

# North Carolina River Herring Plan

## Introduction

The North Carolina Marine Fisheries Commission and the North Carolina Wildlife Resources Commission approved and adopted the North Carolina – Amendment 1 – River Herring Fishery Management Plan (FMP) in September 2007. The goal of the FMP is to restore and manage river herring (blueback herring and alewife) in North Carolina in a manner that is biologically, economically, and socially sound while protecting the resource, the habitat, and its users. The status of both species as indicated in the FMP is overfished and overfishing was occurring.

## Definition of Management Unit

The management unit includes the two species of river herring (blueback herring, *Alosa aestivalis*, and alewife, *A. pseudoharengus*) and their fisheries throughout coastal North Carolina.

The management areas are defined as follows:

The Albemarle Sound River Herring Management Area (ASRHMA)- Albemarle Sound and all its Coastal, Joint and Inland water tributaries; Currituck Sound; Roanoke and Croatan sounds and all their Coastal, Joint and Inland water tributaries, including Oregon Inlet, north of a line from Roanoke Marshes Point 35° 48.3693' N - 75° 43.7232' W across to the north point of Eagles Nest Bay 35° 44.1710' N - 75° 31.0520' W (Figure 1).

The Chowan River Herring Management Area (CRHMA)- Northwest of a line from Black Walnut Point 35° 59.9267' N - 76° 41.0313' W to Reedy Point 36° 02.2140' N - 76° 39.3240' W, to the North Carolina/Virginia state line; including the Meherrin River (Figure 1).

River herring are distributed throughout the coastal waters of North Carolina, ascending many streams to their headwaters or until blocked by dams or other obstructions. As shown in Table 1, they have been harvested historically from virtually all coastal streams. Over the last 30 – 35 years; however, the fisheries have been overwhelmingly concentrated in the Albemarle Sound area. In addition, historical landings data indicate that the river herring fisheries have always been concentrated in the Albemarle Sound area, with minor fisheries in other coastal streams (NCDMF 2007). The DMF has conducted spawning and nursery area surveys and some age composition work for most of the coastal streams outside the Albemarle Sound area, but this work ended 15 – 23 years ago, varying with area, as federal aid funds were decreased. Current data, other than landings data, simply do not exist for river herring outside the Albemarle Sound area. Finally, significant fishery management issues are well documented for the Albemarle Sound area, but not for other areas. For the reasons provided above, this FMP will primarily focus on the Albemarle Sound area and secondarily on the other areas of the state.

## **Current Regulations**

As a result of the FMP, a zero harvest of river herring was implemented in 2007 statewide but up to 7,500 pounds set aside for research in the Albemarle Sound area at the Division Director's discretion and coupled with gear restrictions.

During the week of Easter the river herring season is open in the Chowan River Herring Management Area for four days. Fishermen who wish to participate in the fishery must obtain a permit from the Division. The harvest allocation for the season is set at 4,000 pounds and a season limit per permit holder is established (125 – 250 pounds). River herring can be harvested from pound nets or gill nets (3 inch stretched mesh and not exceed 100 yards in length). Permit holders are to sell to fish dealers who hold a valid River Herring Dealers Permit. The dealers must report to the Division daily on pounds purchased.

## **Landings**

Since the discretionary harvest season in the CRHMA has been in effect a maximum of 20 permits have been issued for the limited season and a maximum of 13 permits used. The harvest for the limited season has averaged less than 1,200 pounds annually.

## **Fishery Dependent Sampling**

The Division staff sample the limited harvest and collect size, age and sex data by species. The data collected are reported in the annual compliance reports.

## **Fishery Independent Sampling**

The Division is continuing to conduct spawning area surveys in the Albemarle area, collect biological data on alewife and blueback herring from pound nets in the Chowan River, and conduct juvenile survey program throughout the Albemarle area.

## **Fisheries in North Carolina**

The recreational and commercial harvest of river herring in North Carolina will remain closed, except for the discretionary season in the CRHMA. The discretionary season will continue to be limited to four days, with a season cap of 4,000 pounds, fishermen must have a valid permit to participate, season limit will not exceed 250 pounds per permit holder, gear restrictions will be in place, fish dealers must have a valid River Herring Dealer Permit and report landings daily during the open season. Staff will sample harvest for size, age and sex composition data.

Table 1. River herring landings and value by waterbody in North Carolina, 1962-2006.

Year	Albemarle Sound		Croatan Sound		Currituck Sound		Chowan River		Roanoke River		Trib. To Albemarle S.		Pamlico Sound	
	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)
1962	3,262,600	32,626	20,000	200	25,000	250	10,786,000	107,860	122,000	1,220	6,600	66	16,200	162
1963	2,366,100	23,661	25,000	250	40,400	404	12,288,400	122,884	300,000	3,000	23,100	231	16,900	169
1964	1,920,500	19,205	35,000	350	22,300	223	4,948,900	50,760	565,000	5,650	26,800	268		
1965	1,827,700	19,976	15,000	150	10,000	100	10,944,200	112,080			12,000	120	3,200	33
1966	1,274,200	13,916			1,000	20	10,911,300	116,597	256,300	2,566	41,400	498	18,700	391
1967	322,100	5,427	5,000	50	11,700	121	18,016,100	309,992	38,000	746	27,700	475	33,900	467
1968	1,067,200	16,824	3,300	35	10,000	150	12,950,100	194,881	1,306,300	19,771	34,000	593	75,600	933
1969	769,000	13,415	19,300	193	12,000	180	17,536,100	266,614	1,286,100	19,293	10,200	181	2,000	20
1970	217,600	3,263			1,000	20	10,701,300	173,541	469,400	14,270	65,100	1,118		
1971	553,500	9,088					10,426,000	166,339	1,670,500	26,062	61,700	1,396	1,000	25
1972	297,551	6,480	2,670	53			10,594,117	182,052	335,488	7,393	7,317	167		
1973	472,153	13,327	4,590	137			7,350,578	196,212	92,056	3,571	5,132	216	149	7
1974	150,490	5,748			7,554	288	5,736,905	224,074	256,110	13,588	53,838	2,682		
1975	597,440	28,659					5,031,756	168,847	230,433	14,485	89,850	3,374		
1976	356,123	21,304			4,150	415	5,734,776	286,830	300,100	27,775	6,211	426		
1977	828,679	38,247					7,418,218	360,962	252,700	21,232	20,746	895	490	29
1978	491,372	24,688			3,950	208	5,615,113	239,227	383,199	15,328	76,418	5,454	30,697	1,465
1979	466,389	32,741	3,000	120	2,900	128	4,303,663	260,229	209,950	12,258	45,392	2,695	2,894	216
1980	680,476	51,882	*	*	4,850	420	5,382,954	379,206	71,773	6,911	20,323	1,615	5,263	527
1981	1,050,871	87,524	*	*	2,585	225	3,314,447	202,814	155,860	13,118	17,432	1,416	39,774	3,627
1982	1,558,873	144,751	*	*	22,787	2,597	7,459,968	515,545	240,540	25,725	49,956	4,629	4,565	429
1983	1,190,909	118,887	110,576	10,732	39,255	3,614	4,405,915	313,747	92,200	14,415	20,093	1,812	5,471	639
1984	1,791,289	193,857	*	*	9,100	1,258	4,561,503	382,919	65,672	8,495	49,815	5,315	*	*
1985	2,296,010	177,908	*	*	*	*	8,871,391	635,190	204,750	20,826	*	*	4,190	499
1986	689,297	94,764	*	*			5,767,874	517,945	244,994	26,519	14,860	1,937	3,780	424
1987	705,585	85,153	*	*			2,334,719	265,640	*	*	*	*		
1988	1,490,413	178,848	*	*			2,259,888	271,186	*	*	20,250	2,430	*	*
1989	554,878	69,157					908,145	110,795	*	*	*	*	*	*
1990	365,881	56,047	*	*			710,849	106,635	*	*	60,037	9,065	1,505	166
1991	352,458	28,361	*	*			1,202,535	87,799	*	*	*	*		
1992	217,918	22,161	*	*			1,135,340	113,655	255,772	25,578	*	*		
1993	111,749	10,308			117	15	801,115	56,806			*	*	25	3
1994	180,271	33,348	729	73	1,357	136	390,852	44,017	*	*	29,015	18,428	1,000	245
1995	97,137	34,277	1,723	344	640	160	280,681	73,482	2,858	715	47,723	20,111	3,923	1,022
1996	104,166	34,311	4,708	2,139	114	28	404,884	82,129	2,176	1,675	12,562	12,039	625	155
1997	109,876	46,927	9,436	5,321	159	59	201,928	67,454	*	*	4,766	5,075	518	302
1998	115,436	46,814	16,831	13,815	157	62	377,311	135,901	*	*	10,338	6,555	601	399
1999	85,086	33,928	21,101	22,884	98	35	332,466	119,247	*	*	3,305	3,167	280	100
2000	88,903	28,646	36,539	23,261	893	262	184,741	57,272	337	450	11,945	4,144	8,120	12,906
2001	49,678	21,081	24,085	9,159	1,485	632	201,717	76,707	*	*	14,162	6,244	15,172	5,992
2002	39,251	14,681	16,569	6,099	136	51	93,048	34,587	*	*	19,650	7,486	4,676	1,683
2003	67,175	29,631	6,552	4,039	1,535	675	84,591	37,220			23,178	10,203	15,100	6,865
2004	73,092	31,651	15,248	6,566	1,297	558	77,177	33,186	*	*	13,698	5,890	3,529	1,517
2005	63,350	32,515	17,495	8,944	*	*	157,087	81,196	*	*	11,844	6,055	*	*
2006	22,573		9,633		288		67,404		*	*	5,670		*	*

Table 1 (Continued)												
	Pamlico River		Neuse River		Cape Fear River		Atlantic Ocean		Other Areas		State Total	
Year	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)
1962	61,100	611	2,000	20	100	1			800	8	14,302,400	143,024
1963	27,700	277	4,000	40	4,500	45			3,500	35	15,099,600	150,996
1964	33,500	335	8,200	82	700	7					7,560,900	76,880
1965	13,400	139			300	3					12,825,800	132,601
1966	15,500	262	500	5	400	6					12,519,300	134,261
1967	30,300	425			300	4			900	9	18,486,000	317,716
1968	4,500	55	200	9	200	8			73,500	1,410	15,524,900	234,669
1969	1,500	56							125,500	3,765	19,761,700	303,717
1970	200	11			1,100	23			65,700	1,510	11,521,400	193,756
1971	100	2	400	10	1,200	50			7,500	150	12,721,900	203,122
1972											11,237,143	196,145
1973			1,240	49							7,925,898	213,519
1974	3,995	340	650	33							6,209,542	246,753
1975	250	15					2,338	121			5,952,067	215,501
1976											6,401,360	336,750
1977	2,980	238									8,523,813	421,603
1978	5,200	260			704	50			500	25	6,607,153	286,705
1979	64,444	3,397	1,130	56			19,388	1,939			5,119,150	313,779
1980	32,609	2,110					*	*	20,275	1,656	6,218,523	444,327
1981	10,049	1,482	*	*			143,232	5,252	*	*	4,753,723	316,850
1982	12,556	1,864	*	*			7,679	726	80,779	8,333	9,437,703	704,599
1983	3,813	528							*	*	5,868,332	464,389
1984	11,137	1,280					9,497	843	18,096	2,461	6,516,109	596,428
1985	7,308	731					*	*	164,629	10,752	11,548,278	845,906
1986	3,306	496					*	*	90,212	5,208	6,814,323	647,293
1987	2,288	297					19,279	1,000	133,104	15,972	3,194,975	368,062
1988	1,593	195					*	*	419,067	49,507	4,191,211	502,166
1989	934	105							27,120	3,785	1,491,077	183,842
1990	307	43					*	*	19,046	2,303	1,157,625	174,259
1991									20,385	2,112	1,575,378	118,272
1992							110,794	10,773	3,354	286	1,723,178	172,453
1993	*	*							3,229	362	916,235	67,494
1994	14	1	1,668	167			38,834	3,883	*	*	644,309	100,996
1995	*	*	64	15			19,174	4,793	62	16	453,984	134,934
1996	*	*	103	59			*	*	165	38	529,503	132,573
1997			185	278			5,568	1,949	2,374	1,317	334,809	128,682
1998	56	20	539	189					*	*	521,930	204,706
1999	*	*	*	*					1,158	1,514	443,494	180,874
2000	44	13	*	*			*	*	815	252	332,336	127,206
2001	*	*	45	81			45	17	373	142	306,761	120,053
2002	*	*	*	*			39	15	1,493	1,121	174,860	65,723
2003	*	*	773	464			*	*	814	358	199,716	89,456
2004	*	*	302	226			*	*	4,199	1,805	188,542	81,399
2005	*	*	*	*					245	125	250,021	128,834
2006									1,249		109,243	83,812

\*Confidential landings; incorporated in "Other Areas".

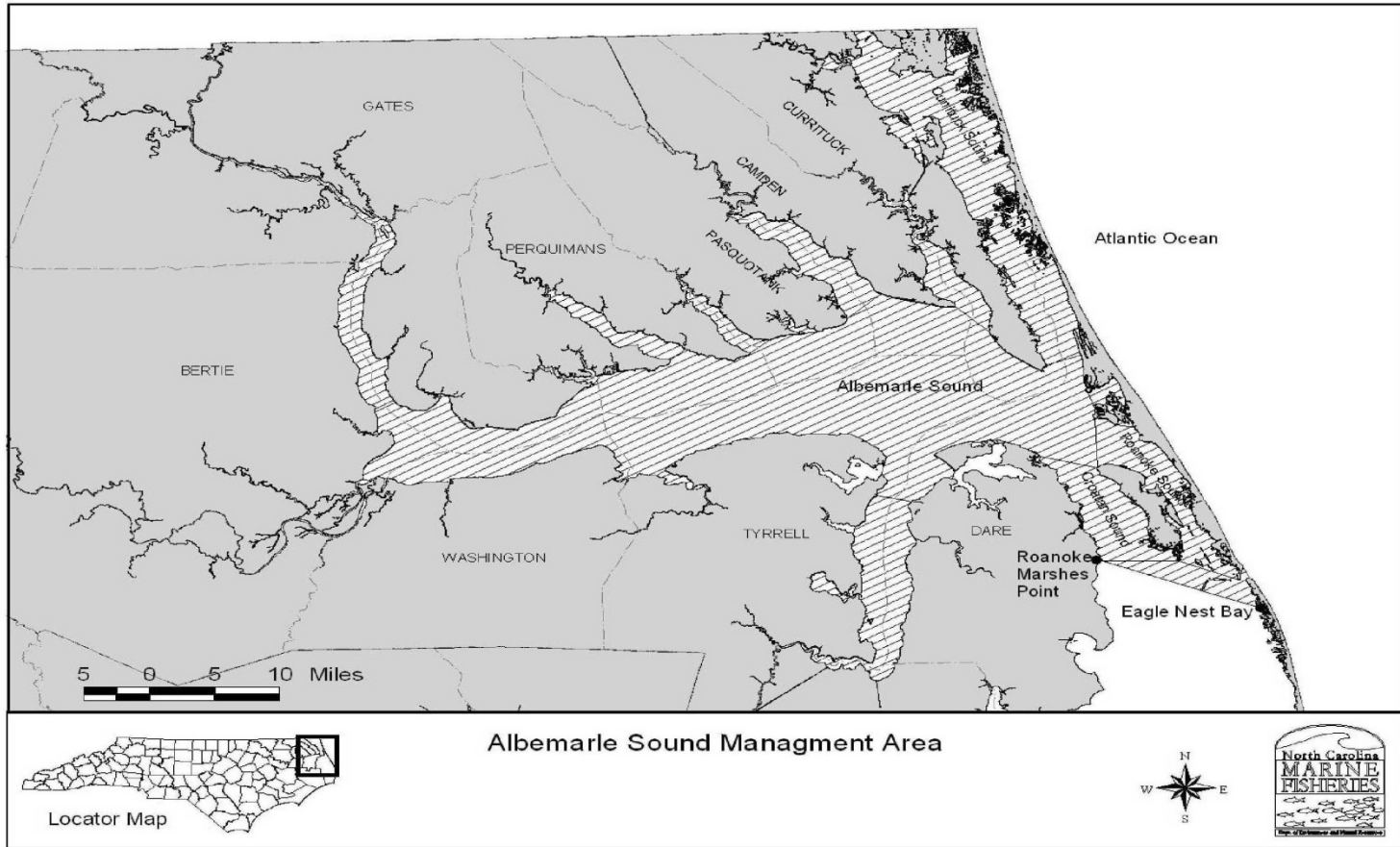


Figure 1. Albemarle Sound and Chowan River river herring management area.

## LITERATURE CITED

North Carolina Division of Marine Fisheries. 2007. North Carolina – Amendment 1 – river herring fishery management plan. NC Division of Marine Fisheries, Morehead City, NC, 310 p.