

Proposed Atlantic Herring Specifications

**for the 2004 Fishing Year
(January 1 – December 31, 2004)**



Prepared by the
New England Fishery Management Council

In consultation with
Atlantic States Marine Fisheries Commission
National Marine Fisheries Service
Mid-Atlantic Fishery Management Council

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Attachment 1

**Atlantic Herring Specifications for the 2003 Fishing Year, Including
the Environmental Assessment, Regulatory Impact Review, and Final
Regulatory Flexibility Analysis**

1.0 INTRODUCTION AND PROPOSED ACTION

This document contains information to support a rollover of the 2003 specifications for the Atlantic herring fishery through the 2004 fishing year (January 1, 2004 – December 31, 2004) with no changes.

This document provides additional information to support the conclusions in Environmental Assessment (EA) for the 2003 specifications (Attachment 1). There are no significant differences between the conclusions reached in this document and those reached in the EA for the 2003 specifications. Rolling over the 2003 specifications through the 2004 fishing year is not likely to result in any significant impacts. The EA for the 2003 specifications and the conclusions reached therein, therefore, are still applicable, and the EA should be referenced for additional information and analysis.

1.1 PURPOSE AND NEED

According to the regulations specified in 50 CFR Section 648.200(d), NMFS can rollover the previous year's specifications for the herring fishery if the Council recommends no changes. The regulations specify that: "the previous year's specifications shall remain effective unless revised through the specification process. NMFS shall issue notification in the *Federal Register* if the previous year's specifications will not be changed."

The Council is proposing a rollover of the 2003 specifications through the 2004 fishing year with no changes primarily because it is currently developing an amendment to the Herring FMP that will allow for a complete assessment of stock and fishery conditions so that appropriate management adjustments can be made in a comprehensive manner. A full Environmental Impact Statement (EIS) will be prepared to support Amendment 1. Rolling over the specifications provides additional time for the Herring Plan Development Team (PDT), Herring Committee, and Council to work on the development of Amendment 1 so that it can be implemented in a timely manner.

Complicating the development of Amendment 1 are the results of the recent meeting of the Transboundary Resource Assessment Committee (TRAC). The TRAC Meeting was intended to represent a joint U.S./Canada peer review of herring stock assessments to reach a consensus about the current status of the herring resource. Both a U.S. and a Canadian assessment of the herring resource were presented and reviewed at the TRAC Meeting in St. Andrew's, New Brunswick from February 10-14, 2003. However, the two assessments produced different results, and no overall consensus was reached regarding which assessment is most accurate. In addition, the Canadian assessment did not provide biological reference points and/or other information that is useful to guide management. Following the TRAC Meeting, many outstanding technical issues remain to be resolved.

Because no technical consensus has been reached regarding the TRAC results, the TRAC information cannot be utilized at this time to support the development of different specifications

for the 2004 fishing year. As a result, the Council is proposing to rollover the 2003 specifications so that it can continue the development of Amendment 1, including the resolution of outstanding technical issues and incorporation of the TRAC results in the most appropriate manner. The Council's Scientific and Statistical Committee (SSC) will meet during June 2003 to develop recommendations regarding the TRAC information and provide management advice to guide the Council during the development of Amendment 1. It is anticipated that the TRAC information will be fully incorporated into Amendment 1, including appropriate adjustments to the management program for herring.

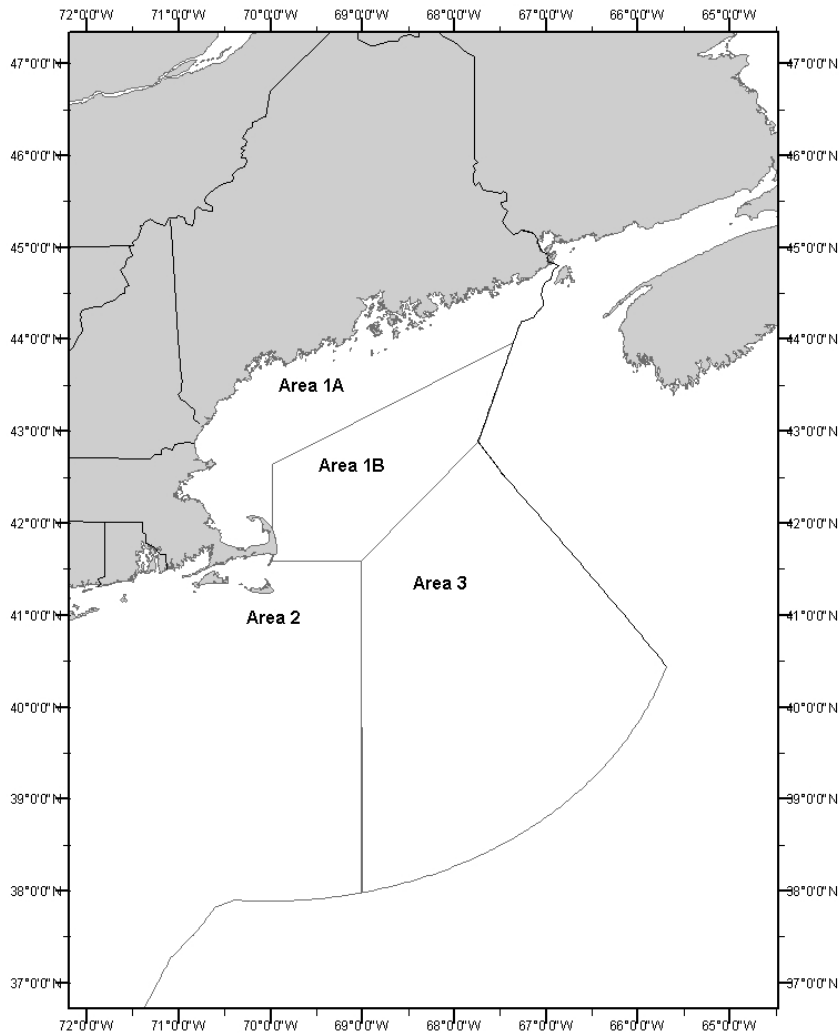
1.2 PROPOSED ACTION

The proposed specifications for the 2004 fishing year are the same as the (current) specifications for the 2003 fishing year (Table 1). This includes the specifications for: Allowable Biological Catch (ABC); Optimum Yield (OY); Domestic Annual Harvest (DAH); Total Allowable Foreign Fishing (TALFF); Domestic Annual Processing (DAP); Total Joint Venture Processing (JVPt); Joint Venture Processing for Areas 2 and 3 (JVP); Internal Waters Processing (IWP); U.S. At-Sea Processing by Vessels >165 feet or >750 GRT (USAP); Border Transfer (U.S.-caught herring transferred to Canadian vessels for export to Canada) (BT); and TAC Reserve.

Table 1 2003 and Proposed 2004 Specifications and Area TACs for the Atlantic Herring Fishery

SPECIFICATION	FINAL ALLOCATION (MT)
ABC	300,000
OY	250,000
DAH	250,000
DAP	226,000
JVPt	20,000
JVP	10,000 (Area 2 and 3 only)
IWP	10,000
USAP	20,000 (Area 2 and 3 only)
BT	4,000
TALFF	0
Reserve	0
TAC – Area 1A	60,000 (January 1 – May 31, landings cannot exceed 6,000)
TAC – Area 1B	10,000
TAC – Area 2	50,000 (TAC Reserve: 70,000)
TAC – Area 3	60,000

Figure 1 Current Management Areas for the Atlantic Herring Fishery



2.0 UPDATED STOCK AND FISHERY INFORMATION

The Atlantic Herring FMP contains a comprehensive description of the biological, physical, and human environment affected by management measures for the Atlantic herring fishery. In addition, the Herring SAFE Report for the 1998, 1999, 2000, and 2001 fishing years includes updated information about affected environment, including the vessels and communities engaged in the herring fishery. This section updates these documents and provides information about the herring fishery through the 2002 fishing year to support rolling over the 2003 specifications for the 2004 fishing year. Amendment 1 to the Herring FMP, currently under development, will update all information related to the biological, physical, and human environments affected by the Herring FMP. This includes incorporation of the results of the recent TRAC Meeting following management advice from the Council's SSC.

2.1 UPDATED STOCK INFORMATION

2.1.1 Surveys

Figure 2 – Figure 4 illustrate trends in abundance and biomass of Atlantic herring from the Northeast Fisheries Science Center (NEFSC) winter, spring, and autumn trawl surveys.

Figure 2 Atlantic Herring Abundance and Biomass from the NEFSC Winter Trawl Survey

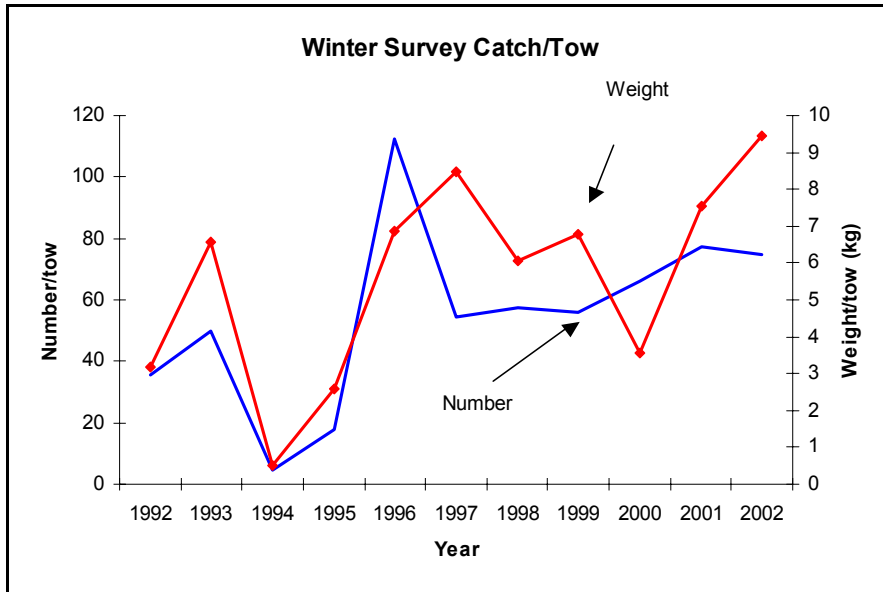


Figure 3 Atlantic Herring Abundance and Biomass from the NEFSC Spring Trawl Survey

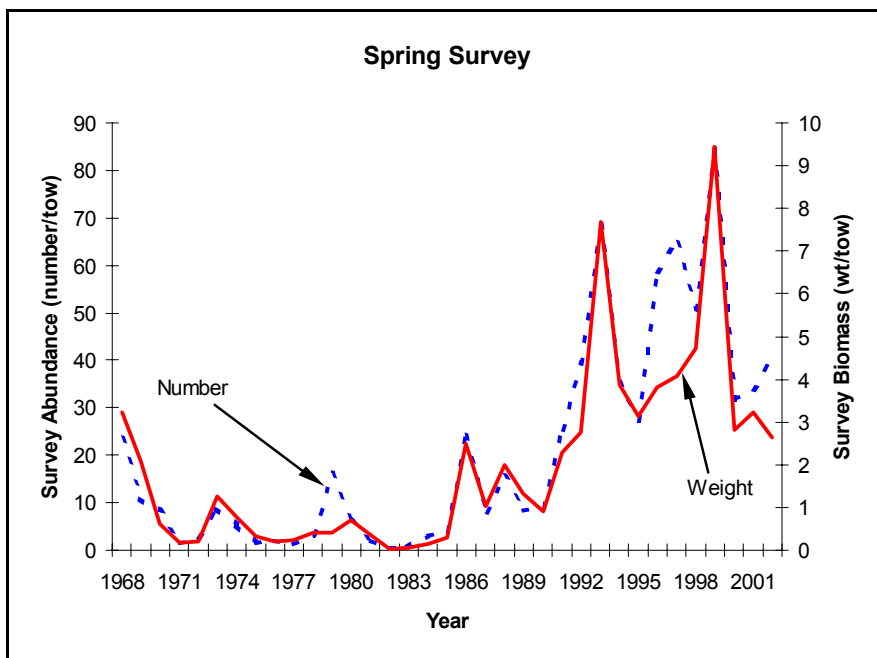
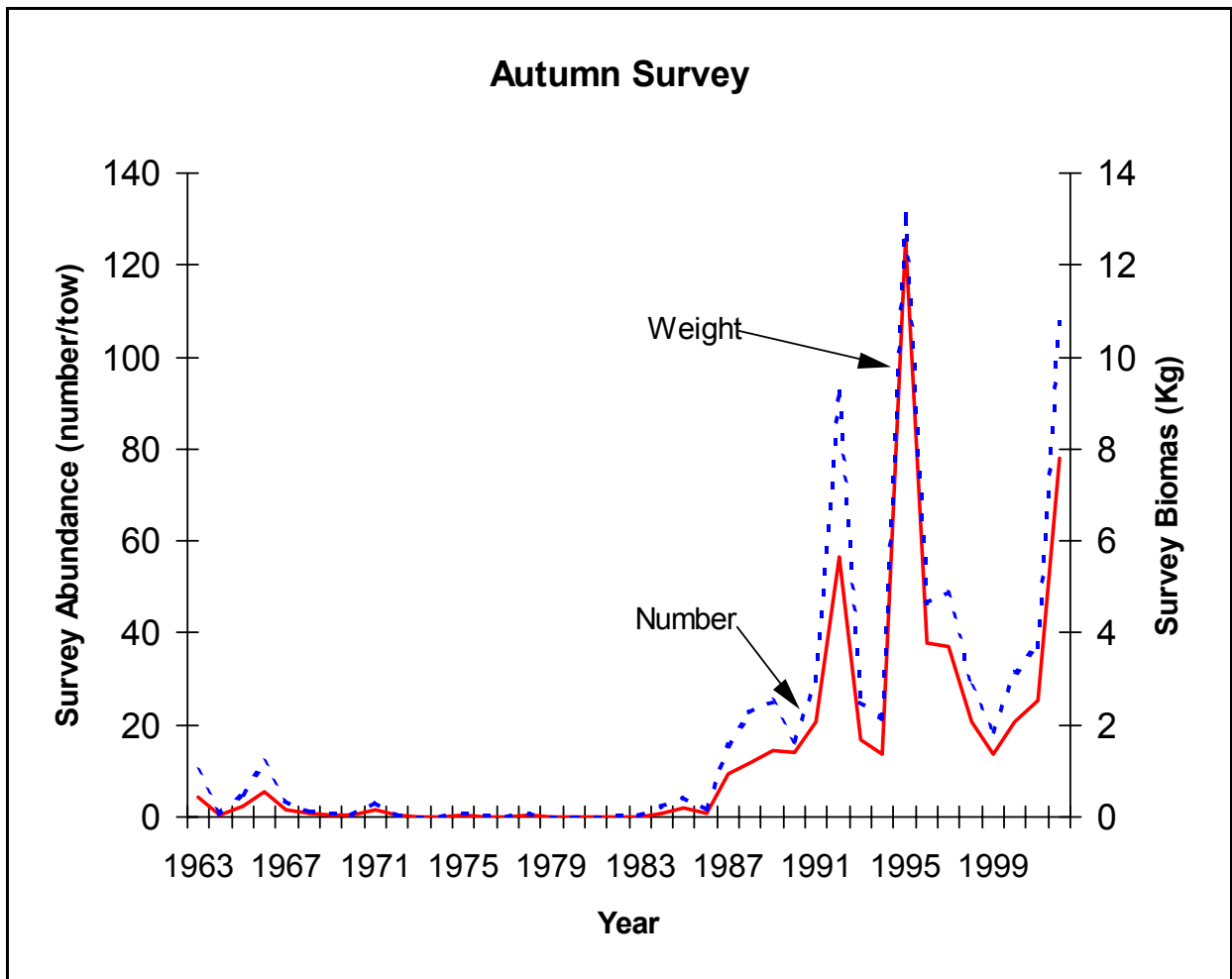


Figure 4 Atlantic Herring Abundance and Biomass from the NEFSC Autumn Trawl Survey



Offshore hydroacoustic surveys of Atlantic herring have been conducted by the National Marine Fisheries Service (NMFS) since 1999. From 1999-2001, three different surveys were conducted; in 2002, one larger survey was conducted. In 2002, 40-50% of the fish that were sampled during the survey were “spent,” suggesting that spawning occurred earlier last year, and the survey may have missed the fish when they were most concentrated. Echo-intensities were therefore lower in 2002, resulting in a lower total biomass estimate, but not affecting the overall distribution (Table 2).

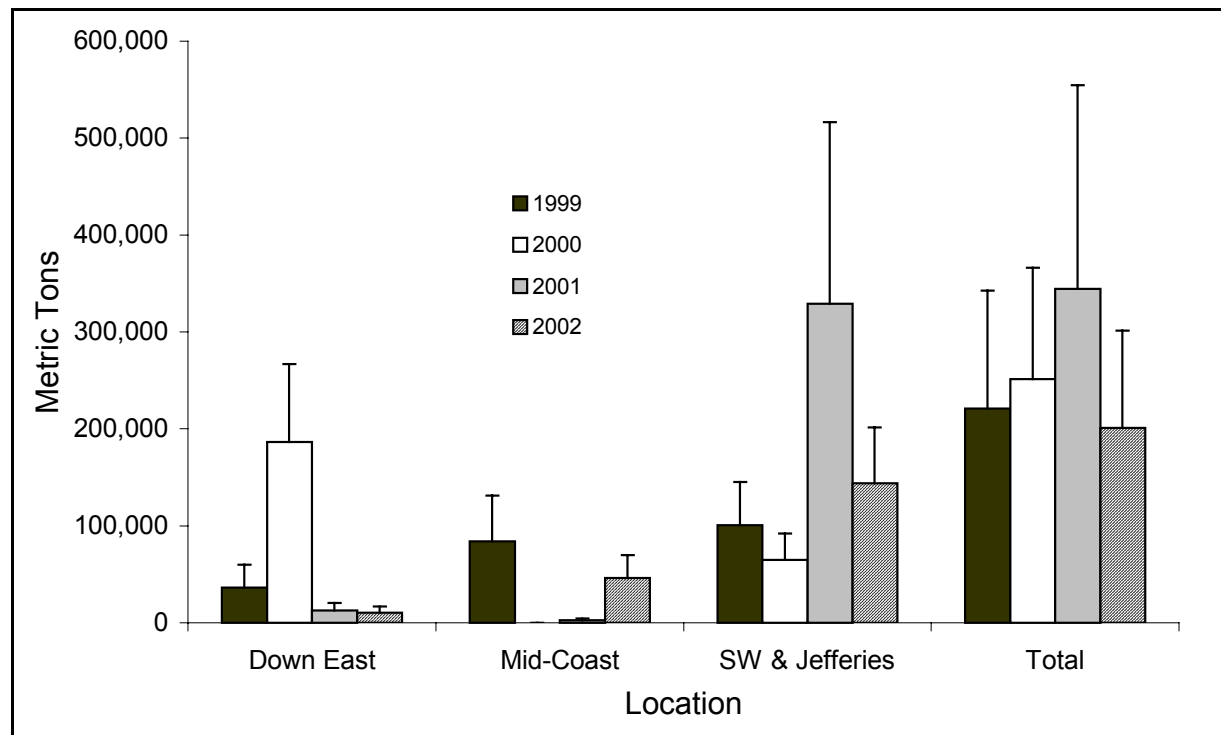
Table 2 Geostatistical Estimates of Biomass, Coefficients of Variation (CV), CV inverse, Weighted Biomass (W), and Weighted CV (W) for Acoustic Surveys on Georges Bank from 1999-2002

Year Survey Design	Biomass	CV	1/CV	W Biomass	W CV
1999					
Zigzag1	1.4173	18.74	0.0534		
Zigzag2	1.0409	20.86	0.0479	1.19E+06	10.712
Parallel	1.1467	9.79	0.1021		
2000					
Parallel	1.5025	11.49	0.087		
Zigzag	1.268	10	0.1	1.43E+06	7.222
S random	1.596	16.89	0.0592		
2001					
Parallel	2.1484	9.89	0.1011		
Zigzag	1.6172	10.8	0.0926	1.82E+06	6.604
S random	1.596	15.3	0.0654		
2002					
Parallel	0.7628	13.56		7.63E+05	13.56

Since 1999, Maine Department of Marine Resources (ME DMR), in partnership with the Gulf of Maine Aquarium, has been surveying the inshore spawning component in the Gulf of Maine during Autumn (September – November). This project is funded by the Northeast Consortium, and uses groundfish and herring vessels to conduct fishery independent hydroacoustic surveys. This survey compliments the offshore hydroacoustic survey conducted by NMFS.

2002 estimates of spawning herring biomass surveyed in the Gulf of Maine total approximately 201,000 metric tons (Figure 5). This value is considerably lower than estimates from prior years 344,000 metric tons in 2001, but well within the margin of standard error. Like the offshore survey conducted by NMFS, timing issues may have played a role in the reduction of fish seen this year. The average spawning stock biomass estimate using this method is approximately 250,000 mt.

Figure 5 Estimates of Spawning Biomass of Atlantic Herring from Inshore Hydroacoustic Surveys



2.1.2 TRAC Assessment Meeting – Reference Points and Projections

The Transboundary Resource Assessment Committee met in St. Andrew’s, New Brunswick from February 10-14, 2003 to assess the status of the Atlantic herring resource. No consensus was reached regarding stock status. According to the U.S. assessment results, maximum sustainable yield (MSY) for the Atlantic herring complex may range from 222,000 to 243,000 metric tons (mt) (Table 3). Estimates of biomass that can sustain MSY (B_{MSY}) may range from 896,000 mt to 1,030,000 mt. The Canadian assessment did not provide any estimates of these reference points.

Table 3 Estimates of Biological Reference Points for Atlantic Herring from the US Assessment Presented at the TRAC Meeting

Model	MSY (mt)	B_{MSY} (mt)	F_{MSY}
Fox	222,000	896,000	0.25
Shaefer	243,000	1,030,000	0.24

Short-term projections for Atlantic herring from the US and Canadian assessments presented at the TRAC are summarized in Table 4. Projections from the US assessment indicate that fishing herring at $F = 0.1$ would remove about 170,000 mt of herring in 2004 with very little change in total biomass. Fishing at $F = 0.2$ would remove about 323,000 mt, resulting in a biomass decline of about 5% in 2005. Both of these levels of landings are significantly higher than annual removals since the late 1980s. According to the Canadian assessment, fishing at $F = 0.1$ would

remove about 60,000 mt of herring in 2004 with no change in biomass. Fishing at $F = 0.2$ would remove about 100,000 mt, resulting in a biomass decline of about 10% in 2005. However, removals of Atlantic herring have been around 100,000 or more for 15 years, and biomass levels have hit record highs during this time period. In addition, declines in the population like those predicted in the Canadian assessment should be apparent in acoustic and other surveys.

Table 4 Projection Results for Atlantic Herring from the US and Canadian Assessments Presented at the TRAC Meeting

US ASSESSMENT			
	2004		2005
	2+ Biomass (mt)	Catch (mt)	2+ Biomass (mt)
F=0.1	1.8 million	170,000t	1.79 million t
F=0.2	1.8 million	323,000t	1.64 million t
CANADIAN ASSESSMENT			
	2004		2005
	3+ Biomass (mt)	Catch (mt)	3+ Biomass (mt)
F=0.1	550,000t	60,000t	550,000t
F=0.2	550,000t	100,000t	500,000t

As previously noted, because no consensus was reached and no management advice was provided at the TRAC Meeting, the Council has asked its SSC to meet and provide management advice for the development of Amendment 1 to the Herring FMP. For this reason (because of timing), the TRAC results cannot be utilized to support any changes to the specifications for the 2004 fishing year.

2.2 UPDATED FISHERY INFORMATION

This section updates information presented in Appendix I to the EA for the 2003 specifications (SAFE Report for 2001).

2.2.1 2002 Herring Catch and Landing Statistics

Catch and landings for the Atlantic Herring fishery is monitored using two harvester reporting systems: Vessel Trip Reports (VTR), and Interactive Voice Reporting (IVR).

Harvesters report VTR data on a monthly basis. Because harvesters give precise location (coordinates or Loran) on a per trip basis, this reporting system allows for detailed catch information from specific areas. VTR data are useful for stock assessment and effort information. Because they are reported on a monthly basis, this system is not useful for quota monitoring.

The IVR call in system is also a harvester report. Harvesters report combined catches by Management Area on weekly schedule. While both trip level information and precise location are not reported, this system is useful for near real time quota monitoring. IVR data are not generally useful for stock assessment, or management questions that require information by sub-

area or gear. Both IVR and VTR data incorporate landing to foreign vessels by domestic harvesters (JV or IWP but not TALFF).

The Catch at Age Matrix is then developed by applying the commercial harvest data (from VTR) to samples of fish taken from the commercial fleet using a program called BIOSTAT. This matrix is developed for each area by month. The results by area are then summed fishery wide from which they can be utilized in an age structured population model, or analyzed for other fishery dependent statistics.

VTR

As reported by the Maine Department of Marine Resources, 91,026 metric tons (mt), (preliminary as of May 2003) of herring were caught during the 2002 fishing year (Table 5). This amount is about a 27,000 mt decrease from the previous year. Management Area 1A (58,754 mt) accounted for approximately 64 % of the over all landings and saw an increase in harvest levels compared to the previous years. Area 3 saw the biggest decline in catch (20,447 mt).

Within Area 1A, purse seines accounted for approximately 32% of the catches, but only accounted for 21 % of the catches for the entire stock complex (Figure 6 and Figure 7). Both types of mid-water trawler gear (single and pair) accounted for the bulk of the catches in 1A and total complex. Of all of the states (Figure 8), Maine had the highest landings (53%), followed by Massachusetts (27%), Rhode Island (12%), and New Hampshire (6%).

IVR

The 2002 season was the third year of mandatory IVR reporting for the Atlantic herring fleet. A total of 96 vessels had a Category 1 permit in 2002, of those vessels, 42 reported using the IVR system. Although IVR reporting compliance among herring permit holders was less than 50%, dedicated herring vessels (about 26 in number) had a compliance level approaching 100%. The total catch in 2002 reached 91,831 mt, a 24% decrease from 2001 (Table 6). The Area 1A harvest accounted for approximately 65% of the total catch followed by Area 3 with 16% and Area 2 with 12% of the total. The most notable decrease in catch was in Area 3 that went from 37,174 mt in 2001 to 14,540 mt, a 61% reduction. Based on IVR data, discards accounted for 234 lbs (.11 mt) of the yearly harvest.

Table 5 Herring Catch (mt) - Management Area by Month, 1997 - 2001

2002*														
Mgt Area	1	2	3	4	5	6	7	8	9	10	11	12	Total	TAC
1A	1,653	1,223	786	3,087	44	9,019	13,760	7,727	7,380	5,953	8,018	103	58,754	60,000
1B	1,701	753	473	126	1,030	369	643	159	259	32		1,800	7,343	10,000
2	5,387	3,951	664	107	187	0	1	1	138	1	125	303	10,866	50,000
3	589	0	29	5	879	412	2,837	2,555	3,056	3,697	4		14,063	50,000
Total	9,330	5,927	1,953	3,325	2,141	9,799	17,240	10,441	10,834	9,682	8,147	2,207	91,026	170,000
* uncompleted catch data														
2001*														
Mgt Area	1	2	3	4	5	6	7	8	9	10	11	12	Total	
1A	3	1,716	1,292	2,476	6,596	8,605	6,978	7,920	4,682	8,954	3,888	57	53,167	
1B	18	1	68	45	195	110		1,266	1,302	1,128	4,382	6,447	14,963	
2	8,582	4,900	430	828	56	100	0	2	96	3	64	327	15,388	
3						755	7,636	7,826	10,701	7,310	193	89	34,510	
Total	8,604	6,617	1,789	3,349	6,847	9,571	14,614	17,015	16,781	17,394	8,527	6,920	118,028	
2000														
Mgt Area	Month	1	2	3	4	5	6	7	8	9	10	11	12	Total
1A		3	3	76	1,339	7,076	10,390	14,355	12,818	4,334	8,525	812	0	59,730
1B			87	127		76	234	276	73	166	0	5,836	110	6,985
2		7,802	7,902	2,391	212	18	1	0	2	23	2	860	4,364	23,578
3		125		537	87	38		418	3,107	5,893	2,679			12,884
Total		7,929	7,992	3,132	1,638	7,208	10,624	15,049	16,001	10,415	11,207	7,508	4,474	103,178
1999														
Mgt Area	Month	1	2	3	4	5	6	7	8	9	10	11	12	Total
1A		628	120	93	3,264	4,975	8,055	12,939	9,415	9,497	5,907	8,644	5,110	68,648
1B		272		41		181	57		35	113	731	106	57	1,593
2		7,179	7,516	2,928	511	9	4	34	136	0	1	4	555	18,878
3			143	272	999	154	1,460	290	92	1,280	994			5,685
Total		8,080	7,779	3,334	4,775	5,320	9,575	13,263	9,678	10,890	7,633	8,754	5,722	94,803
1998														
Mgt Area	Month	1	2	3	4	5	6	7	8	9	10	11	12	Total
1A			193		2,705	3,831	4,014	7,200	4,092	5,101	5,973	6,004	4,473	43,586
1B					392		166	154	112	186	535	1,399	871	3,815
2		5,965	6,568	2,167	160	187	202	161		237	246	222	126	16,242
3					523	487	3,630	3,988	3,845	3,267	1,610	465	144	17,959
Total		5,965	6,761	2,167	3,779	4,505	8,012	11,503	8,049	8,792	8,364	8,091	5,614	81,601
1997														
Mgt Area	Month	1	2	3	4	5	6	7	8	9	10	11	12	Total
1A			6		2,801	3,302	5,885	10,311	12,530	12,841	11,647	7,303	983	67,608
1B					118	295	500	556	1,091	3	94	316		2,972
2		7,229	4,713	3,841	615	5					500	102	4,443	21,448
3						839	948	2,581		213	778			5,393
Total		7,229	4,719	3,875	3,534	4,441	7,333	13,448	13,621	13,057	13,018	7,721	5,426	97,422

Figure 6 2002 Landings of Atlantic Herring by Gear Type

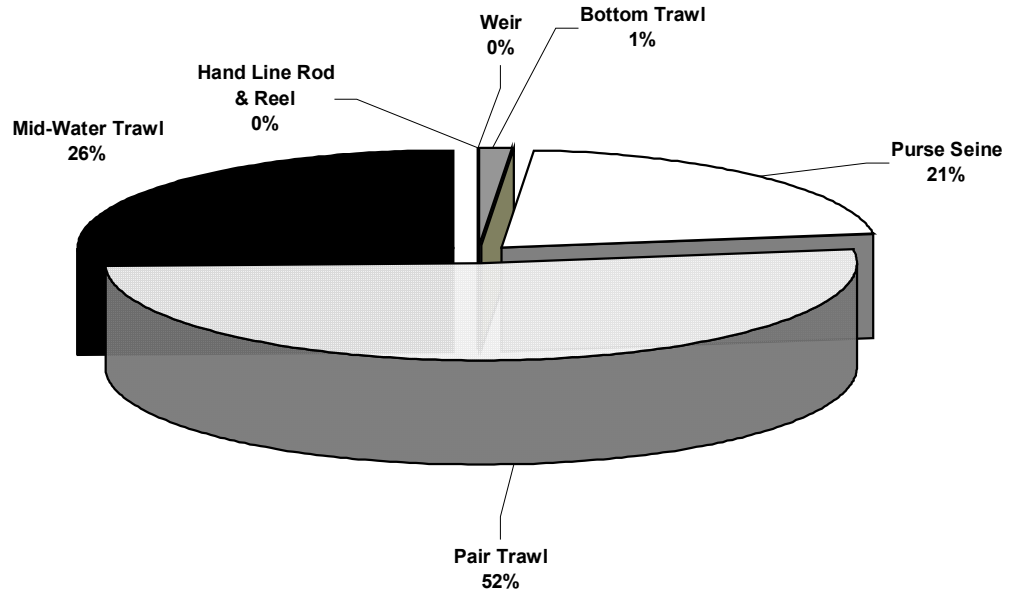


Figure 7 2002 Landings of Atlantic Herring by Gear Type in Management Area 1A

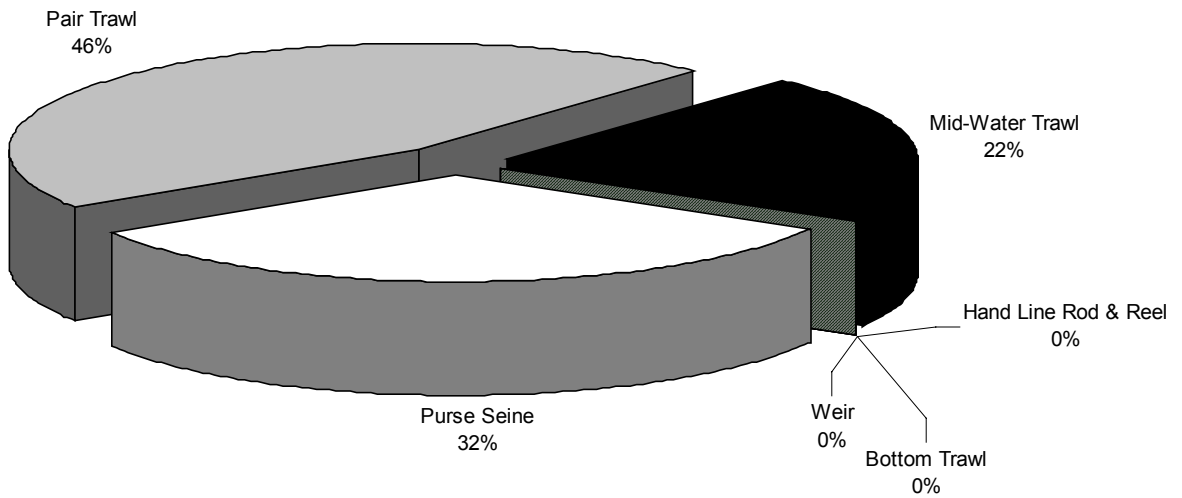


Figure 8 Percentage of 2002 Herring Landings by State

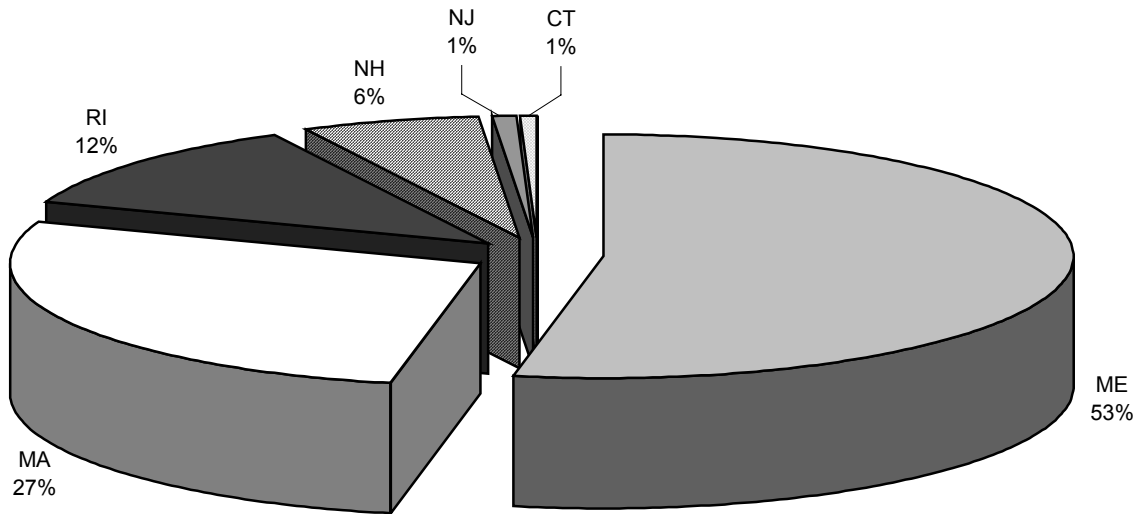


Table 6 2002 Total IVR Catch of Herring by Management Area

	Landings	TAC	%
Area 1A	59,263	60,000	99
Area 1B	7,355	10,000	74
Area 2	10,673	50,000	21
Area 3	14,540	50,000	29
Total	91,831	170,000	

**Note that the TACs in this table reflect the 2002 TACs.*

Catch At Age

Examination of the catch at age matrix reveals interesting trends within the data. Strong year classes are noticeable particularly for 1994, 1996, and 1998 (Table 7). The 1994 and 1998 year classes seem particularly strong complex wide. Overall, the age structure of this complex has shifted to older individuals over the past years. This trend may be attributable to many factors including the abundance of older age classes due to increased recruitment and low fishing mortality, and industry trends towards landing larger fish.

Table 7 Herring Catch at Age in Weight and Numbers

Weight (mt) Harvested at age												
	1	2	3	4	5	6	7	8	9	10	11 +	Total
1998	0	10,589	9,016	38,530	8,090	4,790	5,776	3,141	1,197	397	76	81,601
1999	20	6,065	25,751	9,651	29,594	12,698	6,203	3,832	886	103	0	94,803
2000	0	14,093	4,688	15,947	24,270	30,445	8,762	3,278	638	250	87	102,459
2001	5	4,544	38,144	6,775	15,035	21,531	25,152	5,604	1,081	131	24	118,028
2002	289	5,454	9,998	31,558	12,293	11,313	12,709	6,547	778	87	0	91,026
Numbers (X 1000) Harvested at age												
	1	2	3	4	5	6	7	8	9	10	11 +	Total
1998	0	240,609	109,839	321,663	56,069	29,267	31,640	16,064	5,764	1,618	281	812,814
1999	667	103,606	285,314	82,967	216,579	79,553	35,158	19,554	4,527	357	0	828,282
2000	0	195,108	41,892	121,107	155,341	175,833	44,078	15,388	2,832	1,037	319	752,937
2001	117	74,760	379,858	51,299	98,063	127,478	135,847	26,771	5,153	484	91	899,921
2002	11,888	93,418	100,940	247,386	80,615	67,731	70,482	32,992	3,628	416	47	709,543

2.2.2 Economic Factors

This section updates Section 2.2 of Appendix I to the EA for the 2003 specifications and summarizes the economic aspects of the herring fishery, including vessel, dealer and processor activities, as well as revenues from and utilization of herring.

In 2002, the gear type that brought the largest amount of herring to market was the mid-water pair trawl at 46,924. This is an 18% drop from 2001 levels. Fourteen vessels pair trawled in 2002 which is one more than 2001 levels. Single vessel mid-water trawling accounted for 23,310 metric ton, which is 37% lower than 2001 landings. Purse seine landings totaled 19,571 metric tons; a 5% decline from 2001. Bottom trawl gear accounted for 1,199 metric tons. Landings by weirs in 2002 were 1 metric ton.

Most herring sold in 2002 was taken from Area 1A (58,545 mt). Area 1B landings (7,415 mt) were about half of what they were in 2001. The Area 2 landings were 10,868 metric tons (down from 15,389 in 2001). Area 3 landings were 14,203 metric tons, down from 43,511 mt in 2001. Table 8 shows the landings of the various gears used in 2002 and the activities of each in the management areas.

Table 9 differs from Table 8 in that instead of listing herring landings by gear used, each vessel was assigned a principal gear based on the gear that landed the most herring. Since some vessels used multiple gears to catch herring, this principal gear designation was necessary to describe herring fishery activity by vessel. For example, some vessels which primarily used mid-water trawl gear landed herring with other gears; the actual gear used is shown in Table 8, while Table 9 lists all landings under the primary gear used by the vessel.

The Herring FMP distinguishes between vessels catching herring incidentally while pursuing other species and those targeting herring by defining vessels that average less than 2,000 pounds of herring caught per trip (in all areas) as incidental herring vessels. Table 10 provides the same

information as Table 9 except it excludes the incidental herring vessels. In 2002 there were 37 vessels, defined as directed herring vessels, which sold 90,921 metric tons of herring.

Since Area 1A is the area in which the TAC is most likely to be reached, it is important to summarize the activity of vessels targeting herring in Area 1A. Table 10 provides information for the 27 vessels that averaged more than 2,000 pounds per trip in Area 1A in 2002. Those vessels landed 58,472 mt of herring from Area 1A.

Fluctuations in the ex-vessel price for herring are minor and the average price was \$0.065 per pound in 2002. At this price the total value of herring sold in 2002 was \$13,046,301.

The landings summarized in Table 8 through Table 10 are based on data provided by the State of Maine (for herring landings in all Northeast states). Most of the Maine data is from federal logbooks. Table 11 compares the value of herring to the value of all landed species, expressed as a percentage of revenues, by principal herring gear as well as average crew sizes on herring trips. Since the data provided by the State of Maine does not include information on non-herring landings or crew size, this information must be drawn from logbooks. Table 11 was constructed by only using information where the herring landings provided by the State of Maine closely matched the herring landings in the federal logbooks.

The total number of vessels landing herring in 2002, Table 9, declined to 140 which is 6 less than in 2001. However, the pair trawl fleet gained 1 vessel, the mid-water trawl fleet gained 5 vessels, and the purse seine fleet gained 1 vessel. The number of bottom trawl vessels catching herring dropped by 16 vessels.

Table 8 Metric Tons of Herring Sold by Gear and Management Area in 2002

	1A	1B	2	3	Total
Mid-water pair trawl	26,941	5,320	5,984	8,679	46,924
Mid-water trawl	12,599	1,452	3,760	5,499	23,310
Purse Seine	18,929	642	0	0	19,571
Bottom trawl	73	1	1,113	12	1,199
Weir	0	0	1	0	1
Other	3	0	8	10	21
Total	58,546	7,416	10,868	14,203	91,026

Table 9 Number of Vessels, Herring Trips, and Herring Sold (mt) by Management Area and Principal Herring Gear for 2002

		1A	1B	2	3	Total
Mid-water Pair Trawl 13 vessels	Number of trips	414	76	60	103	653
	Landings (mt)	29,196	5,771	6,107	8,739	49,813
Mid-water Trawl 14 vessels	Number of trips	161	12	22	26	221
	Landings (mt)	9,874	1,001	3,703	5,449	20,027
Purse Seine 6 vessels	Number of trips	324	7	0	0	331
	Landings (mt)	18,929	642	0	0	19,571
Bottom Trawl 64 vessels	Number of trips	294	6	186	10	496
	Landings (mt)	545	1	1,048	12	1,606
Weir	Landings (mt)	0	0	1	0	1
Other Gear 43 vessels	Number of trips	32	0	237	1	270
	Landings (mt)	1	0	8	<1	9
Total 140 vessels	Number of trips	1225	101	505	140	1,971
	Landings (mt)	58,545	7,415	10,867	14,201	91,027

Table 10 Number of Vessels, Herring Trips, and Herring Sold (mt) by Management Area and Principal Herring Gear for Vessels Averaging more than 2,000 pounds of Herring per Trip in All Areas During 2002

		1A	1B	2	3	Total
Mid-water Pair Trawl 13 vessels	Number of trips	414	76	60	103	653
	Landings (mt)	29,195	5,772	6,107	8,739	49,813
Mid-water Trawl 10 vessels	Number of trips	134	12	22	26	194
	Landings (mt)	9,854	1,001	3,703	5,449	20,007
Purse Seine 6 vessels	Number of trips	324	7	0	0	331
	Landings (mt)	18,929	642	0	0	19,571
Bottom Trawl 8 vessels	Number of trips	25	0	39	3	67
	Landings (mt)	494	0	1,029	7	1,530
Total 37 vessels	Number of trips	897	95	121	132	1245
	Landings (mt)	58,472	7,415	10,839	14,195	90,921

Table 11 Number of Vessels, Herring Trips, and Herring Sold (mt) by Management Area and Principal Herring Gear for Vessels Averaging more than 2,000 Pounds of Herring per Trip in Area 1A During 2002

		1A	1B	2	3	Total
Mid-water pair trawl 13 vessels	Number of trips	414	76	60	103	653
	Landings (mt)	29,195	5,772	6,107	8,739	49,813
Mid-water trawl 6 vessels	Number of trips	134	11	19	26	190
	Landings (mt)	9,854	988	3,568	5,449	19,859
Purse seine 6 vessels	Number of trips	324	7	0	0	331
	Landings (mt)	18,929	642	0	0	19,571
Bottom trawl 2 vessels	Number of trips	25	0	4	1	30
	Landings (mt)	494	0	875	5	1,374
Total 27 vessels	Number of trips	897	94	83	130	1204
	Landings (mt)	58,472	7,402	10,550	14,193	90,617

Table 12 Value of Herring Compared to Value of All Species (as a Percentage of Revenue) and Crew Size by Principal Herring Gear for 2000

	Percent of Revenue from Herring	Average Crew Size on Herring Trips
Mid-water pair trawl	51%	4.1
Mid-water trawl	40%	3.0
Purse seine	88%	5.6
Bottom trawl	0.1%	5.0

3.0 ASSESSMENT OF IMPACTS

This section discusses the potential impacts associated with rolling over the 2003 specifications for the Atlantic herring fishery through the 2004 fishing year. Overall, it is not likely that there will be significant impacts associated with the rollover because the rollover equates to maintaining the status quo in the herring fishery for the 2004 fishing year. The discussion provided in this section is in addition to the assessment of impacts presented in the EA for the 2003 specifications, which should be referenced for more information (Attachment 1).

3.1 BIOLOGICAL IMPACTS

This section updates Section 5.1 of the attached EA for the 2003 Atlantic herring specifications.

On February 10 – 14, 2002, the Transboundary Resource Assessment Committee (TRAC) met in St. Andrews, New Brunswick to assess Atlantic herring. At that meeting, two assessment methodologies were presented: (1) an age-structured VPA (ADAPT) and (2) a biomass-based forward projection model (FPM). Both models differed widely in how they approached

assessment of this transboundary resource and final stock projections through 2005. As previously noted, technical issues related to the TRAC results have yet to be resolved; the Council will incorporate this information into Amendment 1 after receiving management advice from its SSC.

The proposed action to rollover the 2003 specifications through the 2004 fishing year is biologically sound. No significant biological impacts are expected from this action. Overall stock removals have averaged about 98,000 mt since the FMP was developed in 1998 (Table 5). During this time, the autumn, winter, and spring NEFSC bottom trawl surveys measured variable but increased abundance indices for Atlantic herring (Figure 2, Figure 3, and Figure 4). Further, while acoustic surveys for both inshore and offshore areas were lower in 2002 (Table 2 and Figure 5), both estimates, when combined, indicate that the stock level is above B_{MSY} for this complex, and overall abundance of herring has increased. The ADAPT and FPM models differ widely in predicted stock abundance; however, both models show similar relative increases in abundance since 1998.

Projected removals through 2005 using the FPM model indicate that a fishing mortality of 0.1 (170,000 mt removal) would keep age 2+ biomass constant (Table 4). Using the more conservative ADAPT model suggests that a fishing mortality rate of 0.2 (100,000 mt removal) would reduce the age 3+ biomass by less than 10%, well within the error associated with either approach.

Given the uncertainties associated with these two modeling approaches and projections, rolling over the 2003 specifications through the 2004 fishing year should not be biologically harmful to this complex in the short-term. Allowing for this rollover will provide the SSC and the PDT time to thoroughly examine both methodologies and make sound recommendations to the Council for the development of Amendment 1.

3.2 ECONOMIC IMPACTS

Impacts of OY and DAH

The 250,000 mt specifications of OY and DAH proposed for 2004 would maintain the specifications that have been implemented each year since 2001. In 2001, the Council increased the OY specification from 224,000 mt to 250,000 mt largely to send a message to the industry that the biomass of herring can support an expansion of production. To measure the economic impact to vessels in 2004 resulting from a rollover of the 2003 specifications, analysts compared 2002 harvest levels to proposed 2004 specifications. Landings from 2002 were used as a baseline because it was the last year in which a full set of annual data could be compiled. With OY and DAH at 250,000 mt, there could be an increase of up to 158,169 mt in herring landings or \$22,618,167 in revenue based on a market price of \$143/mt. This would allow individual vessels to increase their profitability under the 2004 specifications. Increased utilization of the resource will likely require expansion into foreign markets, which the council expects to happen incrementally, as noted in the 2003 EA/FRFA/RIR.

For the 2003 specifications, the Council also considered OY alternatives of 300,000 and >1,000,000 mt. At these OY level there would be increased potential revenues and economic benefits to the herring fleet greater than the proposed 2004 alternative of 250,000 mt. In addition, at these levels there could be risks to the health of the herring stock. An additional alternative for DAH of 230,000 mt was analyzed by the Council in 2003. This amount would also increase potential profits for the herring fleet although not to the extent that the proposed DAH of 250,000 mt.

Impacts of DAP

Under the proposed alternative, DAP will remain at 226,000 mt. Industry testified to the council in 2002 and again in 2003 about plans to develop additional processing plants in New England. Since 1999, harvest levels have been less than 50 percent of DAP. Based on this trend, the DAP specification for the 2004 fishery should produce the potential for a positive economic benefit to the herring fleet. This is also true of the Herring Committee's suggested 2003 DAP alternatives of 236,000 mt and 176,000 mt and would apply to any alternative greater than 91,831 mt, the total harvest for the 2002 fishery. However, the magnitude of economic impact of the DAP will rely on the processing sector's ability to expand markets and increase capacity to handle larger amounts of herring in 2004. Based on the proposed 2004 DAP specification, there could be an increase of up to 134,169 mt in herring landings or \$19,186,167 in revenue based on \$143/mt.

Impacts of TALFF/JVP/IWP

The Council recognizes that market development and expansion is a slow process and the ability for U.S. vessels to engage in JVP is important to the present economic well-being of the herring fleet. Overall, if the full amount of the JVP (10,000 mt) is harvested, revenues to the participating U.S. vessels would approximate \$1.4 million, based on an average price of \$143/mt.

Very little of the 10,000 mt JVP allocation was utilized in 2002, and the JVP allocation in 2003 is not expected to be fully utilized. As of June 2003, no JVP activity for herring has occurred during the 2003 fishing year. There is no indication at this time that demand for the JVP allocation will increase in 2004. As a result, no substantial economic impacts are expected in 2004 from rolling over the 2003 specification of 10,000 mt for JVP.

The Council also evaluated a JVP alternative of 5,000 mt for the 2003 specifications. Any decreases in JVP could have a negative impact on revenues earned in aggregate by the herring fleet. Profits would be calculated by deducting the costs of participating in the JVP from revenues earned by selling over-the-side to foreign vessels. Assuming that optimal profits would be gained by participating in the JVP, the economic benefit of the JVP would have to take into account opportunity costs in the form of profits that could be earned in delivering herring to shoreside processors or participating in another fishery. Therefore, the calculation of economic value of the JVP to U.S. vessels requires a comparison of JVP and other alternatives. Though uncertain as to the economic impact to shoreside processors from reduction in JVP, it is likely that shoreside processors would benefit if they could utilize any portion of a 5,000 mt reduction in JVP. Another, perhaps more important outcome of a reduction in JVP would be increased

market opportunities for shoreside processors. Testimony from a major shoreside processor suggests that U.S.-produced herring could replace sales of foreign JVP vessels in certain markets. This would put JVP-caught fish in direct competition with U.S. herring produced shoreside, and a reduction in competition would benefit U.S. shoreside processors. The Council recommends that JVP operations be conducted in both Areas 2 and 3.

The Council recommends maintaining a TALFF of zero. The Council is aware that there are minimal losses to the nation from the loss of poundage fees collected from foreign vessels. As discussed in the 2002 EA/RIR/FRFA, the Council noted that expanding U.S. processing capabilities are expected to result in increasing harvest by the U.S. fishery. The recommendation reflects the concern that fish caught under a TALFF allocation could compete directly with U.S. caught and processed herring in overseas markets, thus, producing a negative economic impact to herring vessels by reducing revenues either through lower prices, lower quantities demanded, or both. However, other than poundage fees, the economic benefits of TALFF would be indirect, e.g. increased JVP opportunities or economic benefits of goodwill since TALFF produces no revenues for U.S. entities. The indirect benefits of TALFF would be offset by the direct impact such activity might have on the competitiveness of U.S.-exported herring in world markets. Therefore, despite the reduction in economic gain for the Nation that could result by specifying TALFF at zero, the Council continues to believe the potential long-term benefits for U.S. Atlantic herring processors outweigh that loss. The Council remains concerned that the competition that TALFF represents to U.S. processors will impede future expansion of domestic processing facilities. This loss could far outweigh the short-term gains to the Nation that poundage fees collected through TALFF represent.

About 6,132 mt of the 10,000 mt allocation of IWP was utilized in 2002. The Atlantic States Marine Fisheries Commission (ASMFC) approved a 5,000 mt allocation of IWP to Rhode Island for the 2003 fishing year, although it is not anticipated that all of this allocation will be taken. Some limited IWP activity for herring has occurred in Rhode Island in 2003, mostly through low levels of incidental catch while vessels target mackerel for IWP. The ASMFC has already approved a similar 5,000 mt allocation for Rhode Island during the 2004 fishing year as well. However, there is no indication at this time that demand for the IWP allocation will increase in 2004. As a result, no significant economic impacts are expected in 2004 from rolling over the 2003 specifications for IWP.

Area TACs

The 2003 EA/RIR/IRFA concluded that an increase in the Area 3 TAC from 50,000 to 60,000 mt, and concomitant decrease in the Area 2 TAC reserve from 80,000 to 70,000 mt, would have a potentially positive economic impact on vessels. Harvest from Area 2 totaled 10,866 mt in 2002, well below the 50,000 mt TAC and 80,000 TAC reserve for that Area. Landings from Area 3 totaled only 14,063 in 2002, a substantial decrease of 20,477 mt from the 2001 Area 3 harvest. As of October 4, 2003, 16,364 mt have been landed from Area 3. This suggests that the expansion of harvest in Area 3 is an uneven process, and it is unlikely that the 2004 Area 3 TAC of 60,000 mt would come under pressure in the near future even if shoreside processors are able to expand markets and processing capacity. The reduction in TAC reserve approved in Area 2 for the 2003 specifications and carried over in these specifications will have no economic impact since the difference between the total Area 2 allocation (50,000 TAC + 70,000 reserve) and actual landings (10,866 mt) is so large. Therefore, the rollover of 2003 specifications should allow vessels to continue to expand into Areas 2 and 3, resulting in economic gains for individual vessels. The Area 1A and 1B TACs of 60,000 and 10,000 mt, respectively, remained unchanged since the 2000 fishery. These specifications were initially analyzed in the 2001 EA/RIR/IRFA document. In 2002, the Area 1A TAC for the directed herring fishery was fully utilized and is expected to be fully utilized for the 2004 fishery.

In 2002, the Period 1 fishery in Area 1A (January - May) closed on April 26, 2002, and the Period 2 fishery (June - December) closed on December 1, 2002. The 2002 fishing year was the first year that the Period 1 and 2 TAC system was implemented (Framework 1). In 2003, only about one half of the 6,000 mt Period 1 TAC was taken, so no closure was necessary. Two possible explanations exist: (1) the abnormally cold winter in 2002/2003 affected the availability of fish in the inshore GOM from January – May, and/or (2) the states implemented days out of the fishery earlier in the season than they had in 2002 to slow the fishery in this area and prevent an early closure. In 2001, when there was one Area 1A season, the season ended on November 10, 2001. In 2000, it ended on October 28, 2000.

Availability of fish, market conditions, fleet size, days out, and the implementation of Framework 1 are all possible factors that may have contributed to keeping both fishing periods in Area 1A open for 83% of the 2002 season and Period 1 open for the entire season in 2003 (Period 2 is currently underway). It is not expected that any of the factors will significantly change in 2004 and lead to seasons shorter than what was experience in the recent past. Therefore, no change is expected in profitability of vessels from the 2004 Area 1A specification. Since only 7,416 mt of herring were harvested in Area 1B in 2002, the proposed 2004 specification of 10,000 mt should allow for increased economic benefits to individual vessels prosecuting the 2004 specification.

Impacts of USAP

Since the allocation of 20,000 mt to USAP has never been utilized, continuing to keep it at 20,000 mt in 2004 (or to keep it as a separate category) will not result in economic impacts in the short-term. The long-term implication of keeping USAP as a separate specification that gets an allocation, even though the allocation has never been utilized, is that it discourages investment in a form of processing that may be better able to respond to changing market and stock conditions, and it may have encouraged investment in more permanent onshore processing capacity.

The Council recommendation continues the prohibition on USAP vessels recovering from Area 1A and 1B. Landings from Area 1A and 1B in 2002 neared the total TAC for the area. The Council, in 2003, was concerned that future USAP activity, if allowed in these areas, would have a negative impact on firms that have historically harvested Area 1 fish for sale to shoreside processors. If the TACs were attained, harvesting vessels that sell their catch to shoreside processors would have to fish further offshore, increasing their operating costs and potentially reducing their profitability. The economic impact on USAP vessels from the prohibition on receiving fish harvested in Areas 1A and 1B cannot be directly measured since there is no history of over-the-side purchases upon which to base economic impacts.

The Council, in its 2003 EA/RIR/IRFA document, considered a Committee recommendation to reduce USAP by 5,000 mt, but rejected it based on comments that a vessel may enter the fishery in 2003 that could fully utilize the 20,000 mt specification. The reduction of the specification to 15,000 mt would reduce potential profits of USAP operations when compared to the status quo specification of 20,000 mt, although as yet, no part of USAP has been utilized.

3.3 Social Impacts

This section updates Section 5.3 of the attached EA for the 2003 Atlantic herring specifications.

The social impacts of rolling over the 2003 specifications through the 2004 fishing year are not expected to be significant, nor are they expected to be different than those discussed in the EA for the 2003 specifications (Attachment 1).

3.4 CUMULATIVE EFFECTS

Cumulative effects result from the proposed action's incremental impacts when these impacts are added to the impacts of other past, present, and reasonably foreseeable future actions. These impacts can result from individually minor but collectively significant actions taking place over a period of time. This assessment is based on the eight principles of cumulative effects analysis from the Council on Environmental Quality's (CEQ) 1997 handbook entitled, *Considering Cumulative Effects Under the National Environmental Policy Act*.

3.4.1 Cumulative Effects on the Herring Fishery

Cumulative effects, as they relate to Atlantic herring, are generally reflected in the present status of the herring resource, the biological impacts of the proposed action, and the management program implemented in the Atlantic Herring FMP. The Atlantic Herring FMP was intended to:

achieve, on a continuing basis, the optimum yield from the herring fishery; provide for the orderly development of the offshore and inshore herring fisheries, taking into account the viability of current participants in the fishery; and provide controlled opportunities for fishermen and vessels in other Mid-Atlantic and New England fisheries. The effects of the proposed rollover are not expected to jeopardize the objectives of the Atlantic Herring FMP. The rollover still allows for orderly development of the fishery and controlled opportunities for all fishermen and vessels in the region.

The direct effects of the proposed rollover on the Atlantic herring resource are discussed in Section 3.0 of this document and Section 5.1 of the EA for the 2003 specifications (Attachment 1). The proposed action is not expected to have any significant negative impacts on the Atlantic herring resource. From the perspective of cumulative effects, rolling over the specifications for the 2004 fishing year equates to maintaining the status quo, and the cumulative effects of this action are negligible.

Future actions for Atlantic herring will build on the proposed action as well as past actions for herring. Foreseeable future actions include measures that may be adopted in Amendment 1 to the Herring FMP, currently under development. It is likely that a limited access program for the herring fishery will be developed in this amendment; this limited access program may or may not apply to all management areas for Atlantic herring. A comprehensive cumulative effects analysis will be included in the EIS for Amendment 1.

Cumulative effects may result from the indirect effects of management measures in other fisheries on the Atlantic herring resource, but these effects are difficult to predict at this time. The most likely indirect effect of future management measures in other fisheries is increased participation in the herring fishery. Allocated multispecies days-at-sea (DAS) were reduced in an interim action resulting from the Framework 33 lawsuit and may be reduced again in Amendment 13 to the Northeast Multispecies FMP, currently under development and scheduled for implementation on May 1, 2004. DAS allocations for many vessels may become so low that groundfishing is no longer a viable option for these vessels. Because herring is an open access fishery, it is likely that some of these vessels will direct more effort towards herring. While these effects are difficult to predict, there are two reasons why they are not expected to be significant:

- (1) Herring is managed through the use of area TACs, which control the total amount of herring that can be harvested annually. When the TAC in an area is reached, the fishery in that area closes. While an increase in the number of vessels that participate in the herring fishery may affect the efficiency of the fishery and result in other impacts, the TACs will continue to prevent overfishing of the resource.
- (2) The herring fishery is a market-controlled, high-volume fishery that requires a significant investment expense to enter. To effectively participate in the herring fishery, vessels must be relatively large and must be rigged to operate herring gear. Midwater trawls are very expensive, and operating purse seines is labor-intensive and requires a relatively large crew. The large size of the vessels is necessary to hold an adequate amount of fish to make the operation viable and to maintain safe operations at sea, especially in offshore areas. Entering the herring fishery is not as simple as re-rigging some groundfish trawl gear. While some multispecies vessels may have the capacity and capital to enter the herring fishery, it is not

expected that there will be a significant increase in effort in the herring fishery as a result of pending reductions in multispecies fishing opportunities.

In addition to the multispecies fishery, management measures in other fisheries may indirectly affect the herring resource. These fisheries include, among others, lobster, and squid, mackerel, and butterfish. The lobster fishery affects herring through changes in the demand for lobster bait. The squid, mackerel, and butterfish fishery affects herring because mackerel and herring are sometimes caught in combination with each other, especially in the southern New England and Mid-Atlantic regions. Many vessels that target mostly herring also catch mackerel seasonally, and the same is true for vessels that target mostly mackerel. There is no expectation that measures in these fisheries will change in 2004 to the extent that significant cumulative effects on herring will result.

The Council may address some of these potential effects through the development of Amendment 1 to the Herring FMP. For example, as previously noted, a limited access program for the herring fishery may be implemented through Amendment 1. This would eliminate the potential for indirect effects to result from effort shifts from other fisheries and new entrants into the herring fishery. Other effects on the herring resource may be addressed through the development of new effort controls in the fishery. Again, a comprehensive assessment of cumulative effects will be prepared as part of the EIS for Amendment 1.

3.4.2 Cumulative Effects on Other Fishery Resources

The indirect effects of the proposed action on other fishery resources are discussed in Section 5.1 of the EA for the 2003 specifications (Attachment 1). The area TACs for the herring fishery are taken almost exclusively by “directed” vessels that use either purse seine or midwater trawl (including pair trawl) gear. The EA for the 2003 specifications notes that available information suggests that the directed herring fisheries are relatively “clean” fisheries in that there is limited documented bycatch of other species when vessels are targeting herring. Again, the proposed rollover equates to maintaining the status quo, so indirect and cumulative effects on other fishery resources are expected to be negligible.

3.4.3 Cumulative Effects on Habitat

Impacts of rolling over the 2003 specifications on habitat are not expected to be different than those discussed in the EA for the 2003 specifications (Attachment 1). Section 5.4 of the attached EA should be referenced for an assessment of the impacts of the proposed action on habitat. Because the proposed action equates to maintaining the status quo, no additional cumulative effects on habitat are expected.

3.4.4 Cumulative Effects on Protected Species

Impacts of rolling over the 2003 specifications on protected species (marine mammals and endangered species) are not expected to be different than those discussed in the EA for the 2003 specifications (Attachment 1). Section 5.5 of the attached EA should be referenced for an assessment of the impacts of the proposed action on protected species. Because the proposed

action equates to maintaining the status quo, no additional cumulative effects on habitat are expected.

3.4.5 Conclusions

This action builds on actions taken in both the Atlantic Herring FMP and the annual specification process for the 2003 fishing year. Based on the information and analyses presented in these documents, the 2001 SAFE Report for Atlantic Herring, and this document, there are no significant cumulative effects associated with the proposal to rollover the 2003 specifications through the 2004 fishing year.

3.5 OTHER IMPACTS

Impacts of rolling over the 2003 specifications on habitat and protected species (marine mammals and endangered species) are not expected to be different than those discussed in the EA for the 2003 specifications (Attachment 1). Section 5.4 of the attached EA should be referenced for an assessment of the impacts of the proposed action on habitat. Section 5.5 of the attached EA should be referenced for an assessment of the impacts of the proposed action on protected species.

4.0 FINDING OF NO SIGNIFICANT IMPACTS (FONSI)

This section updates Section 6.2 of the attached EA for the 2003 Atlantic herring specifications.

NOAA Administrative Order 216-6 provides guidance for the determination of significance of the impacts resulting from the management measures contained in fishery management plans, their amendments, and framework adjustments. The nine criteria to be considered are addressed below:

1. Can the proposed action be reasonably expected to jeopardize the sustainability of any target species that may be affected by the action?

The proposed action is not expected to jeopardize the sustainability of the target species affected by this action – Atlantic herring. The impacts of the proposed action on the Atlantic herring resource are discussed in Section 3.0 of this document. In addition, an assessment of the biological impacts of the 2003 specifications is presented in Section 5.1 of the EA for the 2003 specifications (Attachment 1). The herring resource is healthy at this time, and the proposed action is therefore biologically sound.

2. Can the proposed action be reasonably expected to jeopardize the sustainability of any non-target species?

The proposed action is not expected to jeopardize the sustainability of any non-target species. The EA for the 2003 specifications (Attachment 1) states that available information suggests that the directed herring fishery is a relatively clean fishery, with limited documented bycatch of other species. Since this action proposes to maintain the status quo in 2004, there is no expectation that impacts on non-target species will be any different than those expected in 2003.

3. *Can the proposed action be reasonably expected to allow substantial damage to the ocean and coastal habitats and/or EFH as defined under the Magnuson-Stevens Act and identified in FMPs?*

Impacts of the specifications on ocean and coastal habitats and/or EFH were assessed in Section 5.4 of the EA for the 2003 specifications (Attachment 1) and apply to the proposed rollover for 2004. This action is not expected to allow substantial damage to the ocean and coastal habitats and/or EFH as defined under the Magnuson-Stevens Act and identified in the FMP. In general, EFH that occurs in areas where the fishery occurs is designated as the bottom habitats consisting of varying substrates (depending upon species) within the Gulf of Maine, Georges Bank, and the continental shelf off southern New England and the Mid-Atlantic south to Cape Hatteras. The primary gears utilized to harvest Atlantic herring are purse seines and mid-water trawls which typically do not impact bottom habitats. NOAA fisheries concluded that a consultation under the Magnuson-Stevens Act's EFH provisions was not required for the 2003 herring specifications, and the same holds true for the 2004 rollover.

4. *Can the proposed action be reasonably expected to have a substantial adverse impact on public health or safety?*

When developing management measures, the Council usually receives extensive comments from affected members of the public regarding the safety implications of measures under consideration. The proposed rollover is not expected to have substantial adverse impacts on public health or safety. No such impacts were expected from the 2003 specifications, and the Council has received no comments from affected members of the public suggesting that such impacts could be expected from maintaining the status quo through the 2004 fishing year.

5. *Can the proposed action be reasonably expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?*

Impacts of the herring specifications on endangered and threatened species and marine mammals were assessed in Section 5.5 of the EA for the 2003 specifications (Attachment 1) and apply to the proposed rollover for 2004. The proposed rollover is not reasonably expected to have an adverse impact on endangered or threatened species, marine mammals, or critical habitat for these species. The activities to be conducted under the proposed action are within the scope of the FMP and do not change the basis for the determinations made in previous consultations.

6. *Can the proposed action be reasonably expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?*

Cumulative effects related to the proposed action are discussed in Section 3.0 of this document. Because this action equates to maintaining the status quo for the herring fishery through the 2004 fishing year, cumulative effects are not expected to be significant.

7. *Can the proposed action be expected to have a substantial impact on biodiversity and ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships)?*

The proposed rollover is not expected to have a substantial impact on biodiversity and ecosystem function within the affected area. While herring is recognized as one of many important forage fish for marine mammals, other fish, and birds throughout the region, the resource appears to be large enough at this time to accommodate all predators including Atlantic bluefish, Atlantic striped bass, and several other pelagic species such as shark and tunas. The Atlantic herring itself is not known to prey on other species of fish but prefers chaetognaths and euphausiids. The proposed action will likely continue to ensure biodiversity and ecosystem stability over the long-term. A comprehensive assessment of this issue will be included in the EIS for Amendment 1 to the Herring FMP, currently under development.

8. *Are significant social or economic impacts interrelated with significant natural or physical environmental effects?*

A discussion of the impacts of the proposed action is presented in Section 3.0 of this document and Section 5.0 of the EA for the 2003 specifications (Attachment 1). There are no significant social or economic impacts, nor are there any significant natural or physical environmental effects expected to result from the proposed rollover.

9. *To what degree are the effects on the quality of human environment expected to be highly controversial?*

The proposed rollover of the 2003 specifications is not expected to be highly controversial. The vast majority of the affected public has expressed support for this action so that the Council can move forward as quickly as possible with the development of Amendment 1 to the Herring FMP. According to the EA for the 2003 specifications (Attachment 1), the specifications, when established, were not expected to be highly controversial either, for reasons explained in the EA.

FONSI STATEMENT

In view of the analysis presented in this document, the EA/RIR/IRFA for the 2003 specifications, and the EIS for the Atlantic Herring Fishery Management Plan, rolling over the 2003 specifications through the 2004 fishing year will not have a significant effect on the human environment, with specific reference to the criteria contained in Section 6.02 of NOAA Administrative Order NAO 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act, May 20, 1999. Accordingly, the preparation of a Supplemental Environmental Impact Statement for the proposed action is not necessary.

Assistant Administrator for Fisheries, NOAA

Date

4.1 LIST OF PREPARERS

This document was prepared by the New England Fishery Management Council and the National Marine Fisheries Service, in consultation with the Atlantic States Marine Fisheries Commission and the Mid-Atlantic Fishery Management Council.

5.0 REGULATORY IMPACT REVIEW AND INITIAL REGULATORY FLEXIBILITY ANALYSIS

This section provides the analysis and conclusions to address the requirements of Executive Order 12866 and the Regulatory Flexibility Act (RFA). Since many of the requirements of these mandates duplicate those required under the Magnuson-Stevens Act and NEPA, this section contains references to other appropriate sections of this document. The following sections provide the basis for concluding that the proposed action is not significant under E.O. 12866 and will not have a significant economic impact on a substantial number of small entities under the RFA.

5.1 REGULATORY IMPACT REVIEW (E.O. 12866)

This section contains the required elements for determination of whether the proposed action is significant under E.O. 12866.

5.1.1 Description of management objectives

The goals and objectives of the management plan are stated on Section 2.3 of the Atlantic Herring FMP. The proposed action is consistent with, and does not modify those goals and objectives.

5.1.2 Description of the fishery

Section 4.0 of the FMP contains a detailed description of the fishery. Section 2.0 of this document contains an updated description of the fishery using the best and most current data available.

5.1.3 Statement of the problem

The purpose and need for this action is described in Section 1.1 of this document.

5.1.4 Description of the alternatives

The 2003 EA/RIR/FRFA and Section 3.0 of this document contains a description of the alternatives considered.

5.1.5 Economic analysis

The 2003 EA/RIR/FRFA and Section 3.0 of this document contain the economic analysis of the proposed action and alternatives.

5.1.6 Determination of significance under E.O. 12866

NMFS Guidelines provide criteria to be used to evaluate whether a proposed action is significant. A significant regulatory action means any regulatory action that is likely to result in a rule that may:

1. Have an annual effect on the economy of \$100 million or more, or adversely effect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities.

The proposed action will not have an effect on the economy in excess of \$100 million. The proposed action is not expected to have any adverse impacts on the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local or tribal governments or communities.

2. Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency.

The proposed action will not create a serious inconsistency with or otherwise interfere with an action taken or planned by another agency. No other agency has indicated that it plans an action that will affect the Atlantic herring fishery in the EEZ.

3. Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof.

The proposed action will not materially alter the budgetary impact of entitlements, grants, user fees or loan programs, or the rights and obligations of their participants.

4. Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

The proposed action does not raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in E.O. 12866.

5.2 INITIAL REGULATORY FLEXIBILITY ANALYSIS

The following sections contain analyses of the effect of the proposed action on small entities. Under '603(b) of the RFA, each final regulatory flexibility analysis is required to address:

1. reasons why the agency is considering the action
2. the objectives and legal basis for the proposed rule
3. the kind and number of small entities to which the proposed rule will apply
4. the projected reporting, record-keeping and other compliance requirements of the proposed rule, and
5. all Federal rules that may duplicate, overlap or conflict with the proposed rule.

5.2.1 Reasons for considering the action

The purpose and need for this action to implement annual specifications for the herring fishery is described in Section 1.1 of this document.

5.2.2 Objectives and legal basis for the action

The objective of the proposed rule is to implement specifications for the 2004 Atlantic herring fishery, as required under the regulations implementing the Atlantic Herring FMP, found at 50 CFR 648.

5.2.3 Description and number of small entities to which the rule applies

All of the affected businesses (fishing vessels) are considered small entities under the standards described in NOAA Fisheries guidelines because they have gross receipts that do not exceed \$3.5 million annually. There were 140 vessels, 37 of which averaged more than 2000 lb of herring per trip.

5.2.4 Recordkeeping and Reporting Requirements

The action does not introduce any new reporting, record-keeping or other compliance requirements.

5.2.5 Duplication, overlap or conflict with other Federal rules

The proposed rule does not duplicate, overlap or conflict with any other Federal rules.

5.2.6 Economic impacts on small entities resulting from the proposed action

Section 3.0 of this document contains the economic analysis of the proposed action and alternatives. None of the alternatives are expected to produce a negative economic impact to vessels prosecuting the fishery. To measure the economic impact to vessels in 2004 resulting from a rollover of the 2003 specifications, analysts compared 2002 harvest levels to proposed 2004 specifications. Landings from 2002 were used as a baseline because it was the last year in which a full set of annual data could be compiled. Results of the analysis indicated that substantially positive economic benefits would accrue to the fishery as a whole and to individual vessels prosecuting the fishery if the 2003 specifications were rolled over. There were no significant alternatives identified that would increase economic benefits to vessels participating in the herring fishery. The proposed 2004 specifications should allow for incremental growth in the industry, while taking into consideration biological uncertainty.

The specification of 250,000 mt for OY and DAH was approved for the 2003 fishery and is recommended for the 2004 fishery. At this level, there could be an increase of up to 158,169 mt in herring landings or \$22,618,167 in revenue based on a market price of \$143/mt. This would allow individual vessels to increase their profitability under the 2004 specifications. For the 2003 specifications, the Council also considered OY alternatives of 300,000 and >1,000,000 mt. At these OY levels there would be increased potential revenues to a greater extent than the proposed 2004 alternative of 250,000 mt. In addition, at these levels there could be risks to the health of the herring stock. An additional alternative for DAH of 230,000 mt would also increase potential profits for the herring fleet although not to the extent of the proposed DAH.

Based on the proposed 2004 DAP specification of 226,000 mt, there could be an increase of up to 134,169 mt in herring landings or \$19,186,167 in revenue based on \$143/mt. Revenues to the fleet would also increase under the Council's proposed 2003 DAP alternatives of 236,000 mt and 176,000 mt would apply to any alternative greater than 91,831 mt, the total harvest for the 2002 fishery. However, the magnitude of economic impact of the DAP will rely on the processing sector's ability to expand markets and increase capacity to handle larger amounts of herring in 2004.

Overall, if the full amount of the JVP (10,000 mt) is harvested, revenues to the participating U.S. vessels would approximate \$1.4 million, based on an average price of \$143/mt. Very little of the 10,000 mt JVP allocation was utilized in 2002, and the JVP allocation in 2003 is not expected to be fully utilized. As of June 2003, no JVP activity for herring has occurred during the 2003 fishing year. There is no indication at this time that demand for the JVP allocation will increase in 2004. As a result, no substantial economic impacts are expected in 2004 from rolling over the 2003 specification of 10,000 mt for JVP. The Council also considered a JVP alternative of 5,000 mt for the 2003 specifications. This would also yield economic benefits since landings for the 2002 fishery did not approach 5,000 mt. However, potential benefits would be far less than those estimated for a 10,000 mt JVP.

Approximately 6,132 mt of the 10,000 mt allocation of IWP was utilized in 2002. There is no indication at this time that demand for the IWP allocation will increase in 2004. As a result, no significant economic impacts are expected in 2004 from continuing the 2003 specifications for IWP.

The rollover of 2003 specifications should allow vessels to continue to expand into Areas 2 and 3, resulting in economic gains for individual vessels. The Area 1A and 1B TACs of 60,000 and 10,000 mt, respectively, remained unchanged since the 2000 fishery. In 2002, the Area 1A TAC for the directed herring fishery was fully utilized and is expected to be fully utilized for the 2004 fishery. Therefore, no change is expected in profitability of vessels from the 2004 Area 1A specification. Since only 7,416 mt of herring were harvested in Area 1B in 2002, the proposed 2004 specification of 10,000 mt should allow for increased economic benefits to individual vessels prosecuting the 2004 specification.

Since the allocation of 20,000 mt to USAP has never been utilized, continuing to keep it at 20,000 mt in 2004 (or to keep it as a separate category) will not result in economic impacts in the short-term. The long-term implication of keeping USAP as a separate specification that gets an allocation, even though the allocation has never been utilized, is that it discourages investment in a form of processing that may be better able to respond to changing market and stock conditions, and it may have encouraged investment in more permanent onshore processing capacity. The Council, in its 2003 EA/RIR/IRFA document, considered a Committee recommendation to reduce USAP by 5,000 mt, but rejected it based on comments that a vessel may enter the fishery in 2003 that could fully utilize the 20,000 mt specification. The reduction of the specification to 15,000 mt would reduce potential profits of USAP operations when compared to the status quo specification of 20,000 mt, although as yet, no part of USAP has been utilized.