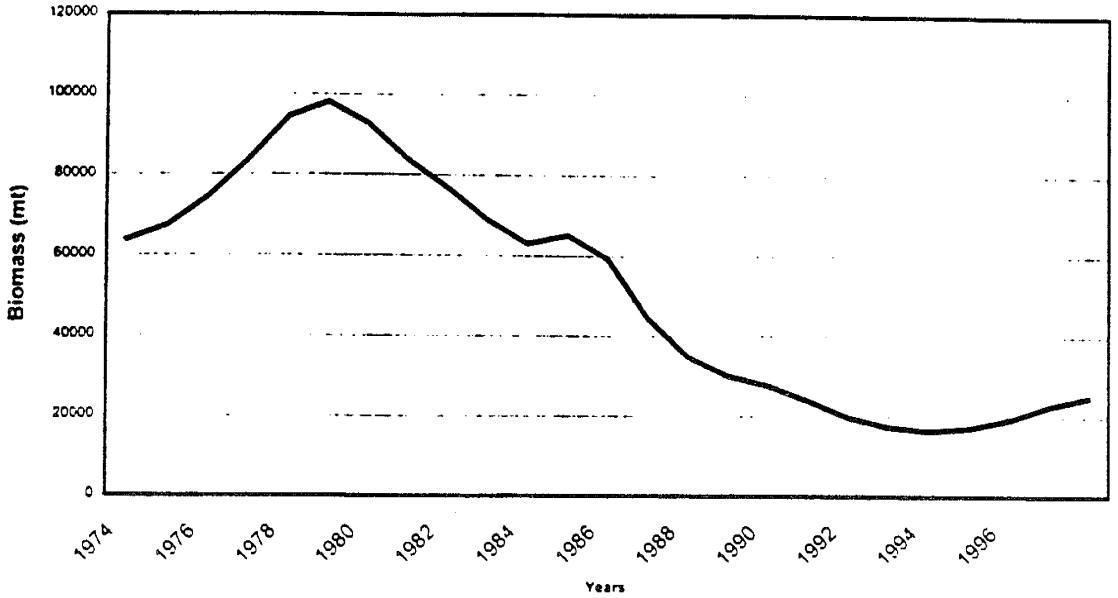


Figure 4: Fishing mortality from ASPIC model and total landings

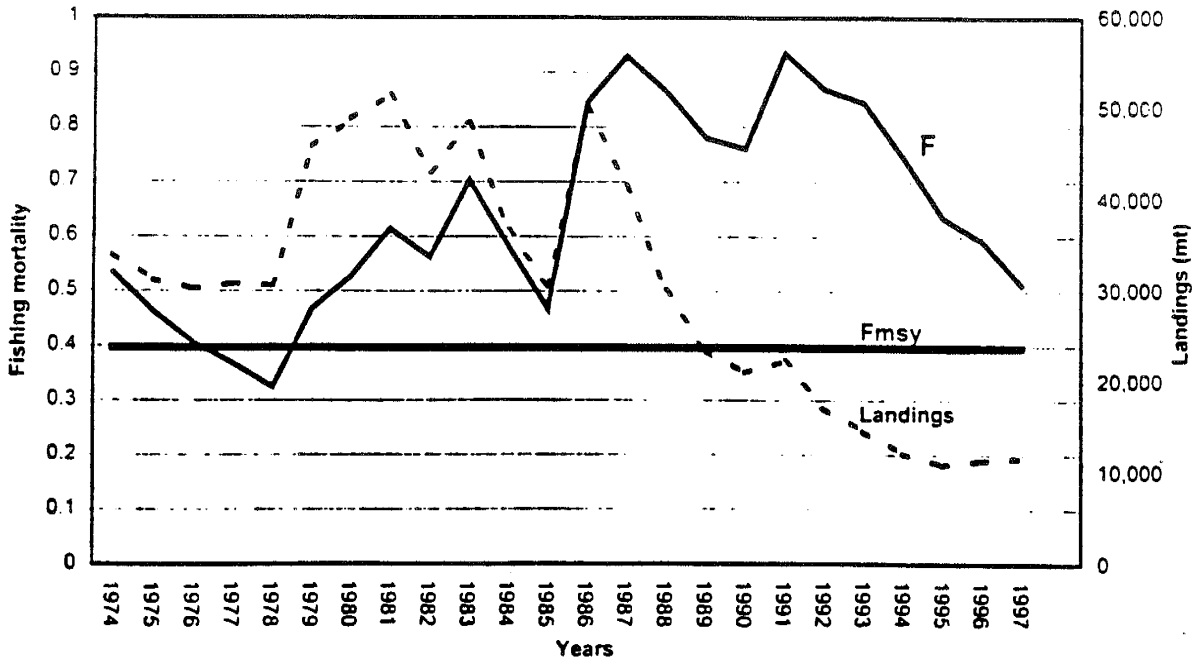


Figure 5: Bluefish stock production (1974-1997)

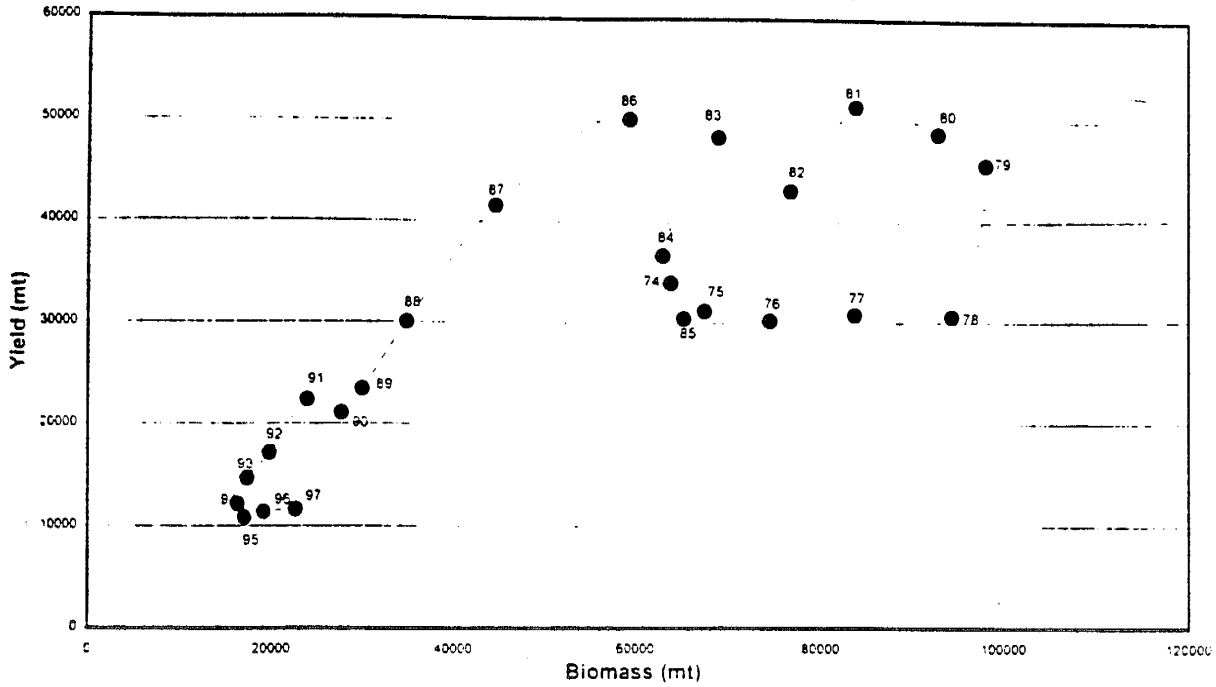


Figure 6: Ratio estimates of relative fishing mortality and biomass (F/Fmsy and B/Bmsy)

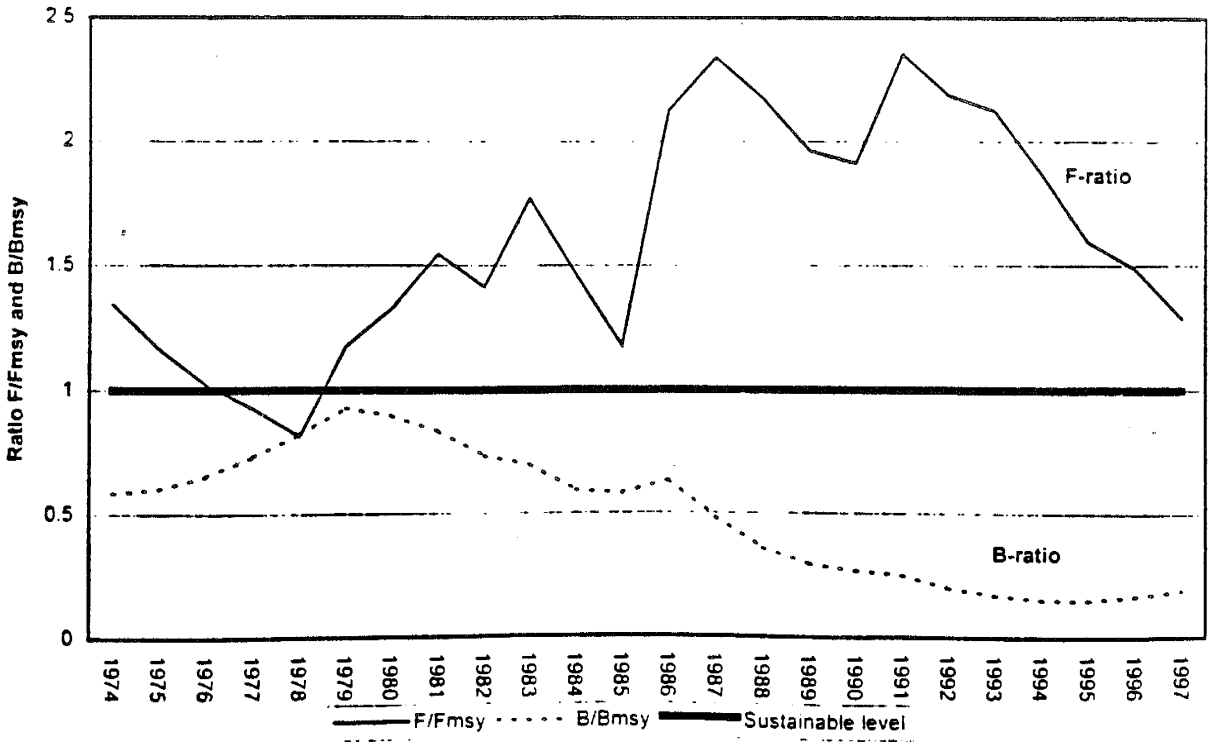


Figure 7: Precision estimates of Fishing mortality in 1997 (F97)

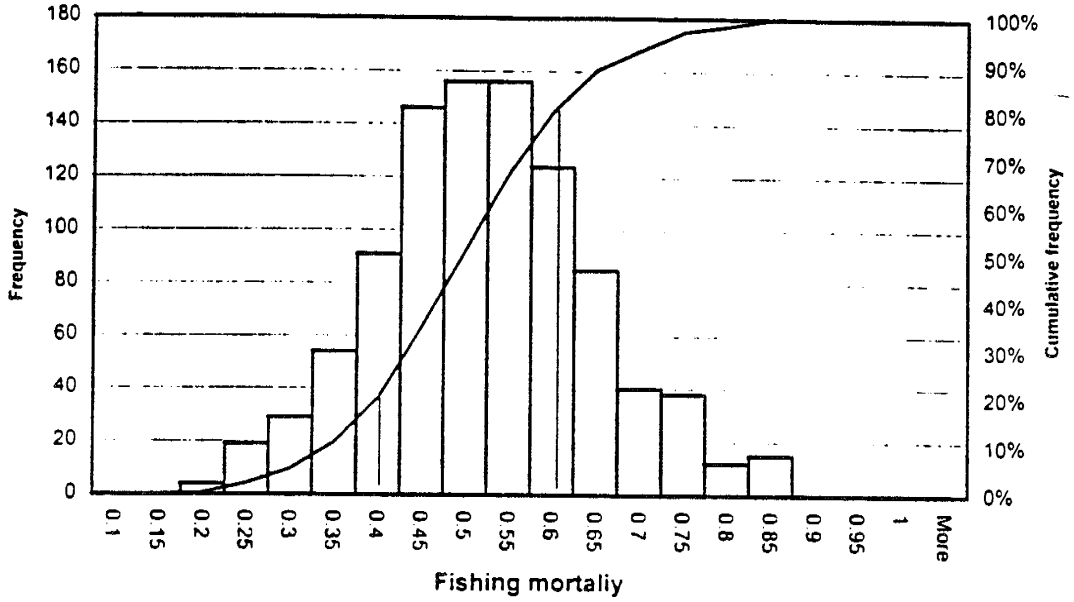


Figure 8: Precision estimates of Biomass in 1997 (B97)

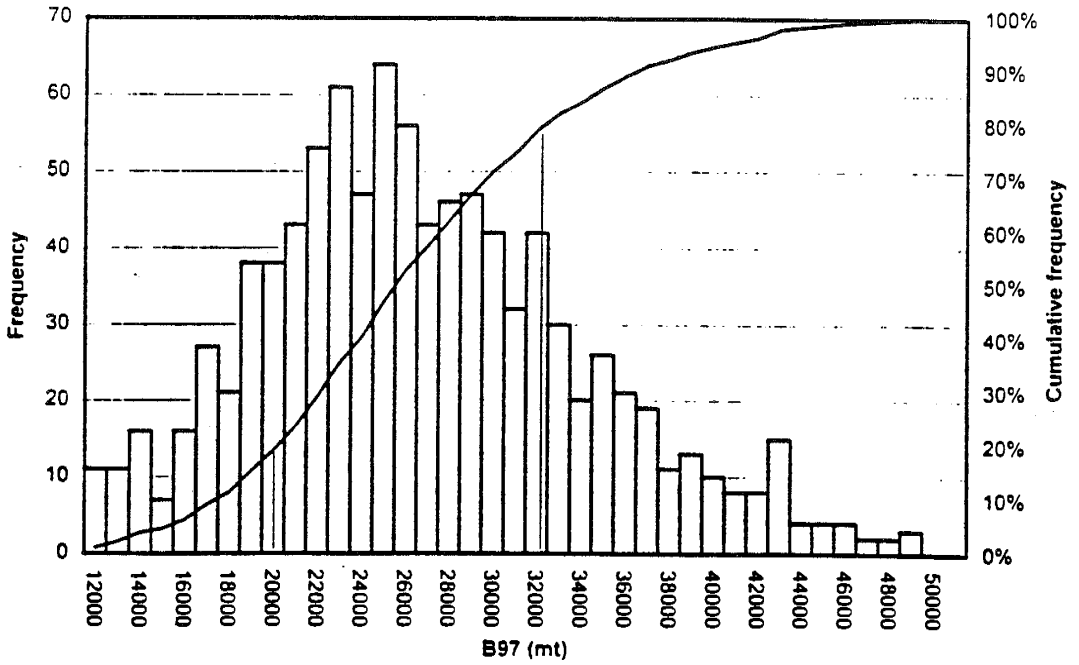


Figure 9: Precision estimates of MSY for bluefish

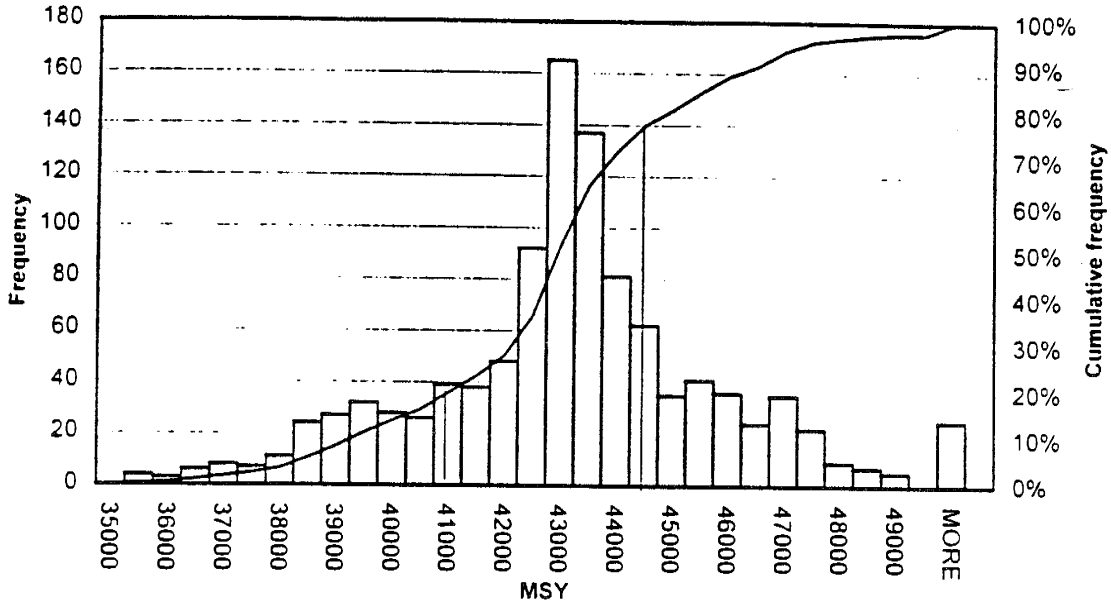


Figure 10: Precision estimates of Bmsy for bluefish

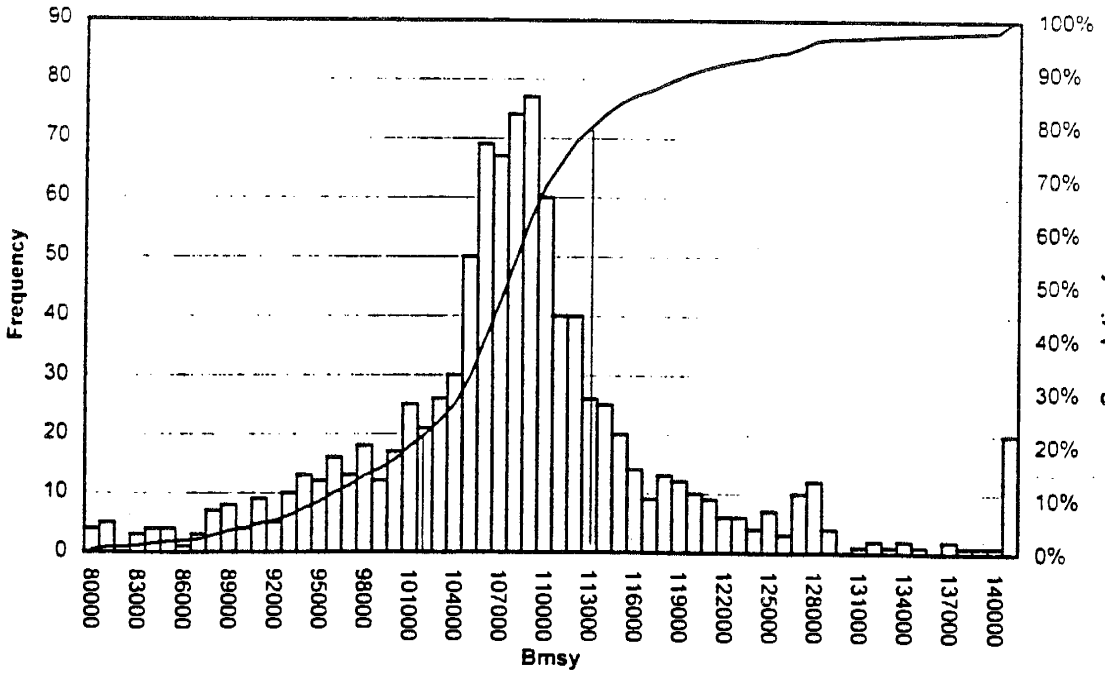


Figure 11 : Bluefish landings and a mid-term projection of landings (mt) for Atlantic bluefish with 80% confidence intervals under a fixed fishing mortality F=0.28 from 1998 to 2007

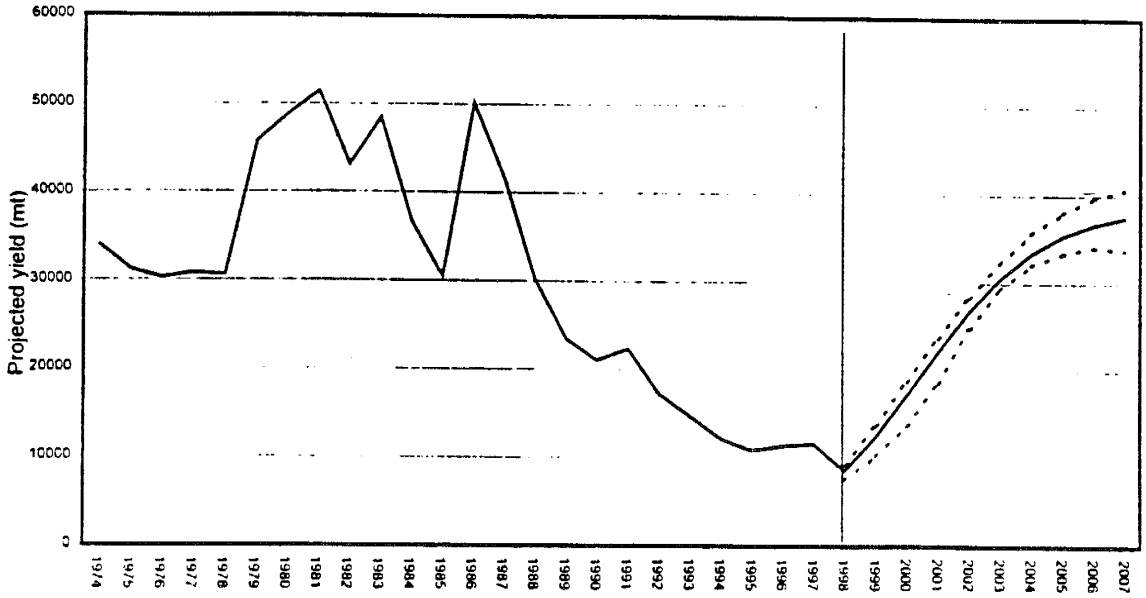


Figure 12 ASPIC estimates of bluefish biomass (74-97) and a mid-term projection of total biomass (mt) for Atlantic bluefish with 80% confidence intervals under a fixed fishing mortality F=0.28 from 1998 to 2007

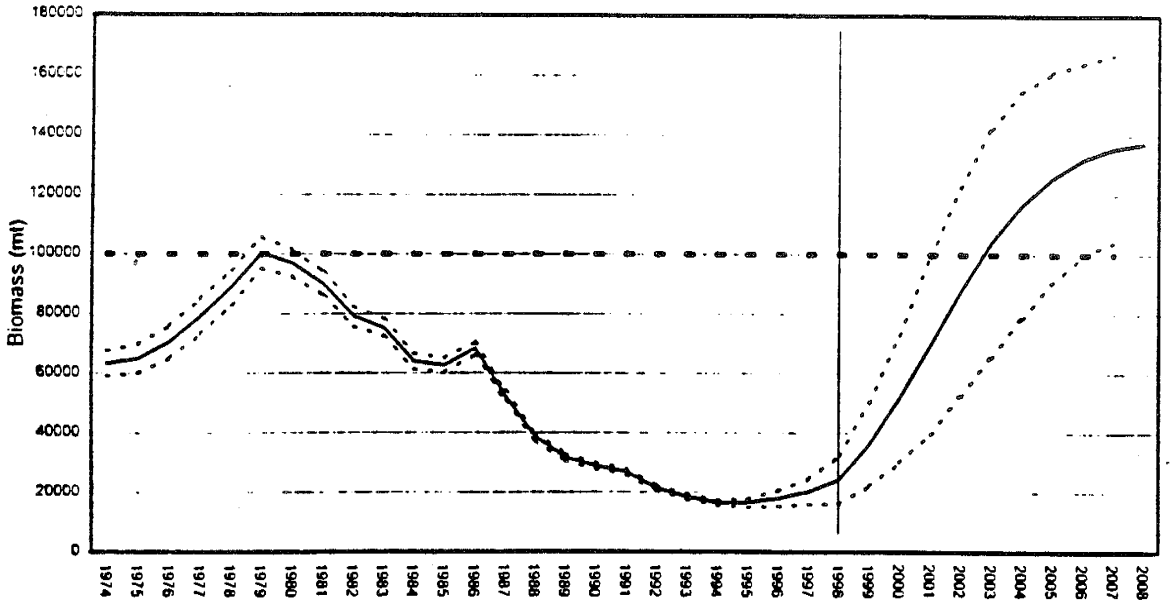
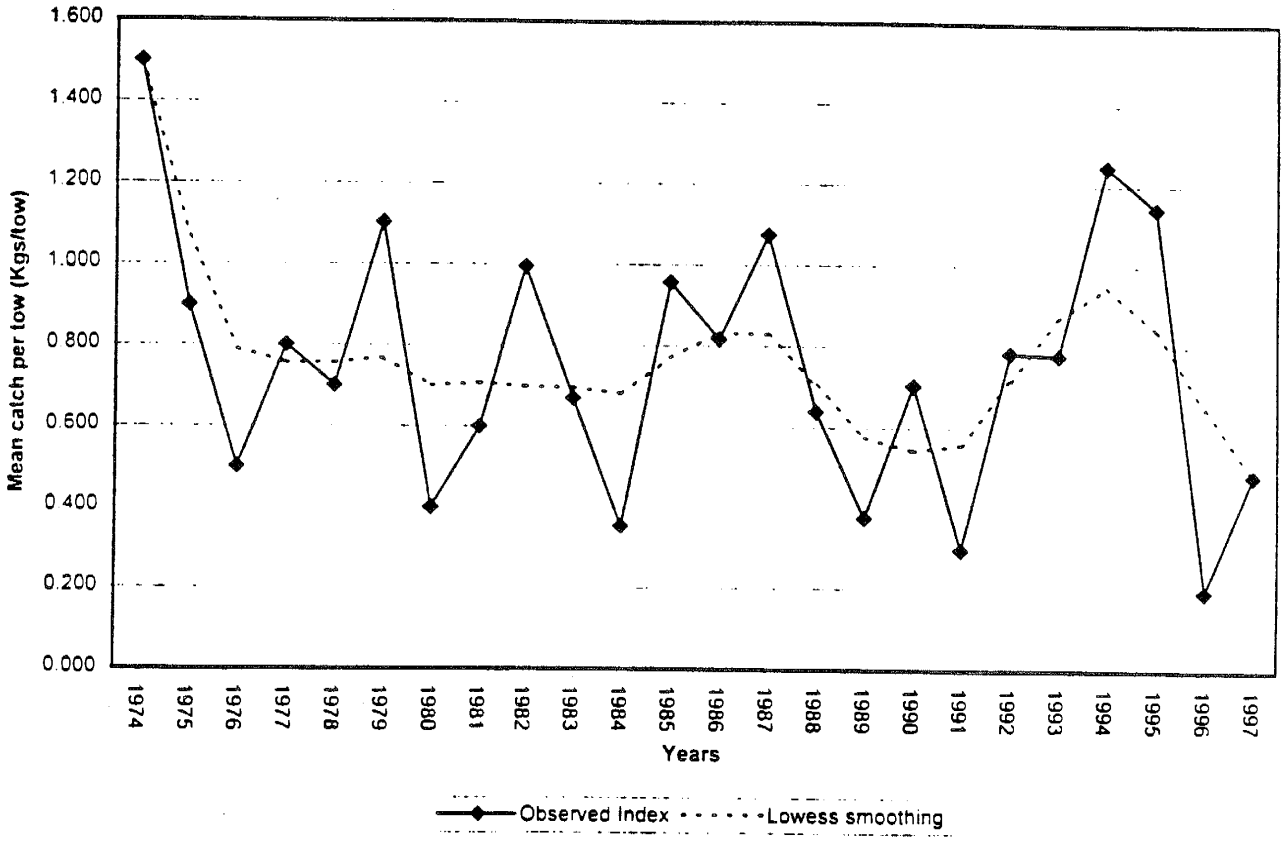


Figure 13: NEFSC offshore survey abundance index (kgs/tow)
with LOWESS smoothing 1974-1997



Appendix A. ASPIC configuration and input data for bluefish.

```
'BOT'                    ## Mode (FIT, IRF, BOT)
'ASPIC 3.6x BLUEFISH NEFSC INSHORE + REC. CPUE'
'EFF'                    ## Error type ('EFF' = condition on yield)
 2                       ## Verbosity (0 to 4)
 1000                    ## Number of bootstrap trials, <= 1000
 1 10000                 ## Monte Carlo search enable (0,1,2), N trials
 0.5E-8                  ## Convergence crit. for simplex
 3.0E-8                  ## Convergence crit. for restarts
 1.0d-4                  ## Convergence crit. for estimating effort
 2.0d0                   ## Maximum F when estimating effort
 0.25E+0                 ## Statistical weight for B1 > K as residual
 2                       ## Number of data series (fisheries)
 1.0d0  1.0d0            ## Statistical weights for fisheries
 0.60d0                  ## B1-ratio (starting guess)
 4.00d4                  ## MSY (starting guess)
 0.5d0                   ## r (starting guess)
 7.00d-05  8.00d-05      ## q (starting guess)
 1 1 1 1 1               ## Flags to estimate parameters
 1.0d1  1.2d5            ## Min and max allowable MSY
 0.2d0   1.5d0           ## Min and max allowable r
 4455973                 ## Random number seed
 24                      ## Number of years of data.
'Recreational CPUE'      ## Title for first series
'CC'                     ## Type of series ('CC' = CPUE, catch)
    1974   -1.0d0       34004
    1975   -1.0d0       31179
    1976   -1.0d0       30224
    1977   -1.0d0       30785
    1978   -1.0d0       30566
    1979    4.797       45776
    1980    4.765       48845
    1981    7.332       51472
    1982    5.741       43082
    1983    4.117       48416
    1984    4.604       36675
    1985    3.321       30462
    1986    4.844       50134
    1987    4.518       41542
    1988    2.435       30068
    1989    1.688       23439
    1990    1.391       21035
    1991    1.251       22350
    1992    1.138       17187
    1993    0.961       14655
    1994    0.826       12153
    1995    1.000       10836
    1996    1.277       11348
    1997    1.226       11606
'NEFSC INSHORE index'    ## Title for first series
'I1'                     ## Type of series ('I1' = Survey index)
1974  1.484d0
1975  5.587d0
1976  5.724d0
1977  6.546d0
1978  5.875d0
1979  7.443d0
1980  7.031d0
1981 13.183d0
1982  4.823d0
1983  3.958d0
1984  7.682d0
1985  3.451d0
1986  3.913d0
1987  2.703d0
1988  1.982d0
1989  9.132d0
1990  2.513d0
1991  2.063d0
1992  1.363d0
1993  0.736d0
1994  1.673d0
1995  2.054d0
1996  2.264d0
1997  1.367d0
```

Appendix B. ASPIC projection results for Atlantic bluefish

A mid-term projection scenario was run so that in year 2007. The 80% lower bound of biomass would reach Bmsy

TRAJECTORY OF RELATIVE BIOMASS (BOOTSTRAPPED)

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1974	5.863E-01	5.851E-01	-0.20%	5.306E-01	8.779E-01	5.605E-01	6.739E-01	1.134E-01	0.193
1975	6.018E-01	6.004E-01	-0.22%	5.404E-01	9.087E-01	5.730E-01	7.016E-01	1.286E-01	0.214
1976	6.540E-01	6.525E-01	-0.23%	5.785E-01	9.639E-01	6.200E-01	7.543E-01	1.344E-01	0.205
1977	7.325E-01	7.311E-01	-0.18%	6.451E-01	1.025E+00	6.933E-01	8.287E-01	1.353E-01	0.185
1978	8.232E-01	8.224E-01	-0.11%	7.256E-01	1.100E+00	7.783E-01	9.143E-01	1.360E-01	0.165
1979	9.302E-01	9.292E-01	-0.11%	8.316E-01	1.173E+00	8.868E-01	1.015E+00	1.285E-01	0.138
1980	8.984E-01	8.977E-01	-0.08%	8.099E-01	1.095E+00	8.593E-01	9.678E-01	1.086E-01	0.121
1981	8.338E-01	8.333E-01	-0.05%	7.584E-01	9.916E-01	8.004E-01	8.904E-01	8.994E-02	0.108
1982	7.330E-01	7.323E-01	-0.09%	6.714E-01	8.607E-01	7.067E-01	7.820E-01	7.532E-02	0.103
1983	6.967E-01	6.963E-01	-0.05%	6.407E-01	8.072E-01	6.724E-01	7.380E-01	6.560E-02	0.094
1984	5.923E-01	5.917E-01	-0.10%	5.474E-01	6.849E-01	5.724E-01	6.278E-01	5.547E-02	0.094
1985	5.802E-01	5.798E-01	-0.08%	5.369E-01	6.644E-01	5.611E-01	6.129E-01	5.174E-02	0.089
1986	6.326E-01	6.323E-01	-0.05%	5.831E-01	7.103E-01	6.116E-01	6.597E-01	4.807E-02	0.076
1987	4.828E-01	4.828E-01	-0.01%	4.480E-01	5.383E-01	4.678E-01	5.022E-01	3.434E-02	0.071
1988	3.576E-01	3.575E-01	-0.04%	3.346E-01	3.989E-01	3.475E-01	3.733E-01	2.573E-02	0.072
1989	2.934E-01	2.933E-01	-0.02%	2.758E-01	3.273E-01	2.861E-01	3.068E-01	2.077E-02	0.071
1990	2.664E-01	2.664E-01	-0.01%	2.503E-01	2.965E-01	2.589E-01	2.776E-01	1.866E-02	0.070
1991	2.490E-01	2.490E-01	0.00%	2.342E-01	2.766E-01	2.421E-01	2.592E-01	1.707E-02	0.069
1992	1.980E-01	1.980E-01	0.03%	1.865E-01	2.201E-01	1.925E-01	2.059E-01	1.335E-02	0.067
1993	1.707E-01	1.710E-01	0.15%	1.617E-01	1.911E-01	1.662E-01	1.777E-01	1.149E-02	0.067
1994	1.521E-01	1.527E-01	0.40%	1.429E-01	1.705E-01	1.473E-01	1.591E-01	1.179E-02	0.078
1995	1.498E-01	1.512E-01	0.98%	1.368E-01	1.715E-01	1.421E-01	1.606E-01	1.638E-02	0.109
1996	1.639E-01	1.667E-01	1.70%	1.382E-01	1.985E-01	1.521E-01	1.802E-01	2.809E-02	0.171
1997	1.852E-01	1.903E-01	2.71%	1.431E-01	2.434E-01	1.629E-01	2.120E-01	4.911E-02	0.265
1998	2.240E-01	2.322E-01	3.65%	1.434E-01	3.247E-01	1.822E-01	2.720E-01	8.982E-02	0.401
1999	3.391E-01	3.478E-01	2.55%	2.026E-01	4.997E-01	2.677E-01	4.165E-01	1.489E-01	0.439
2000	4.850E-01	4.944E-01	1.94%	2.694E-01	7.186E-01	3.728E-01	5.968E-01	2.240E-01	0.462
2001	6.520E-01	6.602E-01	1.26%	3.531E-01	9.439E-01	4.984E-01	7.939E-01	2.955E-01	0.453
2002	8.179E-01	8.249E-01	0.85%	4.431E-01	1.125E+00	6.319E-01	9.781E-01	3.462E-01	0.423
2003	9.626E-01	9.689E-01	0.66%	5.330E-01	1.263E+00	7.623E-01	1.123E+00	3.610E-01	0.375
2004	1.077E+00	1.081E+00	0.39%	6.256E-01	1.351E+00	8.765E-01	1.225E+00	3.489E-01	0.324
2005	1.157E+00	1.162E+00	0.40%	7.182E-01	1.406E+00	9.682E-01	1.295E+00	3.268E-01	0.282
2006	1.212E+00	1.215E+00	0.29%	7.876E-01	1.439E+00	1.034E+00	1.339E+00	3.054E-01	0.252
2007	1.247E+00	1.250E+00	0.27%	8.414E-01	1.456E+00	1.081E+00	1.363E+00	2.818E-01	0.226
2008	1.267E+00	1.271E+00	0.30%	8.824E-01	1.467E+00	1.109E+00	1.376E+00	2.667E-01	0.210

NOTE Printed BC confidence intervals are always approximate
At least 500 trials are recommended when estimating confidence intervals

TRAJECTORY OF RELATIVE FISHING MORTALITY RATE (BOOTSTRAPPED)

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1974	1.340E+00	1.342E+00	0.16%	1.034E+00	1.425E+00	1.235E+00	1.381E+00	1.456E-01	0.109
1975	1.162E+00	1.163E+00	0.15%	8.802E-01	1.242E+00	1.052E+00	1.199E+00	1.471E-01	0.127
1976	1.019E+00	1.021E+00	0.19%	7.961E-01	1.100E+00	9.364E-01	1.055E+00	1.183E-01	0.116
1977	9.238E-01	9.258E-01	0.21%	7.500E-01	9.962E-01	8.571E-01	9.574E-01	1.003E-01	0.109
1978	8.139E-01	8.149E-01	0.13%	6.935E-01	8.743E-01	7.686E-01	8.400E-01	7.138E-02	0.088
1979	1.172E+00	1.174E+00	0.16%	1.038E+00	1.247E+00	1.128E+00	1.203E+00	7.532E-02	0.064
1980	1.323E+00	1.324E+00	0.10%	1.200E+00	1.391E+00	1.279E+00	1.350E+00	7.016E-02	0.053
1981	1.544E+00	1.546E+00	0.10%	1.425E+00	1.611E+00	1.501E+00	1.571E+00	6.984E-02	0.045
1982	1.412E+00	1.413E+00	0.11%	1.324E+00	1.470E+00	1.382E+00	1.435E+00	5.279E-02	0.037
1983	1.768E+00	1.769E+00	0.10%	1.672E+00	1.832E+00	1.735E+00	1.793E+00	5.752E-02	0.033
1984	1.465E+00	1.466E+00	0.09%	1.392E+00	1.515E+00	1.440E+00	1.484E+00	4.389E-02	0.030
1985	1.175E+00	1.175E+00	0.03%	1.123E+00	1.220E+00	1.158E+00	1.189E+00	3.175E-02	0.027
1986	2.128E+00	2.128E+00	-0.02%	2.059E+00	2.239E+00	2.105E+00	2.157E+00	5.204E-02	0.024
1987	2.341E+00	2.341E+00	-0.02%	2.279E+00	2.433E+00	2.321E+00	2.365E+00	4.389E-02	0.019
1988	2.174E+00	2.174E+00	0.00%	2.130E+00	2.231E+00	2.159E+00	2.189E+00	3.007E-02	0.014
1989	1.964E+00	1.963E+00	-0.01%	1.928E+00	2.008E+00	1.951E+00	1.976E+00	2.441E-02	0.012
1990	1.913E+00	1.912E+00	-0.04%	1.881E+00	1.967E+00	1.901E+00	1.929E+00	2.782E-02	0.015
1991	2.356E+00	2.354E+00	-0.05%	2.316E+00	2.415E+00	2.339E+00	2.374E+00	3.504E-02	0.015
1992	2.189E+00	2.186E+00	-0.15%	2.134E+00	2.235E+00	2.163E+00	2.211E+00	3.765E-02	0.017
1993	2.131E+00	2.123E+00	-0.35%	2.041E+00	2.210E+00	2.089E+00	2.171E+00	6.339E-02	0.030
1994	1.880E+00	1.872E+00	-0.43%	1.740E+00	2.004E+00	1.810E+00	1.944E+00	1.131E-01	0.060
1995	1.609E+00	1.596E+00	-0.82%	1.424E+00	1.824E+00	1.516E+00	1.715E+00	1.809E-01	0.112
1996	1.506E+00	1.489E+00	-1.13%	1.242E+00	1.892E+00	1.373E+00	1.679E+00	2.893E-01	0.192
1997	1.304E+00	1.288E+00	-1.20%	9.805E-01	1.834E+00	1.118E+00	1.533E+00	4.149E-01	0.318
1998	7.042E-01	6.958E-01	-1.20%	5.295E-01	9.901E-01	6.036E-01	8.276E-01	2.241E-01	0.318
1999	7.042E-01	6.958E-01	-1.20%	5.295E-01	9.901E-01	6.036E-01	8.276E-01	2.241E-01	0.318
2000	7.042E-01	6.958E-01	-1.20%	5.295E-01	9.901E-01	6.036E-01	8.276E-01	2.241E-01	0.318
2001	7.042E-01	6.958E-01	-1.20%	5.295E-01	9.901E-01	6.036E-01	8.276E-01	2.241E-01	0.318
2002	7.042E-01	6.958E-01	-1.20%	5.295E-01	9.901E-01	6.036E-01	8.276E-01	2.241E-01	0.318
2003	7.042E-01	6.958E-01	-1.20%	5.295E-01	9.901E-01	6.036E-01	8.276E-01	2.241E-01	0.318
2004	7.042E-01	6.958E-01	-1.20%	5.295E-01	9.901E-01	6.036E-01	8.276E-01	2.241E-01	0.318
2005	7.042E-01	6.958E-01	-1.20%	5.295E-01	9.901E-01	6.036E-01	8.276E-01	2.241E-01	0.318
2006	7.042E-01	6.958E-01	-1.20%	5.295E-01	9.901E-01	6.036E-01	8.276E-01	2.241E-01	0.318
2007	7.042E-01	6.958E-01	-1.20%	5.295E-01	9.901E-01	6.036E-01	8.276E-01	2.241E-01	0.318

TABLE OF PROJECTED YIELDS

1998	8.576E+03	8.537E+03	-0.45%	7.519E+03	9.212E+03	8.116E+03	8.955E+03	8.391E+02	0.098
1999	1.253E+04	1.245E+04	-0.63%	1.028E+04	1.373E+04	1.161E+04	1.328E+04	1.670E+03	0.133
2000	1.731E+04	1.714E+04	-0.99%	1.371E+04	1.874E+04	1.589E+04	1.817E+04	2.285E+03	0.132
2001	2.242E+04	2.210E+04	-1.42%	1.857E+04	2.373E+04	2.100E+04	2.314E+04	2.145E+03	0.096
2002	2.745E+04	2.673E+04	-2.62%	2.476E+04	2.835E+04	2.635E+04	2.793E+04	1.575E+03	0.057
2003	3.163E+04	3.056E+04	-3.38%	2.933E+04	3.230E+04	3.050E+04	3.185E+04	1.346E+03	0.042
2004	3.471E+04	3.342E+04	-3.73%	3.213E+04	3.572E+04	3.338E+04	3.501E+04	1.629E+03	0.047
2005	3.663E+04	3.539E+04	-3.90%	3.342E+04	3.801E+04	3.512E+04	3.733E+04	2.214E+03	0.060
2006	3.809E+04	3.668E+04	-3.69%	3.416E+04	3.977E+04	3.622E+04	3.890E+04	2.684E+03	0.070
2007	3.883E+04	3.750E+04	-3.42%	3.379E+04	4.067E+04	3.650E+04	3.989E+04	3.384E+03	0.087

TRAJECTORY OF ABSOLUTE BIOMASS (BOOTSTRAPPED)

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1974	6.323E+04	6.293E+04	-0.48%	5.888E+04	1.074E+05	6.088E+04	7.276E+04	1.187E+04	0.188
1975	6.490E+04	6.457E+04	-0.51%	6.001E+04	1.044E+05	6.215E+04	7.384E+04	1.168E+04	0.180
1976	7.054E+04	7.017E+04	-0.52%	6.509E+04	1.131E+05	6.766E+04	8.107E+04	1.342E+04	0.190
1977	7.903E+04	7.863E+04	-0.51%	7.310E+04	1.155E+05	7.581E+04	8.854E+04	1.273E+04	0.161
1978	8.884E+04	8.844E+04	-0.45%	8.297E+04	1.208E+05	8.563E+04	9.841E+04	1.278E+04	0.144
1979	1.003E+05	9.993E+04	-0.41%	9.505E+04	1.303E+05	9.748E+04	1.094E+05	1.194E+04	0.119
1980	9.691E+04	9.655E+04	-0.37%	9.244E+04	1.235E+05	9.454E+04	1.043E+05	9.813E+03	0.101
1981	9.002E+04	8.962E+04	-0.45%	8.604E+04	1.186E+05	8.814E+04	9.684E+04	8.693E+03	0.097
1982	7.909E+04	7.876E+04	-0.42%	7.570E+04	1.055E+05	7.753E+04	8.465E+04	7.119E+03	0.090
1983	7.520E+04	7.489E+04	-0.42%	7.227E+04	1.004E+05	7.386E+04	8.025E+04	6.389E+03	0.085
1984	6.393E+04	6.364E+04	-0.46%	6.131E+04	9.451E+04	6.273E+04	6.858E+04	5.855E+03	0.092
1985	6.263E+04	6.235E+04	-0.45%	6.021E+04	9.004E+04	6.153E+04	6.673E+04	5.202E+03	0.083
1986	6.825E+04	6.800E+04	-0.37%	6.621E+04	9.155E+04	6.730E+04	7.157E+04	4.272E+03	0.063
1987	5.213E+04	5.192E+04	-0.41%	5.044E+04	7.084E+04	5.132E+04	5.487E+04	3.550E+03	0.068
1988	3.861E+04	3.845E+04	-0.42%	3.721E+04	5.425E+04	3.796E+04	4.089E+04	2.928E+03	0.076
1989	3.168E+04	3.155E+04	-0.43%	3.046E+04	4.541E+04	3.113E+04	3.379E+04	2.652E+03	0.084
1990	2.807E+04	2.865E+04	-0.45%	2.766E+04	4.086E+04	2.827E+04	3.055E+04	2.283E+03	0.079
1991	2.689E+04	2.678E+04	-0.40%	2.587E+04	3.489E+04	2.640E+04	2.815E+04	1.746E+03	0.065
1992	2.139E+04	2.130E+04	-0.44%	2.047E+04	2.844E+04	2.094E+04	2.241E+04	1.466E+03	0.069
1993	1.846E+04	1.838E+04	-0.39%	1.758E+04	2.405E+04	1.803E+04	1.940E+04	1.362E+03	0.074
1994	1.647E+04	1.662E+04	-0.34%	1.551E+04	2.127E+04	1.596E+04	1.747E+04	1.507E+03	0.091
1995	1.630E+04	1.626E+04	-0.20%	1.492E+04	1.997E+04	1.555E+04	1.746E+04	1.913E+03	0.117
1996	1.781E+04	1.793E+04	0.68%	1.517E+04	2.259E+04	1.660E+04	1.967E+04	3.073E+03	0.173
1997	2.015E+04	2.046E+04	1.56%	1.588E+04	2.716E+04	1.792E+04	2.317E+04	5.255E+03	0.261
1998	2.422E+04	2.497E+04	3.10%	1.607E+04	3.580E+04	1.998E+04	2.963E+04	9.649E+03	0.398
1999	3.610E+04	3.740E+04	3.61%	2.216E+04	5.359E+04	2.905E+04	4.498E+04	1.593E+04	0.441
2000	5.146E+04	5.317E+04	3.33%	3.008E+04	7.447E+04	4.066E+04	6.370E+04	2.303E+04	0.448
2001	6.936E+04	7.100E+04	2.36%	3.966E+04	9.633E+04	5.437E+04	8.392E+04	2.956E+04	0.426
2002	8.747E+04	8.871E+04	1.43%	5.238E+04	1.170E+05	7.039E+04	1.042E+05	3.378E+04	0.386
2003	1.039E+05	1.042E+05	0.31%	6.550E+04	1.337E+05	8.558E+04	1.198E+05	3.424E+04	0.330
2004	1.165E+05	1.163E+05	-0.20%	7.863E+04	1.462E+05	9.997E+04	1.325E+05	3.250E+04	0.279
2005	1.256E+05	1.249E+05	-0.50%	9.017E+04	1.539E+05	1.097E+05	1.405E+05	3.073E+04	0.245
2006	1.319E+05	1.307E+05	-0.91%	9.979E+04	1.609E+05	1.177E+05	1.465E+05	2.881E+04	0.218
2007	1.355E+05	1.344E+05	-0.79%	1.041E+05	1.643E+05	1.214E+05	1.496E+05	2.821E+04	0.208
2008	1.373E+05	1.367E+05	-0.43%	1.061E+05	1.661E+05	1.237E+05	1.513E+05	2.767E+04	0.201

TRAJECTORY OF ABSOLUTE FISHING MORTALITY RATE (BOOTSTRAPPED)

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1974	5.307E-01	5.332E-01	0.47%	3.232E-01	5.716E-01	4.648E-01	5.530E-01	8.824E-02	0.166
1975	4.598E-01	4.623E-01	0.53%	2.886E-01	4.980E-01	4.025E-01	4.800E-01	7.744E-02	0.168
1976	4.035E-01	4.056E-01	0.53%	2.649E-01	4.369E-01	3.572E-01	4.211E-01	6.391E-02	0.158
1977	3.661E-01	3.678E-01	0.47%	2.596E-01	3.939E-01	3.288E-01	3.807E-01	5.196E-02	0.142
1978	3.223E-01	3.238E-01	0.47%	2.391E-01	3.426E-01	2.934E-01	3.330E-01	3.957E-02	0.123
1979	4.647E-01	4.665E-01	0.40%	3.654E-01	4.888E-01	4.317E-01	4.776E-01	4.593E-02	0.099
1980	5.241E-01	5.261E-01	0.39%	4.072E-01	5.487E-01	4.896E-01	5.368E-01	4.717E-02	0.090
1981	6.116E-01	6.143E-01	0.44%	4.540E-01	6.396E-01	5.700E-01	6.243E-01	5.427E-02	0.089
1982	5.591E-01	5.616E-01	0.45%	4.231E-01	5.833E-01	5.266E-01	5.706E-01	4.398E-02	0.079
1983	6.957E-01	7.030E-01	0.47%	5.178E-01	7.298E-01	6.564E-01	7.135E-01	5.712E-02	0.082
1984	5.797E-01	5.824E-01	0.48%	3.948E-01	6.040E-01	5.416E-01	5.906E-01	4.853E-02	0.084
1985	4.650E-01	4.669E-01	0.40%	3.354E-01	4.814E-01	4.398E-01	4.725E-01	3.262E-02	0.070
1986	8.420E-01	8.453E-01	0.39%	6.229E-01	8.690E-01	8.021E-01	8.546E-01	5.244E-02	0.062
1987	9.263E-01	9.301E-01	0.42%	6.674E-01	9.592E-01	8.776E-01	9.412E-01	6.353E-02	0.069
1988	8.601E-01	8.638E-01	0.43%	5.961E-01	8.936E-01	8.077E-01	8.749E-01	6.719E-02	0.078
1989	7.767E-01	7.801E-01	0.44%	5.473E-01	8.081E-01	7.326E-01	7.907E-01	5.804E-02	0.075
1990	7.565E-01	7.598E-01	0.44%	5.784E-01	7.869E-01	7.207E-01	7.711E-01	5.032E-02	0.067
1991	9.314E-01	9.354E-01	0.44%	7.092E-01	9.713E-01	8.907E-01	9.502E-01	5.952E-02	0.064
1992	8.648E-01	8.686E-01	0.44%	6.327E-01	9.046E-01	8.217E-01	8.836E-01	6.189E-02	0.072
1993	8.402E-01	8.436E-01	0.40%	6.523E-01	8.881E-01	8.000E-01	8.656E-01	6.566E-02	0.078
1994	7.423E-01	7.438E-01	0.20%	6.123E-01	7.989E-01	6.991E-01	7.734E-01	7.437E-02	0.100
1995	6.341E-01	6.340E-01	-0.01%	5.112E-01	7.115E-01	5.835E-01	6.745E-01	9.100E-02	0.144
1996	5.970E-01	5.916E-01	-0.92%	4.500E-01	7.487E-01	5.277E-01	6.682E-01	1.270E-01	0.213
1997	5.236E-01	5.119E-01	-2.23%	3.697E-01	7.257E-01	4.392E-01	6.150E-01	1.759E-01	0.336
1998	2.827E-01	2.764E-01	-2.23%	1.997E-01	3.919E-01	2.371E-01	3.321E-01	9.496E-02	0.336
1999	2.827E-01	2.764E-01	-2.23%	1.997E-01	3.919E-01	2.371E-01	3.321E-01	9.496E-02	0.336
2000	2.827E-01	2.764E-01	-2.23%	1.997E-01	3.919E-01	2.371E-01	3.321E-01	9.496E-02	0.336
2001	2.827E-01	2.764E-01	-2.23%	1.997E-01	3.919E-01	2.371E-01	3.321E-01	9.496E-02	0.336
2002	2.827E-01	2.764E-01	-2.23%	1.997E-01	3.919E-01	2.371E-01	3.321E-01	9.496E-02	0.336
2003	2.827E-01	2.764E-01	-2.23%	1.997E-01	3.919E-01	2.371E-01	3.321E-01	9.496E-02	0.336
2004	2.827E-01	2.764E-01	-2.23%	1.997E-01	3.919E-01	2.371E-01	3.321E-01	9.496E-02	0.336
2005	2.827E-01	2.764E-01	-2.23%	1.997E-01	3.919E-01	2.371E-01	3.321E-01	9.496E-02	0.336
2006	2.827E-01	2.764E-01	-2.23%	1.997E-01	3.919E-01	2.371E-01	3.321E-01	9.496E-02	0.336
2007	2.827E-01	2.764E-01	-2.23%	1.997E-01	3.919E-01	2.371E-01	3.321E-01	9.496E-02	0.336

A Mid-term (9 years) and a short-term (5 years) Projection of stock biomass and landings for the Atlantic Coast Bluefish Using a Biomass Dynamic Model.

Stock Rebuilding Strategies

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July 22, 1998

The ASPIC model contains a projection module which allows stock forecasts to be made from the model fit and a specified set of target F rates in future years. Given the population dynamics model, it is simple to project a population ahead in time given estimates of the logistic model parameters, a starting biomass level, and a stream of desired F rates. Uncertainty in the forecasts is incorporated by utilizing the bootstrap results to give different starting biomass levels and logistic parameters.

A medium term projection of 9 years (1998-2007) and a short term projection of 5 years (1998-2003) was run so that in the terminal year the mean biomass would reach the Biomass at MSY estimated at 107,500 mt. For each projection, two harvesting strategies were identified to reach this management goal by iterating a constant fishing mortality and 3 step reduction of fishing mortality. Naturally, the projections assume that the population dynamic process is without error with constant production parameters (r, K, and q). Environmental factors which result in low stock production or unusually large year classes cannot be anticipated and could invalidate the projection results.

Scenario 1A: constant F=0.36 for 9 years (31% reduction from F_{97}).

This harvesting strategy was configured so that the total biomass of bluefish would reach B_{msy} in 9 years by applying a constant fishing mortality. This projection suggest that the bluefish stock can recover to former levels of abundance given a 31% reduction in F from the 1997 level (F=0.36) (Figure 1). Under this scenario, landings could gradually increase from 14,040 mt to levels close to MSY=42,700 mt in 2007 (Figure 2).

Scenario 2A: Step reduction for 9 years

1) F=0.51 for 1st 2 years (1999-2000)
2) F=0.41 for 2nd 3 years (2001-2003)
3) F=0.31 for remaining 4 years (2004-2007)

This harvesting strategy was configured so that the total biomass of bluefish would reach B_{msy} in 9 years by applying a step reduction in fishing mortality. This projection suggest that bluefish stock can recover to sustainable biomass by maintaining fishing mortality at the 1997 for 2 years, followed by a 21% reduction to F=0.41 for 3 years, to a final reduction to F=0.31 for 4 years (Figure 3). Under this scenario landings would show a small increase during the first 2 years from about 16,710 mt to 19,540 mt, followed by a similar increase in the second block of 3 years reaching about 27,090 mt in 2003. The reduction of fishing mortality in year 2004 would result in a small reduction in yield but should then constant increase to about 36,800 mt in 2007 (Figure 4).

Scenario 1B: constant F=0.23 for 5 years (55% reduction from F_{97}).

This harvesting strategy was configured so that the total biomass of bluefish would reach B_{msy} in 5 years setting a constant fishing mortality. This projection suggest that bluefish stock can recover to former levels of abundance given a 55% reduction in F from the 1997 level (F=0.23) (Figure 5). Under this scenario landings would increase from 14,040 mt to 27,500 mt in 2003 (Figure 6).

Scenario 2B: Step reduction in 5 years

1) F=0.51 for (1998) status-quo
2) F=0.40 for 1999
3) F=0.25 for 2000
4) F=0.18 for 2001
5) F=0.13 for 2002
6) F=0.13 for 2003

This harvesting strategy was configured so that the total biomass of bluefish would reach B[illegible] in 5 years with a step reduction in fishing mortality. This projection suggest that bluefish stock can recover to sustainable biomass levels by reducing fishing mortality by 25% in 1999, followed by a 37% reduction to F=0.25 in 2000, then a final reduction to F=0.18 for years 2001 and F=0.13 in 2002 and 2003 (Figure 7). Under this scenario landings would decline slightly from 14,040 mt in 1998 to about 11,800 mt in 2000 then increase to about 12,620 mt in 2002 and 16,540 mt in 2003 (Figure 8).

Scenario 1C: Constant catch for 5 years

Under this scenario, biomass would probably increase from 24,200 mt in 1998 to 94,280 mt in 2003. Fishing mortality would likely to decrease below F[illegible] in 2001 with further decline to levels close to 0.15.

Scenario 2C: Constant catch for 9 years

Similarly, a constant catch projected for 9 years resulted in a constant decline in fishing mortality to levels below 0.10 in 2007, and biomass increase reaching over 194,000 mt in 2007.

Figure 1: ASPIC estimates of *biomass* and mid-term projection of total biomass (mt) for Atlantic bluefish with 80% confidence intervals
Scienario 1A: Keep F=0.36 for 9 years to rebuild to Bmsy

Figure 2: ASPIC estimates of projected *landings* (mt) for Atlantic bluefish with 80% confidence intervals
Scienario 1A: Keep F=0.36 for 9 years to rebuild to Bmsy

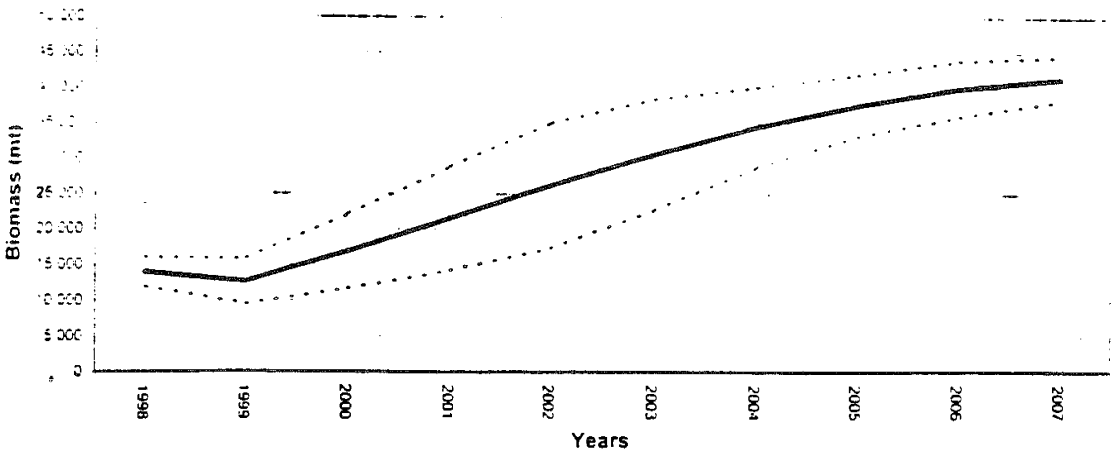


Figure 3: ASPIC estimates of *biomass* and mid-term projection of total biomass (mt) for Atlantic bluefish with 80% confidence intervals

Scenario 2A: A 3 year step reduction Keep F=0 51 (97 level) for 3 years, then reduce to F=0 41 for 3 years, then reduce F=0 31 for 4 years

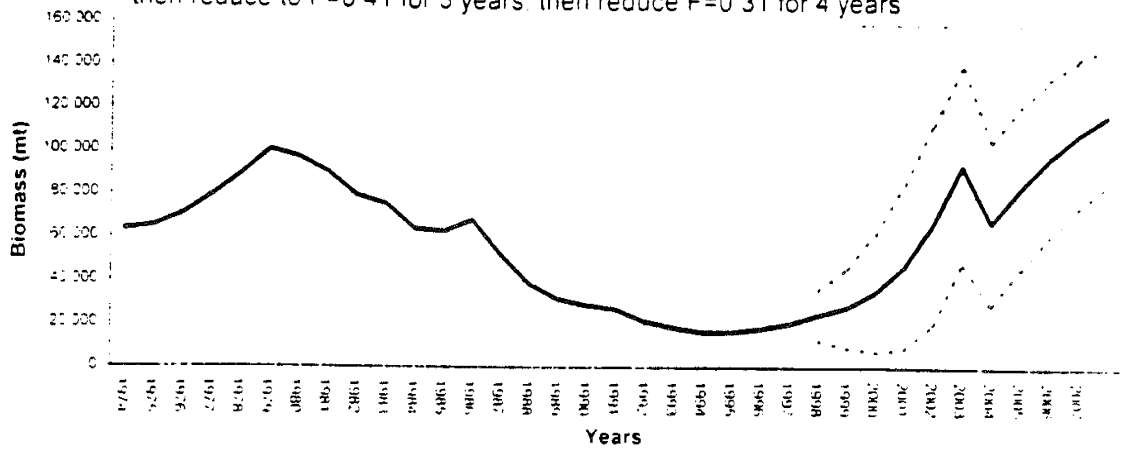


Figure 4: ASPIC estimates of projected *landings* (mt) for Atlantic bluefish with 80% confidence intervals

Scenario 2A: A 3 year step reduction Keep F=0 51 (97 level) for 3 years, then reduce to F=0 41 for 3 years, then reduce F=0 31 for 4 years

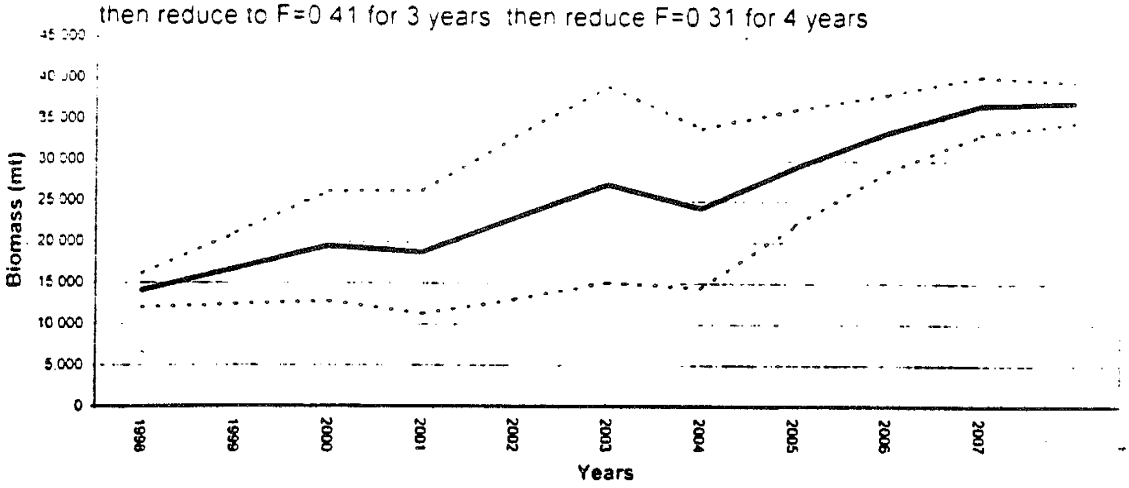


Figure 5: ASPIC estimates of *biomass* and short-term projection of total biomass (mt) for Atlantic bluefish with 80% confidence intervals

Scenario 1B: Reduce F to F=0.25 (55% of 97 level) for 5 years to rebuild to Bmsy

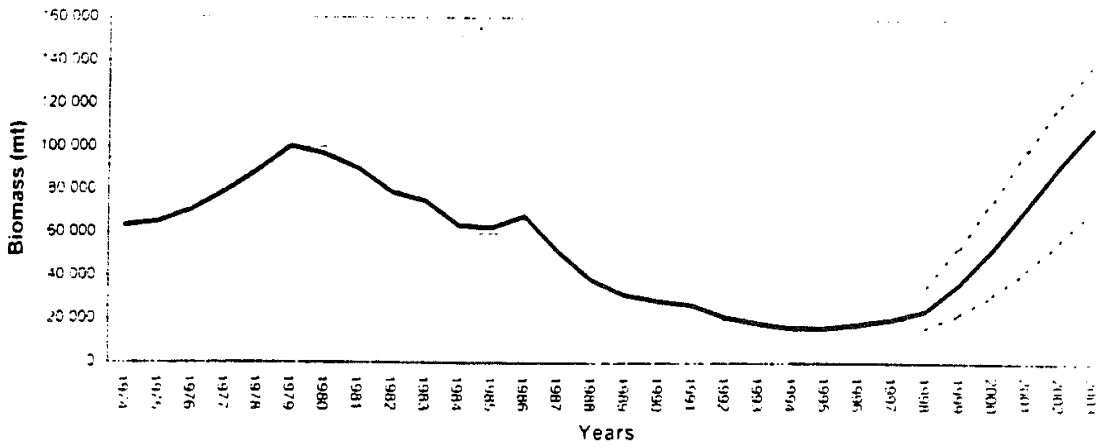


Figure 6: ASPIC estimates of projected *landings* (mt) for Atlantic bluefish with 80% confidence intervals

Scenario 1B: Reduce F to F=0.23 (55% of 97 level) for 5 years to rebuild to Bmsy

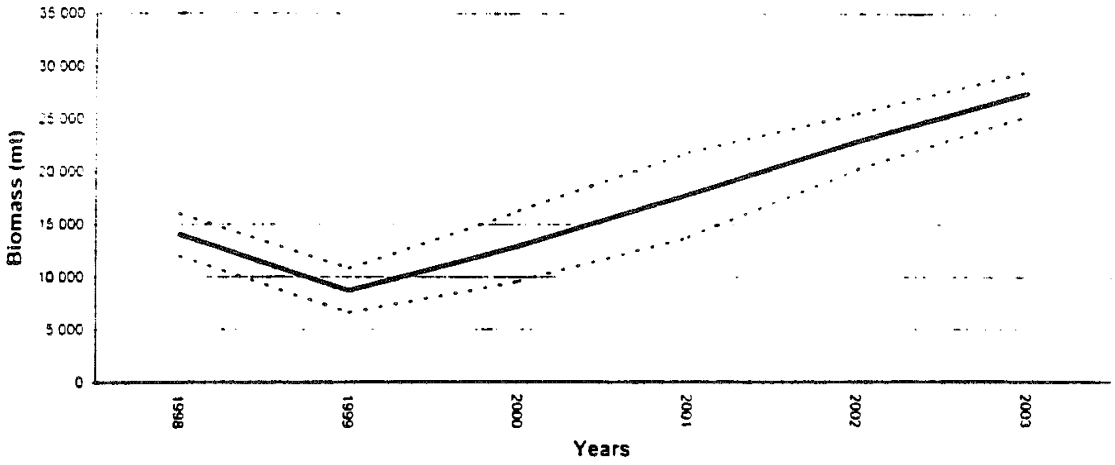


Figure 7: ASPIC estimates of *biomass* and short-term projection of total biomass (mt) for Atlantic bluefish with 80% confidence intervals

Scenario 2B: A step reduction Reduce F to F=0 40 in 1999, and reduce again to F=0 25 in 2000 and then reduce to F=0 18 for 2001 and F=0 13 in 2002 + 2003

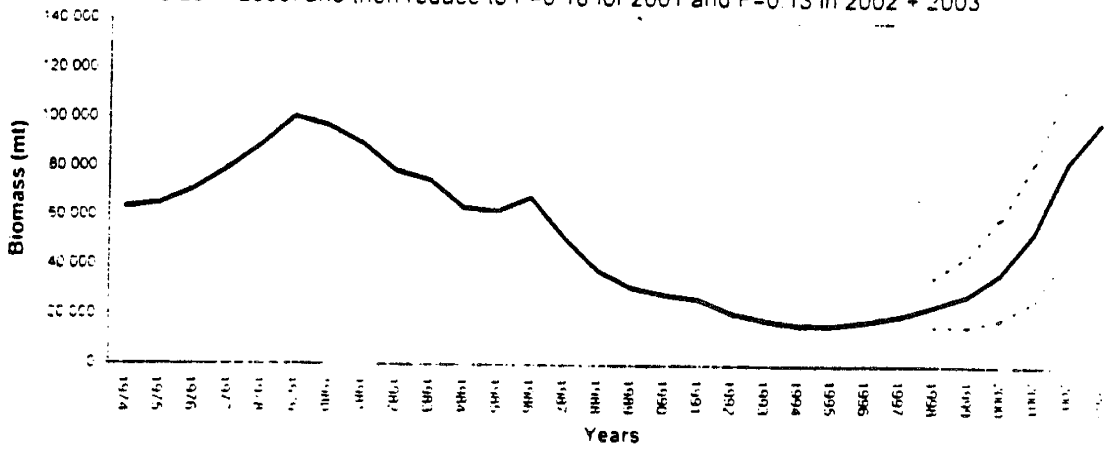
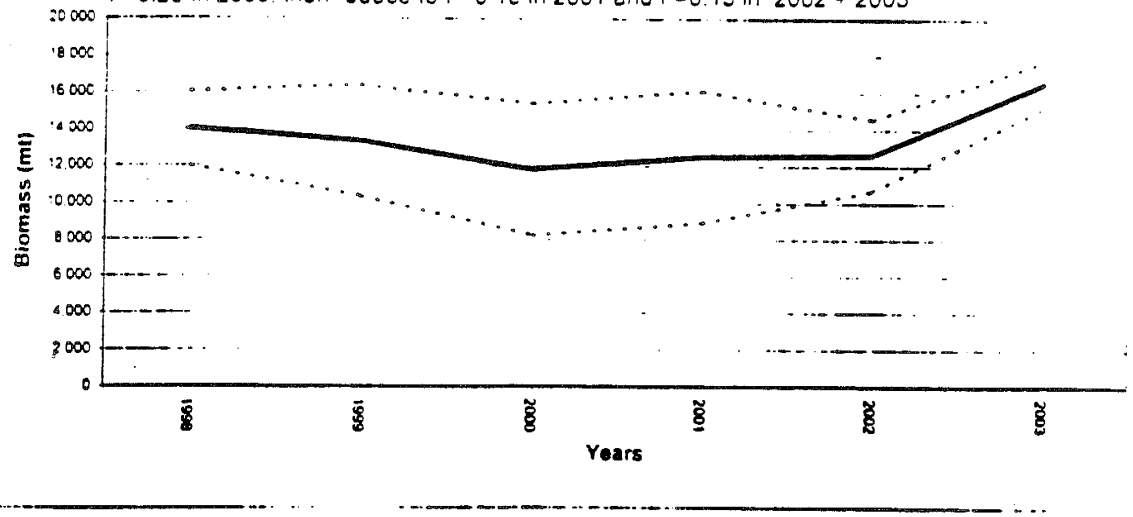


Figure 8: ASPIC estimates of projected *landings* (mt) for Atlantic bluefish with 80% confidence intervals

Scenario 2B: A step reduction Reduce F to F=0 40 in 1999, and reduce again to F=0.25 in 2000, then reduce to F=0 18 in 2001 and F=0.13 in 2002 + 2003



Scenario 1A. Constant F=0.36 for 9 years from 1999 to 2007

[illegible]

[illegible] CONTROL INFORMATION (FROM INPUT FILE)

Name of biomass (BIO) file aspic.bio
Name of output file (this file) proj1.out
Number of years of projections 10

Year	Input data	User data type	Fishing mortality
1998	1.000E+00	F (1997)	F=0.51
1999	7.000E-01	F (1997)	F=0.36
2000	7.000E-01	F (1997)	F=0.36
2001	7.000E-01	F (1997)	F=0.36
2002	7.000E-01	F (1997)	F=0.36
2003	7.000E-01	F (1997)	F=0.36
2004	7.000E-01	F (1997)	F=0.36
2005	7.000E-01	F (1997)	F=0.36
2006	7.000E-01	F (1997)	F=0.36
2007	7.000E-01	F (1997)	F=0.36

[illegible] metric ton[illegible]

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1998	1.404E+04	1.404E+04	-0.06%	1.201E+04	1.553E+04	1.307E+04	1.486E+04	1.790E+03	[illegible]
1999	1.264E+04	1.259E+04	-0.37%	9.477E+03	1.475E+04	1.116E+04	1.385E+04	2.688E+03	[illegible]
2000	1.688E+04	1.674E+04	-0.85%	1.167E+04	1.984E+04	1.458E+04	1.874E+04	4.158E+03	[illegible]
2001	2.157E+04	2.127E+04	[illegible]	1.423E+04	2.480E+04	1.839E+04	2.372E+04	5.326E+03	[illegible]
2002	2.618E+04	2.579E+04	[illegible]	1.734E+04	2.917E+04	2.247E+04	2.816E+04	5.691E+03	[illegible]
2003	3.053E+04	2.991E+04	[illegible]	2.267E+04	3.280E+04	2.771E+04	3.212E+04	4.404E+03	[illegible]
2004	3.443E+04	3.336E+04	[illegible]	2.877E+04	3.598E+04	3.219E+04	3.525E+04	3.063E+03	[illegible]
2005	3.753E+04	3.605E+04	-3.94%	3.320E+04	3.948E+04	3.563E+04	3.784E+04	2.211E+03	[illegible]
2006	3.995E+04	3.804E+04	-4.77%	3.601E+04	4.064E+04	3.795E+04	3.983E+04	1.879E+03	[illegible]
2007	4.138E+04	3.945E+04	-4.65%	3.827E+04	4.216E+04	3.953E+04	4.141E+04	1.883E+03	[illegible]

TRAJECTORY OF ABSOLUTE BIOMASS (BOOTSTRAPPED)

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1998	2.422E+04	2.497E+04	3.10%	1.607E+04	3.580E+04	1.998E+04	2.963E+04	9.649E+03	0.398
1999	2.880E+04	2.993E+04	3.93%	1.606E+04	4.551E+04	2.217E+04	3.711E+04	1.494E+04	0.519
2000	3.890E+04	4.067E+04	4.55%	1.980E+04	6.189E+04	2.891E+04	5.098E+04	2.207E+04	0.567
2001	5.090E+04	5.294E+04	4.02%	2.439E+04	7.940E+04	3.699E+04	6.616E+04	2.917E+04	0.573
2002	6.404E+04	6.577E+04	2.71%	3.027E+04	9.611E+04	4.633E+04	8.136E+04	3.503E+04	0.547
2003	7.627E+04	7.799E+04	2.25%	3.663E+04	1.109E+05	5.619E+04	9.561E+04	3.943E+04	0.517
2004	8.740E+04	8.863E+04	1.41%	4.353E+04	1.221E+05	6.630E+04	1.070E+05	4.070E+04	0.466
2005	9.684E+04	9.721E+04	0.38%	5.149E+04	1.317E+05	7.548E+04	1.151E+05	3.959E+04	0.409
2006	1.031E+05	1.037E+05	0.53%	5.758E+04	1.370E+05	8.281E+04	1.216E+05	3.880E+04	0.376
2007	1.084E+05	1.084E+05	-0.01%	6.286E+04	1.407E+05	8.878E+04	1.258E+05	3.700E+04	0.341

Scenario 2A. A 9 year step reduction of fishing mortality from 1999 to 2007

ASPIC 3.6x BLUEFISH NEFSC INSHORE [illegible]

USER CONTROL INFORMATION (FROM INPUT FILE)

....

Name of biomass (BIO) file aspic.bio
Name of output file (this file) proj1.out
Number of years of projections

Year	Input data	User data type	Fishing mortality
1998	1.000E+00	F F(1997)	F=0.51
1999	1.000E+00	F F(1997)	F=0.51
2000	1.000E+00	F F(1997)	F=0.51
2001	8.000E-01	F F(1997)	F=0.41
2002	8.000E-01	F F(1997)	F=0.41
2003	8.000E-01	F F(1997)	F=0.41
2004	6.000E-01	F F(1997)	F=0.31
2005	6.000E-01	F F(1997)	F=0.31
2006	6.000E-01	F F(1997)	F=0.31
2007	6.000E-01	F F(1997)	F=0.31

TABLE OF PROJECTED YIELDS (Total Allowable Catch TAC, metric ton)

Year	corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CI	Approx 80% upper CI	Approx 50% lower CI	Approx 50% upper CI	Inter-quartile range	Relative IQ range
1998	1.404E+04	1.404E+04	-0.06%	[illegible]	1.553E+04	1.307E+04	1.486E+04	1.790E+03	[illegible]
1999	1.671E+04	1.667E+04	-0.29%	[illegible]	1.981E+04	1.460E+04	1.849E+04	3.881E+03	[illegible]
2000	1.954E+04	1.941E+04	-0.70%	[illegible]	2.427E+04	1.615E+04	2.228E+04	6.129E+03	[illegible]
2001	1.879E+04	1.863E+04	-0.86%	[illegible]	2.361E+04	1.507E+04	2.171E+04	6.638E+03	[illegible]
2002	2.299E+04	2.271E+04	-1.22%	[illegible]	2.816E+04	1.832E+04	2.634E+04	8.017E+03	0.349
2003	2.709E+04	2.670E+04	-1.46%	[illegible]	3.197E+04	2.173E+04	3.042E+04	8.690E+03	0.321
2004	2.427E+04	2.385E+04	[illegible]	[illegible]	2.727E+04	2.006E+04	2.629E+04	6.229E+03	[illegible]
2005	2.919E+04	2.834E+04	[illegible]	[illegible]	3.116E+04	2.662E+04	3.041E+04	3.786E+03	[illegible]
2006	3.344E+04	3.205E+04	[illegible]	[illegible]	[illegible]	3.151E+04	3.384E+04	2.333E+03	[illegible]
2007	3.681E+04	3.485E+04	[illegible]	[illegible]	[illegible]	3.486E+04	3.653E+04	1.673E+03	[illegible]

TRAJECTORY OF ABSOLUTE BIOMASS (BOOTSTRAPPED)

Year	corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CI	Approx 80% upper CI	Approx 50% lower CI	Approx 50% upper CI	range	quartile	Relative IQ range
1998	2.422E+04	2.497E+04	3.10%	1.607E+04	3.580E+04	1.998E+04	2.963E+04	9.649E+03		0.398
1999	2.880E+04	2.993E+04	3.93%	1.606E+04	4.551E+04	2.217E+04	3.711E+04	1.494E+04		0.519
2000	3.342E+04	3.521E+04	5.38%	1.608E+04	5.638E+04	2.430E+04	4.512E+04	2.082E+04		0.623
2001	3.859E+04	4.061E+04	5.25%	1.618E+04	6.584E+04	2.648E+04	5.297E+04	2.649E+04		0.686
2002	4.821E+04	5.046E+04	4.67%	1.875E+04	8.074E+04	3.221E+04	6.544E+04	3.323E+04		0.689
2003	5.836E+04	6.042E+04	3.53%	2.257E+04	9.432E+04	3.907E+04	7.780E+04	3.873E+04		0.664
2004	6.775E+04	6.980E+04	3.02%	2.617E+04	1.059E+05	4.611E+04	8.964E+04	4.352E+04		0.642
2005	8.393E+04	8.530E+04	1.64%	3.512E+04	1.218E+05	5.984E+04	1.061E+05	4.625E+04		0.551
2006	9.800E+04	9.878E+04	0.79%	4.548E+04	1.349E+05	7.299E+04	1.182E+05	4.525E+04		0.462
2007	1.094E+05	1.094E+05	-0.04%	5.650E+04	1.444E+05	8.675E+04	1.284E+05	4.163E+04		0.380

Scenario 1B. Constant F=0.23 for 5 years from 1999 to 2003

ASPIC 3.6x BUFFLEHEAD ATLANTIC INSHORE - REF

USER CONTROL INFORMATION (FROM INPUT FILE)

Name of biomass (BIO) file aspic.bio
Name of output file (this file) proj1.out
Number of years of projections 5

Year	Input data	User data type	Fishing mortality
1998	[illegible]	[illegible]	F=0.51
1999	[illegible]	[illegible]	F=0.23
2000	[illegible]	[illegible]	F=0.23
2001	[illegible]	[illegible]	F=0.23
2002	[illegible]	[illegible]	F=0.23
2003	[illegible]	[illegible]	F=0.23

TABLE OF PROJECTED YIELDS (Total Allowable Catch TAC)

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1998	1.404E+04	[illegible]	-0.06%	1.201E+04	1.553E+04	1.307E+04	1.486E+04	[illegible]	[illegible]
1999	8.686E+03	8.658E+03	-0.56%	6.598E+03	9.986E+03	7.738E+03	9.448E+03	[illegible]	[illegible]
2000	1.291E+04	[illegible]	-0.99%	9.571E+03	1.448E+04	1.145E+04	1.392E+04	2.468E+03	[illegible]
2001	1.784E+04	[illegible]	-1.44%	1.376E+04	1.919E+04	1.633E+04	1.870E+04	2.368E+03	[illegible]
2002	2.299E+04	[illegible]	-2.59%	2.026E+04	2.384E+04	2.186E+04	2.348E+04	[illegible]	[illegible]
2003	2.750E+04	[illegible]	-3.49%	[illegible]	2.829E+04	2.647E+04	2.771E+04	[illegible]	[illegible]

TRAJECTORY OF ABSOLUTE BIOMASS (BOOTSTRAPPED)

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1998	2.422E+04	2.497E+04	3.10%	1.607E+04	3.580E+04	1.998E+04	2.963E+04	9.649E+03	0.398
1999	2.880E+04	2.993E+04	3.93%	1.606E+04	4.551E+04	2.217E+04	3.711E+04	1.494E+04	0.519
2000	4.408E+04	4.582E+04	3.95%	2.372E+04	6.716E+04	3.353E+04	5.622E+04	2.269E+04	0.515
2001	6.382E+04	6.563E+04	2.85%	3.408E+04	9.195E+04	4.849E+04	7.853E+04	3.005E+04	0.471
2002	8.550E+04	8.704E+04	1.79%	4.835E+04	1.162E+05	6.708E+04	1.024E+05	3.529E+04	0.413
2003	1.067E+05	1.069E+05	0.44%	6.448E+04	1.362E+05	8.646E+04	1.223E+05	3.587E+04	0.337

<u>Sceanrio 2B: A 5 year step reduction of fishing mortality from 1999 to 2003</u>

ASPIC 3.?? BLUEFISH NEFSC INSHORE + REC

USER CONTROL INFORMATION (FROM INPUT FILE)

Name of biomass (BIO) file: aspic.bio
Name of output file (this file): proj1.out
Number of years of projections: 5

Year	Input data	User data type	Fishing mortality
1998	1.000E+00	F/F(1997)	0.51
1999	7.800E-01	F/F(1997)	0.40
2000	4.800E-01	F/F(1997)	0.25
2001	3.500E-01	F/F(1997)	0.18
2002	2.500E-01	F/F(1997)	0.13
2003	2.500E-01	F/F(1997)	0.13

TABLE OF PROJECTED YIELDS

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1998	1.404E+04	1.404E+04	-0.06%	1.201E+04	1.553E+04	1.307E+04	1.486E+04	1.790E+03	0.127
1999	1.380E+04	1.375E+04	-0.39%	1.036E+04	1.616E+04	1.216E+04	1.516E+04	3.000E+03	0.217
2000	1.183E+04	1.172E+04	-0.92%	8.239E+03	1.387E+04	1.028E+04	1.312E+04	2.847E+03	0.241
2001	1.251E+04	1.235E+04	-1.24%	8.946E+03	1.390E+04	1.104E+04	1.343E+04	2.388E+03	0.191
2002	1.262E+04	1.234E+04	-2.18%	1.069E+04	1.326E+04	1.188E+04	1.301E+04	1.123E+03	0.089
2003	1.654E+04	1.593E+04	-3.68%	1.528E+04	1.711E+04	1.589E+04	1.673E+04	0.841E+03	0.051

TRAJECTORY OF ABSOLUTE BIOMASS (BOOTSTRAPPED)

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1998	2.422E-04	2.497E+04	3.10%	1.607E-04	3.580E-04	1.998E+04	2.963E-04	9.649E+03	0.398
1999	2.880E-04	2.993E+04	3.93%	1.606E-04	4.551E-04	2.217E+04	3.711E-04	1.494E+04	0.519
2000	3.737E+04	3.914E+04	4.74%	1.873E+04	6.010E+04	2.756E+04	4.923E+04	2.167E+04	0.580
2001	5.469E+04	5.682E+04	3.89%	2.701E+04	8.343E+04	4.026E+04	6.991E+04	2.966E+04	0.542
2002	7.958E+04	8.150E+04	2.42%	4.250E+04	1.120E+05	6.098E+04	9.756E+04	3.658E+04	0.460
2003	1.104E+05	1.112E+05	0.67%	6.547E+04	1.410E+05	8.882E+04	1.270E+05	3.819E+04	0.346

Scenario 1C: Constant catch (TAC=32 millions lbs) for 5 years.

USER CONTROL INFORMATION (FROM ASPIC FILE)

Name of biomass (BIO) file	aspic.bio
Name of output file (this file)	proj1.out
Number of years of projections	5

Year	Input data	Set data type
1998	14500 mt = 32,000,000 lbs	TAC
1999	14500 mt = 32,000,000 lbs	TAC
2000	14500 mt = 32,000,000 lbs	TAC
2001	14500 mt = 32,000,000 lbs	TAC
2002	14500 mt = 32,000,000 lbs	TAC
2003	14500 mt = 32,000,000 lbs	TAC

TRAJECTORY OF ABSOLUTE BIOMASS (BOOTSTRAPPED)

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1998	2.422E+04	2.497E+04	3.10%	1.907E+04	3.580E+04	1.998E+04	2.963E+04	9.649E+03	0.378
1999	2.772E+04	2.929E+04	5.64%	1.738E+04	4.623E+04	1.957E+04	3.731E+04	1.774E+04	0.640
2000	3.470E+04	3.701E+04	6.65%	4.515E+02	6.210E+04	1.921E+04	4.940E+04	3.019E+04	0.870
2001	4.713E+04	4.995E+04	6.00%	1.278E+02	8.557E+04	2.021E+04	6.927E+04	4.906E+04	1.041
2002	6.712E+04	6.957E+04	3.64%	7.868E+00	1.139E+05	2.411E+04	9.624E+04	7.214E+04	1.075
2003	9.428E+04	9.525E+04	1.04%	4.290E+01	1.406E+05	3.330E+04	1.235E+05	9.016E+04	0.956

TRAJECTORY OF ABSOLUTE FISHING MORTALITY RATE (BOOTSTRAPPED)

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1998	5.558E-01	5.849E-01	5.25%	3.550E-01	9.621E+00	4.315E-01	7.352E-01	3.037E-01	0.536
1999	4.604E-01	4.384E-01	-4.79%	2.580E-01	2.965E+00	3.363E-01	7.496E-01	4.133E-01	0.898
2000	3.542E-01	3.346E-01	-5.53%	1.962E-01	6.862E+00	2.457E-01	7.277E-01	4.820E-01	1.361
2001	2.558E-01	2.434E-01	-4.86%	1.435E-01	9.732E+00	1.741E-01	6.346E-01	4.605E-01	1.800
2002	1.811E-01	1.760E-01	-2.81%	1.133E-01	9.674E+00	1.315E-01	5.256E-01	3.941E-01	2.176
2003	1.154E-01	1.145E-01	-0.82%	1.121E-01	9.634E+00	1.021E-01	4.641E-01	3.781E-01	3.129

Scenario 2C: Constant catch (TAC= 32 million lbs) for 9 years

Bluefish Production model projection 20 May 1998 at 20:52

USER CONTROL INFORMATION (FROM INPUT FILE)

Name of biomass (BIO) file aspic bio
Name of output file (this file) proj1.out
Number of years of projections

Year	Input data	User data type
1998	14500 mt = 32,000,000 lbs	TAC
1999	14500 mt = 32,000,000 lbs	TAC
2000	14500 mt = 32,000,000 lbs	TAC
2001	14500 mt = 32,000,000 lbs	TAC
2002	14500 mt = 32,000,000 lbs	TAC
2003	14500 mt = 32,000,000 lbs	TAC
2004	14500 mt = 32,000,000 lbs	TAC
2005	14500 mt = 32,000,000 lbs	TAC
2006	14500 mt = 32,000,000 lbs	TAC
2007	14500 mt = 32,000,000 lbs	TAC

TRAJECTORY OF ABSOLUTE BIOMASS (BOOTSTRAPPED)

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1998	2.422E+04	2.497E+04	3.10%	1.607E+04	3.580E+04	1.998E+04	2.963E+04	9.649E+03	0.398
1999	2.772E+04	2.929E+04	5.64%	1.138E+04	4.623E+04	1.957E+04	3.731E+04	1.774E+04	0.640
2000	3.470E+04	3.701E+04	6.65%	4.515E+02	6.210E+04	1.921E+04	4.940E+04	3.019E+04	0.870
2001	4.713E+04	4.995E+04	6.00%	1.278E+02	8.557E+04	2.021E+04	6.927E+04	4.906E+04	1.041
2002	6.712E+04	6.957E+04	3.64%	7.868E+00	1.139E+05	2.411E+04	9.624E+04	7.214E+04	1.075
2003	9.428E+04	9.525E+04	1.04%	4.490E-01	1.406E+05	3.330E+04	1.235E+05	9.016E+04	0.956
2004	1.244E+05	1.232E+05	-0.95%	2.374E-02	1.627E+05	5.051E+04	1.472E+05	9.665E+04	0.777
2005	1.523E+05	1.482E+05	-2.72%	2.302E-02	1.815E+05	1.078E+05	1.696E+05	6.179E+04	0.406
2006	1.738E+05	1.668E+05	-4.01%	1.989E+04	1.960E+05	1.512E+05	1.845E+05	3.329E+04	0.192
2007	1.873E+05	1.790E+05	-4.47%	1.110E+05	2.070E+05	1.691E+05	1.942E+05	2.515E+04	0.134

TRAJECTORY OF ABSOLUTE FISHING MORTALITY RATE (BOOTSTRAPPED)

Year	Bias-corrected estimate	Ordinary estimate	Relative bias	Approx 80% lower CL	Approx 80% upper CL	Approx 50% lower CL	Approx 50% upper CL	Inter-quartile range	Relative IQ range
1998	5.558E-01	5.349E-01	-3.75%	3.550E-01	1.062E+00	4.315E-01	7.352E-01	3.037E-01	0.546
1999	4.604E-01	4.384E-01	-4.79%	2.680E-01	4.000E+00	3.363E-01	7.496E-01	4.133E-01	0.898
2000	3.542E-01	3.346E-01	-5.53%	1.962E-01	4.000E+00	2.457E-01	7.277E-01	4.820E-01	1.361
2001	2.558E-01	2.434E-01	-4.86%	1.435E-01	4.000E+00	1.741E-01	6.346E-01	4.605E-01	1.800
2002	1.811E-01	1.760E-01	-2.81%	1.133E-01	4.000E+00	1.315E-01	5.256E-01	3.941E-01	2.176
2003	1.323E-01	1.323E-01	0.03%	9.505E-02	4.000E+00	1.065E-01	3.330E-01	2.266E-01	1.713
2004	1.049E-01	1.063E-01	1.38%	8.479E-02	4.000E+00	9.154E-02	1.987E-01	1.071E-01	1.022
2005	8.815E-02	9.164E-02	3.96%	7.676E-02	4.000E+00	8.173E-02	1.059E-01	2.421E-02	0.275
2006	7.948E-02	8.359E-02	5.17%	7.154E-02	1.807E-01	7.612E-02	8.925E-02	1.313E-02	0.165
2007	7.534E-02	7.926E-02	5.21%	6.791E-02	1.014E-01	7.293E-02	8.259E-02	9.657E-03	0.128

APPENDIX 2. BLUEFISH AMENDMENT 1 PUBLIC HEARING SUMMARIES

MANHATTAN BEACH, NY - AUGUST 24, 1998

Hearing officer Tony DiLernia opened the hearing at 1940 hours. Twenty nine individuals from the public were present. John Mason attended. Tom Hoff of MAFMC staff attended.

Professor DiLernia solicited questions before he took comments. There were lots of questions on the biological targets for bluefish. Many individuals stated that bluefish were cyclical and that more enforcement of the existing rules was needed before more rules were imposed. It was questioned that when we reach the rebuilt level how quickly will the restrictions be reduced? Numerous individuals stated that the data were flawed and that bluefish should not be considered overfished. Several people questioned the accuracy of the MRFSS data.

Professor DiLernia then accepted individuals comments.

Walter Wiegand, NY & Western Long Island Party & Charter Boats, had a written statement that he said he would mail in. He stated that we should not pass regulations that decrease the effort in fisheries. Bluefish are not overfished. Landings have decreased because of effort shifting to other species. Statistics are off because effort has changed. He recommends a 9 year rebuilding plan and fishing should be at the current levels. No change in the bag limit. No support for operator permits if fares can cause the boats to be penalized. We should not subject the crews or the boats to enforcement regulations. Vessels need to be able to sell to individuals. He wants both recreational and commercial fishermen on the Monitoring Committee. Management measures should be adjusted only annually not on a frameworked basis within the year. He supports the 12 inch minimum size for commercial fishermen. No support for a 12 inch size for recreational fishermen.

Robert Jones, CCA - NYC, stated that there is no enforcement now so we should leave everything as the status quo.

Al Lama spoke about the commercial EEZ hook and line fishery and wanted to know what permits are needed for it.

Peter Guoba, Lady Sheryll and the Freeport Boatmens Assoc, stated that he has never seen a MRFSS sampler. He does not believe the numbers in the assessment. He is totally opposed to any in season changes that would come from frameworking. He believes that catch and release programs are working. He is concerned that there is enforcement only on party and charter boats and not with the average angler.

Dolores D'Ambrosio, Smittys Fishing Station, stated that the DEC boards their boats every week-end. Snappers introduce kids to fishing. Recreational size limits are a turn-off for kids.

Captain Dennis Kannoc does not want to increase the commercial take if the recreational fishery decreases. There should be a harvest limit for both sectors that is independent. There is no support for in-season closures or adjustments. Under the current regulations, the stocks are rebuilding so do not need to do anything.

Richard Johnson, The Fishing Line, stated that there is no support for the 12 inch size limit. The stock is rebuilding and therefore keep the status quo. There were more bluefish in 1998 than at any time during the previous 5 years. The two year lag for data in the stock assessments is too

long. He does not want to give any recreational fish to the commercial fishermen.

Walter Wiegand stated that he fills out trip reports every day and gets "writers cramp" from providing so much information that is not used in the assessments.

Walter Specht questioned where the survey samples boats. He never is sampled. He does not want an in-season closure or any other in-season adjustments.

Kevin Bradshaw has never been surveyed. He has never seen any MRFSS or other sampler. He stated the random survey is flawed. Surveys are not appropriate.

Numerous people stated they want the Regional Administrator to come to Freeport to explain sampling.

Jack Ferra stated that he wanted the States to be able to adopt various conservation equivalencies. He also does not want any in-season adjustments.

Dennis Kanyach stated that roller rigs destroy habitat and that for EFH, one needs to stop commercial fishing.

Jeff Dunson, recreational fishermen, stated that more information is needed at the docks. Education is the key.

Captain Frank Morelli stated that bluefish are cyclical in nature. Otter trawls are not the most efficient gear to catch bluefish. Current regulations are working.

Professor DiLernia closed the hearing at 2125.

TOMS RIVER, NJ - AUGUST 24, 1998

The hearing was opened by hearing officer Bruce Freeman at 7:00 PM. Staff in attendance included Rich Seagraves. Other MAFMC members in attendance included Gary Caputi and Dusty Rhodes.

Mr. Seagraves presented the Amendment and Mr. Freeman opened the hearing to public comment.

Ray Bogan, representing United Boatman, stated that the major goal of the plan is to conserve the bluefish resource and to increase the understanding of the stock. United Boatmen have worker hard to get anecdotal, "on the water" information used in the management process. ASMFC went out of their way to consider this type of information. The second objective involves preserving the traditional uses of the resource and should be sustainable use. The third objective involves cooperation and this has occurred through ASMFC, the Councils and the states. The fourth objective is to prevent recruitment overfishing. The fear of recruitment overfishing has not materialized, this has not been observed. The last objective is to reduce waste in the fisheries. Up to 55% of the bluefish caught are released, a high percentage of which are released alive. Also the decrease in fishing effort has reduced waste. On page 92 and 93 of the document, within that context, the research recommendations should include research to examine angler preference. There has been a shift in effort from bluefish to striped bass. The managers need to consider the cumulative effort. This is part economic and part social. With regard to the overfishing definition, it is consistent with the SFA. However, he cautioned that the definition should be based on abundance over a 50 year time frame. We are currently basing the definition at bluefish at their

maximum. He feels that the 118 million lb biomass is unrealistic to attain and will we will be able to maintain the bluefish stock at that level even if we can rebuild to that level at all. In terms of research needs, we need to carefully examine if the current estimate of Bmsy is appropriate. He agrees with the management strategy of rebuilding the stock in nine years. It is consistent with the SFA and five year rebuilding strategy would be destructive and may not be attainable. In regards to permits and fees, a party/charter boat permit already exists for a variety of other species. The Council and Commission should take a closer look at what sanctions go with this. The captain or operator should not be sanctioned or held responsible for violations committed by customer on the boat or a crew member. This must be specified in the plan, don't leave this to law enforcement. He could not support the party/charter vessel permit without the specification that the vessel owner or operator is not responsible for violations by customers or crew. He agrees with the commercial dealer permit, they already exist. The issue of licensing the commercial vessel instead of the individual goes to the issue of the party/charter industry being allowed to continue with the traditional use of the resource, including the sale of fish. He maintains that the sale of bluefish by the captain and crew of party/charter vessels is a traditional activity and should be preserved as per the second objective of the FMP. The document states that up to 35% of the party/charter vessels sell their catch. He feels there is no justification to disallow the sale of bluefish by the party/charter boat industry, and this is inconsistent with the second plan objective which is to maintain the traditional fisheries. Also, the party/charter sector has been filling out logbooks but only the MRFSS data has been used for management, why isn't the logbook data being used? He feels that the permit to permit catches in excess of the 10 fish limit should continue. NMFS should look at this, there is no biological impact from this activity. The individual permit to sell bluefish should continue to exist so party charter captains and crew can sell their fish. He agrees with the Bluefish Monitoring Committee and feels that the framework adjustment process is very important to maintain flexibility in the management process. He agrees with the 83:17 split, and the proposal to allow a transfer of quota should be considered if it means maintaining traditional fisheries and so long as it does not become a permanent transfer of quota. It should not allow for the expansion of non-traditional fisheries. He is strictly opposed to the 12 inch minimum size limit. He feels that it is not justified and will have a negative economic impact on the bait and tackle industry. He is totally opposed to the minimum size limit and feels that the snapper fishery has no biological impact. This should only be considered as a framework measure. The size limit will impact the inland fisheries the most and they have already been hit hard by other regulations. It may be OK to restrict the party/charter boat fleet, but not the shore based anglers. The bag limit should be raised above ten fish. With the 83:17 split we will see a recreational quota which is unattainable. There has been an increase in recreational effort overall, but effort directed at bluefish has declined. Therefore, recreational bluefish anglers should be rewarded with an increase in the bag limit. He is concerned about unreported commercial landings. We should consider increasing the bag limit, without the increase the recreational sector will not reach their quota. Seasonal closures should be included as a framework measure, but there should be allowance for seasonal closures in more than one wave. When the seasons are closed for one full wave then different areas are disproportionately impacted. He is opposed to using alternate base years to determine the allocation between commercial and recreational fisheries. He supports increasing the bag limit to 12 fish. The crew and customers should be held liable for their own violations, not the captain or licensed operator. This needs to be carefully worded.

Frances Bogan, representing Bogan Party Boats, feels that if the stocks continue to improve then the bag limit should be increased to 12 fish. He favors the licensing of the individual to sell bluefish (party/charter mates and crew should be allowed to sel their catch). This will preserve the traditional use of the resource. He is opposed to the minimum size limit, although we could consider a party/charter size limit. On page 118, the wording about the operator being held accountable for violations by passengers or crew should be removed. The crew and customers

should be held liable for their own violations, not the captain or licensed operator.

Jim Donofrio was strongly opposed to the minimum size limit. He supports limited entry for the traditional or historical participants in the commercial fishery. He is concerned that there will be a shift in effort from the spiny dogfish fishery into the bluefish fishery and the Amendment has no provisions to deals with this displaced effort. If new markets are created with this increased effort we could see big vessels enter this fishery. The Council should consider limited entry. Dogfish fishermen have been irresponsible in their by bycatch of striped bass and this problem could be transferred to bluefish.

John Koegler, representing the 1000 Fathom Club, was concerned that the amendment was affecting a lot of the traditional components of the bluefish fishery. The 12" minimum size limit will eliminate the bay snapper fisheries. Also, the sale of bluefish by party/charter crews is a traditional use of the bluefish resource that would be eliminated. Dollar wise, the value of the fish sold by this sector does not amount to much, it's just supplemental income so why take it away? He is very concerned that the rebuilding schedule on page 279 is unrealistic. How was this calculated and how can this really happen? He feels that the target biomass of 241 m lb is totally unrealistic. He questioned how the stock could rebuild that fast. The fluke stock could not be rebuilt that fast. He is concerned that recreational fishermen will be hit hard nine years down the road when the stock fails to rebuild to this level. He is concerned about the provision for the transfer of quota from the recreational sector to the commercial sector. Gill nets are intruding into traditional recreational fishing grounds. This area conflict is a real problem. He totally objects to the transfer of quota from the recreational to the commercial sector. He supports the 83:17 split. Any deviation of this allocation could be very harmful to the rebuilding process. He opposes the quota transfer provision unless the Council wants to consider transferring some of the fluke quota from the commercial sector to the recreational sector. Finally, he is opposed to the 12" minimum size limit since it will only affect kids having fun in a catch and release fishery. The minimum size limit has the effect of taking more fish from the recreational sector. Amendment 1 does not address the traditional uses of the bluefish fishery and the Council is exercising an error in judgement if it allows a 4.5 million pound quota transfer to the commercial sector.

John Connell, ASMFC Commissioner, asked where the concept of di minimus originated? He is opposed to the 12" minimum size limit since it would eliminate the traditional snapper fishery. He favors an increase in the bag limit. This would put them out of the situation of considering a quota transfer. He supports regional closures. The traditional sale of bluefish by individual permit holders needs to be preserved. The purpose of the amendment is manage the resource, this only affects who makes money from the sale of bluefish. He is concerned about the concept of di minimus, he wants the 83:17 split to apply to di minimus states.

Tom Fote stated that the Bluefish Plan is the worst FMP he ever saw. The 10 fish bag limit is a feel good measure that did nothing. While the 10 fish limit was in place the stock and catch dropped. He wants the Council and Commission to show the 50 year average catch for bluefish. You are disguising the rebuilding schedule by basing the recovery on periods of high abundance. There is a need to look at a broader number of years. The target biomass proposed is unattainable. The plan will not work. Even if you shut the fishery down you probably could not rebuild to the target propose. This stock can not collapse completely. He is strongly opposed to the 12" minimum size limit. If we stay within the quota, we don't need the size limit.

Gary Caputi, representing himself, stated that there is a need for more accurate scientific data on bluefish. The current fishery independent indices used to monitor the bluefish stock are woefully inadequate. They are inaccurate because the gear used and are covered by the surveys are

inappropriate. Bluefish have a much wider range than was previously though in terms of water temperature, salinity and prey migrations. Anecdotal information indicate that bluefish are found offshore and also move north of Maine. The areas covered by the NMFS trawl surveys are too limited. There is a need for a wider area to be assessed and as a result NMFS can't accurately estimate stock biomass for bluefish. The 12" minimum size limit is applicable if an appropriate mesh is specified. The size limit has a place in the list of framework measures but he is opposed to the 12" size limit as currently proposed. The most recent stock assessment information indicates that a 12" size limit is not necessary. It would be difficult for him to support having kids arrested for taking a few snappers.

Kevin Wark, commercial fishermen, commented that he has been a bluefish advisor. He feels strongly that a limited entry system for bluefish is needed. He is concerned about effort being redirected from other fisheries into the bluefish fishery. The quota will not prevent a derby fishery from occurring. He supports trip limits ans limited entry on the commercial side. He asked how we came to a 83:17 allocation? The commercial fishermen should get a higher percentage of the allocation.

Al Ristori, representing himself, stated that this all started when he was on the Council. There was public support for a plan for bluefish because of the possibility of foreign markets opening up and the purse seiners and pair trawlers targeting bluefish. Prior to that time bluefish took care of themselves. The stock was not overfished because they have a high reproductive potential and they do not freeze well. As a result, when a lot are caught the price drops. The plan was originally designed to stop expansion of non-traditional fisheries and preserve the 90:10 split. Somehow we have slipped to 83:17. The proposal to allow a transfer of quota would further increase the commercial share which he opposes. Recreational fishermen should not have to give up any more quota. He strongly opposes the quota transfer provision. He has questions about the rebuilding program. Do we really want 240 m lbs of bluefish in the ocean? We always manage each fishery independently as if they exist alone in the ocean. Given the voracious nature of bluefish this level of biomass will require a huge forage base. How will striped bass, bluefish, and weakfish all exist at high biomass levels at the same time. The scientists have a narrow view in this regard. The 12" minimum size limit has no biological basis. He fished for snappers with a cane pole in the 40's and there were no big blues. By the late 1950's the big ones started to show up. How can we explain this. His impression is that there currently area large number of bluefish available of all sizes. We are probably fishing at the proper rate at the current time. The recreational fishermen are satisfied with what they are catching. There is no justification to reduce the recreational catch any more, especially by imposing a 12" minimum size limit.

The hearing closed at 8:30 PM.

OCEAN CITY, MD - AUGUST 24, 1998

Hearing Officer Bill Outten called the hearing to order at 7:05 p.m. Others present were Bob Beal of ASMFC, José Montañez of the MAFMC staff and Kathy Collins who prepared the summary minutes. There were ten members of the public present.

Mr. Outten presented the opening remarks. Mr. Montañez then presented an overview of the Bluefish Amendment 1 FMP. After the FMP presentation, Mr. Outten opened the hearing for questions and comments.

Mr. Joe O'Hara (MD Saltwater Sportfishing Assoc.) gave comments regarding different sections of the Plan which could be improved. Under section 2.2.5.10 (letter E) on page 82 referencing

essential habitat which says you shouldn't do nourishment or sandmining in bluefish habitat, that is a little tricky in Ocean City because the beach nourishment has to be done when there is not a lot of wave action, and bluefish will be out there. Table 62 on page 295, the table indicates that the recreational size limit should be a 14" fish. The only reason given for a 12" fish was so it would cover young of the year. By increasing the size limit to 14" it would reduce mortality 10.8% and this would be more appropriate. On table 43, page 277, he did not agree that 'fish to eat' should be listed as not very important when compared to other reasons. On page 120, item 10, it should read 'Any Other Management Measures in the FMP and Amendments' rather than referring to the current document, which could be the document less amendments. Under section 3.1.1.9 on page 124 it should read 'Recreational Management Measures' because you are referring in the framework measures that you should be able to change management measures. Section 3.1.1.10 on page 125 should read 'Other Management Measures.' Section 3.1.1.11 on page 125 should read 'Data Management Measures' so this would allow you to change those things in the future. Page 129 regarding defining the Sustainable Fisheries Act it says it requires the resource be rebuilt to biomass that produces maximum sustainable yield in as short a period as possible. He questions a nine year recovery period and suggested they should have options for every year. Page 261, table 23, shows a summary of landings, average landings for 1992-1996 was 27,441 million pounds and in 1996 it was 24,023 million pounds. On page 279, the preferred alternative proposes a nine year reduction in mortality and the projected yield for 1999 is 36.84 million pounds, that is 50% above the 1996 level. If the fish are at the lowest point ever, you shouldn't start out with a 51% mortality rate, you should start out with a number close to the current yield. He thinks they should start out near 25 million and increase that 10% per annum until they get to the sustainable yield. That way you have a stronger chance of recovering. As of August 1996, no states had 12" commercial limits. To reduce dead discards there should be a change in gear requirements, so if you have to put in a 12" requirement for commercial fishing but you didn't change any of the gear, this would not make sense. Table 58 on page 292, 18.6% of the commercial fishery from 1987-1996 of the NC samples were less than 12", so that means you are throwing away 18.6% dead discards with the 12" size limit unless you change gear. In table 60 on page 293, of the total bluefish harvested by pound net gear in NC, 64.2% were less than 12" TL. Pound nets are 7% of your total gear overall, so how can you change a size limit without changing gear if you want to reduce discards?

Mr. Henry Koellein (President of Atlantic Coast Chapter of the MD Saltwater Sportfisherman's Association) thinks that the minimum size should be at least 14" for all parties. This would probably be in an area of two years of age so this would allow them to have a chance to spawn.

Mr. Sherman Baynard requested that every effort be given to try and release the documents concerning fisheries ASAP prior to meetings. He asked a question regarding the commercial quota in which it states that if the quota was less than 10.5 million pounds, the quota could be increased up to 10.5 million pounds if the recreational fishery was not anticipated to land their entire allocation for the upcoming year. He asked, in the Plan, what is the provision if the recreational fishery were to harvest larger than their quota? Mr. Montañez stated that there were no provisions in the current Plan. Mr. Bob Beal of ASMFC stated that right now there are no provisions. He added, for example, what they would do for 1998 if the recreational fishery exceeded the quota by an enormous amount, it would have to go through the framework process and through the Technical Monitoring Committee that this Plan proposes to set up, and they could change the regulations for next year adding a creel limit or the size limit to adjust to get closer to the target for 1999. Mr. Baynard added that he is opposed to having commercial being given the opportunity to pull from the recreational quota to fill their 10.5 million pounds. If the recreational fishery cannot harvest their quota, the same provision should be allowed for adjustments to try and increase their harvest to get closer to their quota instead of reapplying to the commercial sector.

Mr. Bernie Hawkins stated that the paperwork for reporting requirements has become burdensome. He asked if there was any way to have new reporting requirements to issue one party/charter permit? This would allow less paperwork. He agrees with the 14" size limit proposed by previous speakers. Why increase the commercial quota if sports don't meet their quota? That would indicate that the fishing is off, so why take more. Regarding seasonal closures, which is listed as a tool, he doesn't think they work for sports because the word does not get out in time about the closures. Regarding the harvest limit, trying to keep track of the recreational catch and putting a closure on it after the harvest limit is reached would be a nightmare (for example bluefin tuna). Put a reasonable creel limit and size limit on anglers. He added that during the first week of August, during the black sea bass closure, has been the hardest week he has ever known. When you take people out to fish and they can't keep anything, it creates a bad scene. He stated that they carried people during the seasonal closure but it will have to show up on the books next year as a lack of sponsors. He stressed that there is a need to create some enforcement, to make regulations work. He stated that they have had only one sea bass check on one person this year and that is because he called them and asked them to. The boats are not being inspected or checked to see if the laws are being obeyed. He feels that the MSY is insufficient as a management tool. He feels the Council should redirect their efforts on rebuilding. He asked what can be done to increase essential fish habitat? Can the spawning ground be protected for bluefish? They have been so far down in the Ocean City area, up until this year, very few boats were targeting them. He would like to see the stock rebuilt.

Mr. Mike D'Amico (Director of Special Projects-Sierra Club) stated that he will submit written comments from the Sierra Club at a later date. He would call on Council to begin to establish a monitoring and sampling program for all beach renourishment projects throughout the Council's jurisdiction and also extend that into the full range of species that is in question. They feel it is important to assess the direct secondary and cumulative impacts of these actions. We have projects going on from Montauk Point, Long Island all the way down to Virginia Beach right now with renourishment. At the same time, NC is in the process of starting beach replenishment. They would like to see time of year restrictions. Would like to see more research in significance in the Relic Shoals that is being used as sources of sand for beach replenishment. He stated that there is a need for more research, sampling programs and the need to look for alternative sites.

The hearing was closed at 7:40 p.m.

1998 RONKONKOMA, NY - AUGUST 25, 1998

Hearing officer John Mason opened the hearing at 1940 hours. Forty individuals from the public were present. Tom Hoff of MAFMC staff attended.

Mr. Mason solicited questions before he took comments. Numerous individuals stated that the data were flawed and that bluefish should not be considered overfished. Several people questioned the accuracy of the MRFSS data. An explanation was needed on what conservation equivalency meant. Were the Bluefish Advisors plugged into the overall process? Numerous questions were raised on the economic parts of the surveys. Questions on the stock assessment were generally followed with statements that the data stink. Why consider regulatory actions without the weather data being included in the stock assessment?

Mr. Mason then opened the hearing for comments.

Dave Levin stated he supported a 5 year rebuilding schedule.

John Digiacomo, J&R Fishing Tackle and FTTA, stated that bluefish are prey for striped bass. Weather is important in bluefish distribution and since not included in stock assessment, the stock assessments are not valid. There is a definite correlation between the increase in regulations and his income going down. He is tired of the Magnuson Act being thrown in his face. The snapper fishery is for kids and old people. The stock assessments ignore relevant (weather) data. Striped bass have out stripped their food supply. Recreational anglers fish for what is available. Government is doing "overlordship" not stewardship. He pays taxes and is ignored by NMFS. Council member Tony DiLernia lies and where is he now? He supports the "Take No Action" alternative. He wants to be able to keep 6 inch bluefish.

Chet Wilcox, B&B Tackle and NYFTTA, has never been asked during any survey and thus the data are no good. The fishing tackle industry will send in comments. He opposes minimum sizes. There is non-existant economic data for any decisions.

Bill Perkins spoke in favor of a slot size and the conservation equivalency.

Carl Froelich, commercial fisherman, stated that recreational fishermen can go snapper fishing. He supports a 16 inch commercial size limit if it would allow the commercial quota to increase. He fishes with gillnets with 3.75 inch mesh between the knots and that is the appropriate mesh size for 16 inch bluefish.

Tim Froelich, commercial fisherman, stated that there should be no maximum size limit. Striped bass are too plentiful. Maintain the status quo. He supports an increase in the size limit if it allows the commercial fisherman to have more pounds of bluefish. Commercial fisherman should not be penalized by recreational release policies.

John Mantione, NYFTTA, provided a written statement (see Attachment 1). Government should consider predator prey interactions. He does not like a recreational size limit. The Bluefish FMP does not mention bait and tackle shops. There are 300 businesses represented by NYFTTA. He provided petitions with 3000 signatures that support the status quo. Conservation should be achieved through the promotion of release.

Fred Schwab, Coastal Conservation Association, provided a written statement (see Attachment 2). Opposed to the commercial quota transfer. He opposes size limits. The FMP makes no mention of the impacts to bait and tackle shops. He is in favor of conservation equivalency.

Charles Witek, CCA NY, provided written comments (see Attachment 3). The stock should be rebuilt in five years. He favors the five years with the 75% reduction. NMFS should not allow rebuilding to take nine full years. He opposes the commercial quota transfer. Replace the size limit to reduce the bag limit. Cap the commercial quota at 17% of TAL, and make no upward adjustments to such cap based on anticipated recreational harvest. Replace the 12 inch size limit with an 8 fish bag limit. Implement all other preferred management measures set forth in the Amendment.

Joe Feliccia, Long Island Beach Buggy Association, which represents 2000 members presented written comments (see Attachment 4). Snapper fishery is threatened by these measures. He questions the data especially since there is no complete economic or social impacts in the FMP at all. They are against the Amendment.

John Dinkelmeyer opposes the framework management measures since they allow in-season adjustments. He can not keep up with the regulations now even though they only change yearly. He questioned how can anyone want to keep a 6 inch snapper and argue that they are conservation focused.

James Schneider, Capt. James, does not believe bluefish are over exploited. There are lots of boats that

no longer fish for bluefish in the past couple of years. There are only six charters currently fishing blues. The government should increase the striped bass bag limit and fishermen would not fish for blues. Striped bass are overpopulated. Kids do not need six inch fish, they are happy to release snappers. The proposed 16 inch commercial size limit is a joke. He does not want a bag limit of less than 10 fish. He supports the conservation equivalency. He believes the commercial quota should be constant and not have any transfers.

Pat Augustine, NY Sportfishing Federation, is in favor of Amendment 1 to conserve the resource. He supports the 83% recreational, 17% commercial quota with no transfers. He understands and agrees with the framework measures. Coast wide commercial quota with trip limits is favored. Nine year rebuilding plan is ok. The economic analyses is very poor. Need more thorough economic analyses. A recreational demand curve must be developed. EFH is a great first step in the right direction. They support the conservation equivalency.

John Digiacomo wanted to know whether enforcement cops would lock up little kids or senior citizens if they kept fish smaller than 12 inches.

Pete Pearson stated that no one has ever surveyed him.

Deidre Williamson submitted a written statement. (see Attachment 5)

A petition with 2,221 signatures was submitted. (see Attachment 6)

Mr. Mason closed the hearing at 2215.

CAPE MAY, NJ - AUGUST 25, 1998

The hearing was opened by hearing officer Dusty Rhodes at 7:30 PM. Staff in attendance was Rich Seagraves. Council members in attendance included Charles Bergmann. There were three members of the public in attendance.

Mr. Seagraves presented the Amendment and Mr. Rhodes opened the hearing to public comment.

Mr. Bergmann read and then submitted written testimony (see Attachment 7).

Alex Ogden, representing the Delaware Waterman's Association asked, if there is a shortage of bluefish, why is the Council allocating more fish to the recreational sector based on the 83:17 allocation ration? The recreational sector catches most of the bluefish. He feels that additional rules on the commercial sector will only result in the increase in discard of dead fish. He catches bluefish as a bycatch species. He feels the traditional allocation of 80:20 should be maintained. There should be some allowance made for the bycatch of bluefish in other directed fisheries. He doesn't want a boat quota. He feels that because of all the regulations, commercial fishermen are throwing away more of their catch than they keep.

The hearing was closed at 8:00 PM.

PROVIDENCE, RI - AUGUST 25, 1998

The hearing was opened by hearing officer Mark Gibson of the Rhode Island Department of Environmental Management, representing the Atlantic States Marine Fisheries Commission. Also present was Robert Beal of the Atlantic States Marine Fisheries Commission Staff. There were no

members of the public in attendance.

SANDWICH, MA - AUGUST 26, 1998

The hearing was opened by hearing officer David Pierce of the Massachusetts Division of Marine Fisheries, representing the Atlantic States Marine Fisheries Commission. The meeting was called to order at approximately 7:15 p.m. Also present was Robert Beal of the Atlantic States Marine Fisheries Commission Staff. There were 3 members of the public in attendance.

Dr. Pierce made opening comments regarding the Amendment One.

Mr. Beal read the summary of the plan, detailing the management measures that the Council and ASMFC adopted for the purposes of public hearings, as well as the rebuilding schedules included in the plan. Mr. Beal also reviewed the alternatives to the proposed plan.

Donald Manchester, Jr., East Sandwich, MA, felt that the 10 fish limit was too high for recreational fisherman. If a recreational fisherman is catching large bluefish, one bluefish is probably sufficient. However, in any case five bluefish is more than fair. The 12" limit is fair and it will provide an opportunity for people to participate in the upper size limits of the snapper fishery.

Edward S. Syrjala, Centerville, MA, expressed concern that discards in the recreational bluefish fishery may be high which may be killing a large number of fish.

The meeting was adjourned at approximately 8:10 p.m.

BRANFORD, CT - AUGUST 27, 1998

The hearing was opened by hearing officer Dave Simpson of the Connecticut DEP Marine Fisheries Office, representing the Atlantic States Marine Fisheries Commission. The meeting was called to order at approximately 7:05 p.m. Also present was Robert Beal of the Atlantic States Marine Fisheries Commission Staff.

Mr. Simpson made opening comments regarding the Amendment One.

Mr. Beal read the summary of the plan, detailing the management measures that the Council and ASMFC adopted for the purposes of public hearings, as well as the rebuilding schedules included in the plan. Mr. Beal also reviewed the alternatives to the proposed plan.

Mike Corcoran, Clinton, CT commented that the reductions in fishing mortality should be more aggressive at the beginning of the nine year rebuilding schedule and relaxed as the stock rebuilds. The stepwise approach to rebuilding should be reverse relative to what is being proposed. Year one should have a fishing mortality rate of F=0.31. The minimum size limit of 12" is too small and the minimum size limit should be increased to a size associated with a two year old fish, even at the expense of the snapper fishery.

Due to the small percentage of the commercial catch that is taken in Connecticut a lot of fish will be able migrate to the south were they can be caught by the states with larger percentages of the commercial catch. More restrictions in the southern states should be implemented to ensure that this does not happen.

Ralph Biase, Branford, CT commented that the total recreational catch is decreasing over the last

few years, which would allow that commercial fishermen to catch the 10.5 million pound adjusted quota. He did not feel that the left-overs from the recreational fishery should go to the commercial fishery.

Mr. Biase agreed with the gentlemen before him that the fishing mortality reduction schedule associated with the nine year rebuilding schedule should be reversed, with more aggressive reductions in the first years and relaxing the restrictions in the later years. He would also like to see larger minimum size and a maximum size put on commercial catches. He also commented that the plan should detail the type of nets that can be used as well as minimum mesh size requirements.

The snapper bluefish fishery is important to getting kids involved with fishing, a system should be developed where kids 15 or 16 years old and younger should be allowed to catch 10 snapper bluefish of any size. The 10 fish limit would begin to teach the kids about conservation.

Douglas Brander, Stratford, CT commented that the 12" size limit would limit the kids ability to participate in the snapper bluefish fishery. During the summer when the kids are not in school there are not too many 12" fish available, the 12" fish don't show up until after school begins. The amount of fish the kids would take is insignificant anyway.

It is also important to include many of the bait species, such as menhaden, in the model as well as the management plan. The baitfish haven't been around and therefore the large bluefish haven't shown up this year.

We should also maintain the moratorium on large vessels catching bunker in Long Island Sound. The tidal estuaries also need to be protected to ensure habitat for bluefish and bait.

Peter Digregorio, recreational fishermen and tackle shop owner commented that everyone wants the bluefish stocks to prosper, but to do away with the snapper fishery would be a travesty. The snapper fishery has not hurt the population excessively. Senior Citizens also count on the snapper fishery. A much smaller bag limit should be put on the larger fish, there is no need to keep 4 or 5 large bluefish. A 12" size limit would end the snapper fishery in the state of Connecticut.

The baitfish is a big issue, we need to protect the food source for the bluefish. We need to take more drastic measures to protect menhaden.

Randy Dean, Fairfield Boat Owners Association, the Association believes that a creel limit is an appropriate way to help the bluefish stocks however, the 10 fish limit may be too high. No one needs to keep 10 large bluefish. The Association would support a five adult fish limit per person. The snapper fishery is difficult to deal with, but to cut it out completely is a stiff measure, we should possibly implement a regulation for kids under 15 years old and retired people to participate in the fishery. The slow down in the bluefish fishery is putting more pressure on the striped bass and summer flounder populations.

Arthur Brown, Branford, CT commented that the snapper fishery should be left as it is with a 10 fish limit. The take of the larger fish should be reduced since the larger fish supply more eggs per fish.

Randy Dean, Fairfield Boat Owners Association, the rebuilding schedule is backwards as proposed, it should be more aggressive in the early years and relaxed as the stock rebuilds.

Ron Domurat, Newington, CT, the Council and Commission have not done enough for rebuilding, a 15" size limit would be more appropriate, to allow the stock to spawn at least once before being caught. The bag limit could also be more aggressive, a five fish bag limit would be more appropriate. The kids just want to participate in the snapper fishery even if they can not keep the fish, this will also teach the kids the catch and release ethic. Over the years a lot of small bluefish have been removed which has contributed to the decrease in stocks of bluefish.

William Clayton, Deep River, CT, commented that the snapper fishery should be maintained. A five fish bag limit of any size may be more appropriate to reduce to recreational catch, and this will allow the kids and the senior citizens to fish. The rebuilding schedule should be reversed with F=0.31 during the first two years and the fishing mortality rate could be stepped up as stocks rebuild.

Richard Bloom, Guilford ,CT, commented that the commercial quota should not be adjusted upward because of conservation practices in the recreational sector. This would skew the 17% allocation to the commercial fishery.

Douglas Brander, Statford, CT, felt that it would be appropriate for children and senior citizens to keep 10 fish of any size to keep the snapper fishery open. Also a 14" or 15" size limit on adult bluefish for commercial and recreational fisheries. He felt that a mesh size requirement may be needed to allow smaller fish to escape the nets.

Frank McKane, Bridgeport, CT, the USFWS just conducted a program to get more people into fishing, if the snapper fishery is ended by the 12" limit his would discourage kids from getting into fishing. Possibly should develop a 10 fish limit under 14" to maintain the snapper fishery and a 5 fish limit over 14". Also, set the commercial fishery at a 14" minimum.

Mike Corcoran, Clinton, CT, five fish bag limit is more than adequate at 12". He fished for snappers as a kid but that does not mean it was the right thing to do. This plan does not stop people from catching fish and releasing them.

The meeting was adjourned at approximately 8:15 p.m.

DOVER, DE - AUGUST 31, 1998

Hearing officer Rick Cole opened the hearing at 1940 hours. Eleven individuals from the public were present. Tom Hoff of MAFMC staff attended.

John Marshall, recreational fisherman, questioned the percentage for the commercial fishery. He stated that striped bass do not eat bluefish.

Joe Bailey, recreational fisherman, questioned why the Council was not going to rebuild the resource for nine years. He also wanted to know if the Amendment had any provisions for recreational licences. Fishing mortality should be reduced immediately and not wait until 2001 to begin. He supports a minimum size of 14 inches.

Tim O'Connor, Sierra Club, questioned the relationship between bluefish and striped bass. He stated that Delaware recreational gillnet fishermen should all comply with the commercial rules.

Charlie Lesser, DE Division Fish & Wildlife, said that the plan should license individual fishermen and not vessels. Licenses should stay with the individuals. He questioned how EFH will impact State activities.

Sonja Fordham, CMC and speaking for EDF, supports the swift and full recovery of the bluefish resource. They support the five year rebuilding plan. They support the minimum size with 12 inches at a minimum, but really would like to have the minimum size as the size at maturity. Supports less than a 10 fish bag limit. They support the Council's preferred alternative for identification of EFH at 90% for this overfished resource. They support the Monitoring Committee.

Mr. Cole closed the hearing at 2015.

STUART, FL - AUGUST 31, 1998

The hearing was opened by hearing officer Roy Williams of the Florida Marine Fisheries Commission, representing the Atlantic States Marine Fisheries Commission. Also present was Robert Beal of the Atlantic States Marine Fisheries Commission Staff. There were no members of the public were in attendance.

NEWPORT NEWS, VA - SEPTEMBER 1, 1998

The hearing was opened at 7:05 p.m. by hearing officer Jack Travelstead of the Virginia Marine Resource Commission, representing the Atlantic States Marine Fisheries Commission and the Mid-Atlantic Fisheries Management Council. Also present was Robert Beal of the Atlantic States Marine Fisheries Commission Staff. There were 9 members of the public in attendance.

Mr. Travelstead made opening comments regarding the Amendment One.

Mr. Beal read the summary of the plan, detailing the management measures that the Council and ASMFC adopted for the purposes of public hearings, as well as the rebuilding schedules included in the plan. Mr. Beal also reviewed the alternatives to the proposed plan.

Larry Snider, Coastal Conservation Association (CCA) of Virginia, The CCA does agree with many of the provisions in the plan, however the 5 year rebuilding schedule is favored because it cuts the mortality rate and gets to the target biomass more quickly. The CCA realizes that this would result in more restrictive management measures. The 12 " size limit does not seem to coincide with the size at maturity. The CCA supports increasing the minimum size to ensure that each fish spawns at least once before it is caught.

Squid and menhaden stocks need to be protected to ensure forage food for the rebuilding bluefish stock. The bluefish stocks have not been coming inshore as in the past which means the recreational fishery may not catch the target. Therefore, the commercial quota will likely be increased to the 10.5 million pounds which may set a precedence for a higher allocation for the commercial fishery. This is a low value commercial fish and a high value recreational fish.

The CCA is concerned that there is no moratorium on new participants entering the commercial fishery. In the early 1980's many fishermen from other states came into Virginia and caught a large volume of bluefish.

Mr. Travelstead asked if the low commercial quota would act as a deterrent to get into the commercial fishery.

Mr. Snider responded that initially that may limit entry but as the abundance of bluefish increases the quota may increase which may draw in additional participants.

Harold Diebler, Jr., Virginia Charter boat Association, The Association would like to see no further regulations on the bluefish fishery at this time. The Association has worked with the VMRC on many other species and opportunities to catch and keep fish are very limited. For example the 15" size limit on summer flounder was implemented to keep the season open but the boats up in the middle bay are now out of the flounder business since there aren't any 15" flounder up there. The same situation occurred in the tautog fishery, there are very few tautog over the size limit where our charter boats are fishing. Bluefish is one of the few opportunities still left for the charter boats to catch and bring in customers. There are plenty of bluefish in the Bay and catches have been good.

Claude Jones, President of CCA Chapter and former commercial fishermen, commented that when bluefish come in contact with any net they will get their gills caught in the net. The size limit on the commercial fishery will result in a high number of dead discards due to small fish being caught in the net. If you put a gill net or a pound net out there you will catch small bluefish. The larger size limit to allow the fish to spawn one time may be appropriate. If the bluefish stock needs to be rebuilt, the 5 year rebuilding plan seems to be the most appropriate, but this will lead to either commercial, recreational, and/or charter boats enduring stiff restrictions. The bluefish stocks do seem to be decreasing. The commercial fishermen in North Carolina try to catch 100 boxes of bluefish to be allowed to keep one bluefin tuna, this may need to be changed.

Eric Burnley, manager of Taylor's Landing Tackle Shop, owner/operator of Ebbtide Guide Service, and a member of the advisory panel for the original bluefish plan, commented that he sees no benefit to a size limit on bluefish, let people keep the first ten they catch. People catching and releasing small fish adds to the mortality of bluefish. Only one of his clients in seven years has ever kept a limit of bluefish. Keep the limit at ten fish and let people keep the first ten of any size.

It is a big mistake to change the commercial quota limit on projections of the recreational catch. The projections are very difficult to make with any accuracy. 83% of the TAC for recreational and 17% of the TAC for commercial and that's it, don't change the distributions. We don't need to catch every fish that is in the total allowable catch, let the remainder go towards conservation.

Jack Travelstead read a public comment that was supplied in writing by Bob Pride (see Attachment 8).

The meeting was adjourned at approximately 7:45 p.m.

MANTEO, NC - SEPTEMBER 2, 1998

The hearing was opened by hearing officer Fentress "Red" Munden of North Carolina Division of Marine Fisheries, representing the Atlantic States Marine Fisheries Commission and the Mid-Atlantic Fisheries Management Council. Also present was Robert Beal of the Atlantic States Marine Fisheries Commission staff, Damon Tatem the ASMFC Governor's appointee for the State of North Carolina, and Bill Foster a member of the Mid-Atlantic Fisheries Management Council and member of the Bluefish Advisory Panel. Fourteen members of the public were present.

Mr. Munden made opening comments regarding the Amendment One.

Mr. Beal read the summary of the plan, detailing the management measures that the Council and ASMFC adopted for the purposes of public hearings, as well as the rebuilding schedules included in the plan. Mr. Beal also reviewed the alternatives to the proposed plan.

Duke Spencer, charter boat operator and spokes person for the Oregon Inlet Guides Association, During the 1940's and 1950's there were many large bluefish in the area. In North Carolina there are two categories of bluefish taylor blues (many less than 12") and chopper blues. In the summer the taylor blues are along the shore. North Carolina does not have 2-4 pound bluefish. For the small bluefish 10 per person is appropriate, however for the large bluefish 10 fish is way too many. Five big bluefish would be sufficient.

James Fletcher, United National Fishermen, presented a written statement (see Attachment 9). If the species will be managed through a fish limit on fishing mortalities, then we need to determine what F was during the periods of historic fluctuations.

Bill Foster, Hatteras, NC, presented an alternative proposal (see Attachment 10). The stock assessments prior to this last one relied on the assumption that the fishing mortality controlled the size of the population and natural mortality is constant. The Council and Commission did not accept this assessment. A new assessment was developed based on recreational catch rates are dependant on the populations. The SAW said the population was declining and the F rate was increasing and the new assessment indicated that F rate was going down and the population was going up. Crecco put together another model that did not identify a trend in F.

C. Wayne Lee, recreational fishermen from Kill Devil Hills, ASMFC advisor on striped bass and weakfish, The goals on page 132 of the plan with a target biomass of 237 million pounds of bluefish, when these reference points are compared to the tables in the plan, it appears that 237 million pounds is an unrealistic goal. Table 1 indicates that the average biomass over 14 years is only 116 million pounds. Table 23 shows that the average biomass for the years when the highest landings occurred is only 144 million pounds. These goals will put undue hardships on the recreational and commercial fishermen. My recommendation is to use the 144 million pounds as the target which is more reasonable. Therefore, we may have a realistic chance of reaching our goals. We should re-evaluate the F-rate after the first two years to determine is a more aggressive approach is needed.

Mr. Lee did not support the 12" minimum size limit for the recreational fishery, the plan allocates 29 million pounds to the recreational fishery and only about 14 million pounds has been landed during the last few years. The size limit is not needed if the recreational fishery is not catching the allocation anyway. There is no biological benefit to the size limit. He does support the 10 fish bag limit. He also supported a 2 - 5 fish bag limit on bluefish over 5 pounds.

Bluefish compete with striped bass and weakfish therefore there is a lot of competition for food. Many of the bluefish may have moved offshore to find food. The amount of forage fish is decreasing in many areas. The Council and Commission need to develop a forage plan for coastal species. Food supply, not overfishing, could be the cause for bluefish declines.

Frank Fegel, Gerry F Fishing Charters, the operator permits being recommended are redundant to the Coast Guard licenses that are currently required. Vessel permits need to be streamlined to have one permit for all species that a charter boat may catch. Vessels with a summer flounder permits already have to file a report form every trip. These report forms need to be developed with input from the individuals that will have to fill them out every day. The party and charter boat industry needs to be represented on the Bluefish Monitoring Committee.

Billy Tillet, Wanchese, NC, opposes the 12" minimum size limit more for the recreational fishery than commercial. The commercial industry does not catch many bluefish under 12". The12" limit in the recreational fishery will lead to discards and waste. Expressed concern about a hard quota in

the commercial fishery while only having a harvest limit in the recreational fishery.

Brian Davenport, charter boat operator, concerned that the 12" bag limit would limit his catches excessively. If you release a 10" bluefish this year it will not come back next year as a larger fish. The charter boats are fishing in a nursery area and the fish will not return. There are not many bluefish over 12" around during many times of the years. A 12" limit will be devastating to his business.

Bill Foster, Hatteras, NC, the 12" size limit in the commercial fishery does not need to be implemented, there is no market for bluefish under 12". Any bluefish that are caught under 12" are incidental catch and would be turned into unnecessary discards and waste. The amendment missed the point when it says that a goal is to maximize catch and release is wrong, it should try to minimize catch and release. The amendment mentions that bag limits have been a successful way to control harvest in the recreational fishery, and they have not worked that well, due to increasing effort.

The meeting was adjourned at approximately 8:15 p.m.

MOREHEAD, NC - SEPTEMBER 3, 1998

The hearing was called to order at 7:25 p.m. by hearing officer Fentress "Red" Munden of the North Carolina Division of Marine Fisheries, representing the Atlantic States Marine Fisheries Commission and the Mid-Atlantic Council. Also present were Robert Beal of the Atlantic States Marine Fisheries Commission Staff, John Carmichael of North Carolina Department of Marine Fisheries, and Willard Cole of the USFWS. Two members of the public were present.

Mr. Munden made opening comments regarding the Amendment One.

Mr. Beal read the summary of the plan, detailing the management measures that the Council and ASMFC adopted for the purposes of public hearings, as well as the rebuilding schedules included in the plan. Mr. Beal also reviewed the alternatives to the proposed plan.

Michelle Duval, representing the Environmental Defense Fund (EDF) and the Center for Marine Conservation (CMC), presented the following statement:

EFH: EDF and CMC support the risk-averse decision to designate 100% of the area south of Cape Hatteras and 90% of the area north of Cape Hatteras where bluefish are caught as EFH for this spp. EDF and CMC urge the Council and Commission to continue to fill in gaps in the EFH data, particularly in those areas which should be included as EFH for ecological purposes, but currently are not due to lack of sampling. EDF and CMC will continue to work with the Habitat Advisory Panel to identify new sources of data to be used in the EFH process. EDF and CMC also encourage the Council to use its commentary authority to oppose any federal or state activities within its jurisdiction which may adversely affect EFH for bluefish and any other council-managed species.

EDF and CMC fully support any measures necessary in order to rebuild the stock for this species on a five-year plan as opposed to the 9 year plan proposed by the Council. This includes a reduction in the recreational bag limit if necessary. EDF and CMC support the 12" size limit as a minimum for both recreational and commercial sectors, but would prefer a size limit that is more in line with size at maturity.

The hearing was adjourned at 7:40 p.m.

ATTACHMENT 1

NYFTTA

NEW YORK FISHING TACKLE TRADE ASSOCIATION INC.

265 W. Main St. • Patchogue, NY 11772 516-654-2311 • Fax 516-475-2506 • Email 76021.1455@compuserve.com • www.nyftta.org

Comments On July 1998 Draft Of Amendment 1 To The Bluefish Fishery Management Plan

I would like to comment on the July 1998 Draft of Amendment 1 to the Bluefish Fishery Management Plan. While the members of the NYFTTA recognize the need for conservation, we are concerned that other important factors such as environmental effects, interaction with competitors and interaction with prey were barely mentioned in the amendment.

The NYFTTA urges you to weigh the factors presented in our position versus the economic hardship associated with the recommended efforts to reduce fishing mortality, as proposed in the amendment. The NYFTTA feels the amendment does not properly address the potential economic and social impacts that would occur operating under a bluefish size limit. Since only 2 ports were surveyed, we feel the decision to introduce a bluefish size limit was made from a shallow base of information and therefore the economic and social impacts would be greater than indicated in the amendment.

Absolutely no mention is made of the bait & tackle industry in either the Economic Impacts or Social Impacts discussions. We argue that such an oversight represents a major weakness in the amendment, considering the fact that the NYFTTA alone represents over 300 businesses in the N.Y. Marine District, including bait & tackle shops, manufacturers, manufacturers rep groups, bait wholesalers and marine and boat associations that contribute over one billion dollars to the economy of New York State.

On page 159, it is perturbing to read, "Party/Charter Boats may experience a change in annual revenues from the implementation of a size limit," when in fact, these businesses are unlikely to experience any reduction in revenue as a result of a 12" size limit, since no one aboard these boats targets fish of that size. Almost absurdly, the amendment cites this meaningless example, while the recreational fishing industry, which would be greatly impacted by a size limit, does not even rate a mention. In a sense validating our position, the authors correctly state that the snapper fishery is predominantly a shore-based fishery. However, no connection is drawn between the anglers and the retailers who profit from their activity: no mention of the impact of the loss of the snapper fishery to the bait & tackle industry is acknowledged in either the Economic Impacts or Social Impacts text.

The NYFTTA feels these deficiencies must be addressed prior to the adoption of this amendment by the Secretary of Commerce.

Respectfully submitted.

John Mantione

President,
New York Fishing Tackle Trade Association

NYFTTA

NEW YORK FISHING TACKLE TRADE ASSOCIATION INC.

265 W. Main St. • Patchogue, NY 11772 516 654-2311 • Fax 516 475-2506 • Email 76021.1455@compuserve.com • www.nyftta.org

NYFTTA Bluefish Position

The position of the NYFTTA regarding bluefish population is that the bluefish fishery is on a natural down cycle, a belief which is clearly corroborated by many sportsman's articles written since the 1920's, besides being included in the research by Bigelow and Schroeder.

The NYFTTA stands by its mission statement: to promote recreational fishing, especially to our youth. NYFTTA believes fishing is an entertaining sport, in which participation brings about a heightened awareness of one's environment. Fishing is a family experience that can be enjoyed by all.

The targeting of snappers is a way to introduce kids to fishing. Most of our youth are first introduced to fishing by way of the snapper blue fishery. Children (our future customers) enjoy this type of fishing immensely. Many youngsters do not participate or excel in team sports: fishing can instill a sense of self-esteem for those that may not have the opportunity to build self-confidence through other activities.

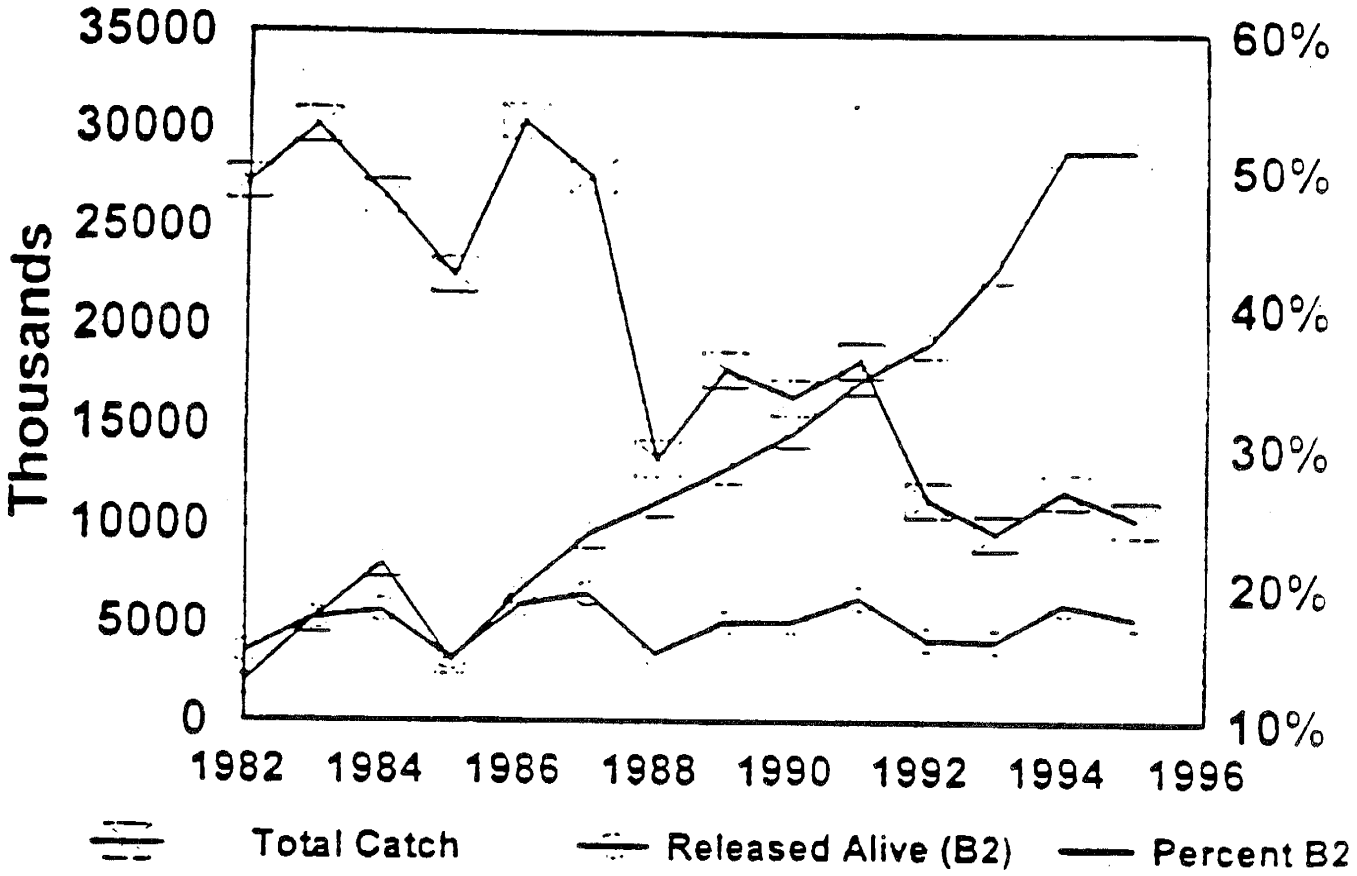
NYFTTA member businesses estimate a 15-20% overall yearly income linked to the juvenile bluefish fishery. As a whole, the bluefish fishery on a consistent basis brings in to member businesses an average of $10-15 per pound of bluefish caught. With this in mind, our businesses must coexist with the resource.

We promote conservation through education and this process is clearly working. According to the graph titled *East Coast Bluefish Recreational Catch*, from *table C12, 23rd Stock Assessment Workshop*, release rates for bluefish of all sizes, including snappers, have increased from 15% in 1982 to over 51% in 1995. Prior to consideration of a minimum size limit, we would like to request the National Marine Fisheries Service (NMFS) Fishery Statistics Division staff develop an estimate of release rates for snappers. Conversation between our local Sea Grant specialist Mark Malchoff and Fishery Statistics Division personnel on snapper release rates for the period of 1982 through 1995 indicate that such estimates could be developed. Such analysis would give a truer picture of the state of the snapper fishery.

There is clearly no need to mandate conservation of the resource if the process is being successfully accomplished through changing angler values.

It is also valid to mention the uncertainties in any data: (eg.) limited geographical sampling region, bluefish biomass displaced offshore due to shifting wind direction, environmental and baitfish patterns, along with poor recruitment due to biotic and environmental variables. Additionally, it should be noted that the 15% post catch and release mortality value is an estimate. The true value may be lower. (Malchoff, 1995) Consequently, angling mortality rates, as estimated from the marine recreational fishery statistics survey (MRFSS) maybe overly conservative.

East Coast Bluefish Recreational Catch



from table C12, 23rd SAW (MRFSS data)

AMENDMENT 1 TO THE BLUEFISH FISHERY MANAGEMENT PLAN

Public Hearing 8/25/98 Holiday Inn, Ronkonkoma, N.Y.

Comment by Fred Schwab

My name is Fred Schwab. I am a member and formerly Chairman of the ASMFC's Striped Bass Advisory Panel, a member of the NYS Marine Resources Advisory Council, and Vice Chair of the Coastal Conservation Association's New York chapter. I am a recreational fisherman and a user of the bluefish resource for some 55 years.

Amendment 1 to the Bluefish Management Plan describes that fishery as over fished and that Amendment as being a 9 year stock rebuilding effort in response to the Magnuson-Stevens Fishery Conservation and Management Act as amended by the Sustainable Fisheries Act of 1996.

I applaud that effort but have a major problem with two of the Plan's proposals. One is an allocation issue while the other relates to minimum size limits within some states

My comment on the allocation issue is directed to the recreational fishing community as well as fisheries managers and all who had input into the development of this amendment.

Amendment 1 repeatedly mentions that the total allowable landings or TAL are based on the "historic proportion of commercial and recreational landings from 1981 through 1989", that being **83% recreational** and **17% commercial**. The Plan's preferred alternative allocates 5.95 million pounds to the commercial fishery and 29.07 million to the recreational sector for 1999. While the allocation in poundage varies and there is a slight mathematical error in one of the four non-preferred options, the 83-17% split is constant for all 5 options.

That's fine! **But there is another "constant".** One which I **strongly oppose**, one which the **entire** recreational sector should **vigorously oppose**, one which is not described in percentage terms and which if it

remains part of the Plan WILL alter the allocation percentages for at least several years and has the potential to alter them on a permanent basis.

What I am referring to is described in Table 47 of the Amendment, and elsewhere, as **"Commercial Quota with Transfers"**. This **gimmick** contributes nothing to the stock rebuilding process. On the contrary, it all but guaranties that throughout much, if not all, of the 9 year rebuilding process commercial landings and monetary return will remain relatively constant.

It works this way; "If 17% of the total allowable landings or TAL was less than 10.5 million pounds then the commercial quota could be increased up to 10.5 million pounds if the recreational fishery was projected to land less than 83% of the TAL for the upcoming year."

What this boils down to is that if because of reduced effort, lack of bluefish, or whatever, the recreational fishery catches less than 83% of the TAL, all or a substantial share of resultant reduction in fishing mortality could be offset by a quota increase for the commercial sector.

Incidentally, commercial landings for the past 3 years, 1994 through 1996, have averaged 8.86 million pounds, on that basis a 10.5 million allocation translates into an allowable increase of 1.64 million pounds.

Recreational fishermen should have no objection to being the major contributor to this rebuilding effort for collectively it is they who account for the highest number of fishing mortalities. But there is something **wrong** with a rebuilding process that reduces the savings in fishing mortality by one user group by transferring it to another user group!

RF SE

That's one problem with **"Commercial Quota with Transfers"**, but there is a less apparent but far greater one.

Perhaps I missed it, but the amendment document does not appear to contain an in-depth analysis of quota transfers in **percentage terms**? That being the case, your's truly played with the numbers.

There is no data for 1997, but for the 4 years of 1993 through 1996 recreational landings ranged from a high of 20.3 million pounds in 1993 to less than 14.2 million for 1995. The average for those four years was 16.19 million pounds while for the 3 most recent years it was 14.82 million. Obviously in recent years the recreational catch has been **WELL** below the 29.07 million pounds which the **preferred alternative** proposes for the recreational fishery in 1999, thus it is a near certainty that the commercial fishery will have an allocation of 10.5 million, **not** 5.95 million during the coming year.

Whatsmore the general trend for recreational landings of bluefish has been one of steady decline since 1986. That along with the scheduling of steady increases in the recreational **TAL** over the 9 year rebuilding period enhances the liklihood that the recreational fishery **will not** catch it's full 83% for **at least several years**. Therefore the commercial fishery will receive a quota transfer and be destined to receive an annual quota in **excess of 17%** for some time to come.

For example, if the recreational catch is 16.19 million pounds (the previously mentioned 4 year average), the commercial TAL of 10.5 million would be 39.35% of all allowable landings. That's a far cry from 17%! And it should be noted that the lower the recreational catch is, the greater the commercial percentage becomes.

As previously noted, the 83-17% split is based on historical landings from 1981 through 1989. If any of the 5 alternatives are implemented

with the Commercial Quota Transfer gimmick one can bet their bottom dollar that at some point in the future there will be a push on to adopt a new set of base years, one which includes those future higher percentages of the commercial TAL. One such period might begin with 1990 when the recreational catch was already in a downward trend and commercial landings accounted for 31% of the total allowable catch.

I don't have a crystal ball, but I don't believe one is needed in this case. If this Amendment is adopted with the Quota Transfer provision, at some point in the future it will bite the recreational fishing community in the rump. Don't let this happen!

As to which alternative I prefer? With the quota transfer...NONE!! Without that provision I personally could live with all but the non-preferred alternative listed under Section 3.1.2.11.4 and the preferred alternative. In both cases it is believed that the annual increases in the TAL may be excessive.

On the question of a size limit. I have long been an advocate of minimum size limits which are designed to minimize the mortality of immature fish. That measure is, or should be the first step taken when implementing a management program for any marine species. It's good science, it's common sense!

Were there clear evidence that the bluefish resource was on the verge of collapsing I'd support a size limit in a heartbeat. However, at this point in time that is not the case. Therefore, other relative factors must be taken into consideration. Those which come to mind fall under the categories of social, economic and biological.

From a social standpoint a minimum recreational fishery size of more than 7 or 8 inches would probably eliminate and most assuredly

would reduce participation in the "snapper" fishery. It is an historically important fishery in New York, Connecticut, Rhode Island and of significance in several other states.

During the latter half of the summer and well into September, within the New York Marine District one needs only to journey to any public dock or tidal creek bank to discover the social value of the snapper fishery.

Perhaps of greatest significance is the fact that the snapper fishery, more than any other, is a child's first introduction to saltwater fishing and the many wonders of the marine environment. Today's adult angler was yesterdays kid on a dock with a cane pole and a bobber, and tomorrows adult angler is today's kid on that same dock! Of course, snapper fishing is not confined to just one age group for yesterdays adult anglers, now senior citizens, will be in the mix.

It can be argued that with catch and release we can still have a snapper fishery. However, the level of participation would diminish and if it did not, from a biological standpoint mortality rates would probably remain close to present levels. Fish are not equipped with handles and in the case of a snapper it is usually clutched in the hand during the unhooking process, thus body slime is removed. In addition, during the snapper season water temperatures are high.

While Amendment 1 assumes a 15% hooking mortality and refers to a study which produced a 12.4% rate, it is assumed that there is no hard data relating to delayed mortality for snappers or for that matter adult bluefish?

In reviewing Amendment 1 I found a number of references to economic impacts associated with the party/charterboat fishery, but unless I

missed it, to my disappointment there was no mention of such impacts to Bait and Tackle Shops, bait suppliers, tackle manufactureres etc.

There are speakers present tonight who are engaged in the bait and tackle business and who speak from experience, so I will limit my comments on the economic factor.

Let it suffice to say that any reduction in participation in the snapper fishery would have a serious economic impact upon a majority of New York's many Bait and Tackle dealers. In New York participation in the snapper fishery takes place at a time when the productivity of other finfisheries and consequently relative fishing activity and related expenditures are at a seasonal low.

Amendment 1 notes that states can develop and upon approval, implement conservation equivalency measures. That being the case it is urged that New York be allowed to reduce it's bag limit in combination with a minimum size which is substantially below 12 inches.

Based on Table 63, at 6 inches the daily possession limit would be 8 and at 8 inches it would be 9. A reduction of 1 or 2 fish from today's limit of 10 will, in reality, not significantly impact other segments of New York's recreational bluefish fishery.

It is a small price to pay for the continuance of the snapper fishery and the related benefits to those mom and pop businesses dependent upon that activity.

Thank you,

Fred Schwab

COASTAL CONSERVATION ASSOCIATION
NEW YORK
P.O. Box 1118
West Babylon, NY 11704

August 25, 1998

Hannah Goodale
Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Dear Ms. Goodale:

On behalf of Coastal Conservation Association New York ("CCA NY"), I am taking this opportunity to comment on the draft Amendment 1 (the "Amendment") to the Bluefish Management Plan (the "Plan"). CCA NY is the state office of the Coastal Conservation Association, a national conservation and education association with particular expertise in marine fishery matters. Most of CCA NY's members are active salt water anglers who participate in the bluefish fishery.

CCA NY was disappointed in the Amendment, which fails to achieve at least one of its stated objectives and falls short of several mandates contained in the Magnuson-Stevens Fishery Conservation and Management Act ("Magnuson-Stevens")[1]. Although the Amendment represents a hesitant step toward proper management of the bluefish resource, it requires substantial revision. In its current form, it subordinates recovery of the bluefish stock to unreasonably high harvest levels, threatens the conservation ethic that has evolved among bluefish anglers and places a disproportionate share of the regulatory burden on citizens of four northeastern states. The following comments represent CCA NY's position on the preferred management measures, along with a discussion of certain preferable alternatives.

I
STOCK RECOVERY SCHEDULE:
THE BLUEFISH STOCK SHOULD BE REBUILT IN FIVE YEARS

A
Magnuson-Stevens requires that stocks be restored as soon as possible

The National Marine Fisheries Service ("NMFS") has declared bluefish to be overfished[2], and research indicates that it has been overfished since 1979[3]. Total stock biomass is estimated at 25,000 metric tons, only one-fourth of the 107,500 metric tons needed to achieve maximum sustainable yield.[4] Fishing-related mortality, which the Amendment asserts to be F=0.51, exceeds the definition of overfishing, set at

[1] PL 94-265, 16 U.S.C. 1901 *et seq.*
[2] *Amendment 1 to the Bluefish Fishery Management Plan*, Mid-Atlantic Fishery Management Council, Draft of 3 June 1998, p.116.
[3] *Ibid.*, p. 18.
[4] *Ibid.*

F_{msy}=0.40[5]. That being the case, Magnuson-Stevens makes it clear that NMFS must establish a plan to "end overfishing in the fishery and to rebuild affected stocks of fish."[6] Such plan must

> specify a time period for ending overfishing and rebuilding the fishery that shall--
>
> (i) be as short as possible, taking into account the status and biology of any overfished stocks of fish, the needs of fishing communities...and the interaction of the overfished stock within the marine ecosystem; and
>
> (ii) not exceed 10 years, except in cases where the biology of the stock of fish [or] other environmental conditions...dictate otherwise."[7]

The preferred rebuilding schedule presented in the Amendment fails to meet this requirement.

None of the considerations listed in Section 304(e)(4)(A) militate against a five-year recovery period. The Amendment characterizes bluefish as "a fast growing, highly fecund fish," and states that "given the right environmental conditions and sufficient spawning stock biomass, the stock could rebuild quickly."[8] It then lists two alternative rebuilding schedules[9] which would allow the stock to be recovered in a five year period. Therefore, there is no biological bar to a five-year recovery period, and no biological need for the proposed 9-year recovery.

There is also no justification for drawing out the recovery period based on the needs of fishing communities. Bluefish comprised only 0.09% of the value of fish and shellfish landed on the Atlantic coast in 1996.[10] Ex vessel value of the entire bluefish harvest was a mere $3.2 million[11]. Even in North Carolina, which accounted for more than 35% of the coastwide harvest in that year[12], bluefish only comprised 1.1% of the value of all seafood landed in that state.[13] In Wanchese, the only North Carolina fishing community described in the Amendment, bluefish represent 4% of the total harvest.[14] Examination of other fishing communities described in the Amendment make it clear that the commercial restrictions on bluefish inherent in a five-year recovery plan would have a *de minimis* effect.[15]

Finally, there is no ecosystem-based argument that can be made to delay recovery. As fish that "feed on a wide variety of pelagic and demersal fish and invertebrates,"[16] bluefish are opportunistic feeders. Thus, restoring the species will not put undue strain on any single species of forage fish. On the other hand, bluefish are an important component of the diets of a number of pelagic species, most particularly mako sharks[17], and it can be assumed that an increase in bluefish numbers would be beneficial to those species

In view of the above considerations, the proposed 9-year recovery plan violates the explicit requirements contained in Magnuson-Stevens, and should be replaced with either of the two plans which provide for a recovery within five years.

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[5] *Ibid.*

[6] Magnuson-Stevens Fishery Conservation and Management Act, Section 304(e)(3)(A)

[7] *Ibid.*, Section 304(e)(4)(A)

[8] Amendment 1, p.137.

[9] "Reduction in fishing mortality by 75% over a five year period (1999 to 2003) to rebuild to biomass target (B_{msy})," p. 129, and "Constant fishing mortality (F=0.23) over a five year period (1999 to 2003) to rebuild to biomass target (B_{msy})," p.130.

[10] Amendment 1, p.98.

[11] *Ibid.*

[12] *Ibid.*, p.267.

[13] *Ibid.*, p.98

[14] *Ibid.*, p.110.

[15] *Ibid.*, pp. 110-114.

[16] *Ibid.*, p.24.

[17] *Ibid.*, p.26.

B

Reducing fishing mortality by 75% over a five year period would not reduce current harvest levels

Preliminary data indicates that 22.6 million pounds of bluefish were landed in 1997.[18] Under the alternative rebuilding schedule that would reduce fishing mortality by 75% over five years, harvest would hit a low point of 24.3 million pounds in 2000, and increase to 34.7 million pounds by 2003.[19]

Given that scenario, the preferred alternative including a 9-year recovery makes no sense. Anglers, employing the most productive means at their disposal, only landed 13.6 million pounds of bluefish in 1997[20]. There is no reason to believe that they will more than double their landings in 1999, as permitted in the preferred alternative. There is also no indication that commercial interests will be able to take significantly more than the 9 million pounds harvested in 1997, even if the final version of the Amendment permits them to do so.

NMFS justifies the preferred recovery schedule on the basis that it provides "stability in projected yields,"[21] ignoring the fact that it would increase harvests by more than 50% before the "stable" period begins. A five-year, 75% reduction in harvest offers at least equal stability in harvest levels during the recovery period, without first artificially raising harvest during the first "recovery" year. It is clear that the 35 million pound total allowable landings for 1999 contained in the plan will only delay, and not contribute to, bluefish restoration. A more realistic, and more effective, rebuilding schedule is called for.

C

Availability of bluefish to anglers should not be confused with harvest

Objective 2 of the Amendment states as an objective, "Provide the highest availability of bluefish to U.S. fishermen while maintaining, within limits, traditional uses of bluefish[22]. However, an analysis of the preferred rebuilding schedule makes it clear that NMFS is equating "availability" to anglers with "harvest" by anglers. Perhaps that correlation explains why NMFS has stated a preference which would allow anglers to harvest a greater number of fish than they have recently been able to take and, most likely, many more than they want to kill.

Surveys have indicated that anglers fish primarily "To enjoy nature and the outdoors," "To relax and escape from my daily routine," "To spend quality time with friends and family" and "To experience the excitement or challenge of sportfishing." Killing fish, whether to eat or weigh in a tournament, fall near the bottom of reasons why people fish.[23] Catch and release fishing is becoming ever more popular among bluefish anglers, with 54% of the recreational catch released in 1996[24]. Such an increasing level of releases is a major contributor to reduced levels of angler harvest, and should not be confused with a decline in angler interest in the species. Therefore, in drafting a plan for important recreational species, NMFS must understand that making fish available for catch and release angling, as well as for harvest, is part of "providing the highest *availability* of bluefish," and that the highest levels of harvest do not necessarily equate with the highest levels of angler satisfaction. A recovery schedule that, instead of maximizing harvest, increases the number of fish that may be caught and released by anglers (such as one of the five-year recovery schedules) thus meets the criteria contained in Objective 2.

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[18] *Ibid.*, p.109.
[19] *Ibid.*, p.173.
[20] *Ibid.*, p.109.
[21] *Ibid.*, p.139.
[22] *Ibid.*, p.12.
[23] *Ibid.*, p.277.
[24] *Ibid.*, p.97.

D

Uncertainties with regard to the stock assessment dictate a conservative approach

Upon reading the Amendment, it becomes clear that the biologists charged with determining the present level and future recovery of the bluefish stock are not comfortable with any of the stock assessments. While there is general agreement that "the stock appears to be at a low level of abundance and over-exploited,"[25] both the true level of the stock and the actual level of exploitation are open to debate.[26] Even the biologists who performed the stock assessment on which the amendment is based cite the checkered history of the "biomass dynamic model" used to evaluate the stock, and admit that such models "were poorly received early on," and that "the models sometimes yielded nonsensical results or worse, plausible results from nonsense data."[27] However, they explain their use of the model by stating, "the problem has been attributed to poor data and biased estimation methods rather than to flaws with the basic approach...With methodological advances, agreement between biomass dynamic and full age-structured models has improved."[28]

Even if such improvement has occurred, the caveat included by the authors of the assessment gives managers reason to approach the data with caution. This is particularly true when other studies arrive at very different results. For example, while the model in question suggests that the bluefish stock can recover if fishing-related mortality is reduced to F=0.28, a stock assessment conducted by other researchers during 1997 advised radically reducing fishing levels, to F=0.06, merely to *stabilize* the spawning stock biomass.[29]

While CCA NY does not advocate such a radical reduction in fishing effort, it does advise NMFS to heed the researchers' advice that "More work needs to be done on interpreting F estimates from the [biomass dynamic] model,"[30] and risk erring on the side of caution by reducing harvests 75% over five years, rather than by 40% over nine years as in the preferred schedule.

E

CCA NY endorses the recovery schedule which would reduce harvest by 75% over five years

CCA NY requests that NMFS not implement the preferred 9-year recovery schedule, and instead replace it with the 75% reduction over five years described in Section 3.1.2.11.1 of the Amendment. As an alternative, CCA NY would be satisfied with the adoption of constant fishing mortality of F=0.23 over a five-year period, as described in Amendment Section 3.1.2.11.3.

II

COMMERCIAL QUOTAS:
THE QUOTA SHOULD BE CAPPED AT 17% OF TAL

CCA NY supports capping the commercial quota at 17% of Total Allowable Landings ("TAL"). Such figure represents the historical proportion of commercial to recreational landings, and maintains the bluefish fishery's character as a primarily recreational fishery.

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[25] *Ibid.*, p.17.
[26] Gibson, Mark R. and Najih Lazar, "Assessment and Projection of the Atlantic Coast Bluefish stock Using a Biomass Dynamic Model," March 17, 1998, pp.1-2.
[27] *Ibid.*, p.3.
[28] *Ibid.*
[29] *Ibid.*, p.12.
[30] *Ibid.*, p.13.

We oppose allowing commercial quotas to increase if anglers do not kill their full allotment of bluefish. As mentioned above, bluefish anglers are moving toward a catch and release fishery. Although they kill fewer fish than they once did, they still require an abundant population if they are to enjoy their sport to the fullest. Allotting any portion of their releases to the commercial sector would allow commercial interests to benefit from anglers' more enlightened fishing practices, and would not reward anglers equally for their resource-oriented behavior.

In addition, allowing commercial fishermen to benefit from anglers' releases threatens the growing trend toward catch and release fishing. There is a hard core of cynical fishermen who oppose catch and release, claiming that any fish which they release will just be killed by someone else. The preferred rebuilding schedule amply reinforces the cynic's claims. Under the preferred schedule's terms, anglers who release their fish and fail to reach their quota will not be rewarded with a more vital fishery, but instead will feel that their efforts have gone to naught as fish which they released are directed to the commercial sector. Some CCA NY among them, fear that such an increased commercial quota could cause a realignment of allocations in any future Amendment 2 to the Plan, with commercial fishermen being given more than 17% of the TAL as a result of their post-1999 share of landings. Should that happen, anglers would be punished for conservation efforts, while commercial fishermen would be rewarded for taking as many fish as possible.

III
RECREATIONAL SIZE LIMIT:
THE PROPOSED SIZE LIMIT SHOULD BE REPLACED WITH A REDUCED BAG LIMIT

CCA NY's membership is strongly opposed to the proposed 12-inch recreational size limit listed as a preferred management measure in the Amendment. In a survey of CCA NY's members, conducted in June and July of this year, three-quarters of the respondents supported regulating recreational bluefish harvest solely through the use of a bag limit. Only 6% supported the use of size limits alone, while 17% endorsed the use of both.[3]

An examination of the facts and the law supports our members' position.

Merely reducing the bag limit from 10 to 8 fish would achieve the same reduction in angling harvest as the proposed minimum size[32], while spreading the regulatory burden among all participants in the recreational fishery. Everyone would be affected, from the wealthy charterboat patron and the grizzled surfcaster to the casual private boater and the six-year old on the village dock. At the same time, the impact on any one individual would be minimal. Even during the period 1985-1989, before restrictions were placed on anglers and when the stock was still relatively healthy, 86.1% of anglers caught eight or fewer bluefish per trip. Only an additional 4.2% of anglers managed to catch 10 bluefish on a single outing.[33] With today's depleted stock and growing release ethic, a two-fish reduction in the bag limit will have little or no discernible impact on the angling community.

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[3] The poll in question was included in the June issue of CCA NY's newsletter, The Coastal Angler. Responses were sent in by members throughout the state of New York, with regional representation in the responses roughly proportional to the distribution of CCA NY members throughout the state. Thus, most came from Long Island and New York City, while Westchester County and the Hudson Valley provided a smaller number of responses and upstate regions returned only a few survey forms. All sectors of the marine angling community were represented, with respondents reporting that they did 53% of their fishing from private vessels, 41% from shore and 7% from charter and party boats. Nearly 95% believed that bluefish stocks were overfished, and more than 80% supported recreational restrictions to help remedy the problem.

[32] Amendment 1, p.158

[33] *Ibid.*, p.20

Any reduction in the bag limit will also help to achieve Objective 5 of the Amendment, "Reduce the waste in both the commercial and recreational fisheries."[34] On those now rare occasions when bluefish are locally abundant, there are still some anglers intent on "limiting out," who view any bag limit as a target to be met and not an absolute cap on harvest. Faced with the prospect of cleaning a bag of fish at the end of the day--fish that, as likely as not, were inadequately iced and therefore soft and unpalatable--such an angler will likely either leave them on board the hired vessel, sell them illegally, dump them back in the bay or dispose of them in a convenient dumpster. Even if the fish are conscientiously filleted and frozen, it is likely that most will be disposed of, freezerburned and useless, at some point in the future.

The proposed 12-inch bag limit, on the other hand, is undesirable, and possibly illegal, for a number of reasons. In the first instance, such a limit would have a substantial adverse effect on a narrow subset of the recreational bluefish fishery. By eliminating the traditional fishery for juvenile or "snapper" bluefish--in itself a violation of the Amendment's Objective 2--the size limit's impact would fall primarily on children, the aged, the handicapped and the economically disadvantaged. Snappers provide many children with their introduction to angling and, if that fishery were closed, many might never take up the sport. The elderly and the handicapped, on the other hand, may have been anglers for years and, finding themselves to weak to seek larger quarry or too frail to spend time on a tossing boat, can only participate in the sport through the snapper fishery. Would-be anglers too poor to afford sophisticated tackle or party boat fare may still buy a cane pole and simple rigging, and find outdoor recreation and perhaps a meal in that fishery. While all such people could tolerate an 8-fish limit, the proposed minimum size could effectively end their angling experience. Because of such disparate impact, the imposition of the 12-inch minimum size is arguably a violation of Section 304(e)(4)(B) of Magnuson-Stevens, which states that recovery plans must "allocate both overfishing restrictions and recovery benefits fairly and equitably among sectors of the fishery."

Imposition of a 12-inch minimum size would also be a clear violation of National Standard 4 as set forth in Magnuson-Stevens.[35] That section states that "Conservation and management measures shall not discriminate among residents of different states..." Analysis included in the Amendment states that it complies with the relevant portion of National Standard 4 because "The Amendment does not discriminate among residents of different states."[36] We disagree. Because the snapper fishery is important only to the residents of Rhode Island, Connecticut, New York and New Jersey[37], citizens in those states will shoulder nearly the entire burden for the 12-inch minimum size. Such predictable disparate impact clearly constitutes *de facto* discrimination against the citizens of the affected states, particularly when an alternate management measure, in the form of a reduced bag limit, would be equitably shared by anglers along the entire coast.

IV
CONCLUSION:
CCA NY'S RECOMMENDATIONS

The bluefish fishery, and most particularly, the recreational bluefish fishery, is complex. No regulatory scheme will satisfy all the participants. However, all will benefit from an abundance of fish, and from access to the bluefish resource. Therefore, CCA NY makes the following recommendations:

1. Institute a rebuilding schedule that would recover the stock in five years, preferably through a 75% reduction in fishing mortality,
2. Cap the commercial quota at 17% of TAL, and make no upward adjustments to such cap based on anticipated recreational harvest,

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[34] Ibid., p.12.
[35] Magnuson-Stevens Section 301(a)(4)
[36] Amendment 1, p.132.
[37] *Ibid.*, p.159.

3. Replace the proposed 12-inch size limit with an 8-fish bag limit and
4. Implement all other preferred management measures set forth in the Amendment.

Thank you for considering our position on this matter.

Yours Truly,

Charles A. Witek, III
Chairman

Joe Feliccia. Director LIBBA

The LIBBA is comprised of nearly 2000 members and their families. Our organization is dedicated to environmental conservation. including fisheries management. Ladies and gentlemen, as you know, bluefish are the only species whose young are targeted. Shorebound anglers can fish for snappers at local docks. which makes it an ideal activity for young and old alike.

I'm sure many of you have fond memories of your father or mother taking you to fish for snappers. I remember how good it felt taking home my first fish to show my friends. Snapper fishing is part of our way of life. Unfortunately, snapper fishing is now being threatened by the July 1998 Draft of Amendment 1 to the Bluefishery Management Plan.

You may not be aware of this. but the bluefish release rate has actually increased over the past few years, without any intervention. People are becoming more conservation-minded. The LIBBA believes that education is one of the keys to successful fisheries management. I am reminded of a recent article in *Long Island Parenting News*. where a question was brought to the author: "should I allow my child to bring a fish home?" The author replied that it was OK to allow the child to bring one fish home to show family and friends. if the child was taught the proper way to safely transport and release the fish back to its habitat. Education and not legislation makes a bigger impact on our fisheries.

Bluefish are one of the most mysterious species we have in our waters. There has not been much research on bluefish. The significant data we do have is very questionable and contains many flawed conclusions. In addition. in conversations with other associations. I've learned that there has not been a complete Social & Economic Impact Study done regarding the amendment to the bluefish plan before us. Therefore, we feel more research on this species is required before fisheries managers can properly comply with the mandates for conservation of this resource.

In conclusion. the LIBBA is against the amendment in its current form. We want to keep our snapper fishery open.

Carroll Stone Nursing Home
PO Box 20
101 Main Street
West Sayville, NY 11796
Phone (516) 567-9140 • Fax (516) 567-2150

Aug. 25th, 1998

To Whom it may concern:

I would like it noted that for the past 13 years, I have been employed at the above Adult home in W. Sayville.

Starting in August, I have found that several outings to the docks with several of my residents is something that they look forward to. Both male & female. They enjoy fishing, as it tends to help most of them remember when they were independent and living on their own.

I find it quite discouraging to find out that something that brings enjoyment to these people is in jeopardy of being taken away.

I honestly hope that the State officials will take this information and weight it with the utmost consideration before changes are made.

Sincerely,

Deidre Williamson

Deidre Williamson

Ass't Administrator

Save the Snapper Fishery!

We the undersigned support the action of the New York Fishing Tackle Trade Association (NYFTA).

The NYFTA supports the status quo regarding bluefish regulations (10 fish per person per day, NO size limit and NO season).

NYFTA bases its position on the following:

1. Bluefish stocks are cyclic in nature. Further restrictions on the snapper fishery would be devastating to a fishery historically enjoyed by children and senior citizens and would have a severe economic impact on industry without providing any significant contribution to the state of the fishery.

2. Historically, the bluefish fishery has been a recreational fishery. Before additional restrictions are imposed on the recreational community, any new ongoing reductions must come from the commercial sector, bringing the fishery in line with its historic split of 10% commercial/90% recreational.

3. Studies show that catch and release participation among recreationals has increased from 15% in 1982 to over 51% in 1995. NYFTA believes there is no need to mandate conservation - the process is being accomplished through education and changing angler values.

The above petition, which was submitted at the Ronkonkoma, NY public hearing, was signed by 2,221 individuals from the state of New York. The names of the petitioners are on file and can be requested from the Mid-Atlantic Fishery Management Council.

LUND'S FISHERIES INCORPORATED
Phone: (609) 884 - 7600 Fax: (609) 884 - 0664 lundsfish@jerseycape.com
997 Ocean Drive, Cape May, New Jersey 08204, U.S.A.

8-24-98

Jim Gilford
Chairman
Mid-Atlantic Fishery Management Council
300 South New Street.
Dover, DE 19904-6790

Dr. Gilford,

Thank you for having a hearing on Bluefish in Cape May. I would like to start my testimony by clearing the air as to who I am and who I might represent. While it is true I am a member on both the Mid-Atlantic Fishery Management Council and the New Jersey Marine Fisheries Council the testimony offered is that of my employer and myself.

The Mid-Atlantic Fishery Management Council has been trying to manage Bluefish since 1979. The genesis of this project was created when potential markets in South America and Africa stimulated interest by purse seine vessels. After the council held a scoping meeting in 1979 a work plan was adopted by the council in July, 1979 and NMFS in March, 1980. The addition impetus for a FMP was the harvest of Bluefish in the Chesapeake Bay by roller rig gill net boats from Florida.

The MAFMC, NMFS, and the ASMFC approved the FMP for Bluefish and submitted it to the Secretary of Commerce in 1984. This FMP was based upon an allocation system 80% of the total projected catch for recreational fisheries and 20 % for the commercial fishery. This FMP was in fact rejected by the Secretary due to no constraints on the recreational sector.

The council and ASMFC resubmitted the FMP with recreational measures (10 fish bag limit) in October, 1989. This revised FMP was approved by the Secretary in March, 1980.

Here we are in 1998, proposing an amendment to the FMP. Once again we are trying to manage the stock of Bluefish by imposing very restrictive controls on the commercial fishery while maintaining a ten fish bag limit on the recreational sector. Some would say that the bag limit is a restriction on the recreational sector but where is the additional conversational measure. A ten fish bag limit has been in place since 1980 and the commercial state by state quota (declining each year I might add) has been in place since the early 1990's. How can the council justify further reductions in commercial landings when there are little to no controls on the recreational sector. The bag limit is not being proposed to change, there is no control over the participation in the fishery, and little is known as what changes have been made to that participation with regards to a recovering striped bass population and the explosion in the off-shore tuna fishery. Before any additional reduction in harvest levels for the commercial fishery should be considered one would hope the council and NMFS would answer these questions. To add insult to injury the recreational sector is also asking for a commercial fishing permit. From testimony of recreational fishers this is an attempt to satisfy the needs of fisherman who may fish in an effort to feed their families. If this is the true reason why would a family require more than ten fish anywhere from two to twenty pounds in weight. I must point out that the average seafood annual consumption is somewhere around fourteen pounds. We also hear

that the selling of Bluefish by crews on recreational charter and party boats is an acceptable tradition. This may have been the case when there were large enough allocation for the commercial sector , but as has been previously stated the quota for the commercial fishery has been declining each year.

While this amendment attempts to separate the ties between the recreational and commercial sectors it does so again at the expense of the commercial fishers. The allocation formula would now change from a 80 / 20 split to a 83 / 17 split. All of this based upon the initial idea that purse seine vessels would overexploit the Bluefish stock because of potential markets in Africa and South America. Somehow NMFS needs to address the problems associated with the assessment process and the council needs to pay very close attention to nation standard 4 of the MSFCMA. By doing these two steps maybe the council can avoid what happened at the first submittal to the Secretary of Commerce way back when.

Again, thank you for having a hearing in Cape May and the opportunity to testify

Respectfully,

Charlie Bergmann

Jack Travelstead

From: Bobpride
To: jtravelste
Subject: Oops
Date: Monday, August 31, 1998 10:21PM

Jack,

As a bluefish advisor, I feel compelled to comment on the proposals before you regarding changes to the bluefish plan. I will be in Dallas on business and unable to attend the public hearing, so please pass along my comments to ASMFC and MAFMC.

While the recreational/commercial split of 83/17 is not unreasonable, it will result in a commercial share of almost 6 million pounds of the 35 million pound TAL. Since recreational landings are presently running about 14 million pounds, the actual result is about a 70/30 split. This would be further aggravated by the proposed transfer of 4.5 million pounds of recreational quota.

I believe the transfer of recreational quota is a bad idea. There is no conservation benefit. It is simply a strategy to give the commercial sector one more year without having to conserve. Why wait? What is the incentive for the recreational sector to allow a precedent of this magnitude to be established? It seems like nothing good can come of it except to put about a million and a half dollars in the pockets of commercial harvesters. Considering the directed 1994 recreational bluefish fishery in Virginia alone yields 275 jobs, $7 million in taxable incomes and almost $12 million in sales for Virginia businesses, it seems foolish to jeapordize the recovery with such short sighted measures.

With the limiting changes in the commercial monkfish, butterfish and other fisheries, the commercial effort directed toward bluefish is likely to increase. The proposed plan does not provide for a moratorium on entry. I do not believe any fishery has made progress toward recovery without a moratorium on commercial entry. We should try to incorporate this provision in the bluefish plan.

The proposed 12" limit may be a problem for the party and charter boat fisheries. It is certainly a problem for me. I like using smaller bluefish for live bait and strip baits. Because recreational fishermen are landing only about one-half of the proposed quota, perhaps a minimum size is unnecessary at this time. Unless the biology of the species is such that there is a spawn at or below the 12" size, I see little benefit.

I do not like the proposed provision for transfer of commercial quota between states. It can cause undue pressure in localized fisheries which penalize recreational fishermen in those areas by decreasing local availability. That has certainly been the case in North Carolina in recent years. Ask any surf fisherman that frequents NC beaches.

Why stretch out the rebuilding schedule for 9 years? Without a commercial

entry moritorium and the fact that no real conservation is scheduled for two more years. It seems unlikely to me that the 8 years will be long enough. I would prefer to see a shorter rebuilding schedule, even if it means more restrictive recreational bag limits. Certainly we need to reduce commercial effort, not maintain it at present levels.

My final comment is the most important. The proposed plan indicates a fourfold increase in bluefish biomass is the target for recovery. Given that commercial landings of squid and butterfish have increased tenfold in the last decade and that menhaden seem to be in decline, what will all those voracious bluefish have to eat? The plan needs to consider availability of forage biomass to support the increase in bluefish.

I trust you will find my comments of value.

Bob

--part0_904816456_boundary--

Comments on Amendment 1 Proposed Bluefish Management Plan

Clearly the stock is within it's historic range if the statements in 2.1.2 Abundance and present Conditions are to be believed. If the 23rd SAW is Believed " the stock is at a low level of Abundance and is over-exploited."
Statements on page 19 " Terceiro 1996 noted that bluefish abundance in the Northwest Atlantic has been documented Historically to fluctuate between periods of great abundance and noted scarcity since 1600's .... Notable disappearances of bluefish from areas north of Cape Cod has occurred in the late 1700's late 1800's early 1900's and early 1940's .... Such Fluctuations are assumed to be due to factors other than EXTREME FISHING mortality, such as Environmental factors that influence recruitment success; environmental factors which causes changes in the distribution of aduh stock;. . .
Clearly the stock may not be over-exploited.

Management then need address quotas on both commercial and recreational no more quota on commercial and landing limit on recreational. If pay backs apply to commercial then they should apply to recreational , Magnuson 304 sect (e) (4) (b) the document page 4 & 5 quotas and harvest limits . by law (Magnuson) if you have Quota on commercial then a Harvest limit on Recreational is unlawful. thus the proposed plan is unlawful.
This plan does not address reducing by catch or book and release Mortality in recreational fishing. A management plan of keep the first 10 fish and STOP FISHING no release would save fish and address so called by- catch. No longer can waste be called by-catch, the BIAS long implemented in fishery management Amendments (toward low income bank or dock fishermen) are illegal (size limits cause waste Barbless Hook regulations would reduce waste)
The Amendment allows bias against low income families due to a size limit. (size limits increase book and release mortality) catch the first 10 and stop fishing puts the same burden on rich and poor alike. NO RELEASES eliminates book and release mortality. THE AMENDMENT does not address 16 million people having access to 83% of the fish and 225 million people having access to only 17% of the fish

THE DEFINITION that the stock is over fished or exploited is the reason we have to use poor science. Perhaps the best management would be to set a five year program that locked Regulations in place and see if the regulations were affecting the population. Perhaps the natural Fluctuations are within it's range and blue fish do not require strict management. (just the prevention of waste mandated by ASMFC Previsions. Lack of understanding of natural cycles in tide, moons, solar are not part of the document. If best Science is the requirement then this Document Fails.
PERCEPTION IS GET ENOUGH PEOPLE TO ATTEND THE MEETINGS AND THE SO CALLED BEST SCIENCE WILL CHANGE. HOW ELSE CAN THE CHANGES IN THIS DOCUMENT BE EXPLAINED.
HABITAT FAILS TO ADDRESS CHEMICALSYNTHESIS AND UPWELLING THUS THE SCIENCE FAILS AGAIN IN THIS DOCUMENT

James Fletcher
United National Fishermen
123 APPLE RD
MONNS HARBOR NC 28563

BLUEFISH AMENDMENT 1—ALTERNATE PROPOSAL

The basic premise of this proposal is that the science used to justify the Amendment 1 document is so flawed that it is unusable.

This is not a reflection on the ability or effort of the assessment people. There simply is no fisheries dependent or independent data which reflects the bluefish stock.

Any effort to use the available data to rationalize a regulatory scenario desired by the public diminishes the credibility of the assessment process. (see attachment, A Test of the Proposed Bluefish Plan ...)

Assumptions of Alternate Proposal:

1. Because the current bluefish stock is within the historic range of stock fluctuation, it is not overfished.

2. The only way to study the effects of factors other than fishing on the bluefish population is to hold fishing regulations constant.

3. If bluefish landings are constrained reasonably within the current range for a period of time, say 5 years, and if the effort that is currently being expended trying to justify constant changes in the regulations is redirected to study changes in the population, then at the end of the period of time the bluefish will be no worse off but the science could be much better.

Proposed Regulations:

1. Commercial—Coastwide quota based on average landings from 1974-1997.
2. Recreational—Daily bag limit of 10 fish, no minimum size.

Rational for Proposed Regulations:

1. Commercial—Will prevent unforeseen major increase during study period. If landing of this level caused any decrease in the bluefish stock in the 1980's or 1990's, then they also caused the increase in the stock in the 1970's.
2. Recreational—Effort has shifted to other species. This is not likely to change in the next 5 years. Minimum size limit of say 12 inches would do little for stock because natural mortality is very high on juveniles. It would increase discard mortality and decrease access to the fishery for children and low income families.

William A. Foster
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A Test of the Proposed Bluefish Plan Amendment 1 and Bluefish Stock Assessment

Proposed bluefish regulations can be viewed as a scientific experiment in which it is hypothesized that the proposed regulations will influence fishing mortality such that there will be an increase in the bluefish stock.

The need for the regulations is supported by a stock assessment in which the basic assumption of the model is that the recreational catch rate is proportional to the size of the bluefish population.

Even though restrictive recreational regulations were implemented in the middle of the time-frame used in the model, no allowance was made for changes in the catch rates caused by those restrictions.

If changes in regulations have caused changes in recreational catch rates, then the basic assumption of the model is invalid and the stock assessment can not be considered to be based on scientific information

If changes in regulations do not cause changes in recreational catch rates, then the hypothesis that proposed regulations will cause an increase in the bluefish population is false and there is no reason to implement regulations.

Any proposed amendment to fishery management plan must comply with the Standards of the Magnuson-Stevens Act.

Since the proposed amendment can not satisfy both National Standard 1 (prevent overfishing) and National Standard 2 (best scientific information) at the same time, the amendment can not be approved.

Since National Standard 2 mandates the use of the best scientific information, and the latest assessment appears to be invalid, then the previous assessment attempts must be less valid.

William A. Foster
August 10, 1998

APPENDIX 3. COMMENT LETTERS AND COUNCIL RESPONSE

A total of 75 comment letters were received by the Council on the hearing draft of Amendment 1. Four letters were received from US government agencies; three letters were from national agencies; four letters were from fishery associations; seven letters represented fisherman; one letter was from an environmentalist; 11 represented miscellaneous interested parties, and four letters came from commercial fishing organizations. Three letters were responses from state agencies, which the Council requested. The remaining 39 letters were copies of the same letter from various respondents; 28 commenters sent one version, and 11 commenters sent another.

Comment 1: A total of 6 respondents felt that the stock assessment is not accurate due to the habits of bluefish and methods of assessment.

Amendment 1 to the Bluefish FMP is based on the best and most recent scientific information available. As such, the Council and Commission believe that the current assessment represents that best assessment of the bluefish stock. However, they are aware of the data limitations for bluefish and support future bluefish research on data collection and analyses in order to evaluate and update the current assessment. Stock assessments and updates will be reviewed annually as part of the Stock Assessment Workshop process.

Comment 2: Two commenters suggested that no commercial quota or recreational catch limit be implemented (reflecting the opinion that the stock assessment was not accurate).

As stated above, the bluefish stock assessment is based on the best available information. The assessment indicates that bluefish is overfished. As such, the commercial quota and recreational harvest limit are being proposed to control fishing mortality and rebuild the stock as directed by the Sustainable Fisheries Act.

Comment 3: One commenter suggested that party/charter permits should not be revoked in response to the actions of the passengers.

The amendment stipulates that any individual who operates a vessel for the purpose of fishing commercially for bluefish or the operator of a vessel with a party/charter boat permit must have an operators permit issued by NMFS or a state. That operator may be held accountable for violations of the fishing regulations and may be subject to a permit sanction. The Council and Commission believe that the possible revocation of this permit will help ensure compliance with the permit requirements of the amendment.

Comment 4: Two respondents opposed the prohibition on the crew of party/charter vessels selling any bluefish they catch during cruises which have paying passengers on board.

Amendment 1 to the Bluefish FMP was designed to reduce overfishing and rebuild the stock. The primary management measure that will be used to reduce fishing mortality in the commercial fishery is a quota. A commercial quota requires accurate reporting of the bluefish sold commercially. As such, the amendment requires that any owner of a vessel desiring to fish for bluefish within the US EEZ for sale, or transport or deliver for sale, any bluefish taken within the EEZ must obtain a federal commercial permit from NMFS for that purpose. In addition, any dealer of bluefish, including party/charter vessel operators who sell fish to the public, must have a dealer permit. Commercial fishermen and dealers with permits must report their landings to the NMFS. However, the amendment does allow for a party/charter boat to have a party/charter boat and commercial permit to catch and sell bluefish. However, such a vessel may not fish under the commercial rules if it is

carrying passengers for a fee.

Comment 5: One respondent supported the Bluefish Monitoring Committee as a means of tracking the progress of the stock.

The Council and Commission agree. The Bluefish Monitoring Committee was established by the Council and Commission to annually review the best available data including the most recent stock assessment information.

Comment 6: One respondent indicated that the Bluefish Monitoring Committee should include both a party/charter boat captain and a commercial bluefish fisherman.

The Bluefish Monitoring Committee is composed of staff scientist and managers from the Councils, Commission, NMFS, and the states. The purpose of the committee is to recommend to the Council and Commission commercial and recreational management measures designed to assure that the target mortality level for bluefish is not exceeded. As such, the Committee provides technical guidance and review. In addition, the Council and Commission Advisory Panels may meet and may present recommendations to the Council and Committee. The Advisory Panels include recreational and commercial fishermen and processors. As such, input from fishermen on these panels as well as public input during Council and Commission meetings can be considered when the Commission and Council make their yearly recommendations to the Regional Administrator on management measures. The Council and Commission believe that it is more appropriate that a party/charter boat captain and a commercial bluefish fisherman be members of the Advisory Panel.

Comment 7: One respondent felt that, for the state of Rhode Island, quotas be set to allow fisherman to maintain their historical landing levels as proven by landing records.

Amendment 1 would establish a state by state allocation system that would allocate a portion of the commercial quota to each state based on their percentage share of commercial landings for the period 1981-1989. The states could then impose trip limits or other management measures to manage their quota and maintain traditional landings patterns.

Comment 8: Six respondents advocated reducing the commercial portion of the 83/17 quota, with one of them stating that the Amendment benefits the commercial fishery only, and that the 83/17 split seems to be a means for the commercial fishery to continue for another year unhindered.

The commercial quota and the recreational harvest limit are proposed to control fishing mortality on the bluefish stock. The quota and the harvest limit are based on projected stock size estimates for that year as derived from the latest stock assessment information. Estimates of stock size coupled with the target fishing mortality rate would allow for a calculation of total allowable landings (TAL). Based on the proportion of commercial and recreational landings for the period 1981-1989, 17% of the total allowable landings would be allocated to the commercial fishery and 83% to the recreational fishery. In choosing historical catch as a basis of allocation, the Council and Commission believe that the allocation is fair and equitable to all fishermen, both commercial and recreational.

Comment 9: A total of 6 respondents did not support the transfer of any unused portion of the recreational harvest to the commercial quotas.

The recreation harvest limit proposed by this Amendment would allow for an increase in recreational landings when compared to landings for the period of 1992-1996. If the Council and

Commission determine that the recreational fishery will not land their limit, the commercial quota could be increased. By transferring the unused portion of this limit to the commercial fishery, the amendment will allow the commercial fishery to maintain their current landings without restricting recreational fisherman. This transfer will not increase the total bluefish catch for the year and, as such, will not interfere with rebuilding the stock.

Comment 10: One respondent felt that the current Amendment would accomplish its goals at the expense of commercial fisherman, and that more regulations should be introduced regarding the recreational fishery.

The Council and Commission do not believe that the management measures proposed in this Amendment benefit one sector of the bluefish fishery at the expense of another. Management measures in the amendment are proposed to meet the target fishing mortality rates and ensure that the commercial quota and recreational harvest limit are not exceeded. The possession limit of 10 fish should allow recreational fishermen the opportunity to achieve their harvest limit.

Comment 11: One commenter suggested a fluctuating recreational conservation credit system be introduced so that fisherman who keep smaller fish be subject to a stricter possession limit than those who keep larger fish.

In Amendment 1, the Council and Commission propose that the recreational fishery be managed through an annual evaluation of a framework system of possession limits, size limits, and seasonal closures. The Council and Commission adopted a 10 fish possession limit for 1999. However, states could develop and implement alternative recreational management measures that were equivalent to the coastwide measures. As such, a state could design a system that incorporated a conservation credit as long as they could demonstrate that such a system was equivalent to the coastwide management measures.

Comment 12: Three respondents suggested that a moratorium be placed on the bluefish fishery.

At this time, the Council and Commission do not believe a moratorium on the commercial fishery is necessary to achieve the goals of the Amendment and rebuild the bluefish stock at the current time. The Council did propose a control date for bluefish of May 29, 1997 for bluefish. This means that anyone entering the commercial bluefish fishery after May 29, 1997 may not be assured of future access to the bluefish resource in federal waters if a management regime is developed and implemented that limits the number of participants in the fishery. As such, the Council could limit the number of entrants in the commercial fishery using this or a later control date in a future amendment to the FMP if the amount of effort in the bluefish commercial fishery becomes excessive.

Comment 13: Eight respondents felt that the biomass goal is unreasonable and were concerned that the prey species of bluefish may not be able to support the projected increase in the stock.

The bluefish stock assessment and the associated rebuilding goal is based on a surplus production model. That model indicates that the biomass associated with MSY is 237 million pounds. The current biomass is estimated to be 54.5 million pounds or 23% of this biomass target. As indicated above, Amendment 1 to the Bluefish FMP is based on the best and most recent scientific information available. As such, the Council and Commission believe that the current assessment represents that best assessment of the bluefish stock. However, they are aware of the data limitations for bluefish and support future bluefish research on data collection and analyses in order to evaluate and update the current assessment. Stock assessments and updates will be reviewed

annually as part of the Stock Assessment Workshop process. As part of the annual review, the Council will examine the overfishing definition and determine if modifications are necessary.

Comment 14: A total of 11 respondents support protecting all bluefish habitat designated as essential.

The Council in sections 2.2.4 and 2.2.5 make numerous recommendations for the protection of essential fish habitat (EFH). The main purpose of this Amendment, from an EFH standpoint, is the description and identification of EFH. The Council in the original FMP had numerous recommendations to the Secretary of Commerce that dealt with protecting essential habitat. The Council has worked closely with NMFS, Fish and Wildlife Service, EPA, and the Corps of Engineers in the past to modify or stop projects that would negatively impact on important habitat. The Council anticipates that, now that EFH has been identified and described for bluefish, they will be working closer with the various Federal and state agencies in the protection of bluefish EFH.

Comment 15: Thirty nine commenters suggested that EFH be expanded to included all near shore coastal waters, small estuaries, and tidal waters in which bluefish can be found.

The Council chose the preferred alternative to be the highest 90% of the area because it is the most inclusive and thus the most risk-averse, without going to 100% of the distribution for this overfished resource. The Council did not chose 100% of the estuaries, near shore coastal waters and all tidal waters where bluefish have been collected because it is not obvious from the summary document produced by NMFS that any life stage is completely dependent on a specific habitat type.

Comment 16: One respondent suggested that the EFH designations for New York State be modified.

The Council and Commission agree. The suggestions provided by New York State Dept. of Environmental Conservation regarding EFH areas in New York waters will be incorporated into the final Amendment.

Comment 17: Two respondents suggest that the 10 minute squares be adjusted so that quadrants not designated as EFH, but surrounded by others that are so designated, are included in EFH.

The designation of EFH now includes any ten-minute squares that were identified as such on the blank maps that were in the FMP as well as all ten-minute squares identified by the various federal surveys that meet the selection criteria . Comments from individuals that identified EFH in general terms or without any documentation will be supplied to the Habitat Monitoring Committee for their consideration. It is anticipated that as the various state surveys are compiled in a uniform format by the researchers at the Howard Laboratory at Sandy Hook the Habitat Monitoring Committee will be reviewing and perhaps recommending new identification and description of EFH. The identification of all ten-minute squares as EFH required data documentation for this initial process.

Comment 18: One commenter felt that the Amendment is too broad and oversteps the authority congressionally granted to NMFS and the Council, especially regarding: (a) the EFH definitions which go beyond waters that are "essential" and "necessary" to the species as intended by the Magnuson-Stevens Act and the SFA; (b) that NMFS and the Council have authority to manage fisheries only, and the Amendment transgresses that authority by including non-fishery related measures; and (c) that NMFS and the Council have no authority to extend EFH or any management measures to state managed, inland waters, and that the Amendment should not attempt to include

those areas.

The Council disagrees with this commenter's beliefs that this Amendment represents a clear departure from the letter of the MSFCMA and the intent of Congress. The Congressional mandate was clear and NMFS has interpreted that mandate and proposed regulations. During the comment period on the EFH regulations, these types of comments should have been raised. Many similar issues were raised during the comment period on the proposed regulations and were addressed by NMFS. The Council is simply working within the NMFS EFH regulations in the identification and description of EFH. Clearly the Congress wanted the NMFS and Councils to have authority of EFH and not simply propagate rules that reduce fishing mortality only.

Comment 19: One respondent stated that the section on Silviculture NPS (section 2.2.5.3.3) does not contain a balanced presentation of data and does not show in what way silviculture activities affect bluefish EFH. Specific objections cover the following points: (a) many of the conservation measures in this section are included in state BMP (best management practices) manuals and do not need to be restated with slight variations in the Amendment; (b) guidelines on road construction have no baselines and are too vague; (c) the statements regarding harvesting contain no objective guidelines or standards; (d) that the Amendment cannot enforce water quality standards and should instead defer to the existing guidelines in state programs; and (e) that the comments regarding restoration of upland habitat are too vague and not within the intended jurisdiction of EFH.

The Council agrees completely with this commenter's premise that best management practices should be used for all silvicultural NPS issues. All of the description and discussion of silvicultural problems were taken from NMFS (USDC 1997a) and EPA (USEPA 1993) documents. The Council is not proposing any recommendations that are not BMPs as considered by EPA in their *Guidance Specifying Management Measures for Sources on Nonpoint Pollution in Coastal Waters*. The series of recommendations that were attributed to Murphy (1995) have been dropped since they were somewhat duplicative of the EPA recommendations.

Comment 20: One respondent disputed some of the statements in section 2.2.5.7.4, Offshore oil and gas operations; specifically, they stated that the effects of drill muds and discharges are temporary and very slight, and that no data show that seismic testing operations interfere with fish or fishing.

The Council acknowledges the concerns raised in the letter from Minerals Management Service and has modified the descriptive language of this section to remove the last phrase in the first sentence and the third sentence.

Comment 21: One respondent suggested that permitting be limited to renewals only.

The Council and Commission do not believe that such a limitation is necessary at this time. As indicated above, the Council could limit the number of participants in the commercial fishery in a future amendment if effort became excessive.

Comment 22: Two commenters do not support the transferring of quotas between states.

At this time, the Council and Commission have no information that indicates a negative biological, economic, or social impact which would arise from the transfer or combination of quotas between states.

Comment 23: One respondent felt that the data collection procedures proposed by the Amendment may be difficult to implement in a timely fashion.

The data collection requirements proposed in Amendment 1 are identical to those already in place for several species managed under joint Council and Commission plans (i.e., summer flounder and scup) and as such, the additional data collection and reporting requirements for bluefish should not be problematic. In addition, if the amendment is approved by NMFS, the implementation of the management measures detailed in Amendment 1 will not occur until June or July, 1999. This will give states the time to develop the data collection and reporting requirements necessary to bring them into compliance with the amendment.

Comment 24: Two respondents supported the elimination of the use of nets; one of them suggested this be done by making bluefish a hook and line species.

One of the objectives of this amendment is to provide the highest availability of bluefish to US fishermen while maintaining, within limits, traditional uses of bluefish. The gears that harvested most bluefish from 1987-1996 were otter trawls and gill net. Hook and line gears combined accounted for approximately 5% of the total landings.

Comment 25: One respondent suggested that the sale of whole bluefish for bait should be prohibited.

The Council and Commission considered a minimum size limit of 12" TL that would have restricted the harvest of bluefish less than this size for any purpose including bait. However, after consideration of public comment and additional debate, the Council and Commission decided not to implement a size limit for 1999. It is important to note that the size limit is frameworked in the amendment and could be used as a management tool to reduce mortality and control harvest in the future.

Comment 26 and 27: A total of 4 commenters felt that the plan is not immediate or aggressive enough to ensure quick stock recovery. A total of 39 respondents felt that the plan should enforce a 5 year rebuilding period.

The Council and Commission gave careful consideration to a number of rebuilding schedules for bluefish. The preferred and alternative rebuilding schedules are detailed in the amendment. The Council and Commission chose the preferred nine-year alternative because it would reduce adverse impacts to the recreational and commercial fisheries during the early years of implementation of this amendment. As such, it would minimize negative impacts to fishermen and communities while still allowing for the bluefish stock to recover in accordance with the new National Standard 1 guidelines.

Comment 28 and 29: A total of 39 commenters suggested reducing the fishing mortality rates now instead of waiting until 2001 or later. A total of 11 commenters support implementing the necessary means to immediately end overfishing.

As indicated above, the stock rebuilding schedule adopted by the Council and Commission in this amendment would reduce fishing mortality rates gradually over a nine year period. This schedule was chosen as the alternative producing the least negative impacts on the commercial and recreational fisheries while still rebuilding the stock as directed by the Sustainable Fisheries Act. In addition, the Council and Commission adopted language to be included in Amendment 1 that would set the target fishing rate for the next year at the lesser of the level specified in the mortality

rate reduction schedule or the level observed in the most recent year for which data are available. As such, fishing mortality rate targets could be lower than specified by the schedule and the stock could rebuild at a faster rate.

Comment 30: A total of 11 commenters felt that it is necessary to ensure that all state regulations are consistent with the regulations of federal waters.

The Council and Commission agree. Amendment 1 is an amendment developed by both the Council and Commission and is compatible with the management efforts of the states.

Comment 31: One respondent supported a 12" size limit for commercial fisheries, and an additional two respondents supported a 12" size limit for both the commercial and recreational fisheries.

The Council and Commission did propose a 12" TL minimum size limit as the preferred alternative in the public hearing draft of Amendment 1. However, after review of public comment and further consideration, they decided to not implement a size limit in 1999 for either the commercial or recreational fishery. As indicated in the document, a 12" TL size limit would have minimal effects on commercial landings, i.e., most fish are larger than 12" TL. A 12" TL minimum size limit in the recreational fishery would have effected about 18% of the landings. However, given that the recreational harvest limit in 1999 exceeds the recreational landings in 1997, the Council and Commission do not believe that additional restrictions are necessary to control landings.

Comment 32: Four commenters felt that there should be no size limit, and an additional 3 commenters felt that there should be no size limit for just the recreational fishery.

The Council and Commission agree. The Council and Commission did propose a 12" TL minimum size limit as the preferred alternative in the public hearing draft of Amendment 1. However, after review of public comment and further consideration, they decided to not implement a size limit in 1999 for either the commercial or recreational fishery.

Comment 33: Two respondents did not support the discontinuation of the free permit to be replaced by the 10 fish bag limit.

The amendment does not propose that the commercial permit be replaced with the 10 fish possession limit.

Comment 35: Four commenters supported the proposed 10 fish bag limit.

The Council and Commission agree. The preferred alternative in this Amendment would maintain the current 10 fish possession limit on the recreational fishery.

Comment 36: One respondent suggested an 18" size limit be implemented in conjunction with a 6 fish bag limit. Four commenters advocated a 5 fish (or less) bag limit, preferably in conjunction with a size limit.

As indicated above, the amendment would maintain the current 10 fish possession limit to control the harvest in the recreational fishery. Based on current stock assessment information, a more restrictive limit is not necessary at this time to control fishing mortality. However, states could implement limits that combined possession and size limits that were equivalent to or more restrictive than the 10 fish possession limit.

State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

Division of Fish, Game & Wildlife
P.O. Box 400
Trenton, NJ 08625-0400
Robert McDowell, Director
Visit our Division Website: www.state.nj.us/dep/fgw

May 20, 1998

Thomas Hoff
Mid-Atlantic Fishery Management Council
Room 2115 Federal Building
300 S. New Street
Dover, DE 19904-6790

Dear Tom:

After a rather cursory review of the EEH sections, tables and figures, I do not believe I have anything to add for New Jersey's bluefish habitats.

I tried to use this as an excuse to call, but you were too busy having fun out of the office.

Have a good summer.

Sinerely,

Bruce A. Halgren

bd

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
Bureau of Marine Resources
205 North Belle Mead Road, Suite 1, East Setauket, New York 11733
Phone: (516) 444-0430 FAX: (516) 444-0434

RECEIVED
JUN - 4 1998

June 1, 1998

Mr. Tom Hoff
Mid-Atlantic Fishery Management Council
Room 2115 Federal Building
300 South New Street
Dover, Delaware 19904-6790

Dear Mr. Hoff:

This is to provide New York's comments on the May 12, 1998 Draft EFH for bluefish.

It is noted on P.9 that there is no narrative on importance of bluefish in New York waters and that Table 6 lists a limited number of New York waters as EFH. I recommend you insert the following in the document and consider expanding the EFH designation in New York if "common", "abundant" and "highly abundant" will serve as the EFH criteria:

> In New York juvenile bluefish from 25mm and up use virtually every cove, embayment and creek mouth to the first impassible barrier on Long Island, New York Harbor and the Hudson River to River Mile 70 on occasion and River Mile 40 routinely. Long Island Sound and all the near shore waters all serve as necessary for juvenile bluefish in New York (Byron Young pers. comm.) In addition, adult bluefish use all tidal waters in New York Stare, up to River Mile 40 or so in the Hudson River, as they migrate along the coast. In fact, juvenile and adult bluefish seasonally occupy all tidal waters as described above.

Byron also noted that he thought Figure 16 was too truncated. Bluefish are found well out onto the shelf as juveniles.

Although New York has not been active in the MAFMC EFH proceedings, it was our understanding that NMFS had available to it virtually all of the New York data to support the paragraph provided above, most of it at the Sandy Hook lab. Is there any way that data collected by New York and provided to NMFS can be better incorporated into the EFH process?

Sincerely,

Arthur J. Newell
Chief, Marine Habitat Protection

AJN:dr

cc: G. Colvin
B. Young
J. Mason

D51fshhoff.ltr

Author: s2@dnrcrd5.dnr.state.ga.us at EXTERNAL
Date: 5/21/98 5:24 PM
Priority: Normal
TO: Valerie Whalon at -NMFS-HQ
Subject: EFH Section of Bluefish FMP

Per Tom Hoff's letter of May 13, Georgia DNR, Coastal Resourecs Division has reviewed the EFH Section of the Bluefish FMP. We have no comments or suggested changes to the plan provided to us. Thanks for the opportunity to review it.

Good luck to the MAFMC getting all the EFH mandates addressed. I just got my SAFMC EFH documents in, and practically had to hire a crane to get it out of my mailbox!

Susan
Shipman

August 14, 1998

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Ms. Goodale:

I understand your agency is holding hearings on ways to protect bluefish. While I applaud your efforts to protect the fish, you should make stronger efforts to protect it. It's rather common today to hear news reports about ocean species that have been overfished, and such is the case with the bluefish. While I don't have the technical expertise to tell you how to protect bluefish, I do believe you need to take a bolder stance on this to help protect the species and future fishing opportunities. Everyone benefits if we protect the bluefish before the population completely crashes.

Sincerely,

Lou Bubala
5536 Winthrop Ave.
Indianapolis, IN 46220

August 15, 1998

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

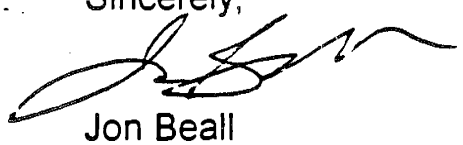
RE: Bluefish decline and Bluefish Management Plan

Dear Ms. Goodale,

I have been reading about the decline in the bluefish populations. I am a former resident of the coastal region of North Carolina and enjoyed very much my experiences fishing for and eating bluefish.

I urge you to take any and all necessary actions to protect bluefish habitat and ensure the long term health of this species. Please enact a strong and vigorous recovery plan. Sacrifices now will ensure the continuation of the economic activity tied to this species into the future.

Sincerely,



Jon Beall
16 St. Stephens School Road
Austin, Texas 78746

Copy to:
Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
U.S. Dept. of Commerce
Washington, D.C. 20230

UNITED STATES ENVIRON

REGION 4

ATLANTA FEDERAL CENTER

61 FORSYTH STREET

ATLANTA, GEORGIA 30303-8960

AUG 2 0 1998

4EAD/OEA

Andrew Rosenberg, Regional Administrator
National Marine Fisheries Service
One Blackburn Drive
Glochester, MA 01930

SUBJECT: Amendment 1 to the Bluefish Fishery Management Plan and Draft Environmental Impact Statement

Dear Mr. Rosenberg:

The Environmental Protection Agency Region 4 (EPA) has reviewed the referenced draft environmental impact statement (EIS) and management plan in accordance with EPA's responsibilities under Section 309 of the Clean Air Act and Section 102 (2)(C) of NEPA. The proposed action is a suite of management alternatives to protect the species which is in decline from over fishing. The Bluefish Fishery Management Plan (FMP) will provide for cooperation among the coastal states and the various management councils to enhance the management of the bluefish throughout its range. The following management measures are proposed: (1) Establishment of a bluefish monitoring committee; (2) implementing a management framework that is an adjustable process; (3) establish a 9-year stock rebuilding program; and (4) other technical elements relating to recreational/commercial equipment, catch size, and possession limits.

As this species is migratory and a high percentage of the recreational fishing occurs in state waters, consistent practices between jurisdictional waters are essential in order to rebuild the fishery. Bluefish are a very important Atlantic coast recreational fishery, comprising (in 1987) 34 percent by weight of all recreational fish caught along the Atlantic coast. Since the early 1980's, however, recreational landings have trended downward from an average of 72 million pounds in 1981 to 14.7 million pounds in 1995. The majority - 51 percent - of all blues caught were by recreational private or rental boats. Bluefish are not heavily targeted by commercial fishermen because, even on ice, the flesh does not keep well. Bluefish is primarily a "fresh fish" product, that is, local markets proximate to the docks will sell bluefish, but travel time further inland takes a heavy toll on fish quality, and sales become problematic. The limited extent of the fresh fish market has been one of the limiting factors constraining the commercial harvesting of blues.

EPA supports the need to implement management measures to rebuild bluefish stocks. We assume that the existing recreational limit of ten fish per angler was a component of an earlier Bluefish FMP. This limit needs to be reexamined because the largest component of bluefish mortality is from recreational fishing, and the limit of ten fish per angler should be reduced to a number consistent with rebuilding the stock. A fishing party who rents boat/captain for a day's

fishing is typically four or five anglers, who under the ten fish limit, could legally possess 40 to 50 bluefish. Assuming 10 lbs average weight per fish, 400 to 500 lbs may be taken for recreational purposes, which in our view is an excessive amount, especially when the species is in decline. (400 lb catches of blues by party boats have been frequently observed by this reviewer during the summer months in the late 1980's and early 1990's at Rock Harbor, a small fishing port near the city of Orleans, MA). We recommend that a four or five fish limit per angler be considered. Because the angler may choose which fish to keep and which to release, we believe four or five blues - even small ones - are adequate to be retained for recreational purposes.

We appreciate the opportunity to review this document and rate it EC-1, environmental concerns - adequate exposition of environmental impacts but additional information is suggested. If you have any questions about this review, please call John Hamilton at 404-652-9617 for more information.

Sincerely,

Heinz J. Mueller, Chief
Office of Environmental Assessment

TALLMAN & MACK, INC.
P. O. BOX 253
TIVERTON, RHODE ISLAND 02878

August 24, 1998

James H. Gilford, Ph.D.
Chairman
Mid-Atlantic Fishery Management Council
Room 2115 Federal Building
Dover, DE 19904-6790

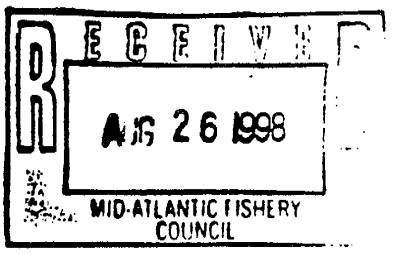
Re: Amendment 1, Bluefish Fishery Management Plan
Public Hearing, August 25, 1998,
Comfort Inn
1940 Post Road
Providence, RI

Dear Mr. Gilford:

I am writing to you on behalf of Tallman & Mack, Inc. with our concerns regarding the proposed amendments to the Bluefish Fishery Management Plan. Tallman & Mack, Inc. is one of the five fish trap companies operating in Rhode Island. It would be greatly appreciated if you would include our comments with the materials being presented at the public hearings on this matter.

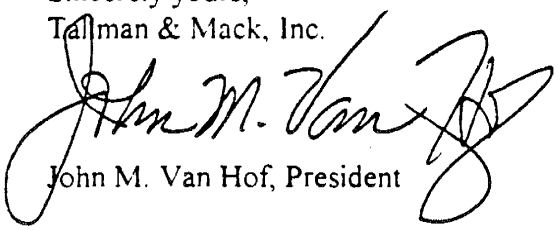
First, it is our position that the amendment's proposed commercial quota and recreational fish possession limit should be eliminated. Based upon our knowledge and experience, we can assure the Council and others involved in the fishing industry that there is no shortage of bluefish in the Atlantic and, thus, no need for the planned nine year rebuilding period. Simply put, the Council has no reliable information that there is a shortage of bluefish or that bluefish are being overfished.

However, if the Council is inclined to impose a commercial quota, the allowable bluefish catch of all commercial fisheries within the State of Rhode Island should not be arbitrarily limited. Instead, Rhode Island's commercial fisheries should be permitted to continue to catch the same amount of bluefish caught in the past as reflected in each company's prior landing records. Otherwise, the amendment would act to unjustly deny Rhode Island's commercial fisheries of their rightful allotment of the available bluefish.



Lastly, if the Council recognizes a need for limiting the amount of bluefish taken from the Atlantic and continues with the proposed amendment, we suggest that permits be issued for renewal only.

Sincerely yours,
Tallman & Mack, Inc.



John M. Van Hof, President

JMVH:jc

U.S. Department of Transportation
United States Coast Guard

Commander
First Coast Guard District

Capt. John Foster Williams Bldg.
408 Atlantic Avenue
Boston, MA 02110
Staff Symbol: oie
Phone: (617) 223-8500

16470
5 August 1998

Mr. George H. Darcy
Chief, Domestic Fisheries Division
National Marine Fisheries Service
Silver Spring, Maryland 20910

Dear Mr. Darcy:

Thank you for the opportunity to provide comments on the Draft Supplemental Environmental Impact Statement for Amendment 1 to the Atlantic Bluefish Fishery Management Plan (FMP). We have no comments on the plan at this time.

Sincerely,

R. J. BROWN
Captain, U. S. Coast Guard
Chief, Office or Law Enforcement & Intelligence
By direction

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

George H. Darcy
Chief, Domestic Fisheries Division
National Marine Fisheries Service, NOAA
1335 East-West Highway
Silver Spring, MD 20910

Dear Mr. Darcy:

Thank you for your letter of July 24, 1998, in which you provided for our review a copy of the Draft Environmental Impact Statement for Amendment 1 to the Atlantic Bluefin Fishery Management Plan. The Draft Amendment does not contain an international component. For this reason, we have no comment. Thank you again.

Sincerely,

David Balton

David Balton
Director, Office of Marine Conservation

Aug 25, 98

Dear Council:

The bluefish populations are showing a continued decline.

In 1997 the population was less than 1/4 of what it should be for healthy recovery.

Your actions don't go far enough to protect the numbers

You can't bring a species to the brink & hope to perform some heroic measure to bring it back. That is foolhearty.

Action needs to be taken Now not tomorrow if the

blue fish is to recover.

Sincerely

Marie Rendziak

National Audubon Society

Ms. Goodale:
Please act strongly to protect bluefish populations from the consequences of short-sighted over-fishing.

Ms. Deana M Crumbling
10210 Colston Ct
Burke, VA 22015

California sea otter in Monterey Bay

A California sea otter is one of the thousands of fascinating species of wildlife you'll find in Monterey Bay.

To find out how you can help save America's wildlife by becoming a member, call the **National Audubon Society** at 1-800-274-4201.

Hannah Goodale
Northeast Regional Office
NMFS
One Blackburn Drive
Gloucester, MA 01930

PAUL W. M. ZEMAN
711 Summit Avenue
Franklin Lakes, NJ 07417

August 25, 1998

Ms. Hannah Goodale
NMFS Northeast Regional Office
One Blackburn Drive
Gloucester, MA 01930

Subject: BLUEFISH STUDY

Dear Ms. Goodale:

Enclosed please find a copy of Al Ristori's newspaper article on the subject which appeared in the Star Ledger, Page 70, August 25, 1998.

I am in agreement with the article.

Specifically,

1. Commercial fishing quotas should be managed such that they leave a good supply of bluefish (and other fish) for recreational anglers.
2. There should be no minimum size on bluefish. However, a quantity limit of 10 is probably acceptable.
3. Bluefish, and other fish management, should be evaluated not only on their own, but also based on their interaction with the total environment including but not limited to bait fish (food) supply, predators, and safety margain anticipating a "hundred year" accident or weather anomoly.

For your interest, I am a recreational fisherman, both fresh and salt water. I fish salt water about seven days per year in either New Jersey or Cape Cod, and a couple days per year in Florida. Catching "snappers" as a kid was an experience that reinforced my current love of the sport, and today's kids should not be deprived of that experience. [Making a minimum size bluefish catch of 12" would be **NUTS**, i.e. - would totally remove the fun of catching snappers for thousands of kids. These kids would grow up not caring about fish or fishing; they'd spend their time only on the Internet, and live narrow little artificial lives. **YUCK!**]

Thank you for your obvious interest in doing the constructive thing, and for your implied request for our comments.

Sincerely yours,

P. Zeman

Paul W. M. Zeman

Enclosure

PZ/kd

Plan for bluefish requires dose of reality

Many of those attending Monday night's bluefish hearing at the Holiday Inn in Toms River questioned aspects of the joint plan submitted by the Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission, especially the call for a 12-inch minimum length which would eliminate the snapper fishery and the use of those young blues as live baits for fluke and weakfish.

Snapper fishing is close to my heart because I got started in saltwater as a youngster by peddling to the Merrick, L.I. waterfront to fish for snappers with a cane pole. Thousands of anglers have started in a similar way.

Especially considering that youngsters and shore-based fishermen are constrained by the same 10-bluefish limit as those seeking 15-pounders, there doesn't seem to be any reason to eliminate their participation in the fishery when there's no biological reason to do so.

Another problem with the recommendations is the proposal to give commercial fishermen a 10.5 million pound quota even if that far exceeds their 17 percent share of a fishery that was 90 percent recreational when the plan was approved.

Now that the public is limited to 10 bluefish per day and attention has been diverted to improving stocks of striped bass and weakfish, the angling catch is down and the commercial 17 percent only projects to 5.95 million pounds for 1999.

While I have no problem with traditional commercial fisheries for bluefish, allowing them to sharply increase their proportion of the landings would be a potential disaster since sad experience with once heavily-recreational fisheries such as fluke and porgies has demonstrated that management agencies will shift the historical balance to netters as soon as their catch increases.

The best management plan at this time would involve no change as the abundance of all sizes in the fishery provides a classic example of a healthy stock. Scientists who were crying doom and gloom a few years ago while trying to impose a three-fish limit now concede that the biomass actually increased from 1994 to 1997. The United Boatmen's call for a 12-fish limit may well be warranted.

The agencies have established a standard for bluefish abundance which I feel has no relation to reality and are attempting to quadruple the population by 2007 through significant restrictions on harvest.

Yet, there's no projection of what that vast increase in voracious bluefish would feed on and how the resulting competition for food would effect stocks of striped bass and weakfish which are also being built up.

The problem here is one I've been emphasizing for years. Marine fisheries management remains in a primitive state with each important species being managed as if it existed independently in the ocean while food sources such as bunkers, herring and mackerel are managed only for human use and others such as sand eels and bay anchovies are simply ignored. This is in complete contradiction to freshwater management where predator-prey relationships are critical in setting all regulations.

Al Ristori

SALT WATER FISHING

My displeasure in no way reflects opposition to having a bluefish plan since I was the member of the original Mid-Atlantic Council who insisted on starting it and then served as chairman of the Bluefish Committee.

Only Bill Feinberg of Ocean joined me in fighting for that plan which was merely designed to collect data from a fishery at its peak for future use, and to prevent the destruction of the species by purse seiners and pair trawlers if a foreign market could be developed.

Comments on this plan must be sent by Sept. 14 to Hannah Goodale, NMFS Northeast Regional Office, One Blackburn Dr., Gloucester, Mass. 01930.

Al Ristori appears regularly in The Star-Ledger.

F/SF3

United States Department of the Interior

FISH AND WILDLIFE SERVICE
300 WESTGATE CENTER DRIVE
HADLEY, MA 01035-9589

In Reply Refer To:
FWS/Region 5/ES

SEP - 1 1998

Bruce Moreland, Acting Director
Office of Sustainable Fisheries
National Oceanic and Atmospheric Administration
1315 East-West Highway SSMC3
Silver Spring, Maryland 20910

Dear Mr. Moreland:

Enclosed please find comments from the Department of the Interior's Office of Minerals Management, regarding the Draft Environmental Impact Statement and Regulatory Impact Review for Amendment 1 to the Bluefish Fishery Management Plan. The U.S. Fish and Wildlife Service has been having regular input into this and other plans in close coordination with the Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission. We have no other specific comments at this time.

Should you have any questions regarding these comments, please contact Ms. Judy Wilson of the Mineral Management Service at 703-787-1075.

Sincerely,

Cathy Short ACTING

Ronald E. Lambertson
Regional Director

Enclosure

United States Department of the Interior

MINERALS MANAGEMENT SERVICE
Washington, DC 20240

Memorandum

To: Regional Director, U.S. Fish and Wildlife Service, Region 5

From: Carolita U. Kallaur
Associate Director for Offshore Minerals Management

Subject: Comments on the Draft Environmental Impact Statement and Regulatory Impact Review for Amendment 1 to the Bluefish Fishery Management Plan (FMP) (ER 98/491)

Our comments to the National Oceanic and Atmospheric Administration on the Mid-Atlantic Fishery Management Council draft Environmental Impact Statement and Regulatory Impact Review for Amendment 1 to the Bluefish FMP are directed at offshore oil and gas operations. We appreciate the efforts of the Mid-Atlantic Fishery Management Council to develop an amendment to the Bluefish FMP.

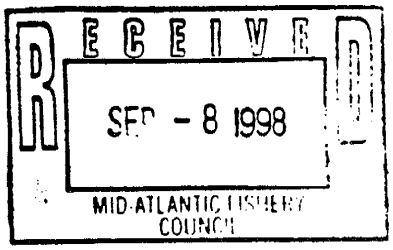
2.2.5.7.4 - Offshore oil and gas operations

Page 75 - "...OCS exploratory and production drilling and transport may affect biota and their habitats through the deposition of drilling muds and cuttings." Transport of oil or gas will never result in the deposition of drill muds and cuttings. Although routine discharges of from exploration, development, and production operations would comply with EPA criteria, local and relatively minor offshore water quality perturbations could occur. Studies by Maciolek et al. (Study of Biological Processes on the U.S. Mid-Atlantic Slope and Rise. Prepared for the Minerals Management Service by Battelle Ocean Sciences, Duxbury ,MA; Woods Hole Oceanographic Institution, Woods Hole, MA; and Lamont-Doherty Geological Observatory Under Contract No. 14-12-0001-30064. MMS 87-0051. Palisades, NY. Volumes I and II.) have shown the impacts from discharged drilling muds to be low and temporary in nature. Drilling muds are frequently recycled for reuse in subsequent production wells. Also the actual toxicity of drilling muds are low and those trace metals that are present are in low concentrations relative to EPA criteria for aquatic life (*Federal Register*, November 28, 1980).

"Seismic testing operations can interfere with fishing operations and damage or destroy fishing gear." This statement is inappropriate for two reasons. It has not been shown that seismic surveys adversely impact fish or fish habitat. And whether there are space use conflicts between seismic surveys and fishing operations is of no value to protecting essential fish habitat.

LUND'S FISHERIES INCORPORATED
Phone: (609) 884 - 7600 Fax: (609) 884 - 0664 lundsfish@jerseycape.com
997 Ocean Drive, Cape May, New Jersey 08204, U.S.A.

8-24-98



Jim Gilford
Chairman
Mid-Atlantic Fishery Management Council
300 South New Street.
Dover, DE 19904-6790

Dr. Gilford,

Thank you for having a hearing on Bluefish in Cape May. I would like to start my testimony by clearing the air as to who I am and who I might represent. While it is true I am a member on both the Mid-Atlantic Fishery Management Council and the New Jersey Marine Fisheries Council the testimony offered is that of my employer and myself.

The Mid-Atlantic Fishery Management Council has been trying to manage Bluefish since 1979. The genesis of this project was created when potential markets in South America and Africa stimulated interest by purse seine vessels. After the council held a scoping meeting in 1979 a work plan was adopted by the council in July, 1979 and NMFS in March, 1980. The addition impetus for a FMP was the harvest of Bluefish in the Chesapeake Bay by roller rig gill net boats from Florida.

The MAFMC, NMFS, and the ASMFC approved the FMP for Bluefish and submitted it to the Secretary of Commerce in 1984. This FMP was based upon an allocation system 80% of the total projected catch for recreational fisheries and 20 % for the commercial fishery. This FMP was in fact rejected by the Secretary due to no constraints on the recreational sector.

The council and ASMFC resubmitted the FMP with recreational measures (10 fish bag limit) in October, 1989. This revised FMP was approved by the Secretary in March, 1980.

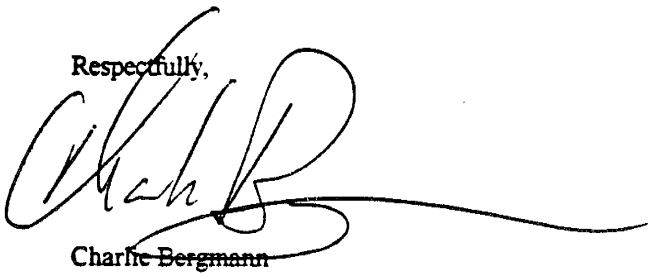
Here we are in 1998, proposing an amendment to the FMP. Once again we are trying to manage the stock of Bluefish by imposing very restrictive controls on the commercial fishery while maintaining a ten fish bag limit on the recreational sector. Some would say that the bag limit is a restriction on the recreational sector but where is the additional conversational measure. A ten fish bag limit has been in place since 1980 and the commercial state by state quota (declining each year I might add) has been in place since the early 1990's. How can the council justify further reductions in commercial landings when there are little to no controls on the recreational sector. The bag limit is not being proposed to change, there is no control over the participation in the fishery, and little is known as what changes have been made to that participation with regards to a recovering striped bass population and the explosion in the off-shore tuna fishery. Before any additional reduction in harvest levels for the commercial fishery should be considered one would hope the council and NMFS would answer these questions. To add insult to injury the recreational sector is also asking for a commercial fishing permit. From testimony of recreational fishers this is an attempt to satisfy the needs of fisherman who may fish in an effort to feed their families. If this is the true reason why would a family require more than ten fish anywhere from two to twenty pounds in weight. I must point out that the average seafood annual consumption is somewhere around fourteen pounds. We also hear

that the selling of Bluefish by crews on recreational charter and party boats is an acceptable tradition. This may have been the case when there were large enough allocation for the commercial sector , but as has been previously stated the quota for the commercial fishery has been declining each year.

While this amendment attempts to separate the ties between the recreational and commercial sectors it does so again at the expense of the commercial fishers. The allocation formula would now change from a 80 / 20 split to a 83 / 17 split. All of this based upon the initial idea that purse seine vessels would overexploit the Bluefish stock because of potential markets in Africa and South America. Somehow NMFS needs to address the problems associated with the assessment process and the council needs to pay very close attention to nation standard 4 of the MSFCMA. By doing these two steps maybe the council can avoid what happened at the first submittal to the Secretary of Commerce way back when.

Again, thank you for having a hearing in Cape May and the opportunity to testify

Respectfully,



Charlie Bergmann

Hannah Goodale 9-2-98

The new bluefish plan- 12 inch min size. Give 10.5 million pounds to commercial Fisherman. Both these ideas stink! I have watched the NMFS sit and watch while the commercial fisherman has destroyed the bluefin - whiting - Scup - Fluke - winter Flounder and the list goes on. Any Fish ocean stock that has crashed is always has been commercial overfishing. Recreational fisherman must keep 90% of the bluefish caught just as it was when the original plan was approved. If you make changer in size & bag limit it will be the final blow to the party & charter

eet, and lets face it they mean alot more
ney to the economy than the commercial
ed doubled. No change in the plan

Please!

The captains who run the party and charter
ale on the east coast need & deserve a break.
ont screw them again.

Capt. Dave

RECEIVED
SEP - 8 1998

Capt Dana Kaiser
499 Main St Box 2
Metuchen NJ 08840

75 North Rochdale Ave
Perrineville N.J. 08535-1034
September 5.1998

Hanna Goodale
National Marine Fisheries Services
Northeast Regional Office
1 Blackburn Drive
Gloucester. M A 01930

Dear Hanna

The proposed regulations on blue fish that I have been reading about are way out of line. I fish for food on the table for myself and my family every time I go fishing I find another species has had a size limit and a possession limit imposed on them. I started fishing in salt water at the age of 5 I still remember the thrill of catching my first snapper in barganet bay. My children and my grandchildren still talk about their first snapper catch. My children and grand children have been taught to keep as much fish as you use and to return the small ones so they can be caught another day.
I was able to fish once or maybe twice a month and catch enough fish for the table. Now with size limits and possession limits I fish at least once a week for the table. I do not know where you get your information from but I do know that their are more fish out their than your reports show. The blue fish. stripped bass. weakfish. sea bass and fluke stocks are in better shape now than they were 5 years ago.
If you are truly concerned about our fishing needs put and end to fish traps on our reefs and rock piles. put and end to roller netting. put and end to the trawlers catching spike whiting and selling them for .09 per pound for cat food. Many times I have come in from sea and followed a trail of dead ling that were discarded from the commercial fishing boats from Belford N.J. For your information we here in New Jersey have not had a good winter run of ling and whiting for over 5 years, whiting are one of the best tasting fish, you can bake, broil. fry, smoke or boil. Just check with the head boats from Brielle. Belmar or the Atlantic Highlands.
I'm for fishing conservation. I also must fish for the table. (I do not like chicken)

Yours truly.

Ronald W. Trust Sr.

Ronald W. Trust Sr.

September 2, 1998

RE: *Bluefish Plan*

Dear Hannah Goodale, NMFS Northeast Regional Office:

I am a recreational-sport fisherman. I am for a 6 fish 18 inch size for recreational fishing. But, only if no nets can be used by commercial fisherman to catch Bluefish. Give the commercial NO limit and 18 inches or more.

This will allow the fishery to bounce back. They're so easy to catch; the commercials don't need their nets.

Thank you,

Steven S. Palmer-President
Hot Seat, Inc.
2647 Haddonfield Road
Pennsauken, NJ 08110
(609) 665-3669

SATEMENT OF CAPTAIN WALTER WEIGAND
RE: BLUEFISH PUBLIC HEARING DOCUMENT
KINGSBOROUGH COMMUNITY COLLEGE
AUGUST 24, 1998

Gentlemen, my name is Walter Weigand and I a speaking tonight on behalf of the Party and Charterboats from New York City and Western Long Island that fish for bluefish.

In recent years we have seen the number of boats going after bluefish cut to one fifth of what there used to be. A combination of regulations that have discouraged participation in fishing for bluefish and increases in striped bass, fluke and weakfish fishing have all caused this shift. We hope the Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission will not continue to pass regulations that will result in more decreases in participation.

I would like to take this opportunity to remind the council and commission that party and charterboats are businesses servicing recreational anglers. Some people come aboard our vessels for the recreational experience a few come aboard to catch fish to sell.

I would now like to focus my comments on the proposed amendments:

1) Management Strategy:

We do not believe that bluefish are overfished and therefore we do not believe a rebuilding period is necessary. As I said earlier bluefish landings are down do to less activity in fishing for blues, not because of less fish but

due to a combination of social, economic and fish restrictions. We have less boats and less people than in years gone by which can give inaccurate reflections on statistics. Also more people are going after fluke, striped bass and weakfish and more people every year are practicing catch and release fishing each year. This is why bluefish landings are down and not because of overfishing. If the council still believes that a rebuilding period is necessary then we recommend that it be nine years. If the science is right then nine years will permit us to operate at current levels and still allow the stock to rebuild. We would not support any rebuilding schedule that would result in additional reductions in bag limits.

2) Permits and Fees

We do not support any vessel or operator permit that can be revoked because of the actions of our customers. We all have signs on our vessels informing the public of the 10 fish bag limit and we announce it on our way out in the morning. If a customer chooses to exceed the bag limit we should not be penalized. We are not cops. As Coast Guard licensed captains we will enforce regulations that effect the safety of our vessel, passengers and crew but we will not subject our vessels, passengers or crews to the possible violent reactions passengers have when forced to obey conservation rules. If enforcement of conservation regulations was not dangerous at times why do they give conservation officers guns?

Regarding permits to sell bluefish. One of the objectives in the bluefish plan is to preserve the traditional nature of the fishery. Traditionally deckhands aboard passenger carrying vessels while carrying passengers have fished for bluefish to sell at the market.

Any loss of the deckhands ability to continue to catch and sell bluefish while the vessel is carrying passengers would violate the traditional nature of the fishery. Deckhand keep their fish separate from the customers in containers marked with the vessels name and any observer onboard can tell which fish belong to the crew and are subject to commercial regulations and which fish belong to passengers and are subject to recreational regulations.
Also many vessel in the area traditionally have sold their catch right from their decks to people waiting for boats to arrive. Vessels must be permitted to continue this practice.

3) Bluefish Monitoring Committee:

We recommend that a party/charter boat captain and a commercial bluefish fisherman be included on the committee. Their participation with the scientists would help the scientists understand the nature of the fishery while at the same time the fishermen would benefit from working with the scientists as the recommendations of the committee were being developed.

4) Bluefish Quota:

We recommend that in order to avoid unexpected midseason closures of the recreational bluefish fishery the council and commission should continue to use a target TAC and adjust management measures as they have done in the past annually or every two years. The use of a total quota would have the potential of closing the fishery mid year which if it did occur would shift effort to other recovering species thereby slowing down their recovery and invalidating the estimates and assumptions made by the council and commission when the recreational controls for the other species were set. It would also impose unexpected financial hardships on those involved in the

recreational bluefish fishery and it would make it impossible to make business decisions. Once a fishery has been opened for the year it should not be closed prematurely.

5) Commercial Management measures:

We support a commercial minimum size of 12 inches. Also the annual commercial quota should be delinked from the recreational catch and each fishery should be allowed to operate independently from the other.

6) Recreational Management Measures:

We do not support a minimum size due to the effect it would have on the recreational snapper fishery. What we propose is the creation of a recreational conservation credit whereby individuals choosing to retain only those fish above a certain minimum size would be credited with a higher personal possession limit. This would permit individuals who wish to take snapper blues the ability to continue to do so while at the same time those individuals who wish to have a higher possession limit would be constrained by a larger minimum size. Enforcement would be easy. All an enforcement officer would have to do is measure the smallest fish in a catch to determine which of the two possession limits to enforce.

Thank you for this opportunity to present our comments to the council and the commission and we look forward to the favorable acceptance of our advice.

Sincerely,

Capt. Walter J. Wescott

2/25/97

JERSEY COAST ANGLERS ASSOCIATION
Working For the Saltwater Resource and Marine Anglers
1201 Route 37 East, Toms River NJ 08753
Phone 732-506-6565 Fax 732-506-6975
Web Site http://www.jcaa.org

NEW JERSEY FEDERATION OF SPORTSMEN'S CLUBS
Working For 150,000 Sportspersons Of New Jersey
190 Oberlin Road North, Lakewood NJ 08701
Phone 732-905-0755 Fax 732-905-5261
Web Site http://www.njsfsc.org/

Mid-Atlantic Fishery Management Council
Federal Building, Room 200
300 New Street
Dover, DE 19904

RE: Comments on the Bluefish Management Plan - Amendment 1

After reviewing the Amendment 1 document, the Jersey Coast Anglers Association and New Jersey Federation of Sportsmen's Clubs enter the following comments on behalf of our associations representing 150,000 members.

1) We find the methods used to assess bluefish stocks to be highly speculative and based on extremely limited sea sampling data. The current stock assessment bears little resemblance to the fishery we see today, even considering the most recent work done by the S & S and Monitoring committees which determined the stocks are in better shape than previous assessments indicated.

Bluefish are an extremely wide-ranging species both in their north-south migrations and their ability to move well offshore in search of forage. The use of bottom trawl surveys as an assessment tool is a highly questionable way to estimate stock size. First, bottom trawls are an extremely inefficient method of catching bluefish. Second, the swept area of the typical bottom trawl survey covers only a fraction of the known migratory range of the species in western Atlantic waters. The bottom trawl survey does not provide enough hard information to be used as even a rough indicator of bluefish stock health.

Depending to such a high degree upon recreational catch statistics developed from MRFSS data is speculative, at best. There is the potential for wide-ranging statistical error when relying on such data and the implications of using it as the single most important indicator of stock size is not very reassuring. As an example, when bluefish are concentrated in areas of high angler participation, catches, and hence stock abundance, appear high. When forage or other factors makes availability low in just two key states (New Jersey and New York) that are responsible for a major portion of the coastwide recreational catch, the assessment appears low and hence stock abundance appears to have declined. The methodology becomes even less dependable when you consider the recreational community has, in most recent years, been releasing the majority of its catch. This brings into question the use of recreational "landings" and recreational "catch" in the assessment. It almost appears the two are interchangeable in places when, in actuality, the figures are different by orders of magnitude. This needs to be closely reviewed.

Therefore, we strongly recommend revising the stock assessment methodology for bluefish to provide a more accurate and representative sampling biomass to better judge the merits and benefits of different management tools. Without a more accurate stock assessment, much of the FMP's assumptions are simply hard to support.

2) Concerning the rebuilding objectives of this plan, JCAA questions the ability of any plan to result in a biomass of 107,500 metric tons except under the most ideal environmental conditions and with the highest availability of forage species. This biomass goal becomes even harder to fathom when you take into consideration the fact that commercial landings of squid and butterfish have increased tenfold in the last decade and the menhaden population is in decline and commercially harvested at grossly unsustainable levels. The harvest of herring has become the latest commercial "gold rush" and smaller forage species such as sand eels have not been in abundance in recent years. Without an enormous forage base to support such a massive increase in biomass of a voracious predator like bluefish, a plan objective of 107,500 metric tons of biomass is doomed to failure without a wider "ecosystem based" assessment of the possibilities.

3) While the recreational/commercial split of 83/17 is not totally unreasonable, it is most definitely not representative of the true historic nature of this fishery. The actual historic "shares" were in the range of 90/10. And, in reality, an 83/17 split will result in a commercial share of almost 6 million pounds of the 35 million pound TAL. Since recreational landings are presently running about 14 million pounds, the actual result is about a 70/30 split. For this reason, we do not support the proposed transfer of 4.5 million pounds of recreational quota to the commercial quota in year one of the plan.

A transfer would provide no conservation benefit and is nothing more than a strategy to give the commercial sector one more year to maintain its harvest level without having to conserve. Such a transfer would set a highly questionable precedent.

4) We request an immediate moratorium on the entry of new participants into the commercial bluefish fishery. With the pending quota reductions on two other overfished species, specifically monkfish and dogfish which are traditional target species for coastal gill-netters, it is likely that a dramatic increase in commercial effort will be directed on bluefish. The proposed plan does not provide for a moratorium on entry. Such an effort shift will only hurt recovery and those commercial fishermen who have been traditional participants in the fishery have the landing records to prove it.

5) We do not support the imposition of a 12" size limit. The current stock assessment and the most recent landing trends in the recreational fishery clearly show no reason to institute a size limit at this time. A 12" size limit might not impact ocean fishermen and those anglers who patronize party and charter boats, but it does represent an unfair exclusion of estuary and shore-based fishermen from the fishery. Anglers limited to fishing bay waters and children who participate in the seasonal snapper fishery do not deserve to be arbitrarily shut out of another fishery, especially at a time when recreational fishermen are landing only about one-half of the proposed quota.

6) We do not support the transfer of commercial quota between states. It can cause undue pressure in localized fisheries which penalize both recreational fishermen in those areas by decreasing local availability, and commercial fishermen in other areas who have been traditional participants in the fishery.

Sincerely,

Thomas P. Fote
Legislative Chairman
22 Cruiser Court
Toms River NJ, 08753
732-270-9102 Fax 732-506-6409
Email <tfote@jcaa.org>

COMMENTS

by the

National Party Boat Owners Alliance, Inc.

on the

Proposed Amendment 1 to the Bluefish Fishery Management Plan

181 Thames Street Groton, CT 06340

COMMENTS BY THE NATIONAL PARTY BOAT OWNERS ALLIANCE, INC.
Regarding the request for comments on the proposed Amendment 1 to the Bluefish Fishery Management Plan

The following comments are in response to the Bluefish Management Proposals as published in the Federal Register of Aug. 13, 1998.

It is our understanding that nobody showed up at the hearing scheduled to be held in Rhode Island, and that the turnout in Connecticut was slim. That should not come as any surprise. It is not because people in this industry are not interested, it is the fact that primarily owner/operated businesses cannot afford the time to attend meetings scheduled at the height of their earning season. That's a fact that the fishery bureaucracies should keep in mind when scheduling public hearings in the future.

Given all the idiosyncrasies of the bluefish (Pomatomus saltatrix), combined with methodology that does not seem to have changed since the last time we went through this exercise in frustration, the accuracy of any biomass guesstimate is just that, a guesstimate that remains questionable and should never be used as the sole basis in regulating this species.

We would like to point out that reduced landings in the party and charter boat sector are not the best available data to determine the population of bluefish. All that is reflected by reduced landings is reduced landings. The reasons for any decline in landings are simply not addressed by just counting fish. When landings fall off there are a variety of reasons that have nothing to do with the biomass of the species:

1. A shift in the migratory patterns not entirely approachable by fishery management schemes. For example:
   a. The bait species that normally keep the fish in certain areas have moved away, for reasons encompassing over-development in coastal and estuary areas to unseasonable rains that cause localized flooding, thus creating a brackish water problem.
   b. As a case in point, that is what happened earlier this season for most of
   c. Long Island Sound. The bait and bluefish that were there in good numbers early on simply moved out to other areas. As the temperature and salinity returned to normal, both the bait and blues moved back.
2. There has been a shift in effort by party and charter boat fleets to other species in order to satisfy the changing demands of our customer base. This has served to reduce landings of this species.
   a. drum-beating about diminshing biomass of this species, even though it remains virtually impossible to determine that as a fact.

NPBOA 181 Thames St. Groton, CT 06340 Phone: (860) 535-2066 Fax: (860) 535-8389

b. There has been a reduction in the number of party and charter boats in the trade, many having been driven out of business by all of the fishery and other government regulations, etc.
c. Other factors, including the heavy promotion of other species such as fish in the tuna family, or striped bass, have pulled many anglers in those directions.

3. While there might be a reduction in the number of blues landed inshore, depending upon the area fished, there has been no problem with the quantity of these fish available in the ocean. But here again, this resource is not tapped as hard now as it was only a few years ago.
   a. There has been a reduction in the number of party and charter boats fishing for this species. Also, as stated above, the demands have changed. For example, one large head boat in the southern New England area had been running10 trips per week into the ocean for blues. Because of customer demand for different scheduling, that vessel remains local for 7 trips and offers only 2 trips per week to fish the prolific ocean population of bluefish.
   b. Another example: A two boat operation in fishing the above- mentioned area, had provided 6 trips per week in the past, but because of customer demand has substituted extra trips for a different species, cutting back the bluefish safari to 1 trip per week.

It has been our contention that when it comes to catch effort for bluefish using rod and reel, results are self limiting, as you cannot catch what isn't there or does not want to bite. This is evidenced by the already required log book entries in certain parts of the coast. The passenger counts may be good while the catches are terrible. Boats involved with this type of problem may simply be unable to reach and exploit a sizable concentration of bluefish because of schedule restraints.

The methodology employed to determine bluefish biomass remains flawed. Therefore, any notion of further curtailing the allowable catches of bluefish by the Party/Charter boat fleets is unacceptable. While the effect of such a drastic, un-necessary move would have little or no effect on increasing the biomass, the current amount of which is but a poorly educated guess, it would merely serve to

give the impression that the fisheries management bureaucracy is doing something. If something is to be done to effectively slow down harvest in the commercial sector, there are two things that would be very efficient:

1. Prohibit the sale of whole bluefish for use as bait.
2. Prohibit the use of ANY netting to commercially harvest bluefish by making it a **hook and line** species.

If commercial entities had to deal with the eating habits of these fish, then they would be on a level playing field with the rest of us. Blues can be taken in large quantities by a variety of netting techniques while they will not always take a hook. On the other hand, commercial hook and line skiff fishermen have been harvesting this species for decades, and like their non-commercial counterparts, don't deplete an entire school at one fell swoop.

As to fees and more permits, they accomplish nothing as far as conservation is concerned. All they do is add to the cumulative burden that has been imposed upon our vessels through targeted taxation and ever-increasing regulations. The most recent layer of bureaucracy, ACCSP, in theory, is supposed to simplify statistics gathering. But given the 2 pounds,10 oz. of their printed "source material", which contains their proposed modus operandi, we'll hold in abeyance any judgment about the efficacy of this new entity.

While cutting the creel limit in the future might be contemplated as a possible action, we wish to point out that in the Ground Fish Management Plan, Party and Charter boats have been separated out into a class by themselves, as their needs are different from the commercial and the recreational fisherman. If the trend in management continues, this option may have to be used in the Bluefish plan as well.

9-10-97

Dear Hannah,

I could not agree more with the content of this Article. When will the disparity end?

Thank you

Capt Tom Palchanes

Thomas & Nancy J. Palchanes
209 Odd Fellows Road
Pemberton, NJ 08068

Conservation Watch

By Al Ristori

BLUEFISH PLAN NEEDS REVISION TO REFLECT REALITY

Amendment 1 to the Bluefish Fishery Management Plan has been debated at a series of public hearings held up and down the coast the last two weeks, but many anglers may still not be aware of some problems with proposals for that species by the Mid-Atlantic Fishery Management Council and Atlantic States Marine Fisheries Commission (ASMFC).

Most importantly, there's a well-hidden provision that could vastly increase the percentage of landings taken by commercial fishermen. The average recreational catch used to be around 90 percent of the total, but commercial fishermen expanded their percentage until it became 17 percent during the 1981-89 base period. The plan's provisions that the commercial percentage wasn't to exceed 20 percent were ignored and since 1988 have run from a low of 21 percent to a high of 39 percent in 1996, which was the last year listed in the statistics.

Netters are crying the blues because sportfishing landings have been decreasing due to such factors as the 10-fish bag limit, a large increase in voluntary releasing of blues, and greater attraction to the expanding striped bass and weakfish populations. As the sportfishing total declines, so too should the numbers allowed for the commercial share. As fluke anglers note each year, recreational fishermen are penalized the following year for exceeding their share of the quota. Yet, bluefish netters incur no penalty for exceeding their share of the quota and are about to be rewarded for transgressions the Council, ASMFC and NMFS have allowed to occur.

REBUILDING PLAN. The preferred rebuilding schedule calls for a graduated reduction in fishing mortality of 40 percent over a nine-year period (1999 to 2007) to rebuild to the biomass target. The total allowable catch (TAC) for 1999 under that schedule would be 36.84 millions pounds less an estimated 1.82 million pounds of discards (based on average recreational discards from 1993 to 1996) for total allowable landings (TAL) of 35.02 million pounds. The commercial 17 percent would then come to 5.95 million pounds which is a 3.29 million pound decrease from 1996 landings.

As a result, there's a provision which states the commercial TAL will be 10.5 million pounds if their 17% share doesn't amount to that much - which it almost surely will not. Thus, the commercial share under that provision could easily double and in sheer poundage would be more than they've landed since 1992!

I really don't have any problem with the poundage netted from a healthy fishery, but sad experience has taught even the most trusting of recreational fishermen that quota percentage must never be given up or it will inevitably be lost down the road. There isn't a snowball's chance in hell of recreational quota being taken from a commercial allocation, and for sportsmen to allow this already higher-than-justified commercial share to increase will be nothing short of surrender!

There is no wide spread support for the 12-inch minimum which would eliminate snapper fishing by kids and shore-bound anglers as well as the use of those fish for fluke and weakfish bait. The plan advances no biological reason for such action, and even party and charter boat interests such as the United Boatmen of New York and New Jersey opposed the limit though they have no interest in blues under 12 inches.

INCREASED BAG LIMIT? The United Boatmen did call for an increase in the bag limit to 12 in order to reflect the improvement in bluefish populations. While that is biologically appropriate, I'd prefer to see everything remain as it is. The availability of a free National Marine Fisheries Service (NMFS) license to catch bluefish in excess of the limit allows anyone with such a desire to do so, but the average fishermen doesn't really have any use for 10 blues and that limit does prevent a lot of the waste which gave recreational bluefishing a bad name in the past. I've run quite a few bluefish charters since the limit was imposed and have yet to have any party insist on taking 10 a man, even when the fish were small, after being asked just how much they really were going to use of a fine-eating fresh fish but one which most people consider to be virtually inedible after being frozen.

It's that very edibility factor which has protected the bluefish from excessive exploitation over the years. I was the originator of the bluefish plan as a member of the original Mid-Atlantic Council, though only Bill Feinberg of Ocean, N.J. supported me in getting that plan off the ground while everyone else was worried about surf clams. My main concern was eliminating the threat of mass destruction by purse seiners and pair trawlers should they be able to develop a foreign market.

Since those boats couldn't legally be eliminated directly from the fishery, the plan was eventually enacted with the small commercial share which precluded the massacre which could occur if that foreign market were to develop. As it is, the domestic market can only handle so many blues before the already low price drops out and dumping occurs - and that has long served as an automatic means of preventing overexploitation. Ironically, reducing the amount of blues which can be harvested by netters may increase the market price enough to overcome much of the revenue loss through higher prices.

REBUILDING SCHEDULE FLAWED? I also see a basic problem with the reasoning behind the rebuilding schedule. The agencies which were crying doom-and-gloom, and wanted to lower the bag limit to three per day, now concede that the bluefish population increased from 1994 to 1997. During the last several years I've observed large quantities of bluefish in all sizes in New York Bight, which is the classic sign of a healthy fishery. Yet, the plan calls for quadrupling that population through fishing restrictions. My question is quite simply WHY?

There is nothing in the plan to indicate what this vast increase in bluefish is going to feed on. Is the ASMFC's industry-dominated menhaden committee going to cut their netting tonnage way back in order to accommodate all those extra blues? I don't have to tell you the answer to that one! What about the sand eels, bay anchovy, silverside, etc.? The Council and ASMFC know nothing about them and apparently could care less unless someone decides they'd like to harvest them for food or fertilizer.

What effect would a quadrupling of bluefish have upon the striped bass and weakfish populations which are being built up? During the 1970s all of those inshore species thrived concurrently for awhile, but that was when sand eels were super-abundant throughout the Mid-Atlantic. Since the mackerel and herring which compete with sand eels at the juvenile stage have come back we've seen a vast decrease in sand eels, especially in their southern range. Yet, the bluefish plan overlooks all these questions.

As I've been suggesting for two decades, marine fisheries science is still in the dark ages with each species managed as if it exists all alone in the ocean and has virtually no interaction with other species. This is in direct contrast to freshwater management where the availability of prey dictates acceptable levels of game fish stocking. The bluefish plan as presently constituted is not realistic and no changes should be made until it is thoroughly

Lee R. Schwocho, PhD
29 Castle Drive
Berkeley Heights NJ 07922

September 7, 1998

Hannah Goodale
National Marine Fisheries Service
Northeast Regional Office
One Blackburn Dr.
Gloucester, MA 01930

Dear Ms. Goodale:

Don't even think about it! The proposed bluefish management plan, which would allow a total commercial catch of bluefish of 10.5 million pounds - well above their historical catch - is unthinkable. This represents a near 100% increase above their allowable quota as mandated by the current plan. This increase, if enacted, would clearly be an egregious transgression of the spirit of the reauthorized Magnuson Act. At a time when the NMFS should be actively de-commissioning commercial fishing vessels it baffles me that the agency would be contemplating an increase in the commercial bluefish quota. Then again it shouldn't. Your agency has a deep and rich history of robbing valuable marine resources from the American Public for the monetary benefit of a greedy and elite few. Now is the time to change history by changing the practice of the National Marine Fisheries Service. The currently proposed amendment to the bluefish management plan that would provide commercial interests double their historical quota is unacceptable. The plan should not be changed from its present composition.

Have a backbone and do the right thing!

Sincerely,

Lee R. Schwocho, PhD

Sept 8, 1995

RECEI...

Dear Harold Goodale,

I wish to advise you that I am against the elimination of the Bluefish Permit for anglers. For 40 years, I have been selling bluefish to supplement my income and help defray the costs of fishing. The local restaurants that have bought my bluefish (a couple for 25 consecutive years) have grown to depend on the fresh fish I bring them. They know my fish are fresher than any they could buy from the wholesalers and that is very important to the consumer. Also, the extra fish not sold are given to less fortunate people in the area to supplement their food diet. A ten fish limit and no-Sale Provision would be an extreme hardship to me. It would probably decrease the number of days on the water for me

Thank you

Very truly yours,
George Jones

TO WHOM IT MAY CONCERN,

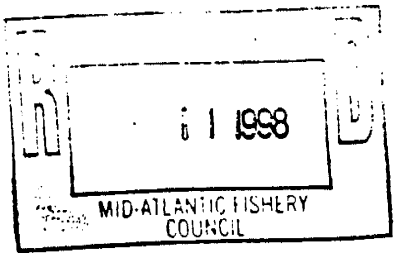
I HAVE BEEN FISHING FOR MANY YEARS AND ALSO WORKED ON A PARTY BOAT AS A MATE, IN BELMAR, N.J. I ATTENDED THE BLUEFISH HEARINGS ON AMENDMENT ONE OF THE BLUEFISH PLAN IN TOMS RIVER. COMMENTS I HEARD FROM THE J.C.A.A. AND ALL BOGAN I AGREE WITH.

ONE THING THAT I FEEL WAS LEFT OUT WAS THE TRADITIONAL SELLING OF BLUEFISH BY MATES ON PARTY BOATS AND CHARTER BOATS. MATES WORK HARD, LONG HOURS AND ARE PAID VERY LOW WAGES FOR HOURS WORKED. THEY DEPEND ON TIPS AND SELLING FISH TO MAKE A LIVING. IF THIS RIGHT IS TAKEN AWAY FROM THEM I DOUBT IF MANY OF THEM COULD SURVIVE ON THE PAY THEY GET. TO SUPPORT THEIR FAMILIES, AND WOULD SEEK OTHER JOBS. THE FEW THAT WOULD STAY WOULD PRESSURE THE OWNERS FOR MORE MONEY AND THE BOATS WOULD HAVE TO RAISE THEIR RATES. AN ALL DAY BOAT CERTIFICATION RATE, PLUS POOL, PLUS TAP, PLUS OPTIONS TO GET TO THE BOAT WOULD STOP A LOT OF PEOPLE FROM BEING ABLE TO AFFORD TO COME FISHING OVER THE YEARS I HAVE SEEN A DECLINE IN FISHERMAN COMING TO THE MARINA'S. THIS COULD BE ANOTHER NAIL IN THE COFFIN FOR PARTY BOATS. THAT HAVE LOST WHITING AND BLUEFIN TUNA FISHING, AND OTHER.

PLEASE CONSIDER THIS!

Al Maloney

Claude M. Bain III
936 Windsor Road
Virginia Beach, VA 23451



Mr. Christopher M. Moore
Mid-Atlantic Fishery Management Council
Room 2115 Federal Building
300 S. New Street
Dover, DE 19904

Dear Mr. Moore:

A review of the proposed Amendment 1 to the Bluefish Fishery Management Plan prompts me to offer the following comments for consideration:

First, a review of the development of this plan is instructive in determining if this amendment fits the goals, objectives, and promises made during the entire management process.

The initial bluefish plan was adopted in the early 1980's, but was disapproved by the Secretary of Commerce. This resulted in the process commencing a second time in the middle 1980's. It was at that time I became involved in the process as an appointee from the Commonwealth of Virginia to the citizen advisory board to the Council's Bluefish Plan group. The final plan was adopted through a series of compromises.

After several meetings with other appointees, management professionals, staff and Council members to discuss research, stock and fishery status, and acceptable management alternatives, a few things are still indelibly etched into my brain. First, is the contradictory position adopted by commercial fishermen appointed to work on this project. To a man they decried the bluefish as a nuisance and a pest that tore up nets and gear, that had little market value, and which they tried to avoid in almost all circumstances. Yet, as a group, they were unwilling to agree to any plan which would allocate the allowable catch (ABC) on the historical share of the catch, which was 90/10 percent recreational/commercial. All were adamant that a market might develop or better preservation techniques might become available which might make the bluefish a more valuable commodity and they did not want to part with any portion of the resource.

Second, the recreational fishermen appointed to work on this project were equally adamant about protecting the bluefish population from potential overfishing, preventing a natural decline in the population from becoming a "freefall" by a failure to control fishing effort or catch, and preserving the 90/10 percent historical catch distribution. The big fear was the opening of new markets with better price and price stability for bluefish, and more efficient commercial gear driving populations down on a rapid basis.

Third, the virtual unanimous agreement among the management community that this resource was a vital part of recreational fisheries and any plan developed would have to provide for the preservation of the resource with primary consideration given to its recreational values. Also, the plan was unique in attempting to address a fishery resource before it reached a crisis level in its decline, and the main reason for this was the demand for resource protection from the recreational community which had witnessed many of its other fisheries suffer in the 1980's.

Fourth, a very small group of recreational fishermen recognized another important consideration in the management of bluefish, namely that when bluefish populations waned due to natural population peaks and valleys, a major threat was the potential for high levels of catch by the most efficient gears. This problem had already surfaced in other fisheries, as commercial catches increased and in certain circumstances reached record levels in the face of fish populations which were already in decline and recreational catches on rod and reel (very inefficient gear) which had dropped dramatically. The result was a management system, which could not respond rapidly enough to prevent the populations from being driven to extremely low levels. This group worked with the management community to support a compromise position and gain acceptance in the recreational community for a doubling of the commercial share of the harvest through an 80/20 percent recreational/commercial split of the bluefish catch in the management plan. The recreational sector would be managed with a bag limit initially and the 20 percent commercial harvest would act as a "trigger" to mandate the adoption of a commercial quota. This plan allowed for two things: 1) a slight growth in commercial fisheries if bluefish populations remained healthy; and 2) a slight downside cushion if population declines caused recreational landings to decline while commercial landings remained the same (which would cause the commercial percentage of harvest to increase while their actual landings remained the same). However, the intent was for the quota to be virtually automatic in it application and it was widely acknowledged that this would mean cutting the actual commercial harvest to protect bluefish stocks. This quota based "cap" of commercial landings was established in exchange for the rather large concession to commercial fishing interests of increasing their harvest share from 10 percent to 20 percent.

This was the plan that was eventually adopted, with very slight modifications. Now, fisheries managers must confront a fishery in which the commercial share has been larger than 20 percent for at least four years, and based upon plan data was a 60/40 recreational/commercial split in 1997 and close to that level in 1996. This situation was allowed to develop by first declaring the 20 percent commercial share was not an absolute "trigger" requiring the implementation of a commercial quota as soon as it was met. Rather, it was interpreted to mean the "trigger" was based upon "projected" share for the ensuing years (even though this was not the original intent). So, even though the 20 percent level was breached four years ago, projections for the subsequent year were "guessed" at less than 20 percent which allowed the commercial fishery to escape a quota and delay further tightening of plan measures.

Now, the "preferred" alternative in Amendment 1 proposes an 83/17 split of the fishery, which is perfectly acceptable based upon plan development and history. However, it proposes to transfer any projected unused portion of the recreational allocation to the commercial fishery up to their recent absolute level of landings. This is patently unacceptable for a variety of reasons, including: 1) it clearly violates the intent, purpose and accord reached when this plan was

developed; 2) it does not promote conservation in any manner by allowing one user group to continue its harvest unabated at the expense of another group which will see tighter controls; 3) it places the burden of conservation on the recreational sector which has already contributed substantially to this effort by altering its practices to the point that a significant portion of their catch is now released alive and, 4) would probably continue to promote a commercial share of the harvest of at least 40 percent (and probably higher with more recreational restrictions) which is not in accord with plan intent and objectives and does not fairly share the conservation burden. Finally, this amendment is not in any manner acceptable under the compromise reached over ten years ago.

The only acceptable management alternatives are listed in sections 3.1.5.2, 3.1.5.3, and 3.1.5.4 of Amendment 1. These sections establish absolute quotas (ranging from 17% to 19.1% of the total bluefish harvest) for the commercial fishery. No transfers of quotas from one group to another would be allowed, since this violates the intent and purpose in developing this plan and since it provides for no conservation benefits at all. Also, this would establish a highly questionable precedent in the management process, which could be used to undermine future management initiatives. Similarly, transfer of commercial quotas from state to state should not be allowed. Finally, a moratorium upon entry in the commercial bluefish fishery should be considered to provide some measure of protection for commercial fishermen already active in this fishery.

With respect to the proposed tightening of recreational limits in Amendment 1, I have to question the rationale for the decision. Actual recreational landings and projected landings are running about 50% of the allowable catch under a management regimen designed to provide 80% of the allowable catch to that group. What is the basis for the need to tighten regulations on this group which is not landing its share of the allowable catch? If the recreational catch is too large, then certainly both the total allowable catch and commercial landings are vastly too large and would need to be addressed with substantial cuts to commercial landings on an immediate basis. This would help to bring the catch to the 80/20 split provided by the management plan and fairly share the management burden.

Sincerely,

Claude M. Bain III

Your regulations must start prohibiting trawling, seining, nets - We are overfishing our marine life. As an environmentalist, I am appalled at the raping of our oceans. Please keep me on your mailing list for all information you send out! Also I would like your phone no + e mail address - B Shaw
15 Elm St Florham Park N/J
07932

1863 Barbee Lane
Wall, N.J. 07719
Sept. 5, 1998

Mid-Atlantic Fishery Management Council
Room 2115 Federal Building
300 South New Street
Dover, DE 19904-6790

RE: Amendment 1 of the Bluefish Management Plan

Dear Council Members:

The unfortunate result of many Mid-Atlantic Fishery Management Council and Atlantic States Marine Fisheries Commission management decisions has been an adverse effect on the elderly, minority, and poor citizens of America who fish from shore because of their traditional reliance on catching immature fishes for food. This is arguably unavoidable in many cases.

However, the elimination of the free permit to harvest more than 10 bluefish, which is being considered by the Council and the Commission, would adversely affect this class of persons further without demonstrable biologic, social or economic gain.

The National Marine Fisheries Service devised the free permit in 1989 as relief from an obvious socio-economic flaw in the management plan. The idea was, in fact, never included in the bluefish fishery management plan's public review document, but was added when the plan was about to be challenged in court because this impact had not been addressed.

Ten years later the free permit is being considered for elimination despite the fact that the economic and social consequences remain the same as they were in 1989.

One of the easiest decisions that those who hold power in a democracy can make is to take action against the most helpless sector of society. Poor persons and the elderly generally have neither the wealth nor the ability to protest even if they are aware of what will affect them, which in this case they are not.

The free permit to catch more than 10 bluefish was supported by socio-economic data compiled in 1988 and 1989 by the United Boatmen of New Jersey and New York using sound methodology reviewed by academics in several colleges and universities.

This study clearly demonstrated that poor, minority and elderly anglers would be the class of citizens most severely impacted by the restraint of

a 10-bluefish limit. They were a source of fresh fish to inner city and low income citizens that could be obtained neither through welfare nor at a comparably low price from the commercial fishing sector.

The charge of the Council and the Commission at this time or any time should be to minimize hardship on any element of society whenever possible within the restraints and provisions of a management plan. In this case it is relatively easy to do.

The free permit to catch more than 10 bluefish can be retained by shifting the landings from the commercial sector to the recreational sector where they rightfully belong.

These anglers are fishing for pleasure as well as for food, and many can only participate by bringing enough food back to their neighborhoods and personal tables to support and justify fishing on a party boat.

These anglers can be easily identified by both name and permit number for statistical purposes. A random phone sampling, as is frequently done in wildlife management, can provide an accurate assessment of the harvest , and, actually, would provide better data than are currently obtainable from the general public that fishes.

There is more than adequate quota on the recreational side to absorb this effort, and the move would free additional quota on the commercial side.

The argument that this provision is only found in the bluefish management plan, and thus should be eliminated, is specious. In the 10 years of the bluefish plan's existence, there has been no hint that its uniqueness has threatened other plans. Uniformity of plans for uniformity's sake is a poor reason to bring hardship on any Americans.

The further argument that some fishermen who are not poor, minority or elderly utilize the free permit is of little consequence beyond a philosophical one. There has been little change in the number of permits issued over the last 10 years, and no data suggest that either the resource or anyone involved in the fishery has been adversely affected by these individuals.

The Council and the Commission are considering proposals for permits and fees for dealers and operators of commercial vessels and party and charter boats, but the free permit for poor, minority and elderly anglers should be a separate and distinct category with landings counted against the recreational quota.

Sincerely yours,

John Geiser
Outdoor Editor
Asbury Park Press

cc: Dr. James H. Gilford, chairman
Robert J. Rhodes, vice chairman

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September 10, 1998

Dr. Christopher M. Moore PH.D
Mid Atlantic Fishery Management Council
Room 2115 Federal Building
300 South New Street
Dover, Delaware 19904-6790

Dear Dr. Moore:

After reading the proposed amendment 1 to the Bluefish Management Plan and with careful consideration. I do not agree that a 40% reduction in mortality and nine years of confusing restrictive addendums is the answer to proper management of this valuable resource.

To be brief, I have prepared several reasons why this amendment should not be adopted.

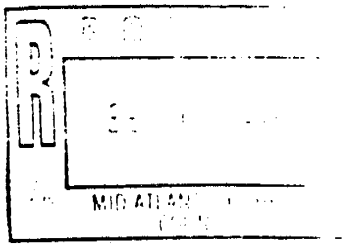
1. Though a 12" limit coast wide and ocean may not make a difference to many user groups, in shore recreational fisherman especially kids may never get the opportunity to catch any size fish except "Snappers". I don't think the Magnuson Act intended this scenario to happen.
2. The "overfished" definition is still vague and needs a better method to define mortality (e.g. MRFSS data needs improvement).
3. Commercial quotas should be restricted to approximately 10% of the TAC (Total Allowable Catch) instead of the 20% ++. Price at the market will reflect supply.
4. Bluefish are an extremely valuable resource to the recreational fisherman. If their unused quota is not transferred to the commercial as proposed, fishing mortality will automatically decrease.
5. Interaction with other species should be considered – How will this huge projected Bio-mass of Bluefish interact with Stripers and Seatrout stocks which are being re-built?
6. The 10 fish recreational limit is working well and is sufficient to maintain healthy stocks.
7. With menhaden and other bait fish in the greatest demand in history and supplies dwindling, will there be enough food for this "restored Bio-mass"?
8. 40% reduction in mortality is absurd. Stocks are increasing each year especially in inland waters according to log books.
9. Cleaning of Bluefish aboard charter and headboats on their return trip to the dock has been a traditional practice for generations. This service is provided by the crews and requested by their patrons – it should be continued.

As an active charter boat captain, I have consulted with fellow captains along the Atlantic Coast and inland. The consensus agree that bluefish numbers are increasing and all year classes are plentiful. While serving on both Bluefish Advisory Boards and other State Boards , I have observed this same opinion. The Bluefish, unlike most coastal species, is highly palegic; to attempt to quantify numbers is almost impossible due to it's vast geographical habitat, climatic conditions, and forage availability to larger species. For these reasons stated above I cannot support this amendment as presented.

Sincerely,

Capt. Bruce R. Scheible
President

CC: Hannah Goodale
NMFS Northeast Regional Office
One Blackburn Drive
Gloucester, MA 01930



September 9, 1998

Dr Christopher M. Moore
Mid-Atlantic Fishery Management Council
Room 2115 Federal Building
300 South New Street
Dover, Delaware 19904-6790

Dear Chris:

Enclosed are my comments on Amendment #1 to the bluefish plan. Thank you for the opportunity to comment.

Sincerely,

Clarence W. Lee
3000 Raymond Ave.
Kill Devil Hills, NC 27948

September 3, 1998

To: Mid Atlantic Fisheries Management Council and ASMFC

From: C. Wayne Lee
Recreational Fishermen

Subject: Comments on Amendment One to the Bluefish Plan

I. Biomass:

According to the Goals on page 132:

1. Target Biomass (B msy) is listed as 237 million pounds (107,531 mt)
2. Biomass threshold is listed as ½ B msy = 118.5 million lbs (53,750 mt)
3. Current Biomass is 54.5 million lbs (24,727 mt), which is 23% of the biomass target.
4. When these reference points are compared to the tables in the plan, it appears the target biomass is an unrealistic goal and really cannot be supported:

- First, Table 1 shows the average biomass over 24 years is only 116.2 million lbs (52,722 mt). Not even close to the 237 million target.

- Further, Table 23 shows the average biomass for the seven years when the highest total landings occurred during the 1981 to 1996 period is only 144 million lbs (65,335 mt). Again, this is not even close to the target biomass, yet it produced the seven highest years of landings on record in the time series.

- Therefore, how can we expect to achieve a target biomass of 237 million pounds when we have never come close to a biomass of that magnitude in the last 24 years. That goal does not seem realistic and should be revised.

- Further, such a goal will cause us to implement unrealistic management measures, putting hardships on both user groups, trying to achieve a goal that does not appear attainable.

- If you use the 144 million lbs (65,335 mt) as the target, which would be reasonable, since it is the average of the seven year time series when total landings were the highest, then we would currently be at 80 % of target, rather than only 23% of target as listed. Further, we could have some expectation of achieving a biomass target in the near future, without draconian management measures.

- I do not know how changing the biomass goals would effect the fishing mortality goals, but since the preferred alternative is to do nothing about fishing mortality for the first two years of the recovery schedule, maybe we could wait and re-evaluate the F rate at that time to determine if more stringent F is necessary for stock recovery during the nine year proposed schedule.

II. Minimum Size:

- Next, I do not support the 12 inch minimum size for recreational fishing. The preferred alternative allocates 29 million lbs to anglers. In the last three years we have only caught about 14 million pounds a year and that was with no minimum size restrictions. In fact we have not caught 29 million pounds in a single year since 1991.

- Further, there is no biological benefit to a 12 inch minimum size because bluefish don't mature and spawn until they are about 17 to 20 inches. Therefore, why impose a 12 inch minimum size when it will penalize some recreational users, but has little, if any, benefit on stock recovery.

- I do support a commercial minimum size of 12 inches, not that commercial fishermen target fish smaller than 12 inches, but it does prevent small bluefish from being used as crab bait or scrap.

III. Daily Bag:

- I do support a daily bag of ten fish and recommend that management measure be retained. Also, there should be a stipulation that no more than two fish a day can exceed 24 inches. This action will prevent anglers from keeping a daily bag composed of all large fish. This action is necessary to protect the SSB during stock recovery.

IV. Quota transfer:

- Since anglers are catching only 14 million pounds a year, the 6 million pounds assigned to commercial fishing makes the split 70/30 rather than the 83/17 assigned by the amendment. As a result, I do not support a transfer of any part of the recreational quota to commercial harvest.

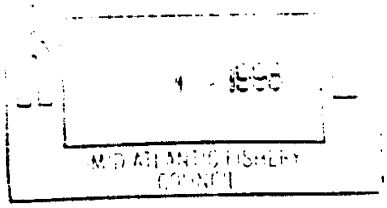
V. Forage Plan:

- Finally, my last comment is like preaching to the choir. As we all know, bluefish as well as all other species do not operate in a fish bowl, but interact with all other fish in the water through out their range. Two major species that Bluefish interact with are striped bass and weakfish. Striped bass are considered recovered and weakfish are recovering under the existing plan. That means there is a lot of competition for forage in the bluefish range, since all three species are often after the same source of food. Since bluefish are a pelagic fish, much like tunas and sharks, they go where they can find food and indications are that is off shore, which means they are not available to recreational anglers. That could account for some of the reduced recreational landings over the last few years. Of course that is speculation not fact. Further, there has been a paucity of silversides, anchovies and menhaden in the upper reaches of the Chesapeake Bay which has triggered concern among a number of organizations . Plus, Florida is experiencing problems with lack of menhaden since it appears their range is compressing due to growth overfishing and other factors. River

herring and shad stocks have been down for some time. Maybe it is time for the Council and ASMFC to take an active leadership role in initiating action to develop a forage fish plan for coastal stocks. I think it is time to see if we can find ways to determine what can be done to insure enough forage fish are available for all coastal species. It could be that food supply and not overfishing is the dominate factor in reduced bluefish stocks. If that is the case, then no matter what we do in the plan it will not restore stock abundance over the next nine years.

- My final recommendation – Initiate action on a forage plan to support bluefish and other coastal fish stocks.

Thank you,



September 9, 1998

Dr. Christopher M. Moore, Acting Executive Director
MAFMC
Room 2115 Federal Building
300 South New St.
Dover, DE 19904-6790

Dear Dr. Moore,

It was a pleasure working with you and the Bluefish Committee in developing Amendment 1 to the Bluefish Fishery Management Plan. I commend the committee and your staff for developing a plan that puts protecting and rebuilding the stock as its major goal.

After listening to the advisors' comments at the August 11 meeting and reviewing the amendment again, I feel that we should use a 5 year rebuilding period rather than the proposed 9 year period. Stock assessments consistently show that bluefish are overfished. Because bluefish are of such importance to the recreational fishery, we should rebuild the stock as quickly as possible. If we err in our rebuilding strategy, it is far better to err on the safe side.

Please convey my thanks to your staff and I look forward to working with Council on future projects.

Sincerely,

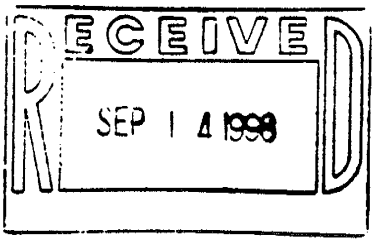
William Walker, MAFMC Bluefish Advisor

57 Eastwood Rd.
Media, PA 19063

XC: James A. Donofrio, Executive Director, Recreational Fishing Alliance

BREAKAWAY SPORTFISHING, INC.

Capt. Pete Ripley
Royall Road Box 860
East Boothbay, Maine 04544
(207) 633-~~4414~~ 6770



N.M.F.S. Northeast Regional Office
One Blackburn Drive
Gloucester,Ma. 01930
Attn; Hannah Goodale

Dear; Hannah

Sept. 10,1998

I would like to respond to the proposed bluefish management plan. I run a charter boat out of Boothbay Harbor , Maine. I believe the bluefish stocks are in serious trouble. That is why in Maine we have already reduced the recreational bag limit for bluefish to three per angler per day.

Any increase in the bag limit would only benefit the charter boat captains from New York and New Jersey that want to sell more of their customer's unwanted fish. Is that counted towards the commercial quota? It should be. Someday those greedy skippers will realize the bluefish is worth more alive than dead.

I would really like to know why Maine and New Hampshire were completely left off the public hearing schedule? As I mentioned Maine is way ahead of you with a bluefish conservation. We are also ahead on the issue of striped bass(with the slot-limit) but that's another story.

I'm also in favor of the 12 inch minimum size for bluefish. I don't buy the argument that it will hurt kids fishing for snappers. Kids are more conservation minded than the last several generations(grandpa says" he use to catch bluefish by the hundreds...where did they all go?"). There are size limits on most fish, small blues should be protected too. We havn't seen snapper blues in Maine for five years. Why? Overpopulation of bluefish stocks? I don't think so.

Thank you for your time. We here in Maine would appreciate being included in the next round of hearings. We have phones, faxes, e-mail and even cars and trucks to get us to the meetings. Please don't forget your neighbors to the north.

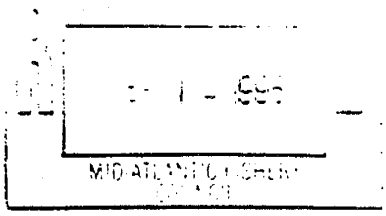
Sincerely,
Capt. Peter B. Ripley

Owner/operator F/V Breakaway
Member State Recreational Salt-Water Advisory Council

THOUSAND FATHOM CLUB of SOUTH JERSEY, INC.

P.O. BOX 74 • NORTHFIELD, NJ 08225-0074

SOUTH JERSEY



Mid-Atlantic Fishery Management Council
300 South New Street,
Dover, Delaware 19904-6790
Att. Chris Moore

September 10, 1998

Subject: Bluefish Management Plan Amendment #1

Dear Chris,

We ask for the following changes in the management plan draft.

1 – There is no need for a minimum recreational size limit in this fishery at this time.

The proposed plan ignores any and all economic, social and biological impact of the imposition of a 12-inch minimum size on recreational landings. The plan can not close this important recreational fishery without supporting documentation. The closure of this important recreational fishery does not conform to Magnuson's national standards.

2- Fishing Morality Schedule and Projected increases in Bluefish Biomass

Unless major changes are made in commercial forage species fisheries landings, the plan's proposed nine year 40% reduction in fishing mortality can not be achieved. The commercial landings of squid, mackerel, butterfish, menhaden and herring must be sharply reduced, at least a 50% reduction, to feed a bluefish population that is four time current levels. It is biologically impossible to increase bluefish, weakfish, stripers and fluke at the same time without major reductions in commercial forage species landings. The plan's only alternative in years 6 to 9 is to sharply reduce recreational bag limits. Requiring such low bag limits will destroy the charterboat, headboat plus the bait and tackle and many other businesses recreational's spending supports. Magnuson/Stevens national standards require consideration of the economic value. The recreational landing value per fish is over 10 times the reported commercial value of 30 cents a pound.

3-We support the 83%- 17% -commercial bluefish allocation split only if there is **NO** additional quota transferred to the commercial fishermen. We totally reject the transfer of 4.55 million pounds of recreational quota to the commercials for 1999. The council has permitted the plan to inflate commercial landings for several years. To permit these excessive commercial landings to continue totally defeats the conservation intent of the bluefish plan amendment. This is wrong and must be corrected.

4 - The plan does not propose a commercial bluefish permit moratorium.
No management plan has ever succeeded without limiting the number of commercial permits and boats in the fishery. Ignoring this issue will destroy the traditional commercial fishers and the markets they serve. A commercial permit moratorium must be part of the final plan.

5 - Charterboat and headboat sales of recreationally caught bluefish have been a part of this fishery for many years. These sales are perfectly legal under the current plan and are an important income to the boats and mates of these vessels. They should be allowed to continue, since they receive far more dollars for these fish than commercials

A 10 fish recreational bag limit greatly assisted by a catch and release rate over 50% has combined to increase current bluefish stocks over the last several years. It is known scientifically that other ecological based factors have more affect on bluefish stock rebuilding than landing restraints. To require the recreational's and the industry they accept all the conservation required to rebuild the bluefish stocks is wrong. Please correct the plans major errors and omissions in the final draft.

Sincerely,

John T. Koegler
Legislative Chairman
8 Ringneck Lane
Radnor, Pa. 19087
1-610-687-2208

Maine PULP & PAPER ASSOCIATION

FAX TRANSMISSION COVER SHEET

DATE:	September 14, 1998
TO:	Hannah Goodale, Northeast Regional Office
FAX #	978-281-9135
FROM:	Mic LeBel
PAGES (INC. COVER):	3
SUBJECT:	Amendment to Bluefish Fishery Management Plan
MESSAGE:	Attached are the comments of the Maine Pulp & Paper Association and Maine Forest Products Council on the July 1998 draft amendment. I have also mailed a copy of the letter and the attachments that are cited in our letter. Please call me if you have any questions (207-622-3166).

If you have difficulty receiving or reading this fax transmittal, please call us at 622-3166.

Maine PULP & PAPER ASSOCIATION

Maine Forest Products Council

September 14, 1998

Hannah Goodale
Senior Fishery Policy Analyst
Northeast Regional Office
1 Blackburn Drive
Gloucester, MA 01930

Re: Amendment 1 to the Bluefish Fishery Management Plan, dated July 1998

Dear Ms. Goodale:

We have recently received a copy of the July 1998 draft amendment to the Bluefish Fishery Management Plan proposed by the Mid-Atlantic Fishery Management Council (MAFMC). As representatives of the forest products industry and the pulp and paper industry in the State of Maine, our organizations have been following the implementation of the essential fish habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act with increasing concern. We have previously submitted comments to the National Marine Fisheries Service (NMFS) and to the New England Fishery Management Council (NEFMC) identifying our concerns regarding NMFS's rule implementing the EFH requirements and regarding the NEFMC's amendment to implement the EFH requirements. The issues raised by the amendment to the Bluefish Fishery Management Plan raise many of the same concerns we have previously identified.

We therefore enclose copies of those following comments previously submitted to NMFS and NEFMC for consideration as the MAFMC considers its own actions to implement the EFH requirements of the Magnuson Act:

1. Comments, dated July 27, 1998, of the Maine Pulp & Paper Association and Maine Forest Products Council on the NEFMC's Essential Fish Habitat public hearing document.

2. Comments, dated July 7, 1997, of the Maine Pulp & Paper Association and Maine Forest Products Council on NMFS's proposed rule to implement the EFH provisions of the Magnuson Act.

Maine Pulp & Paper Association
PO Box 5670
Augusta, ME 04332-5670
(207)622-3166

Maine Forest Products Council
146 State Street
Augusta, ME 04330
(207)622-9288

3. Comments, dated February 13, 1998, of the Maine Pulp & Paper Association and Maine Forest Products Council on NMFS's interim final rule implementing the EFH requirements.

If you have any questions with regard to these comments, please feel free to contact either of us.

Very truly yours,

Jeff Toorish, President
Maine Pulp & Paper Association

William J. Vail, Executive Director
Maine Forest Products Council

cc: Susan B. Fruchter (NOAA)
Paul J. Howard (NEFMC)
Louis Flagg (Maine DMR)

MEMORANDUM

1111 19th Street, NW, Suite 800
Washington, D.C. 20036
Phone: 202.463.2398
Department Fax: 202 463.2052

DATE: September 15, 1998

TO: Christopher M. Moore, MAFMC
302/674-5399

FROM: Christie Prater (for Chip Murray)
Coordinator, Legal Department

PAGES: 5 (including cover sheet)

Mr. Moore.

Please see the attached comments to the Bluefish Fishery Management Plan. For further information or if you have any questions, do not hesitate to contact Chip directly at 202/463-2782.

Regards - Christie

AFRPA

AMERICAN FOREST & PAPER ASSOCIATION
Legal Department

September 14, 1998

Ms. Hannah Goodale
Senior Fishery Policy Analyst
Northeast regional Office
National Marine Fisheries Service
One Blackburn drive
Gloucester, MA 01930

Re: Amendment 1 to the Bluefish Fishery Management Plan

Dear Ms. Goodale:

The American Forest & Paper Association (AF&PA) hereby submits the following comments on the July 1998 draft of Amendment 1 to the Bluefish Fishery Management Plan. AF&PA is the national trade association of the forest, pulp, paperboard, and wood products industry. AF&PA represents approximately 250 member companies and related trade associations (whose memberships are in the thousands) which grow, harvest and process wood and wood fiber, manufacture pulp, paper and paperboard products from both virgin and recovered fiber; and produce solid wood products.

While we support the goal of conserving essential fish habitat (EFH), we object to the scope and reach of the bluefish amendment. We strongly believe that the amendment represents a clear departure from the letter of the Magnuson-Stevens Fishery Conservation and Management Act and the intent of Congress in adopting the "essential fish habitat" amendments. The following comments expand on our concerns.

1. The Draft Amendment Is Overly Broad and Exceeds Congressional Intent

At the outset, it should be understood that the 1996 amendments (Sustainable Fisheries Act) to the Magnuson Act do not authorize the promulgation of standards or regulations that affect nonfishing entities. By its terms, the EFH provision is limited to "the description and identification of essential fish habitat in fishery management plans." 16 U.S.C. § 1855(b)(1)(A). This limitation makes it clear that NMFS' authority applies only to "fisheries." There is no basis in the Magnuson Act for the Councils to address nonfishing activities. Hence, the Councils' description of EFH and measures to preserve EFH goes beyond the underlying statutory authority and is invalid.

Further, the Sustainable Fisheries Act provides that:

> The term "essential fish habitat" means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

16 U.S.C. § 1802(10) (emphasis added).

The bluefish amendments, even at 90%, would appear to go far beyond the statutory understanding of EFH. The EFH descriptions encompass all areas where the species in question occur within the 90% area. The Council's approach to describing EFH is fundamentally at odds with the apparent approach of the Congress in limiting EFH to that which is "essential" or "necessary." EFH should not include any and all habitat nor should it include habitat per se. This approach, on its face, exceeds the authority granted under the Magnuson Act.

2. Inland Areas and EFH

We note that EFH descriptions identify estuarine areas and rivers where juveniles of managed species may occur. We urge the Council to carefully review and revise the amendment in light of the Congress's EFH definition and its historic approach of limiting and constraining the Council and NMFS authority when dealing with fishing interests, as opposed to inland industries, and in deferring to individual states when it comes to matters taking place in state waters, particularly inland waters. There is no authority under the Magnuson Act for the Councils to address prey species or inland areas as EFH, and the Council should avoid any suggestion that EFH will be designated to include such species or areas. E.g., 16 U.S.C. § 1852(a)(1) (the Councils are limited to the management of fisheries "seaward" of the states comprising each Council); 16 U.S.C. § 1801 (b)(1) (the purpose of the Act is "to take immediate action to conserve and manage the fishery resources found off the coasts of the United States"); 16 U.S.C. § 1856(a)(1) (carefully delineating federal and state jurisdiction). Moreover, the Council should focus its efforts on habitat that is truly "essential" and "necessary."

The Council has included estuarine areas as EFH, as well as rivers and other freshwater areas. Further, the Council appears to broadly expand its description of EFH by focusing attention on upland activities that fall well outside the confines of EFH and should not be identified as affecting EFH. In summary, we believe that this definition or description far exceeds statutory authority and the intent of Congress in adopting the EFH provisions to the Magnuson Act.

3. Subsection 2.2.5.3.3 - "Silvicultural NPS"

The apparent purpose of the first two paragraphs is to assert that silviculture has significant potential to affect bluefish EFH. These paragraphs (a) overstate the importance of silviculture as a nonpoint source of water quality problems and (b) fail to show any connection between silvicultural activities and bluefish EFH.

The first paragraph of the subsection begins with a sweeping indictment of "Federal land management" for "contributing to the decline of marine and anadramous fish." Various land management activities are identified along with their potential effects on surface waters and fish habitat. Many of the listed activities (e.g., grazing, mining, hydropower development) have nothing to do with silviculture. It is not clear why a subsection on "Silvicultural NPS" includes a general expression of concern about Federal land management activities. Moreover, it is not clear how this general concern connects silviculture with bluefish EFH. Most of the Federal forest lands in the eastern U.S. are in mountainous areas many miles from the Atlantic coast. On lands that are near the coast (e.g., Francis Marion National Forest), silvicultural activities are generally focused on wildlife habitat improvement and ecosystem management objectives.

The second paragraph of the subsection comprises carefully selected statements about silvicultural contributions to nonpoint source pollution. The intended message is that managers of

bluefish EFH should be very concerned about silviculture. These managers should be presented with a more complete and balanced discussion of silvicultural NPS that has some relevance to bluefish EFH. It should be noted, for example, that silviculture is a very minor source of NPS pollution in the eastern U.S. compared to agriculture and urban runoff. All states with significant forestry activities have nonpoint source control programs that address silvicultural NPS. Most silvicultural activities are conducted using Best Management Practices (BMP) that are very effective in controlling silvicultural NPS.

Given that localized effects on sediment and temperature in headwaters are the main water quality concerns associated with silviculture, it seems unlikely that silviculture would have any appreciable effects on bluefish EFH. If there is any evidence to the contrary, it should be included in the EFH amendment

Many of the conservation measures listed on pages 67-68 of the draft are already included in state BMP manuals. Inclusion of these measures here is potentially confusing to landowners who may receive slightly different versions from various government sources. It would be better to make reference to state BMP manuals than to repeat the information in the FMPs.

Road Construction and Lack of Thresholds. Throughout the document, no baseline is established to determine whether the stated impact is significant and worthy of addressing or whether it is trivial. For example: "Delivery of sediment from road construction or reconstruction should be reduced." Id. At 67. Reduced from and to what levels?

Vague Statements Relating to Harvest Regimes. The document is altogether vague in places: "Appropriate skid trail location and drainage and proper harvesting in SMAs should be addressed. Id. At 67. No guidance is given in the FMP Amendment. Standards pertaining to timber harvest can generally be found in federal and state laws, regulations and guidance documents. Generally these statutes, rules and guidelines set forth objective standards. However, here, instead of objective standards from applicable BMPs, the Bluefish FMP Amendment will likely result in a process in which determinations of "appropriate" and "proper" depend on the particular views, values and objectives of the local agency biologist.

Enforcement of Water Quality Standards. The document suggests that best forestry management practices should be enforced to ensure water quality standards are attained. Generally, federal agencies may not bring enforcement actions based on the failure of a water body to attain articulated water quality standards. The better approach is simply to determine BMPs and implementation through existing state programs.

Restoration of Upland Habitat. The document speaks to the issue of restoring riparian and upland habitat; however, such a recommendation is outside the purview of EFH authority and the document is too vague to be useful.

4. Conclusions

In summary, we believe the NMFS EFH recommendations and Council amendments are flawed and need reconsideration due to the following:

- NMFS and the Council are promoting EFH so as to include all habitat rather than "essential habitat" and without appropriate justification.

- NMFS and the Council fail to describe in sufficient detail how the listed nonfishing activities represent a "threat" to EFH and what conservation and enhancement measures NMFS contemplates in addressing these "threats."

- NMFS and the Council should indicated with some precision its intent, if any, to extent EFH consultation to areas comprising freshwater and where it is described as EFH.

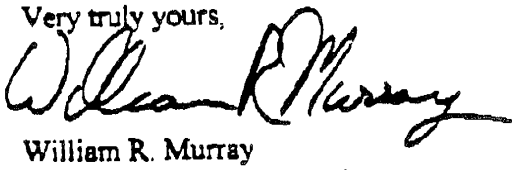
- NMFS and the Council should clarify and elaborate on its views as to what activity would trigger the EFH consultation requirement.

- NMFS and the Council should produce a realistic assessment of forestry and recognize existing state BMP programs, rather than introducing vague and confusing measures of their own.

We believe that the amendments before the Council, if adopted, will violate the spirit and intent of Congress in adopting the EFH amendments. The proposed amendments go beyond the overly broad, complex, and burdensome approach to EFH articulated in the NMFS proposed and interim final EFH regulations.

If you have any questions, please do not hesitate to contact me.

Very truly yours,



William R. Murray
Natural Resources Counsel
202/463-2782

cc: Susan B. Fruchter, NMFS
Christopher M. Moore, MAFMC

Coastal Conservation Association Maryland
P. O. Box 513
Easton, Maryland 21601-0513

September 14, 1998

Dr. James Gilford, Chairman
Mid-Atlantic Fishery Management Council
Room 2115
Federal Office Building
300 S. New Street
Dover, DE 19904-6790

Dear Dr. Gilford:

Coastal Conservation Association-Maryland (CCA MD) is concerned about the status of Atlantic bluefish stocks. We have reviewed Amendment One to the bluefish fishery management plan and attended the Ocean City, MD hearing on August 24, 1998. CCA MD hopes that the upcoming management changes for bluefish, mandated by the Sustainable Fisheries Act (SFA) and the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA), can result in immediate improvement in the recovery effort and ensure more bluefish for everyone.

The proposed recreational/commercial split of 83/17 is reasonable. However, any transfer of quota between user groups should be avoided as it results in no conservation benefit and delays the potential recovery process. Any unused quota should be considered as an investment in the future of the fishery for all users.

Quota being transferred between states should not be allowed. It could adversely impact local fisheries and cause short term declines in availability to recreational anglers. The economic importance of the recreational bluefish fishery to all the Atlantic States is well documented and should not be put at risk by moving commercial quotas with the migrating stocks.

CCA MD asks that the rebuilding effort be initiated immediately. There is no justification in delaying the rebuilding process for two years while the fishery continues to decline. More restrictive recreational limits would be acceptable if the recovery were to begin immediately and a shorter, five years instead of the proposed nine years, rebuilding schedule adopted. There should be a moratorium on commercial entry until the stocks are declared fully recovered. Commercial effort should be reduced from the current levels, not increased.

The question of a proposed size limit is an issue with many sides having valid reasons for their preference. CCA MD believes that this decision should be put in the area of the technical committee as they should be able to better determine how important the issue is to the recovery of the stock.

The recovery program should mandate concurrent studies of the essential fish habitat and the interaction of the bluefish recovery with other species. Essential fish habitat (EFH) has been determined to be a controlling factor in the recovery process of any species and the impact of beach replenishment projects up and down the Atlantic coast needs to be examined along with other areas of habitat concern. In conjunction with EFH we need to insure that a sufficient forage biomass is available for blue fish recovery and other expanding predator species.

It is everyone's desire to see an improved habitat and fishery for the benefit of all citizens. Thank you for giving CCA MD an opportunity to have input in this process.

Sincerely,

Kenneth B. Lewis

Kenneth B Lewis, M. D.
CCA MD Representative for ASMFC Affairs

cc: Dr. Bob Bachman, MD DNR
Dr. Jim Gilford, Sport Fisheries Advisory Committee
Bill Woodfield, Tidal Fisheries Advisory Committee
Dick Brame, CCA Coordinator for ASMFC

Holiday Inn

DATE: 9/15/98

TIME: 2:00 PM

NUMBER OF PAGES: 2
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ACCSP

Atlantic Coastal Cooperative Statistics Program

GOOD DATA, GOOD DECISIONS

1444 Eye Street, N.W., Sixth Floor, Washington, DC 20005
(202)289-6400 (phone) (202)289-6051 (fax)

September 15, 1998

Dr. Chris Moore
Mid-Atlantic Fishery Management Council
Room 2115 Federal Building
300 South New Street
Dover, DE 19904

Chris

Dear Dr. Moore,

The Atlantic Coastal Cooperative Statistics Program Operations Committee has reviewed the sections related to data collection and permitting in Amendment 1 to the Bluefish Fishery Management Plan. The proposed Amendment 1 to the Plan has been found to be consistent with the guidelines for coastwide data collection developed by the ACCSP. We are very appreciative that the ACCSP standards have been incorporated into the plan.

The ACCSP is a broad, comprehensive, coastwide fisheries information system where each data collection component (catch/effort, biological sampling, etc.) will be implemented for all living marine resources rather than species by species. The data collection standards listed in the draft Bluefish FMP would mandate all agencies to fully implement all phases of ACCSP for a single species by next spring. While this goal is commendable, the Operations Committee is concerned that partner resources will not be available to achieve full implementation of the ACCSP in the immediate future. Thus, immediately requiring data collection to be a compliance factor in any Commission or Council FMP may cause significant difficulty for many program partners.

If the resources are made available to fully implement the ACCSP, the program has been designed to meet the needs and priorities of all individual species FMPs, including bluefish. We would appreciate any assistance you can provide in obtaining the appropriate resources to fund the implementation and long-term continuation of the program.

The Atlantic Coastal Cooperative Statistics Program (ACCSP) is a cooperative state-federal marine and coastal fisheries data collection program. The goal of the program is to cooperatively collect, manage, and disseminate fishery statistical data and information for the conservation and management of fishery resources of the Atlantic coast and to support the development and operation of a national data collection and data management program.

We thank you for the opportunity to comment on Amendment 1 to the Bluefish FMP. This Amendment will go a long way toward improving the management of the Atlantic coast bluefish stock including the collection of data. If you have any questions or our comments, please do not hesitate to contact me at 252-726-7021.

Sincerely,

Willard W. Cole, Jr.
Chair, ACCSP Operations Committee

cc. ACCSP Operations Committee and Liaisons
ACCSP Coordinating Council
ACCSP Advisory Committee and Alternates
ACCSP Recreational Technical Committee
ACCSP Commercial Technical Committee
ACCSP Informational Work Group
ACCSP Contacts
Robert Beal, ASMFC

ENVIRONMENTAL
DEFENSE FUND

North Carolina Office
2500 Blue Ridge Rd., Suite 330
Raleigh, NC 27607
(919) 881-2601
Fax (919) 881-2607
www.edf.org

September 15, 1998

Dr. James H. Gilford, Chairman
Mid-Atlantic Fisheries Management Council
Room 2115 Federal Building
300 South New Street
Dover, Delaware 19904-6790

Mr. Jack Dunnigan, Executive Director
Atlantic States Marine Fisheries Commission
1444 Eye Street, N.W. Sixth Floor
Washington, DC 20005

RE: Draft Amendment 1 to the Bluefish Fishery Management Plan

Dear Dr. Gilford and Mr. Dunnigan:

On behalf of our over 300,000 members, please enter these comments of the Environmental Defense Fund into the public hearing record for Amendment 1 to the Fishery Management Plan for Bluefish (Pomatomus saltatrix). As you know, we have participated at length with MAFMC staff and both the MAFMC Habitat Committee and the ASMFC Bluefish Management Board in developing the essential fish habitat (EFH) recommendations for this species. We have a strong interest in sustaining the current recovery both by protecting and restoring bluefish habitat and by maintaining an aggressive recovery schedule for this fish, critically important to our heritage, our coastal ecosystems and our coastal economy.

Major, specific points include the following:

1). We strongly endorse all actions possible to rebuild bluefish populations as rapidly as possible.

The recent recovery of this important sport and commercial fish is remarkable evidence that fish of high reproductive capacity can rebuild given the opportunity. Although significant truncation still exists in the age structure for this species, rapidly increasing population size and landings in both sectors are excellent signs of rebuilding.

National Headquarters

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New York, NY 10010
(212) 505-2100

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44 East Avenue
Austin, TX 78701
(512) 478-5161

5655 College Ave.
Oakland, CA 94618
(510) 658-8008

2). We strongly endorse a five-year rebuilding schedule.

The draft FMP amendment makes very clear that a five-year rebuilding schedule is readily achievable in this fishery. No compelling argument is presented that mitigates the necessity under the Magnuson-Stevens Sustainable Fisheries Act to achieve rebuilding as quickly as is feasible. Absent such as argument, the five-year rebuilding schedule and measures necessary to implement it must be adopted. The principal difference between the preferred alternative (nine-year rebuilding schedule) and the five-year schedule is simply doing nothing for the first two years, with an interim reduction to F = 0.41 in years 3-5, and then a reduction to F = 0.31 in years 6 and after. We recommend dropping immediately to F = 0.31 to achieve rebuilding in five years.

3). We endorse size limits and bag limits necessary to achieve rebuilding in five years.

The proposed minimum size limit of 12 inches is a positive step, but it is inadequately protective of immature fish. Size at first reproduction is on average in the 16-inch size class. Until the fishery is fully rebuilt, we recommend that the minimum size for both commercial and recreational sectors be established at about this size. The proposed recreational bag limits of ten fish per day is excessive for this species. Simply put, no one needs to catch ten blues a day as long as they are running! We support a reduction in the recreational bag limit as a component of rapid rebuilding, at least until the stock is fully rebuilt.

4). We support the establishment of a mechanism to implement the recreational allowable landings.

A serious problem has developed in exceedances of recreational quotas in the summer flounder fishery and in the red snapper fishey in the Gulf of Mexico. As measures to restrict summer flounder recreational catch are implemented (including possible closures), pressure to take bluefish late in the year will return. To avoid the same problem with bluefish, an implementation strategy is mandatory.

5). We support inclusion of habitats for 90% of each life history stage, plus 100% south of Cape Hatteras, as essential fish habitat (EFH) for bluefish.

Bluefish remain overfished, despite the recent recovery, now underway. As such, the MAFMC has little choice but to designate and then protect to the limits of it statutory authority virtually all habitat where bluefish occur in various life history stages. Even the contraction of EFH extent to 90% is questionable; the interim final rules seem to require 100%, given that bluefish populations are at least somewhat estuarine dependent.

and that habitat loss may well threaten stock integrity. Inclusion of 100% of the area south of Cape Hatteras is appropriate given the Level 1 data available.

6). We support inclusion as EFH of all estuaries where life history stages were common or more abundant, for all appropriate salinity zones, and the immediate expansion under the frameworking process for smaller estuaries not tracked by ELMR.

Estuarine Living Marine Resource data are a good starting point for defining estuarine habitats for estuarine-dependent organisms. The data base is limited, however, by what it tracks. Unfortunately, many smaller estuaries and tidal creeks which are critically important nursery grounds for juveniles of a wide array of species are not tracked. They absolutely must be included a soon as possible.

7). We support ecological smoothing of the quad-by-quad EFH draft maps.

The use of 10-minute quadrats to delineate EFH makes for a checkerboard result that does not pass the ecological laugh test. For instance for adult bluefish, there are coastal quads that are omitted that make no ecological sense. Although that problem could in theory be addressed during the framework process, there is absolutely no reason to wait. Every quad which impinges on the East Coast in the species range should be included as EFH, as should as quads bordered on at least three sides by EFH quads.

8). We support continuation of the Bluefish Monitoring Committee as a mechanism to track the recovery.

Bluefish is a perfect species to demonstrate the power of the new approaches contained in the SFA. We heartily support the progress made to date in their recovery, and strongly urge the MAFMC and the ASFMC to use every tool at your disposal to accelerate the recovery of this ecologically and economically important organism.

Thank you for the opportunity to comment.

Sincerely,

Douglas N. Rader, Ph.D.
Senior Scientist

Michelle A. Duval, Ph.D.
Research Scientist

Daniel J. Whitule, J.D.
Attorney

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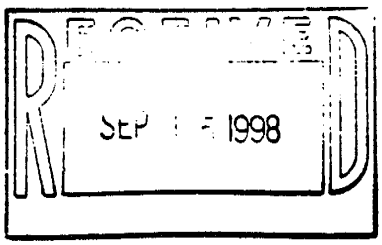

Sept. 13, 1998

Dear Ms. Goodale,

Some comments on proposed changes in Bluefish Regulations.

1. Minimum size = 12 inches. Good idea!
Fishermen seem have far more respect for size limits than bag limits. Also, the adult bluefish spend only a small portion of their lives within catching range of North American fishermen. See analysis of recapture data of tagged bluefish below. Perhaps all of the bluefish visit our shores as snappers, however. We may never prove this, but it is my gut feeling that the young bluefish probably must come inshore to find the proper food and to avoid the predatory adults.

2. Increase the commercial quota. Bad idea!
Bluefish are a far more valuable resource as a sport fish than as a food fish. Actually there is a large sportfishing industry for bluefish -- partyboats, charterboats, private boats, and even surf fishermen spend money because there are bluefish to catch. The total revenue generated by this sportfishing industry could far exceed the revenue generated by commercial fishermen taking bluefish to be sold as a food fish.

3. Analysis of Recapture Data.

3a. Data Analysis.
The following is an analysis of recapture data furnished by the America Littoral Society (ALS). The ALS states that they send you recapture data from their tagging program, so you probably have more data than I do. This analysis was done for 138 recaptures from 1992 through May, 1997 and was published in the "Underwater Naturalist" by the ALS. The data was entered into a spreadsheet (Excel) which computed the number of days between tagging and recapture. The entries were then sorted by days, as shown, and graphed in the attached Chart 1.

From Chart 1, I could draw a rather significant conclusion: **About 3/4 of the recaptures occur within 100 days of tagging.**

In Chart 2, the recaptures are plotted in a column graph by season. In the North, where most of the data comes from, Bluefish have a "season". That is, they arrive in the Spring and are available until mid-to-late Fall. I think it is highly significant that **88.41% of the recaptures occur within the same season**, and the few remaining recaptures occur within the next two seasons. An ALS chart called Fig. 9 shows that a 18-inch Bluefish is 3 years old while a 13.9-lb. fish is 9 years old. There are many tagged

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Bluefish in the 15-to-18-inch range, thus 3 years, or less, old. Sometimes we catch 13-to-15-pounders that the chart shows to be 8-to-10 years old. However none of the 3-year olds are ever recaptured when they reach 8-to-10 years. This implies that the old fish were never in catching (tagging) range when they were three years old. Conversely, when the young fish get old, they are not within catching range. Why?

The ALS gave me a figure of 7058 Bluefish tagged since 1992. The 138 recaptures calculate to a recapture rate of 1.955%. Even if the time periods of tagging and recapture are not exactly the same, the recapture rate must be between 0% and 5%, probably about 2%. **Thus any tagged Bluefish has a probability of only 2% of being recaptured, but if it is recaptured, the probability is about 88% that the recapture will occur in the same season as the tagging.**

3b. Speculation to Explain the Data.

How can the above statistical data be explained physically? Could it be that Bluefish come from some far-off place, such as the Gulf Stream, far beyond the continental shelf? Could it be that Bluefish remain inshore for at most one season and then return to their far-off place? Could it be that when the next season arrives, the Bluefish that move inshore are mostly different fish than those that made the trip in the previous season? If the above is true, then there must a vast quantity of Bluefish in the far-off place. The quantity there must be much larger than anyone has believed, and much larger than the number that moves inshore each season. Could the above explain the periods of abundance and scarcity, dating back to the 1600's, as documented by Henry Lyman and others? That is, could it be that there is a vast quantity of Bluefish in the far-off place, and in some years a larger percentage move inshore during the season, while in other years few or none move inshore?

Al Ristori once told me that when he was a boy, "Snapper Blues" were available in the rivers and bays, but no larger Bluefish were caught. Could this be explained by the following: The larger bluefish remained in their far-off place and spawned there. The young fish moved inshore, all the way to the bays and rivers, but the adults chose to stay in the far-off place?

Part 3a is a mathematical analysis of real data. Part 3b is all speculation to attempt to explain the data. However most scientific discoveries probably came about from discovering some of the truth, speculating on the rest, and then setting about to prove the speculative portion.

I certainly do not have the means to find the "far-off place" to prove its existence, but someday somebody probably will find it, or at least find something that explains the recapture data. Also the "far-off place" may be the edge of the Gulf Stream and its southern continuation on the European and North African side. If so, could it be that schools of bluefish keep moving with the current for their entire lives? For whatever reason, some schools migrate inshore and are caught by humans? If bluefish follow the Stream, could this explain why the largest (rumored) specimens end up off North Africa?

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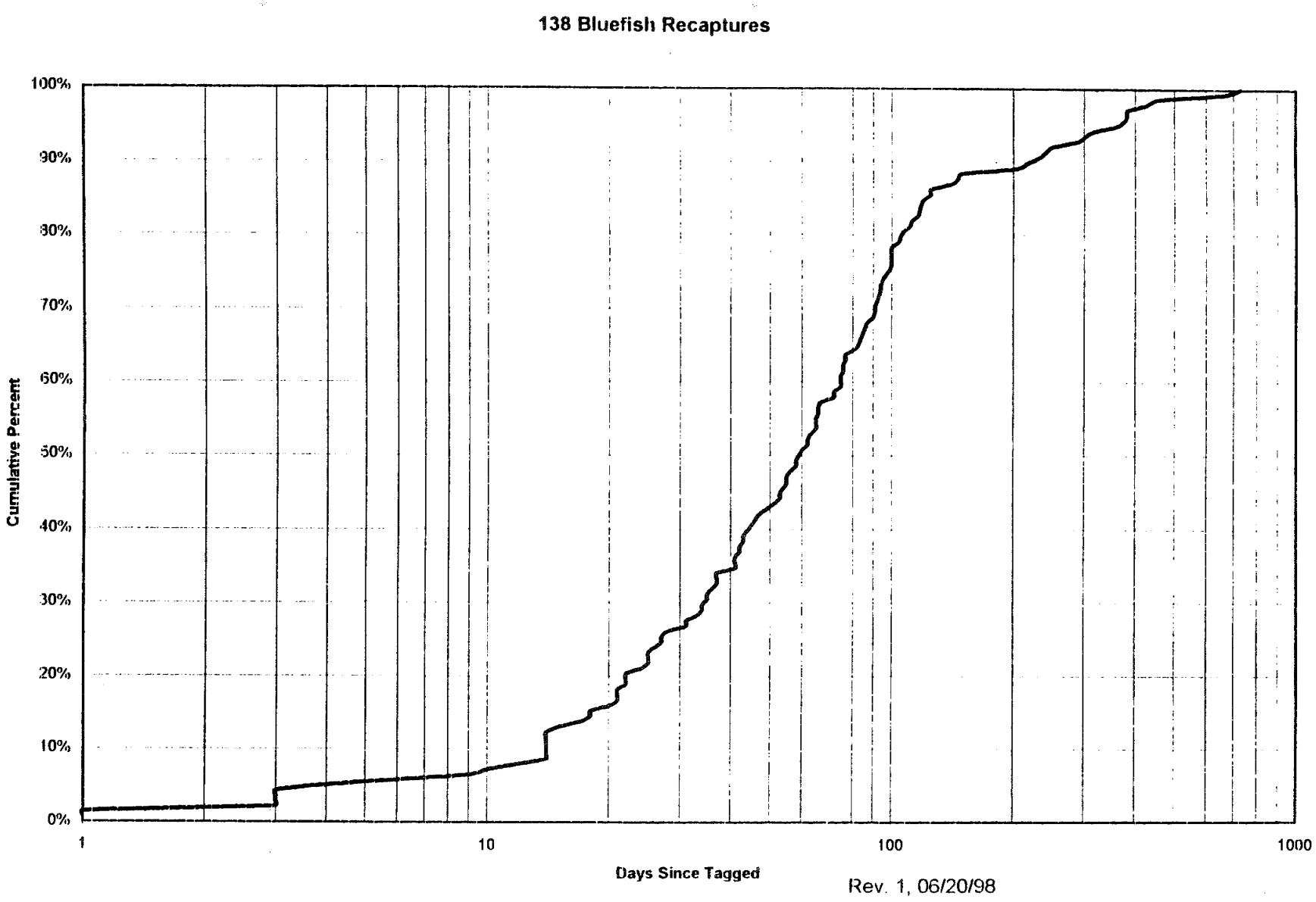
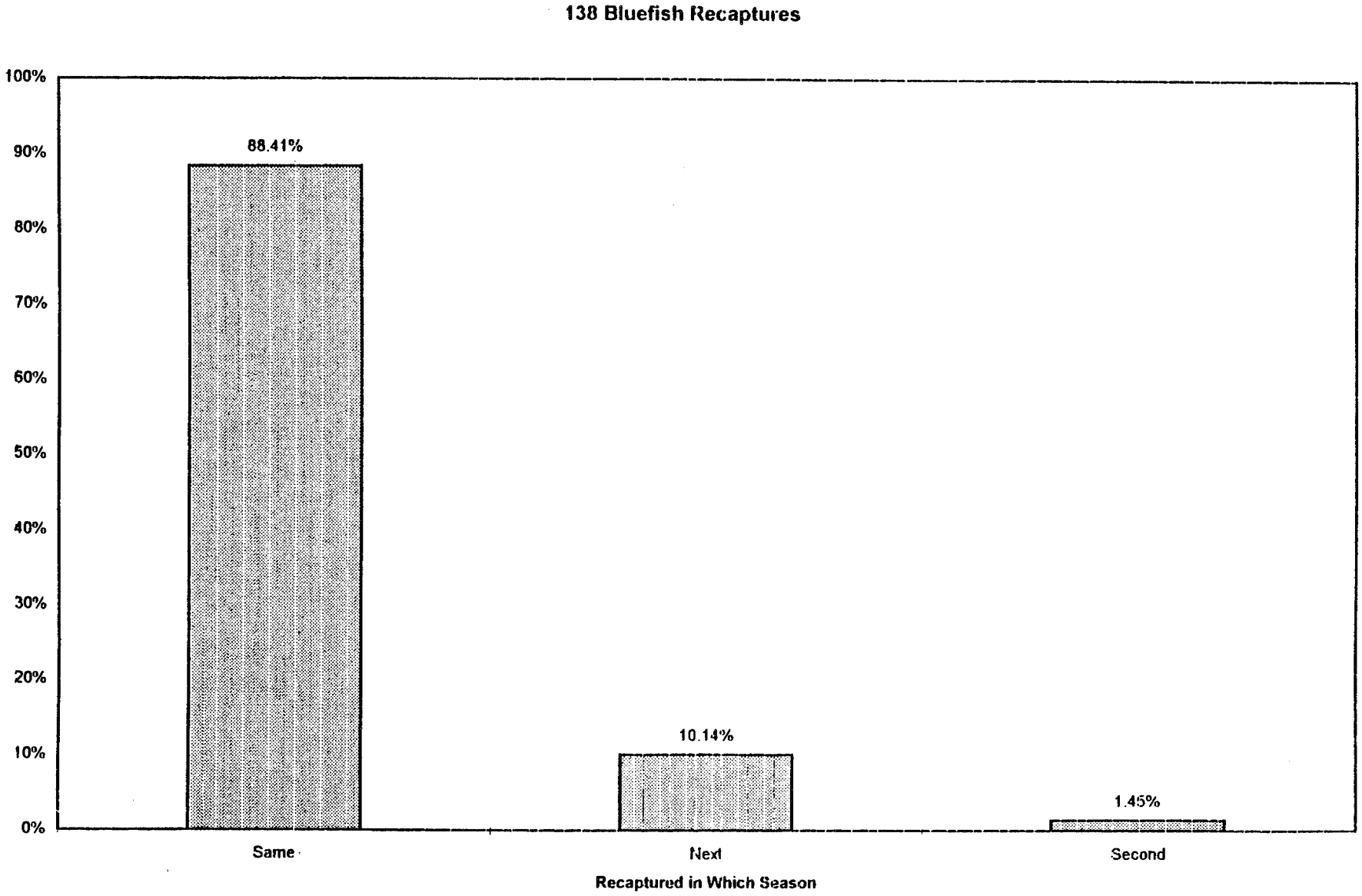
4. Management of the Fishery.

With many unanswered questions, it is difficult to manage the fishery. My two recommendations: 1. Conserve the young since perhaps all of these must migrate inshore immediately after birth. 2. Determine what causes the adults to migrate inshore for one season (88% never return) and try to enhance that migration.

Sincerely,

Jim Balicki


138 Bluefish Recaptures
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Cumulative Percent
1
10
100
1000
Days Since Tagged
Rev. 1, 06/20/98


138 Bluefish Recaptures
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
88.41%
10.14%
1.45%
Same
Next
Second
Recaptured in Which Season

No.	Date Tagged	Date Recap	Days	Cumul. Percent
1	05/24/97	05/25/97	1	0.72%
2	09/25/93	09/26/93	1	1.45%
3	06/02/96	06/05/96	3	2.17%
4	08/11/93	08/14/93	3	2.90%
5	05/15/94	05/18/94	3	3.62%
6	06/04/95	06/07/95	3	4.35%
7	10/07/93	10/11/93	4	5.07%
8	10/11/95	10/17/95	6	5.80%
9	08/23/92	09/01/92	9	6.52%
10	10/04/94	10/14/94	10	7.25%
11	05/23/94	06/04/94	12	7.97%
12	10/11/95	10/25/95	14	8.70%
13	05/30/93	06/13/93	14	9.42%
14	08/18/93	09/01/93	14	10.14%
15	07/30/94	08/13/94	14	10.87%
16	08/28/94	09/11/94	14	11.59%
17	09/11/94	09/25/94	14	12.32%
18	06/15/96	06/30/96	15	13.04%
19	09/03/95	09/20/95	17	13.77%
20	06/05/96	06/23/96	18	14.49%
21	09/01/93	09/19/93	18	15.22%
22	05/22/95	06/11/95	20	15.94%
23	09/20/95	10/11/95	21	16.67%
24	06/24/96	07/15/96	21	17.39%
25	08/22/92	09/12/92	21	18.12%
26	09/26/96	10/18/96	22	18.84%
27	09/08/92	09/30/92	22	19.57%
28	08/12/95	09/03/95	22	20.29%
29	08/26/94	09/19/94	24	21.01%
30	05/26/96	06/20/96	25	21.74%
31	07/18/96	08/12/96	25	22.46%
32	07/16/93	08/10/93	25	23.19%
33	05/26/96	06/21/96	26	23.91%
34	07/04/93	07/31/93	27	24.64%
35	08/03/94	08/30/94	27	25.36%
36	08/13/94	09/10/94	28	26.09%
37	07/28/96	08/28/96	31	26.81%
38	10/10/92	11/10/92	31	27.54%
39	08/23/95	09/25/95	33	28.26%
40	10/18/96	11/21/96	34	28.99%
41	09/21/96	10/25/96	34	29.71%
42	07/28/96	09/01/96	35	30.43%
43	07/31/95	09/04/95	35	31.16%
44	05/29/94	07/04/94	36	31.88%
45	06/12/96	07/19/96	37	32.61%
46	07/22/93	08/28/93	37	33.33%
47	06/04/94	07/11/94	37	34.06%
48	07/23/93	09/02/93	41	34.78%

49	09/01/93	10/12/93	41	35.51%
50	06/05/94	07/16/94	41	36.23%
51	10/03/95	11/14/95	42	36.96%
52	06/08/95	07/20/95	42	37.68%
53	09/02/92	10/15/92	43	38.41%
54	09/13/92	10/26/92	43	39.13%
55	08/27/92	10/10/92	44	39.86%
56	07/17/96	08/31/96	45	40.58%
57	09/06/92	10/22/92	46	41.30%
58	06/16/93	08/02/93	47	42.03%
59	06/05/95	07/24/95	49	42.75%
60	06/30/96	08/20/96	51	43.48%
61	06/19/93	08/11/93	53	44.20%
62	09/02/94	10/25/94	53	44.93%
63	08/30/92	10/23/92	54	45.65%
64	09/12/93	11/06/93	55	46.38%
65	07/02/95	08/26/95	55	47.10%
66	10/20/92	12/15/92	56	47.83%
67	06/18/96	08/15/96	58	48.55%
68	06/04/95	08/01/95	58	49.28%
69	06/23/96	08/21/96	59	50.00%
70	05/29/94	07/28/94	60	50.72%
71	09/11/94	11/12/94	62	51.45%
72	07/11/95	09/11/95	62	52.17%
73	08/13/88	10/15/88	63	52.90%
74	05/30/93	08/03/93	65	53.62%
75	09/03/94	11/07/94	65	54.35%
76	07/15/95	09/18/95	65	55.07%
77	08/13/94	10/18/94	66	55.80%
78	06/17/95	08/22/95	66	56.52%
79	09/09/92	11/15/92	67	57.25%
80	07/05/96	09/15/96	72	57.97%
81	07/23/92	10/03/92	72	58.70%
82	06/19/96	09/02/96	75	59.42%
83	06/14/92	08/28/92	75	60.14%
84	06/15/92	08/29/92	75	60.87%
85	07/24/92	10/08/92	76	61.59%
86	05/23/93	08/07/93	76	62.32%
87	05/30/92	08/15/92	77	63.04%
88	09/13/92	11/29/92	77	63.77%
89	07/21/96	10/10/96	81	64.49%
90	05/18/94	08/09/94	83	65.22%
91	06/20/93	09/12/93	84	65.94%
92	06/16/92	09/09/92	85	66.67%
93	06/06/93	08/31/93	86	67.39%
94	07/20/95	10/15/95	87	68.12%
95	05/17/93	08/15/93	90	68.84%
96	06/07/92	09/06/92	91	69.57%
97	06/04/94	09/03/94	91	70.29%
98	07/12/96	10/12/96	92	71.01%

99	05/13/96	08/14/96	93	71.74%
100	06/29/95	10/01/95	94	72.46%
101	09/12/93	12/15/93	94	73.19%
102	05/24/95	08/27/95	95	73.91%
103	06/17/95	09/22/95	97	74.64%
104	05/30/95	09/06/95	99	75.36%
105	07/03/95	10/11/95	100	76.09%
106	05/29/92	09/06/92	100	76.81%
107	06/17/94	09/25/94	100	77.54%
108	05/16/95	08/24/95	100	78.26%
109	06/12/94	09/24/94	104	78.99%
110	06/28/92	10/11/92	105	79.71%
111	07/05/92	10/20/92	107	80.43%
112	11/28/93	03/19/94	111	81.16%
113	12/06/96	03/28/97	112	81.88%
114	07/15/93	11/08/93	116	82.61%
115	07/24/96	11/18/96	117	83.33%
116	06/18/95	10/14/95	118	84.06%
117	05/14/94	09/11/94	120	84.78%
118	06/13/93	10/16/93	125	85.51%
119	07/23/93	11/25/93	125	86.23%
120	05/23/92	10/11/92	141	86.96%
121	06/08/96	11/01/96	146	87.68%
122	06/19/93	11/15/93	149	88.41%
123	07/20/96	02/10/97	205	89.13%
124	10/15/92	05/21/93	218	89.86%
125	10/29/92	06/18/93	232	90.58%
126	10/10/95	06/07/96	241	91.30%
127	10/10/94	06/17/95	250	92.03%
128	09/15/92	07/01/93	289	92.75%
129	09/20/92	07/19/93	302	93.48%
130	10/12/92	08/25/93	317	94.20%
131	11/03/91	10/28/92	360	94.93%
132	08/29/93	09/10/94	377	95.65%
133	06/18/93	07/06/94	383	96.38%
134	10/10/95	10/29/96	385	97.10%
135	07/29/91	09/28/92	427	97.83%
136	06/11/92	09/12/93	458	98.55%
137	09/25/94	07/25/96	669	99.28%
138	07/16/94	07/15/96	730	100.00%

NATURAL RESOURCES DEFENSE COUNCIL

September 15, 1998

Christopher Moore
Acting Executive Director
Mid-Atlantic Fishery Management Council
Room 2115, Federal Building
300 South New Street
Dover, DE 19904-6790

Re: Proposed Amendment 1 to the Bluefish Fishery Management Plan

Dear Ms. Goodale:

The Natural Resouces Defense Council (NRDC) submits the following comments on proposed Amendment 1 to the Bluefish Fishery Management Plan. NRDC is a national not-for-profit organization, with over 400,000 members, dedicated to protecting the world's natural resources and ensuring a safe and healthy environment for all people. NRDC's Ocean Protection Initiative has been working for the past several years to promote sustainable and healthy fisheries both in the U.S. and internationally.

The Mid-Atlantic Fishery Management Council prepared Amendment 1 in response to recent changes to the Magnuson-Stevens Fishery Conservation and Management Act. Amendment 1 is particularly important because it is the first amendment prepared by the Council to comply with the new statutory requirements and hence sets a precedent for approaches taken in other amendments for fish species such as summer flounder, scup and black sea bass.

Bluefish are a marine fish popular with recreational and, to a lesser extent, commercial fishermen. Unfortunately, the bluefish population has declined significantly from historic levels. (See Attachment 1 showing trends in the bluefish fishery, 1979-1997). In 1997, for example, the recreational catch was only 22% of what it was in 1979. Bluefish are currently classified as "overfished" by the National Marine Fisheries Service, and at current fishing rates, the bluefish population will continue to decline.

The Magnuson-Stevens Fishery Conservation and Management Act, which Congress amended and strengthened in 1996, requires that for an overfished species such as bluefish, the Fishery Management Councils must develop new management measures to end overfishing and rebuild the fish stock as quickly as possible. In addition, the Councils must identify the fish's essential habitat and measures needed to protect it. The proposed bluefish amendment satisfies these requirements only partially.

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The bluefish amendment proposes to end overfishing and return bluefish to their historic abundance over nine years. This restoration would be accomplished through: (1) imposition of commercial and recreational fishing quotas; (2) imposition of a minimum size limit of 12 inches in the recreational and commercial fisheries; (3) strict enforcement of the current 10-fish bag limit in the recreational fishery; (4) establishment of a permitting system for recreational party and charter boats; and (5) development of a procedure for modifying management measures mid-season, if necessary.

NRDC supports these measures as important steps in the right direction, with one major objection. The proposed amendment would not reduce fishing pressure at all until 2001. Indeed, the amendment would allow higher total allowable landings in 1999 than were allowed in 1998. To rebuild the bluefish population as quickly as possible (as required by the Magnuson-Stevens Act), NRDC recommends that the alternative 5-year recovery period be selected in place of the amendment's preferred alternative 9-year recovery period. A 5-year rebuilding plan will end overfishing and begin recovery as soon as possible rather than delay corrective action until the year 2001 as outlined in the preferred alternative.

The analysis in the amendment unfairly stacks the deck in favor of the 9-year rebuilding schedules. (See Table 47). It does so by failing to reflect increases in the recreational and commercial quotas that would occur at the end of the 5- and 6-year recovery periods examined in alternatives (2)-(4). A comparison of the total allowable catch and F values used in the analysis for the period 2004-2007 for the three alternatives reveals this serious flaw in the analysis. (See Attachment 2). As a result of this flaw, the analysis underestimates both the net present value of the exvessel revenues and the cumulative recreational harvest limits. *The analysis must be redone to permit a fair and unbiased comparison of the alternatives.*

Protection of bluefish habitat is also vital to the recovery of the fish population. The proposed amendment identifies as Essential Fish Habitat for bluefish: all ocean areas where bluefish are found south of Cape Hatteras, NC; 90 percent of ocean areas north of Cape Hatteras where bluefish have historically been collected; and the salt-water portion of all east coast estuaries where bluefish are common. Identification of these areas as Essential Habitat does not automatically restrict human activities. Instead, identification gives the Council and the National Marine Fisheries Service the authority to review activities undertaken or permitted by government agencies that may affect the habitat.

NRDC strongly supports the inclusion of these areas as Essential Fish Habitat, but recommends that the following areas be included as well.

* Small estuaries and tidal creeks where bluefish are found. Currently, small estuaries and tidal creeks are not included because the national database relied upon does not provide information on them. However, there is state data that is available, at least in some places, that can and should be used to identify such areas.

* All quads in Figures 26-29 (identifying EFH for different bluefish life stages) that are currently excluded from EFH designation but are surrounded on three sides by EFH and all coastal quads in areas through which bluefish migrate. These adjustments are necessary to make the designations more ecologically coherent and less the artifacts of sampling design.

Finally, we support the Framework Adjustment Process described at pp. 120-121 as a useful mechanism for enabling the Council to respond mid-season to problems in the fishery, without having to await the annual specification process. This enhances the Council's ability to keep rebuilding efforts on track. We also support continuation of the work of the Bluefish Monitoring Committee.

NRDC appreciates this opportunity to comment on the proposed Bluefish Amendment 1, and looks forward to your response.

Yours sincerely,

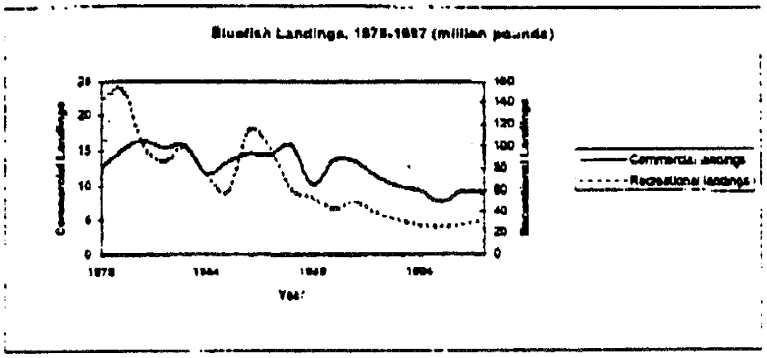
Sarah Chasis

Sarah Chasis
Senior Attorney and Coordinator,
Water and Coastal Program
NRDC

Cc: Susan B. Fruchter, Director
Office of Policy and Strategic Planning
Rm. 5802, OP/SP
U.S. Dept. of Commerce
Washington, DC 20230

Attachment 1

Trends in the Bluefish Fishery, 1979-1997



Attachment 2

Total Allowable Catch (million pounds)

Alternative	1999	2000	2001	2002	2003	2004	2005	2006	2007
1 (9-year, step reductions)	36.84	43.08	41.42	50.68	59.72	53.51	64.35	73.72	81.15
2 (5-year, step reductions)	30.42	26.08	27.58	27.82	36.46	**36.46**	**36.46**	**36.46**	**36.46**
3 (6-year, constant catch)	32.00	32.00	32.00	32.00	32.00	32.00	**32.00**	**32.00**	**32.00**
4 (5-year, constant F)	19.15	28.46	38.33	50.68	60.63	**60.63**	**60.63**	**60.63**	**60.63**
5 (9-year, constant F)	27.87	37.21	47.55	57.52	67.31	75.91	82.74	88.07	91.23

Instantaneous Fishing Mortality (F)

Alternative	1999	2000	2001	2002	2003	2004	2005	2006	2007
1 (9-year, step reductions)	0.51	0.51	0.41	0.41	0.41	0.31	0.31	0.31	0.31
2 (5-year, step reductions)	0.40	0.25	0.18	0.13	0.13	**<0.13**	**<0.13**	**<0.13**	**<0.13**
3 (6-year, constant catch)	0.46	0.35	0.35	0.25	0.18	0.10	**<0.10**	**<0.10**	**<0.10**
4 (5-year, constant F)	0.23	0.23	0.23	0.23	0.23	**<0.23**	**<0.23**	**<0.23**	**<0.23**
5 (9-year, constant F)	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.35

305 Langley Road
Pittsgrove, NJ 08318
September 8, 1998

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Dear Ms Goodale:

I am writing regarding proposed Amendment 1 to the Bluefish Fishery Management Plan, which The Mid-Atlantic Fishery Management Council prepared in response to recent changes to the Magnuson-Stevens Fishery Conservation and Management Act. This act requires that for an overfished species like bluefish, the Fishery Management Council must propose new measures to end overfishing and rebuild the fish stock as quickly as possible. The Council also must identify the fish's essential habitat and develop measures to protect it. The proposed bluefish amendment satisfies these requirements partially, but not completely.

The bluefish population has declined significantly from historic levels, and at current fishing rates, the population will continue to decline. The bluefish amendment proposes to end overfishing and return bluefish to their historic abundance over nine years.

I support these measures but believe they do not go far enough. The proposed amendment would not reduce fishing until 2001. In fact, the amendment would allow higher rates in 1999 than were allowed in 1998. To rebuild the bluefish population as quickly as possible (as required by the Magnuson-Stevens Act), I support a 5-year recovery period in place of the amendment's current 9-year plan.

Protection of bluefish habitat is also vital to the recovery of the fish population and I support the amendment's identification of Essential Fish Habitat. I ask, however, that the area be expanded to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Sincerely,

James R. Shuster

cc:
Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
U.S. Dept. of Commerce
Washington, D.C. 20230

Dear Ms. Goodale, August 14,1998

I am writing regarding proposed Amendment 1 to the Bluefish Fishery Management Plan, which The Mid-Atlantic Fishery Management Council prepared in response to recent changes to the Magnuson-Stevens Fishery Conservation and Management Act. Unfortunately, the bluefish population has declined significantly from historic levels, and at current fishing rates, the population will continue to decline. The Magnuson-Stevens Act requires that for an overfished species like bluefish, the Fishery Management Councils must propose new management measures to end overfishing and rebuild the fish stock as quickly as possible. In addition, the Councils must identify the fish's essential habitat and develop measures to protect it. The proposed bluefish amendment satisfies these requirements partially, but not completely, as the bluefish amendment proposes to end overfishing and return bluefish to their historic abundance over nine years. This restoration would be accomplished through various measures, including commercial and recreational fishing quotas, a minimum size limit of 12 inches in the recreational and commercial fisheries, and strict enforcement of the current 10-fish bag limit in the recreational fishery.

I support these measures as important steps in the right direction, but I do not believe they go far enough. The proposed amendment would not reduce fishing pressure at all until 2001. Indeed, the amendment would allow higher landings in 1999 than were allowed in 1998! To rebuild the bluefish population as quickly as possible (as required by the Magnuson-Stevens Act), I recommend that a 5-year recovery period be selected in place of the amendment's current 9-year plan.

Protection of bluefish habitat is also vital to the recovery of the fish population. The proposed amendment identifies as Essential Fish Habitat: all ocean areas where bluefish are found south of Cape Hatteras; 90 percent of ocean areas north of Cape Hatteras where bluefish have historically been collected; and the salt-water portion of estuaries where bluefish are common or abundant. The Council and the National Marine Fisheries Service have the authority to review and comment on activities undertaken or permitted by government agencies that may affect the identified habitat. I strongly support the amendment's identification of Essential Fish Habitat, but I ask that the area be expanded to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found. I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

My address is:

Sincerely,

Julia Plumb, age 15

Ms. Julia Plumb
455 E. Pond Rd.
Nobleboro, ME 04555

August 14, 1998

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Re: Proposed Amendment 1 to the Bluefish Fishery Management Plan

Dear Ms. Goodale:

We are writing regarding proposed Amendment 1 to the Bluefish Fishery Management Plan, which The Mid-Atlantic Fishery Management Council prepared in response to recent changes to the Magnuson-Stevens Fishery Conservation and Management Act.

Bluefish are a marine fish popular with recreational and commercial fishermen. Unfortunately, though, the bluefish population has declined significantly from historic levels, and at current fishing rates, the population will continue to decline.

The Magnuson-Stevens Act requires that for an overfished species like bluefish, the Fishery Management Councils must propose new management measures to end overfishing and rebuild the fish stock as quickly as possible. In addition, the Councils must identify the fish's essential habitat and develop measures to protect it. The proposed bluefish amendment satisfies these requirements partially, but not completely.

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We support these measures as important steps in the right direction, but we do not believe they go far enough. The proposed amendment would not reduce fishing pressure at all until 2001. Indeed, the amendment would allow higher landings in 1999 than were allowed in 1998! To rebuild the bluefish population as quickly as possible (as required by the Magnuson-Stevens Act), We recommend that a 5-year recovery period be selected in place of the amendment's current 9-year plan.

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We strongly support the amendment's identification of Essential Fish Habitat, but ask that the area be expanded to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

We appreciate this opportunity to comment on the proposed amendment, and look forward to your response.

Sincerely,

Bruce J. Cohen & Simone Marie Lorenz
214 Via Morella, Encinitas, CA 92024

cc: Susan B. Fruchter, Director, Office of Policy and Strategic Planning

ANGELA C. CAMERON
347 Ross Road
Paramus, NJ 07652

Telephone (201) 967-0345
Fax Ecolady@aol.com

August 15, 1998

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Re: Proposed Amendment 1 to the Bluefish Fishery Management Plan

Dear Ms. Goodale:

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I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Best regards,

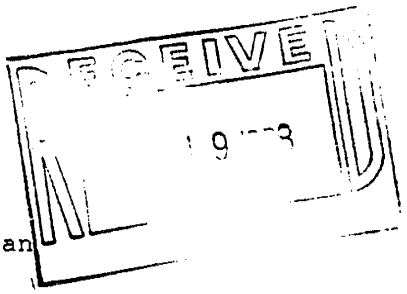
Angela C. Cameron

Angela C. Cameron

ACC

cc: Susan B. Fruchter, Director, Office of Policy and Strategic Planning

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930



Re: Proposed Amendment 1 to the Bluefish Fishery Management Plan

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I strongly support the amendment's identification of Essential Fish Habitat, but I ask that the area be expanded to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Sincerely,

Francis O. Slieter

P.S.

cc:
Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
U.S. Dept. of Commerce
Washington, D.C. 20230

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Re: Proposed Amendment 1 to the Bluefish Fishery Management Plan

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(cont.)

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I strongly support the amendment's identification of Essential Fish Habitat, but I ask that the area be expanded to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Sincerely,

Ron Bennett
2 Dundee Park
Andover, MA 01810

cc:
Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
U.S. Dept. of Commerce
Washington, D.C. 20230

Carol Pinsky Blumenthal
313 Rodman Road
Phillips Heights
Wilmington, Delaware 19809

Fax (215) 898-0201

Friday, August 21, 1998

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

RE: Proposed Amendment 1 to the Bluefish Fishery Management Plan

Dear Ms. Goodale:

I am writing regarding proposed Amendment 1 to the Bluefish Fishery Management Plan, which The Mid-Atlantic Fishery Management Council prepared in response to recent changes to the Magnuson-Stevens Fishery Conservation and Management Act.

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limit in the recreational fishery.

I support these measures as important steps in the right direction, but I do not believe they go far enough. The proposed amendment would not reduce fishing pressure at all until 2001. Indeed, the amendment would allow higher landings in 1999 than were allowed in 1998! To rebuild the bluefish population as quickly as possible (as required by the Magnuson-Stevens Act), I recommend that a 5-year recovery period be selected in place of the amendment's current 9-year plan.

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I strongly support the amendment's identification of Essential Fish Habitat, but I ask that the area be expanded to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Sincerely,

Carol Pinsky Blumenthal

Copy to: Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OI'/SP
U.S. Dept. of Commerce
Washington, D.C. 20230

August 16, 1998

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Re: Proposed Amendment 1 to the Bluefish Fishery Management Plan

Dear Ms. Goodale:

I am writing regarding proposed Amendment 1 to the Bluefish Fishery Management Plan, which The Mid-Atlantic Fishery Management Council prepared in response to recent changes to the Magnuson-Stevens Fishery Conservation and Management Act. Although the amendment is a step in the right direction, it is too small a step, and so I urge you to expand the its scope to insure the continued survival and recovery of bluefish.

Bluefish are a marine fish popular with recreational and commercial fishermen. They occur in the Atlantic from my home state of Florida all the way to Maine. Unfortunately, though, the bluefish population has declined significantly from historic levels, and at current fishing rates, the population will continue to decline.

The Magnuson-Stevens Act requires that for an overfished species like bluefish, the Fishery Management Councils must propose new management measures to end overfishing and rebuild the fish stock as quickly as possible. In addition, the Councils must identify the fish's essential habitat and develop measures to protect it. The proposed bluefish amendment satisfies these requirements partially, but not completely.

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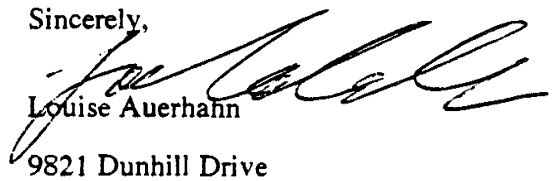
I support the intentions behind these measures, but they are not enough. The proposed amendment would not reduce fishing pressure at all until 2001. Indeed, the amendment would allow higher landings in 1999 than were allowed in 1998! To rebuild the bluefish population as quickly as possible (as required by the Magnuson-Stevens Act), I recommend that a 5-year recovery period be selected in place of the amendment's current 9-year plan.

Protection of bluefish habitat is also vital to the recovery of the fish population. The proposed amendment identifies as Essential Fish Habitat all ocean areas where bluefish are found south of Cape Hatteras, 90 percent of ocean areas north of Cape Hatteras where bluefish have historically been collected, and the salt-water portion of estuaries where bluefish are common or abundant. The Council and the National Marine Fisheries Service have the authority to review and comment on activities undertaken or permitted by government agencies that may affect the identified habitat.

I am a sophomore in college, not a fisheries expert, but I do know something about population biology. At an unstable equilibrium, a population may seem sustainable, but the slightest perturbation can send it crashing downwards towards extinction. This phenomenon has caused too many fisheries crashes in recent years. If the bluefish population is truly to recover, it must be allowed to reach a stable equilibrium. I strongly support the amendment's identification of Essential Fish Habitat, but I ask that the area be expanded to include all near shore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Sincerely,



Louise Auerhahn

9821 Dunhill Drive
Miramar, FL 33025

cc:
Susan B. Fruchter
Director, Office of Policy and Strategic Planning

August 20, 1998

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Re: Proposed Amendment 1 to the Bluefish Fishery Management Plan

Dear Ms. Goodale:

I am writing regarding proposed Amendment 1 to the Bluefish Fishery Management Plan, which The Mid-Atlantic Fishery Management Council prepared in response to recent changes to the Magnuson-Stevens Fishery Conservation and Management Act.

I am in support of measures to protect and recover bluefish populations. However, I do not think Amendment 1 is strong enough.

Amendment 1 does not reduce fishing pressures at all until 2001. In fact, the amendment allows higher landings in 1999 than were allowed in 1998. To rebuild the bluefish population as quickly as possible (as required by the Magnuson-Stevens Act), I recommend that a 5-year recovery period be selected in place of the amendment's current 9-year plan.

I strongly support Amendment 1's identification of Essential Fish Habitat, but I believe that the area should be expanded to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

Thank you for the chance to comment.

Sincerely yours,

Laura C Redish

Laura Redish

5932 E. 23rd St.
Tucson, AZ 85711

ELLEN J. COLODNEY, M.D.

DIPLOMATE AMERICAN BOARD OF PHYSICAL MEDICINE AND REHABILITATION

3067 CONNERS DRIVE
EDENTON, NORTH CAROLINA 27932
Phone 919-482-7828 Fax 482-4967 Beeper 334-6520

September 02, 1998

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Dear Ms. Goodale:

I am writing in regard to proposed Amendment 1 to the Bluefish Fishery Management Plan, which was developed in response to the Magnusen-Stevens Fishery Conservation and Management Act.

The proposed Amendment is a good start. However, I feel that stricter regulations on commercial and recreational bluefish quotas and minimum size limit - sufficiently strict to allow the bluefish fishery to recover over the next 5 years, rather than the proposed 9 years - is more in keeping with the intent of the Magnusen -Stevens Act.

In addition, I ask that the amendment's identification of Essential Fish Habitat for this species be expanded to include all nearshore coastal waters, small estuaries, and tidal creeks, all of which can improve the chances of a successful recovery of this species.

As the granddaughter of a former charter boat captain out of Belmar Basin in New Jersey, I watched bluefish go from an abundant resource that we could count on to keep our bellies full and the boat running to something scarce, pitiful, and desperately in need of all the protection we can give it.

Sincerely,

Ellen J. Colodney, M.D.

cc: Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Room 5802, OP SP
U.S. Dept. of Commerce
Washington, D.C. 20230

John Paul Jones
3791 S. Galloway Dr.
Memphis, TN 38111
jones1@mem.net
August 15, 1998
504 Days Until the Millennium

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Re: Proposed Amendment 1 to the Bluefish Fishery Management Plan

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I strongly support the amendment's identification of Essential Fish Habitat, but I ask that the area be expanded to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

My fishing has been and will be in the nearshore coastal waters, small estuaries, and tidal creeks where bluefish are found, off and near the coasts of Florida. My family have homes there. A variety of fish is vital, so that there will be as little as possible reduction of each species.

I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Enclosed for your convenience in acknowledging its receipt is an extra copy of this letter, and a self-addressed, stamped envelope

Sincerely,

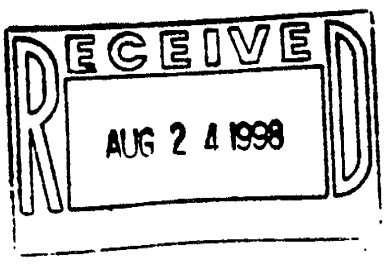
John Paul Jones

cc:
Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802. OP/SP
U.S. Dept of Commerce
Washington D.C. 20230

Mr. Peter Schutt
P.O. Box 3663
Memphis, TN 38103

Mr. Paul Tudor Jones II
Tudor Investment Corporation
600 Steamboat Road, 1st Floor
Greenwich CT 06830

Donald W Andrews



Ms. Rhoda Elovitz
7920 Rockwood Ln Apt 118
Austin TX 78757

8-18-98

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

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I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Sincerely,

Rhoda Elovitz

cc: Susan B. Fruchter, Director, Office of Policy and Strategic Planning

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

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(over, please)

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I strongly **support the amendment's identification of Essential Fish Habitat**, but I ask that the area be **expanded** to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Sincerely, Andrée R. Pierson

(name) 28, Summer Island Point

(address) Branford, CT. 06405

P.S. It is important that we leave behind, for our children and grandchildren to enjoy, a healthy and abundant ocean and this note is my small contribution towards helping to rebuild, save and protect fish stock for future generations.

Hoping for your support!

Sincerely, Andrée Pierson

cc: Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
U.S. Dept. of Commerce
Washington, D.C. 20230

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Re: Proposed Amendment 1 to the Bluefish Fishery Management Plan

Dear Ms. Goodale:

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Bluefish are a marine fish popular with recreational and commercial fishermen. Unfortunately, though, the bluefish population has declined significantly from historic levels, and at current fishing rates, the population will continue to decline.

The Magnuson-Stevens Act requires that for an overfished species like bluefish, the Fishery Management Councils must propose new management measures to end overfishing and rebuild the fish stock as quickly as possible. In addition, the Councils must identify the fish's essential habitat and develop measures to protect it. The proposed bluefish amendment satisfies these requirements partially, but not completely.

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I strongly **support the amendment's identification of Essential Fish Habitat**, but I ask that the area be **expanded** to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Sincerely,

Ruth L. Lawyer
(name)

1256 N. Hwy. 64
Manteo, NC 27954
(address)

P.S. I believe in the balance of nature and feel we must have healthy fisheries thriving along our coasts once again. I want my grandchildren to enjoy fishing in a healthy ocean.

Aug. 17, 1998 RLL

cc: Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
U.S. Dept. of Commerce
Washington, D.C. 20230

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Sincerely,

Dr Robert Hoag
(name)

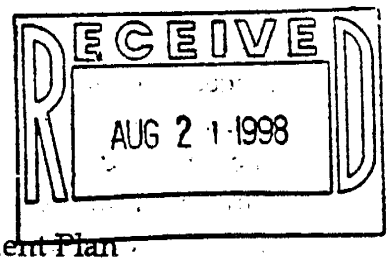
1823 NW 22nd St
Stuart, FL 34994
(address)

P.S. I know that these proposed regulations put a burden on commercial fishermen. These are difficult times for our nation as well as all nations on our planet. Continued destruction and depletion of resources need to be reduced or stopped. Someone will have to pay — either we deplete the fisheries stock to non reproducable numbers or slow the commercial fisheries. Make a strong management decision. For our childrens sake!

cc: Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
U.S. Dept. of Commerce
Washington, D.C. 20230

19 August 1998

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930



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I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response. Thank you.

Sincerely,

Nisha Kapadia

P.S. Although I am a highschool student living in the Midwest and I am not directly affected by a decrease in population in bluefish, I have friends and relatives on the east coast that would greatly appreciate the efforts of the NMFS to help the marine ecosystem of the Mid-Atlantic region restore itself.

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

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Sincerely,

RAYMOND HESS
(name)

9 RICHARD PLACE
LK. RONKONKOMA, NY 11779-5711
(address)

P.S.

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Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
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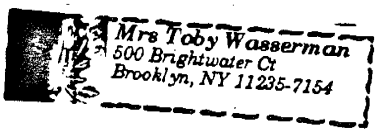
Sincerely, J. Wasserman

(name)



(address)

P.S. PLEASE TRY TO SAVE ALL WILDLIFE.

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Rm.5802,OP/SP
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Emily Fielding
(name)

155 N. Dry Dock #27
Branford Ct 06405-6021
(address)

P.S.

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Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
U.S. Dept. of Commerce
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Sincerely,

Jean Collot

(name)

60 Fritz Drive

Toms River NJ 08755

(address)

P.S. I would like to pass on a legacy of healthy oceans to my grandchildren

cc: Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
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Sincerely, CARL APPEL

(name)

Mr Carl Appel
162 Falmouth St
Brooklyn, NY 11235

(address)

P.S. Sorry - Cannot comment as I know nothing about this subject - am willing to have it to concerned professionals on this topic

C Appel

5/14/98

cc: Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
U.S. Dept. of Commerce
Washington, D.C. 20230

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Sincerely,
William J Mahers Wetlands Watch
(name)
625 Sunset Blvd
Cape May, NJ.
(address) 08204

P.S. (1) I feel the damage is done also to young Snapper blues that fisherman catch off jetties and bridges in fall. Strict enforcement to stop fishing for snappers and let a few year classes survive. Ban all Blue Fish catches for 5 years. Enough will be caught as by catch in commercial boats — they will have to throw back ones that don't die.

cc: Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
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(2) The real problem is that Stripers have taken over all the niches of Bluefish, and are out Competing them, and eating the young blues.

(3) Stop filling Marshes. — No enforcement in Maryland & N.J. anymore

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Sincerely,

J.M BUSKHAUSER

(name)

705 Adriatic

N. CAPE MAY, N.J.

(address) 08204

P.S.

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Protection of bluefish habitat is also vital to the recovery of the fish population. The proposed amendment identifies as Essential Fish Habitat: all ocean areas where bluefish

(over, please)

are found south of Cape Hatteras; 90 percent of ocean areas north of Cape Hatteras where bluefish have historically been collected; and the salt-water portion of estuaries where bluefish are common or abundant. The Council and the National Marine Fisheries Service have the authority to review and comment on activities undertaken or permitted by government agencies that may affect the identified habitat.

I strongly **support the amendment's identification of Essential Fish Habitat**, but I ask that the area be **expanded** to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Sincerely, Ben Weinstein + Laura Weinstein

(name)

Mr. & Mrs. Benjamin Weinstein
220 N. End Avenue
Brooklyn, NY 11235

(address)

P.S.

cc: Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
U.S. Dept. of Commerce
Washington, D.C. 20230

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Re: Proposed Amendment 1 to the Bluefish Fishery Management Plan

Dear Ms. Goodale:

I am writing regarding proposed Amendment 1 to the Bluefish Fishery Management Plan, which The Mid-Atlantic Fishery Management Council prepared in response to recent changes to the Magnuson-Stevens Fishery Conservation and Management Act.

Bluefish are a marine fish popular with recreational and commercial fishermen. Unfortunately, though, the bluefish population has declined significantly from historic levels, and at current fishing rates, the population will continue to decline.

The Magnuson-Stevens Act requires that for an overfished species like bluefish, the Fishery Management Councils must propose new management measures to end overfishing and rebuild the fish stock as quickly as possible. In addition, the Councils must identify the fish's essential habitat and develop measures to protect it. The proposed bluefish amendment satisfies these requirements partially, but not completely.

The bluefish amendment proposes to end overfishing and return bluefish to their historic abundance over *nine* years. This restoration would be accomplished through various measures, including commercial and recreational fishing quotas, a minimum size limit of 12 inches in the recreational and commercial fisheries, and strict enforcement of the current 10-fish bag limit in the recreational fishery.

I support these measures as important steps in the right direction, but I do not believe they go far enough. The proposed amendment would not reduce fishing pressure at all until 2001. Indeed, the amendment would allow higher landings in 1999 than were allowed in 1998! To rebuild the bluefish population as quickly as possible (as required by the Magnuson-Stevens Act), I recommend that a **5-year recovery period** be selected in place of the amendment's current 9-year plan.

Protection of bluefish habitat is also vital to the recovery of the fish population. The proposed amendment identifies as Essential Fish Habitat: all ocean areas where bluefish

(over, please)

are found south of Cape Hatteras; 90 percent of ocean areas north of Cape Hatteras where bluefish have historically been collected; and the salt-water portion of estuaries where bluefish are common or abundant. The Council and the National Marine Fisheries Service have the authority to review and comment on activities undertaken or permitted by government agencies that may affect the identified habitat.

I strongly **support the amendment's identification of Essential Fish Habitat**, but I ask that the area be **expanded** to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Sincerely,

RICHARD L. CRETELLA
(name)
57 Seaview Av.
Branford Ct 06405
(address)

P.S.

cc: Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
U.S. Dept. of Commerce
Washington, D.C. 20230

Hannah Goodale, Senior Fishery Policy Analyst
Northeast Regional Office
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930

Re: Proposed Amendment 1 to the Bluefish Fishery Management Plan

Dear Ms. Goodale:

I am writing regarding proposed Amendment 1 to the Bluefish Fishery Management Plan, which The Mid-Atlantic Fishery Management Council prepared in response to recent changes to the Magnuson-Stevens Fishery Conservation and Management Act.

Bluefish are a marine fish popular with recreational and commercial fishermen. Unfortunately, though, the bluefish population has declined significantly from historic levels, and at current fishing rates, the population will continue to decline.

The Magnuson-Stevens Act requires that for an overfished species like bluefish, the Fishery Management Councils must propose new management measures to end overfishing and rebuild the fish stock as quickly as possible. In addition, the Councils must identify the fish's essential habitat and develop measures to protect it. The proposed bluefish amendment satisfies these requirements partially, but not completely.

The bluefish amendment proposes to end overfishing and return bluefish to their historic abundance over *nine* years. This restoration would be accomplished through various measures, including commercial and recreational fishing quotas, a minimum size limit of 12 inches in the recreational and commercial fisheries, and strict enforcement of the current 10-fish bag limit in the recreational fishery.

I support these measures as important steps in the right direction, but I do not believe they go far enough. The proposed amendment would not reduce fishing pressure at all until 2001. Indeed, the amendment would allow higher landings in 1999 than were allowed in 1998! To rebuild the bluefish population as quickly as possible (as required by the Magnuson-Stevens Act), I recommend that a **5-year recovery period** be selected in place of the amendment's current 9-year plan.

Protection of bluefish habitat is also vital to the recovery of the fish population. The proposed amendment identifies as Essential Fish Habitat: all ocean areas where bluefish

(over, please)

are found south of Cape Hatteras; 90 percent of ocean areas north of Cape Hatteras where bluefish have historically been collected; and the salt-water portion of estuaries where bluefish are common or abundant. The Council and the National Marine Fisheries Service have the authority to review and comment on activities undertaken or permitted by government agencies that may affect the identified habitat.

I strongly **support the amendment's identification of Essential Fish Habitat,** but I ask that the area be **expanded** to include all nearshore coastal waters, as well as small estuaries and tidal creeks where bluefish are found.

I appreciate this opportunity to comment on the proposed amendment, and I look forward to your response.

Sincerely,

Pearl W. Burbage
(name)

117 Evergreen Lane
Milford, DE 19963
(address)

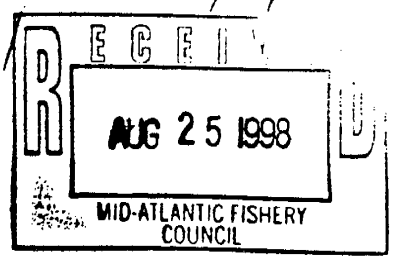
P.S. My father-in-law was a commercial fisherman in the late 40's & early 50's. He raised a family out of the waters of Delaware River & Delaware Bay. He taught me conservation of the species, by never taking more than he needed for a day's wages. If you were alive he would definitely support this Amendment!

cc: Susan B. Fruchter
Director, Office of Policy and Strategic Planning
Rm.5802,OP/SP
U.S. Dept. of Commerce
Washington, D.C. 20230

Peter Zadis
115-64 220 St
Jamaica, N.Y. 1141

8/21/98

Dr. James H. Gilford, Chairman
Mid-Atlantic Fishery Management Council
300 South New Street Rm 2115
Dover, Delaware, 19904



Dear Dr. Gilford:

The Atlantic bluefish is being dangerously overfished. The Mid-Atlantic Fishery Management Council has the responsibility to adopt management measures that rebuild the Atlantic bluefish population as quickly as posible.

I urge you to adopt a management plan that will reduce fishing mortality immediately, protect all essential bluefish habitat, end overfishing and ensure that individual states' management plans are consistent with federal plans.

The Sustainable Fisheries Act must be fully implemented to restore our nation's marine fisheries.

The current Bluefish F.M.P. is inadequate. I urge you to adopt the more conservati measures mentioned above.

Sincerely
Peter Zadis

Jerome W. Bernstein
1358 Lowell Lane
Merrick, New York 11566

August 22, 1998

Dr. James H. Gilford, Chairman
Mid-Atlantic Fishery Management Council
Room 2115 Federal Office Building
300 South New Street
Dover, Delaware 19904-6790

Dear Dr. Gilford:

As a recreational sports fisherman, I am concerned about the overfished status of the Atlantic bluefish. The Mid-Atlantic Fishery Council and the Atlantic States Marine Fisheries Commission are jointly developing Draft Amendment 1 to the Atlantic Blue Fishery Management Plan. I believe strong management measures are needed now to rebuild the Atlantic bluefish population as quickly as possible.

I urge you to adopt a fishery management plan amendment for Atlantic bluefish that will:

1) Rebuild the population levels capable of supporting the maximum sustainable yield within five years;
2) Reduce fishing mortality rates immediately rather than waiting until 2001 or beyond;
3) Protect all habitat considered to be essential;
4) End overfishing; and
5) Ensure that states' management of the bluefish fishery and its essential habitat consistent with that in federal waters.

Because of the poor condition of our nation's marine fisheries, including Atlantic bluefish, we have no choice but to fully implement the Sustainable Fisheries Act. It is our best hope for leaving a legacy of healthy oceans and living marine resources for future generations. Thank you for your consideration of my views.

Sincerely,

Jerome W. Bernstein

cc: Senator Alfonse D'Amato
Senator Daniel Patrick Moynihan
Representative Peter T. King

August 21, 1998

Dr. James H. Gilford, Chairman
Mid-Atlantic Fishery Management Council
Room 2115 Federal Office Building
300 South New Street
Dover, DE 19904-6790

Dear Dr. Gilford:

We are very concerned about the overfished status of our Atlantic bluefish. The Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission are jointly developing Draft Amendment 1 to the Atlantic Bluefish Fishery Management Plan. We believe strong management measures are needed now to rebuild the Atlantic bluefish population as quickly as possible.

We urge you to adopt a fishery management plan amendment for Atlantic bluefish that will:

1) rebuild the population to levels capable of supporting the maximum sustainable yield within five years;
2) reduce fishing mortality rates immediately rather than waiting until 2110 or beyond;
3) protect all habitat considered to be essential;
4) end overfishing; and
5) ensure that *states'* management of the bluefish fishery and its essential habitat is fully consistent with that in federal waters.

Because of the poor condition of our nation's marine fisheries, including Atlantic bluefish, we have no choice but to fully implement the Sustainable Fisheries Act. It is our best hope for leaving a legacy of healthy oceans and living marine resources for future generations.

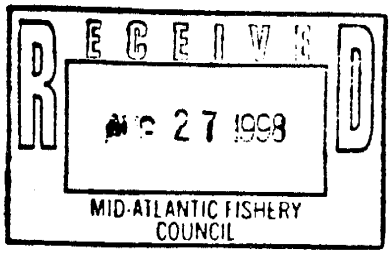
We care so deeply about all living creatures.

Thank you for your consideration of our views. Please let us know what your plans are concerning this matter.

Sincerely,

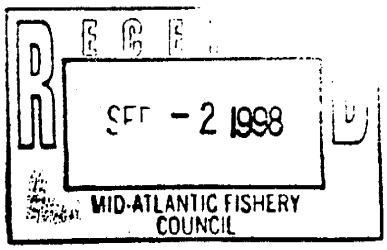
Amy Witkus
Morton Schiff
P.O. Box 1517
Olivebridge, NY 12461

cc: U.S. Senator Alfonse D'Amato (R-NY)
U.S. Senator Patrick Moynihan (D-NY)
U.S. Representative Maurice Hinchey (D-NY)



Guy Merckx, 520 East 77th Street, Suite 1939, New York, NY 10162-0020 August 31, 1998

Dr. James H. Gilford
Chairman
Mid-Atlantic Fishery Management Council
300 South New Street, Room 2115 Federal Office Bldg.
Dover, DE 19904-6790



Our Ref. Nº: 57-241-71095

Dear Dr. Gilford,

The Atlantic bluefish has been designated as overfished on the basis of the documented significant declines of their numbers, and the attendant drop in both the recreational catch and the commercial landings in recent years. The estimated population size in 1997 was estimated to be less than one-fourth of what would be deemed sustainable, and it is clearly urgent that strong management measures are needed now to rebuild the Atlantic bluefish population without delay.

As the Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission are developing Draft Amendment 1 to the Atlantic Bluefish Fishery Management Plan, I am concerned that the measures being considered and the proposed nine year time-frame are not sufficiently in line with the requirements of the Sustainable Fisheries Act, which stipulates that all "overfished" species be rebuilt as quickly as possible, and would actually allow fishing mortality to increase in the first few years of that proposal.

I strongly urge you to adopt a more effective fishery management plan amendment that would aim at:

1) Rebuilding the population to maximum sustainable yield levels within FIVE years;
2) Reducing fishing mortality rates immediately rather than in the year 2001 and beyond;
3) Protecting ALL habitats considered to be essential;
4) Ending overfishing at once; and
5) Ensuring that management of the bluefish fishery and its essential habitat by the states is entirely consistent with the management plan implemented in federal waters.

Because our nation's marine fisheries, including Atlantic bluefish, are in such poor condition, we should not waver or depart from full implementation of the Sustainable Fisheries Act. If we want to leave a legacy of healthy oceans and living marine resources to future generations, it is our best tool and our only hope. Thank you for reading me and considering my views.

Sincerely,

Guy Merckx

cc: Senator Alfonse M. D'Amato, Representative Carolyn B. Maloney, Senator Daniel Patrick Moynihan

August 31, 1998

310 Sheringham Dr.
Hockessin, DE 19707

Dr. James H. Gilford, Chairman
Mid-Atlantic Fishery Management Council
Room 2115 Federal Office Building
300 South New Street
Dover, DE 19904-6790

Dr. Dr. Guilford

As a citizen and concerned saltwater angler, I am disturbed by the overfished status of our Atlantic bluefish. The Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries commission are jointly developing Draft Amendment 1 to the Atlantic Bluefish Fisher Management Plan. I believe strong management measures are needed now to rebuild the Atlantic bluefish population as quickly as possible to preserver this important fisher.

I urge you to adopt a fisher management plan amendment for Atlantic bluefish that will:

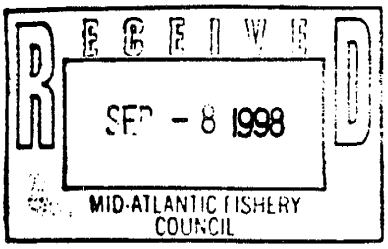
- Rebuild the population to levels capable of supporting the maximum sustainable yield within five years
- Reduce fishing mortality rates immediately rather than waiting until 2001 or beyond
- Protect all habitat considered to be essential
- End overfishing

Because of the poor condition of our nation's marine fisheries, including Atlantic bluefish, we have little choice but to fully implement the Sustainable Fisheries Act. It is our best hope for leaving a legacy of healthy oceans for future generations.

Thank you for your consideration.

Sincerely yours,

Rudolph Valentine, Ph.D.



September 2, 1998

Chesapeake Cardiovascular Associates

KENNETH B. LEWIS M.D.
ERNEST N. ARNETT M.D.
NANCY V. STRAHAN M.D.
STEVEN J. MASON M.D.
JEFFREY J. BROWN M.D.
RODNEY A. JOHNSON M.D.
ETHAN J. HASKEL M.D.
A. ANDREW BURTON M.D.

FRANKLIN SQUARE MEDICAL ARTS BLDG.
9101 FRANKLIN SQUARE DR./BALTO./MD. 21237
SUITE 104 (410) 574-1330

THE PROFESSIONAL CENTRE
120 SISTER PIERRE DR./TOWSON, MD. 21204
SUITE 303 (410) 825-2981
FACSIMILE (410) 574-2691

Dr. James Gilford
Chairman
Mid-Atlantic Fishery Management Council
Room 2115 Federal Office Building
300 South New Street
Dover, Delaware 19904-6790

Dear Dr. Gilford:

As a recreational fisherman who has enjoyed fishing for bluefish in the past, I am very concerned about the decline of the Atlantic bluefish in recent years. The Mid-Atlantic Fishery Management Council and The Atlantic States Marine Fisheries Commission are currently developing Draft Amendment 1 to the Atlantic Bluefish Fishery Management Plan. I believe that aggressive management measures are needed now to rebuild the Atlantic bluefish population as soon as possible.

I urge you to adopt a strong fishery management plan amendment for Atlantic bluefish that will accomplish the following:

1. Rebuild the population to a level that will support the maximum sustained yield within five years.
2. Immediately reduce fishing mortality rates rather than waiting until 2001 to accomplish this.
3. Protect all essential habitat.
4. End overfishing.
5. Ensure that states' management of the bluefish fishery and essential habitat is fully consistent with that in federal waters.

Because of the poor condition of our country's marine fisheries, including the Atlantic bluefish, it is imperative to fully implement the Sustainable Fisheries Act now. It is our opportunity to leave a legacy of healthy oceans and living marine resources for future generations.

Thank you for noting my concerns about this issue.

Sincerely,

Kenneth B. Lewis, M.D., F.A.C.C.
KBL:mjv
cc: Senator Barbara Mikulski
Senator Paul Sarbanes
Representative Benjamin Cardin

1425 Alanton Drive
Virginia Beach, Virginia 23454
September 2, 1998

Dr. James H. Gilford, Chairman
Mid-Atlantic Fishery Management Council
Room 2115 Federal Office Building
300 South New Street
Dover, Delaware 19904-6790

Dear Dr. Gilford:

I believe strong management measures are needed now to rebuild the Atlantic bluefish population as quickly as possible.

I urge the adoption of a management plan amendment for Atlantic bluefish that will:

1. Rebuild the population to levels capable of supporting the maximum sustainable yield within five years.
2. Reduce fishing mortality rates immediately rather than waiting until 2001 or beyond.
3. Protect all habitat considered to be essential.
4. End overfishing;and
5. Ensure that states' mamagement of the bluefish fishery and its essential habitat is fully consistent with that in federal waters.

The implementation of the Sustainable Fisheries Act is our best chance for leaving a legacy of healthy oceans and living marine resources for future generations.

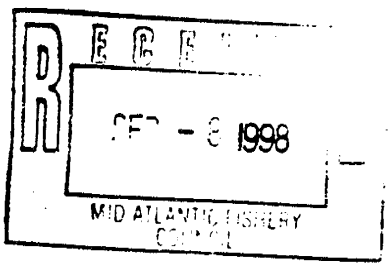
Thank you for your consideration.

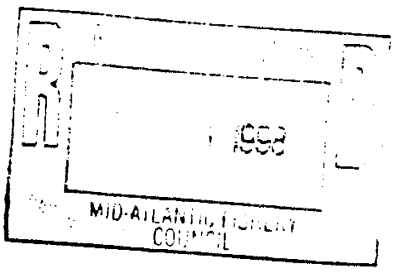
Sincerely,

Sue W. Carlyle

Sue W. Carlyle

cc Senator Charles S. Robb
Senator John W. Warner
Congressman Owen B. Pickett





September 8, 1998

Dr. James H. Gilford, Chairman
Mid-Atlantic Fishery Management Council
Room 2115 Federal Office Building
300 South New Street
Dover, Delaware 19904-6790
(302) 674-2331

Dear Dr. Gilford:

I am concerned about the overfished status of our Atlantic bluefish. The Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission are jointly developing Draft Amendment 1 to the Atlantic Bluefish Fishery Management Plan. I believe strong development measures are needed now to rebuild the Atlantic bluefish population as quickly as possible.

I urge you to adopt a fishery management plan amendment for Atlantic bluefish that will:

1) Rebuild the population to levels capable of supporting the maximum sustainable yield within five years;
2) Reduce fishing mortality rates immediately rather than waiting until 2001 or beyond;
3) Protect all habitat considered to be essential;
4) End overfishing; and
5) Ensure that states' management of the bluefish fishery and its essential habitat is fully consistent with that in federal waters.

Because of the poor condition of our nation's marine fisheries, including Atlantic bluefish, we have no choice but to fully implement the Sustainable Fisheries Act. It is our best hope for leaving a legacy of healthy oceans and living marine resources for future generations. Thank you for your consideration of my views.

Sincerely,

Paula G. Kullberg

Paula G. Kullberg
M.S., Biological Oceanography,
University of Rhode Island
93 Lafayette Street
Waltham, MA 02453

cc: Senator John F. Kerry
Senator Edward M. Kennedy
Representative Edward J. Markey

TOWN OF GREENWICH

Planning and Zoning Commission

Hiram W. Peck III, AICP
Assistant Town Planner

September 14, 1998

Dr. James H. Guilford, Chairman
Mid-Atlantic Fishery Management Council
Room 2115 Federal Office Building
300 South New Street
Dover Delaware 19904-6790

Re: Atlantic Bluefish fishery management plan.

Dear Dr. Guilford:

I am most interested in the status of the presently overfished Atlantic Bluefish. Amendments are being jointly drafted to the Atlantic Bluefish Fishery Management Plan by the Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission. I and others believe strong management measures are needed at this time to rebuild the Atlantic Bluefish population as soon as possible.

I urge you to adopt a fishery management plan amendment for Bluefish that will do the following:

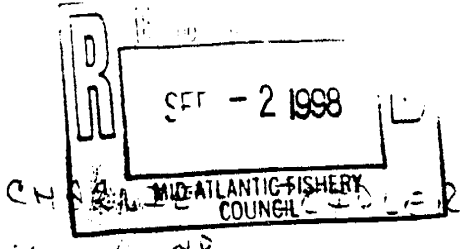
1. Rebuild the population to sustainable yield levels within 5 years.
2. Reduce fishing mortality rates now rather than waiting until 2001.
3. Establish protection of all habitat considered to be essential.
4. End the present overfishing now.
5. Ensure to the maximum extent possible that the individual states, especially Connecticut's, management of the Bluefish fishery and its essential habitat is fully consistent with that in federal waters.

It has become more and more clear that because of the poor condition of our nation's marine fisheries, including the Atlantic Bluefish, we have little choice but to fully implement the Sustainable Fisheries Act. This is especially true if we intend to leave future generations a legacy of healthy oceans and marine resources for all future generations. Thank you for considering my views on this subject. I trust that you will help us do the right thing.

Sincerely,

Hiram W. Peck III
Assistant Town Planner (& Coastal Planner).

cc: Senator Lieberman
Senator Dodd
Representative Shays



CH[illegible]
40-42nd STREET
ISLIP, N.Y. 11751

Dear Dr. Guilford

I am concerned about the overfished status of our Atlantic bluefish. The Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission are jointly developing Draft Amendment 1 to the Atlantic Bluefish Fishery Management Plan. I believe strong management measures are needed now to rebuild the Atlantic bluefish population as quickly as possible.

I urge you to adopt a fishery management plan amendment for Atlantic bluefish that will:

1) Rebuild the population to levels capable of supporting the maximum sustainable yield within five years.
2) Reduce fishing mortality rates immediately rather than waiting until 2001 or beyond.
3) Protect all habitat considered to be essential
4) End overfishing
5) Ensure that states' management of the bluefish fishery and its essential habitat is fully consistent with that in federal waters.

Because of the poor condition of our nations marine fisheries, including Atlantic bluefish we have no choice but to fully implement the Sustainable Fisheries Act. It is our best hope for leaving a legacy of healthy oceans and living marine resources for future generations. Thank you for consideration of my views.

Sincerely,
Charles Fiddler

September 4, 1998

Dr. James H. Gilford, Chairman
Mid-Atlantic Fishery Management Council
Room 2115 Federal Office Building
300 South New Street
Dover, Delaware 19904-6790

Dear Dr. Guilford:

I am concerned about the overfished status of our Atlantic bluefish. The Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission are jointly developing Draft Amendment 1 to the Atlantic Bluefish Fishery Management Plan. I believe strong management measures are needed now to rebuild the Atlantic bluefish population as quickly as possible.

I urge you to adopt a fishery management plan amendment for Atlantic bluefish that will:
1) Rebuild the population to levels capable of supporting the maximum sustainable yield within five years;
2) Reduce fishing mortality rates immediately rather than waiting until 2001 or beyond;
3) Protect all habitat considered to be essential;
4) End overfishing; and
5) Ensure that states' management of the bluefish fishery and its essential habitat is fully consistent with that in federal waters.

Because of the poor condition of our nation's marine fisheries, including Atlantic bluefish, we have no choice but to fully implement the Sustainable Fisheries Act. It is our best hope for leaving a legacy of healthy oceans and living marine resources for future generations. Thank you for your consideration of my views.

Sincerely,

Tyson Kade
Nicholas School of the Environment
Duke University
Durham, NC 27708

APPENDIX 4. PROPOSED REGULATIONS

50 CFR PART 648

Fisheries of the Northeastern United States; Amendment 1 to the Bluefish Fishery Management Plan

1. The authority citation for part 648 continues to read as follows:

Authority: 16 U.S.C. 1801 et seq.

2. The following would be added to Section 648.2 (Definitions) in place of *Bluefish Committee:*

Bluefish Monitoring Committee means a committee made up of staff representatives of the MAFMC, NEFMC, and SAFMC, the NMFS Northeast Regional Office, the Northeast Fisheries Science Center, and the Commission. The MAFMC Executive Director or a designee chairs the committee.

3. Section 648.4 (Vessel and individual commercial permits), paragraph a (8), is revised to read as follows:

(8) Atlantic bluefish vessels - Any vessel of the United States, including party and charter vessels, must have been issued and carry on board a valid vessel permit to fish for, possess, or land Atlantic bluefish in or from the EEZ.

4. Section 648.4 (Vessel and individual commercial permits), paragraph b, is revised to read as follows:

(b) *Permit conditions*. Any person who applies for a fishing permit under this section must agree as a condition of the permit that the vessel and the vessel's fishing activity, catch, and pertinent gear (without regard to whether such fishing occurs in the EEZ or landward of the EEZ, and without regard to where such fish or gear are possessed, taken or landed), are subject to all requirements of this part, unless exempted from such requirements under this part. All such fishing activities, catch, and gear will remain subject to all applicable state requirements. Except as otherwise provided in this part, if a requirement of this part and a management measure required by a state or local law differ, any vessel owner permitted to fish in the EEZ for any species managed under this part must comply with the more restrictive requirement. Owners and operators of vessels fishing under the terms of a summer flounder moratorium, scup moratorium, black sea bass moratorium permit or bluefish vessel permit must also agree not to land summer flounder, scup, black sea bass, or bluefish, respectively, in any state after NMFS has published a notification in the Federal Register stating that the commercial quota for that state or period has been harvested and that no commercial quota is available for the respective species. A state not receiving an allocation of summer flounder, scup, black sea bass, or bluefish either directly or through a coastwide allocation, is deemed to have no commercial quota available. Owners or operators fishing for surf clams and ocean quahogs within waters under the jurisdiction of any state that requires cage tags are not subject to any conflicting Federal minimum size or tagging requirements. If a surf clam and ocean quahog requirement of this part differs from a surf clam and ocean quahog management measure required by a state that does not require cage tagging, any vessel owners or operators permitted to fish in the EEZ for surf clams and ocean quahogs must comply with the more restrictive requirement while fishing in state waters. However, surrender of a surf clam and ocean quahog vessel permit by the owner by certified mail addressed to the Regional Administrator allows

an individual to comply with the less restrictive state minimum size requirement, as long as fishing is conducted exclusively within state waters. If the commercial black sea bass quota for a period is harvested and the coast is closed to the possession of black sea bass north of 35 deg.15.3' N. lat., any vessel owners that hold valid commercial permits for both the black sea bass and the NMFS Southeast Region Snapper-Grouper fisheries may surrender their moratorium Black Sea Bass permit by certified mail addressed to the Regional Administrator and fish pursuant to their Snapper-Grouper permit, as long as fishing is conducted exclusively in waters, and landings are made, south of 35 deg.15.3' N. lat. A moratorium permit for the black sea bass fishery that is voluntarily relinquished or surrendered will be reissued upon the receipt of the vessel owner's written request after a minimum period of 6 months from the date of cancellation.

5. The phrase "With the exception of Atlantic bluefish permits" would be deleted from section 648.4 (Vessel and individual commercial permits), paragraph (c)(2)(i).

6. Section 648.4 (Vessel and individual commercial permits), paragraph (c)(3), would be deleted.

7. Bluefish would be added to the species identified in section 648.5 (Operator permits), paragraph (a).

8. Bluefish would be added to the species identified in section 648.6 (Dealer/processor permits), paragraph (a).

9. Bluefish dealers would be added to section 648.7 (Record keeping and reporting requirements), paragraph (a)(1)(i) and (a)(2)(i).

10. Vessel owners with a commercial vessel permit for bluefish would be added to section 648.7 (Record keeping and reporting requirements), paragraph (b)(1)(i).

11. Vessel owners with a party/charter vessel permit for bluefish would be added to section 648.7 (Record keeping and reporting requirements), paragraph (b)(1)(iii).

12. Bluefish would be added to the species identified in section 648.7 (Record keeping and reporting requirements), paragraph (c) (3).

13. Bluefish would be added to the species identified in section 648.11 (At-sea sea sampler /observer coverage) (a) and (e).

14. Section 648.12 (Experimental Fishing) is revised to read as follows:

The Regional Administrator may exempt any person or vessel from the requirements of subparts B (Atlantic mackerel, squid, and butterfish), D (sea scallop), E (surf clam and ocean quahog), F (NE multispecies), G (summer flounder), H (scup), I (black sea bass), or J (bluefish) of this part for the conduct of experimental fishing beneficial to the management of the resources or fishery managed under that subpart. The Regional Administrator shall consult with the Executive Director of the Council regarding such exemptions for the Atlantic mackerel, squid, and butterfish, the summer flounder, the scup, the black sea bass, and the bluefish fisheries.

15. The following would be added to section 648.14 (Prohibitions):

(x)(8) *Bluefish.* All bluefish possessed on board a party and charter boat issued a permit under section 648.4 are deemed to have been harvested from the EEZ.

16. Subpart J (Management measures for the Atlantic Bluefish Fishery) would be modified as follows:

§ 648.160 Catch quotas and other restrictions.

(a) *Annual review.* The Bluefish Monitoring Committee will review the following data, subject to availability, on or before August 15 of each year to determine the total allowable level of landings (TAL) and other restrictions necessary to achieve a target fishing mortality rate (F) of 0.51 in 1999 and 2000; a target F of 0.41 in 2001, 2002, and 2003; a target F of 0.31 in 2004, 2005, 2006, and 2007; and a target F of 0.36 thereafter: Commercial and recreational catch data; current estimates of fishing mortality; stock status; recent estimates of recruitment; virtual population analysis results; levels of noncompliance by fishermen or individual states; impact of size/mesh regulations; sea sampling data; impact of gear other than otter trawls and gill nets on the mortality of bluefish; and any other relevant information. During the rebuilding period, the target F for the next fishing year would be set at the level specified in the rate reduction schedule or the level estimated for the most recent year, whichever is less.

(b) *Recommended measures.* Based on this review, the Bluefish Monitoring Committee shall recommend to the Coastal Migratory Committee of the MAFMC and the Commission the following measures to assure that the F specified in paragraph (a) of this section will not be exceeded:

(1) A TAL set from a range of 0 to the maximum allowed to achieve the specified F.

(2) Commercial minimum fish size.

(3) Minimum mesh size.

(4) Recreational possession limit set from a range of 0 to 20 bluefish to achieve the specified F.

(5) Recreational minimum fish size.

(6) Recreational season.

(7) Restrictions on gear other than otter trawls and gill nets.

(c) *Allocation of the TAL..*

(1) Commercial quota. A total of 17% of the TAL would be allocated to the commercial fishery as a quota. If 17% of the TAL was less than 10.5 million pounds, the quota could be increased up to 10.5 million pounds if the recreational fishery was not projected to land 83% of the TAL for the upcoming year.

(2) Recreational harvest limit. A total of 83% of the TAL would be allocated to the recreational fishery as a harvest limit.

(d) *Annual fishing measures.* The Coastal Migratory Committee shall review the recommendations of the Bluefish Monitoring Committee. Based on these recommendations and any public comment, the Coastal Migratory Committee shall recommend to the MAFMC measures necessary to assure that the applicable specified F will not be exceeded. The MAFMC shall review these recommendations and, based on the recommendations and any public comment, recommend to the Regional Administrator measures necessary to assure that the applicable specified F will not be exceeded. The MAFMC's recommendations must include supporting documentation, as appropriate, concerning the environmental and economic impacts of the recommendations. The Regional Administrator shall review these recommendations and any recommendations of the Commission. After such review, the Regional Administrator will publish a proposed rule in the Federal Register by October 15 to implement a coastwide commercial quota and recreational harvest limit and additional management measures for the commercial fishery, and will publish a proposed rule in the Federal Register by February 15 to implement additional management measures for the recreational fishery, if he/she determines that such measures are necessary to assure that

the applicable specified F will not be exceeded. After considering public comment, the Regional Administrator will publish a final rule in the Federal Register to implement the measures necessary to assure that the applicable specified F will not be exceeded.

(e) *Distribution of annual quota*. (1) The annual commercial quota will be distributed to the states, based upon the following percentages:

ANNUAL COMMERCIAL QUOTA SHARES

STATE	%
ME	0.6685
NH	0.4145
MA	6.7167
RI	6.8081
CT	1.2663
NY	10.3851
NJ	14.8162
DE	1.8782
MD	3.0018
VA	11.8795
NC	32.0608
SC	0.0352
GA	0.0095
FL	10.0597
TOTAL	100

(2) All bluefish landed for sale in a state shall be applied against that state's annual commercial quota, regardless of where the bluefish were harvested. Any overages of the commercial quota landed in any state will be deducted from that state's annual quota for the following year.

(f) *Quota transfers and combinations*. Any state implementing a state commercial quota for bluefish may request approval from the Regional Administrator to transfer part or all of its annual quota to one or more states. Two or more states implementing a state commercial quota for bluefish may request approval from the Regional Administrator to combine their quotas, or part of their quotas, into an overall regional quota. Requests for transfer or combination of commercial quotas for bluefish must be made by individual or joint letter(s) signed by the principal state official with marine fishery management responsibility and expertise, or his/her previously named designee, for each state involved. The letter(s) must certify that all pertinent state requirements have been met and identify the states involved and the amount of quota to be transferred or combined.

(1) Within 10 working days following the receipt of the letter(s) from the states involved, the Regional Administrator shall notify the appropriate state officials of the disposition of the request. In evaluating requests to transfer a quota or combine quotas, the Regional Administrator shall consider whether:

(i) The transfer or combination would preclude the overall annual quota from being fully harvested.

(ii) The transfer addresses an unforeseen variation or contingency in the fishery.

(iii) The transfer is consistent with the objectives of the Bluefish FMP and Magnuson-Stevens Act.

(2) The transfer of quota or the combination of quotas will be valid only for the calendar year for which the request was made and will be effective upon the filing by NMFS of a notice of the approval of the transfer or combination with the Office of the Federal Register.

(3) A state may not submit a request to transfer quota or combine quotas if a request to which it is party is pending before the Regional Administrator. A state may submit a new request when it receives notice that the Regional Administrator has disapproved the previous request or when notice of the approval of the transfer or combination has been filed at the Office of the Federal Register.

(4) If there is a quota overage among states involved in the combination of quotas at the end of the fishing year, the overage will be deducted from the following year's quota for each of the states involved in the combined quota. The deduction will be proportional, based on each state's relative share of the combined quota for the previous year. A transfer of quota or combination of quotas does not alter any state's percentage share of the overall quota specified in paragraph (d) of this section.

(g) Based upon any changes in the landings data available from the states for the base years 1981-89, the Commission and the Council may recommend to the Regional Administrator that the states' shares specified in paragraph (d)(1) of this section be revised. The Council's and the Commission's recommendation must include supporting documentation, as appropriate, concerning the environmental and economic impacts of the recommendation. The Regional Administrator shall review the recommendation of the Commission and the Council. After such review, NMFS will publish a proposed rule in the Federal Register to implement a revision in the state shares. After considering public comment, NMFS will publish a final rule in the Federal Register to implement the changes in allocation

(h) De minimus status. Any state in which commercial bluefish landings during the last preceding calendar year for which data are available were less than 0.1 percent of the total quota for that year could be granted *de minimus* status by the NMFS and ASMFC upon the annual recommendation of the MAFMC and ASMFC, by way of a recommendation from the Monitoring Committee.

(1) The *de minimus* status will be valid only for that year for which the specifications are in effect, and will be effective upon filing by the NMFS of the final specifications for the commercial summer flounder fishery with the Office of the Federal Register.

(2) The total quota allocated to each *de minimus* state will be set equal to 0.1 percent of the total yearly allocation, and will be subtracted from the coastwide quota before the remainder is allocated to the other states.

(3) In applying for *de minimus* status, a state must show that it has implemented reasonable steps to prevent landings from exceeding its *de minimus* allocation.

§ 648.161 Closures.

(a) *EEZ closure*. The Regional Administrator shall close the EEZ to fishing for bluefish by commercial vessels for the remainder of the calendar year by publishing notification in the Federal Register if he/she determines that the inaction of one or more states will cause the applicable F specified in § 648.160(a) to be exceeded, or if the commercial fisheries in all states have been closed. The Regional Administrator may reopen the EEZ if earlier inaction by a state has been

remedied by that state, or if commercial fisheries in one or more states have been reopened without causing the applicable specified F to be exceeded.

(b) *State quotas.* The Regional Administrator will monitor state commercial quotas based on dealer reports and other available information and shall determine the date when a state commercial quota will be harvested. The Regional Administrator shall publish notification in the Federal Register advising a state that, effective upon a specific date, its commercial quota has been harvested and notifying vessel and dealer permit holders that no commercial quota is available for landing bluefish in that state.

§ 648.162 Time restrictions.

Vessels that are not eligible for a commercial permit under § 648.4(a)(3) and fishermen subject to the possession limit may fish for bluefish from January 1 through December 31. This time period may be adjusted pursuant to the procedures in § 648.160.

§ 648.163 Minimum fish sizes.

If the MAFMC determines through its annual review or framework adjustment process that minimum fish size restrictions are necessary to assure that the fishing mortality rate is not exceeded, or to attain other FMP objectives, such measures will be enacted through the procedure specified in § 648.160.

(a) The minimum size would apply to all fishermen or vessels issued a commercial permit under § 648.4 (a)(3), except on board party and charter boats carrying passengers for hire or carrying more than three crew members, if a charter boat, or more than five crew members, if a party boat;

(b) The minimum size would apply to all fishermen or vessels that do not have a commercial permit, or for party and charter vessels that are issued a commercial permit but are fishing with passengers for hire, or carrying more than three crew members if a charter boat, or more than five crew members if a party boat.

(c) The minimum sizes in this section apply to whole fish or to any part of a fish found in possession, e.g., fillets, except that party and charter vessels possessing valid state permits authorizing filleting at sea may possess fillets smaller that the size specified if all state requirements are met.

§ 648.164 Gear restrictions.

If the MAFMC determines through its annual review or framework adjustment process that gear restrictions are necessary to assure that the fishing mortality rate is not exceeded, or to attain other FMP objectives, such measures will be enacted through the procedure specified in § 648.160.

§ 648.165 Possession restrictions.

(a) No person shall possess more than ten bluefish in, or harvested from, the EEZ unless that person is the owner or operator of a fishing vessel issued a bluefish commercial permit or is issued a bluefish dealer permit. Persons aboard a commercial vessel that is not eligible for a bluefish commercial permit are subject to this possession limit. The owner, operator, and crew of a charter or party boat issued a bluefish permit are not subject to the possession limit when not carrying

passengers for hire and when the crew size does not exceed five for a party boat and three for a charter boat.

(b) If whole bluefish are processed into fillets, the number of fillets will be converted to whole bluefish at the place of landing by dividing the fillet number by two. If bluefish are filleted into single (butterfly) fillets, each fillet is deemed to be from one whole bluefish.

(c) Bluefish harvested by vessels subject to the possession limit with more than one person on board may be pooled in one or more containers. Compliance with the daily possession limit will be determined by dividing the number of bluefish on board by the number of persons on board, other than the captain and the crew. If there is a violation of the possession limit on board a vessel carrying more than one person, the violation shall be deemed to have been committed by the owner and operator.

§ 648.166 Framework specifications.

(a) *Within season management action*. The Council may, at any time, initiate action to add or adjust management measures if it finds that action is necessary to meet or be consistent with the goals and objectives of the Bluefish FMP.

(1) *Adjustment process*. After a management action has been initiated, the Council shall develop and analyze appropriate management actions over the span of at least two Council meetings. The Council shall provide the public with advance notice of the availability of both the proposals and the analysis and opportunity to comment on them prior to and at the second Council meeting. The Council's recommendation on adjustments or additions to management measures must come from one or more of the following categories: minimum fish size, maximum fish size, gear restrictions (e.g., mesh size), gear requirements or prohibitions, permitting restrictions, recreational possession limit, recreational season, closed areas, commercial season, and any other management measures currently included in the FMP.

(2) *MAFMC recommendation*. After developing management actions and receiving public testimony, the MAFMC shall make a recommendation to the Regional Administrator. The MAFMC's recommendation must include supporting rationale and, if management measures are recommended, an analysis of impacts and a recommendation to the Regional Administrator on whether to issue the management measures as a final rule. If the MAFMC recommends that the management measures should be issued as a final rule, the MAFMC must consider at least the following factors and provide support and analysis for each factor considered:

(i) Whether the availability of data on which the recommended management measures are based allows for adequate time to publish a proposed rule, and whether regulations have to be in place for an entire harvest/fishing season.

(ii) Whether there has been adequate notice and opportunity for participation by the public and members of the affected industry in the development of the MAFMC's recommended management measures.

(iii) Whether there is an immediate need to protect the resource.

(iv) Whether there will be a continuing evaluation of management measures adopted following their implementation as a final rule.

(3) *Regional Administrator action*. If the MAFMC's recommendation includes adjustments or additions to management measures and, after reviewing the MAFMC's recommendation and supporting information:

(i) If the Regional Administrator concurs with the MAFMC's recommended management measures and determines that the recommended management measures should be issued as a final rule based on the factors specified in paragraph (b)(2) of this section, the measures will be issued as a final rule in the Federal Register.

(ii) If the Regional Administrator concurs with the MAFMC's recommendation and determines that the recommended management measures should be published first as a proposed rule, the measures will be published as a proposed rule in the Federal Register. After additional public comment, if the Regional Administrator concurs with the MAFMC recommendation, the measures will be issued as a final rule in the Federal Register.

(iii) If the Regional Administrator does not concur, the MAFMC will be notified in writing of the reasons for the non-concurrence.

(b) *Emergency action*. Nothing in this section is meant to derogate from the authority of the Secretary to take emergency action under section 305(e) of the Magnuson-Stevens Act.