

SENT VIA EMAIL TO: comments@NEFMC.org

Andrew Gottlieb Executive Director

April 29, 2024

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APCC comments on "Atlantic Herring Amendment 10 Scoping Comments" Re:

Jack Looney

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Dear Dr. O'Keefe:

Bob Ciolek

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The Association to Preserve Cape Cod (APCC) submits the following comments for the New England Fishery Management Council's scoping for Amendment 10 of the Atlantic Herring Fishery Management Plan. We urge the Council to include in its scoping for the proposed Amendment 10 measures to enhance river herring avoidance and other catch reduction measures in order to protect river herring at sea from the effects of overfishing by trawlers. Overfishing at sea is at odds with the decades-long efforts by the restoration community to restore and protect river herring habitat in inland waters and represents a significant user conflict that needs to be addressed by eliminating offshore trawlers from the waters surrounding Cape Cod. Finally, we urge the Council to recognize the restoration community of organizations and agencies as a legitimate user group that is heavily invested in protection, restoration, and monitoring of river herring and their habitat.

Established in 1968, APCC is the Cape Cod, Massachusetts region's leading nonprofit environmental advocacy and education organization, working for the adoption of laws, policies and programs that protect and enhance Cape Cod's natural resources and quality of life (https://apcc.org).

In its consideration of scoping for the proposed Amendment 10, the Council should consider the following:

River herring run size estimates calculated from volunteer herring counts show that Cape Cod herring runs have been declining for years and some runs have nearly disappeared. Time-series plots of run size estimates show that since volunteer counts began, the highest run size estimates have occurred in the past (see Attachment 1, APCC Summary of Cape Cod Herring Counts, 2007-2023

also posted at https://apcc.org/wp-content/uploads/2023/11/Cape-Cod-Herring-Run-Summary-2007-2023-Final.pdf and Attachment 2, APCC, Summary of Cape Cod River Herring Monitoring Program from 2007-2023).

- Declining runs are found on the Cape Cod Bay side as well as Nantucket Sound and the Atlantic Ocean side of the Outer Cape (Attachment 1).
- These two facts—declining runs and their locations on Nantucket Sound and Cape Cod Bay—point to the need to prohibit mid-water fishing trawlers from operating in Area 1 (Gulf of Maine), Area 2 (Southern New England) and Area 3 (east of Cape Cod). All of these areas should have prohibitions on fishing trawlers.
- Avoidance of river herring catch in prohibited zones needs to be confirmed through effective monitoring to ensure there are no loopholes.
- Overfishing at sea directly conflicts with efforts to protect and restore river herring and their habitat in inland waters. Local, state and federal agencies and organizations, including APCC, have for years expended enormous effort and resources to restore herring runs and restore populations. On Cape Cod, millions of dollars have been spent to restore herring runs—and millions more dollars will be spent—because people want to see river herring return and be part of a healthy ecosystem. Many herring run restoration projects have been funded by NOAA, the Massachusetts Division of Marine Fisheries, and other organizations and agencies. As one example of a Cape-wide herring run restoration effort, the Cape Cod Water Resources Restoration Project, approved by Congress in 2010 with the goal of restoring 4,200 acres of river herring spawning habitat, 1,500 acres of impaired salt marsh, and 7,300 acres of shellfish beds, is administered by the USDA Natural Resources Conservation Service and the Cape Cod Conservation District. To date, this program has allocated over \$8.4 million for herring run restoration projects on Cape Cod with corresponding municipal match provided of over \$1.8 million; an additional \$13.8 million is planned for restoration, with municipal match of \$4.4 million (Attachment 3, Cape Cod Conservation District letter dated 4-24-24). These significant investments in restoration—which support a wider economy—should be complemented by protection of river herring at sea, not wasted due to overfishing at sea.
- There is a significant user group that needs to be recognized in scoping: the
 restoration and monitoring community. These include volunteers, agencies, and
 organizations that support and conduct restoration and monitoring activities.
 These include:
 - River herring monitoring groups: On Cape Cod, at least 300+ volunteers in 14 different organizations and groups, supported by municipal staff, conduct herring counts along 18 herring runs located in 12 towns. At least five state and federal agencies partner with APCC and counting 482 Main Street | Dennis, MA 02638



groups. Each year these partners—volunteers, municipal employees, other organizations, and state and federal agencies—work with APCC to conduct herring counts along the Cape's runs. Volunteer herring count groups and APCC's role were recognized by the Massachusetts Division of Marine Fisheries in a 2023 Memo (Attachment 4, "DMF Notice to Volunteer River Herring Counting Groups" also posted at https://apcc.org/wp-content/uploads/2022/03/DMF-Herring-counting-notice-to-groups 03.21.2012.pdf).

- The restoration community consisting of local, regional, state and federal organizations and agencies, which participate in restoration, protection, and management activities in inland waters habitat of river herring. Restoration projects such as the Cape Cod Water Resources Restoration Project were developed and are being implemented by many partners. Local natural resource staff, herring wardens and town committees provide hundreds of hours of volunteer labor each year to maintain runs on Cape Cod.
- Finally, our coastal and freshwater ecosystems, which rely on healthy river
 herring populations, should be regarded as a "user group" of paramount
 importance. River herring are an important food source for many commercially
 and recreationally important fish species and wildlife, including birds and
 mammals, which rely on river herring adults and juveniles as food. Damage to
 this "user group" through overfishing of river herring at sea has cascading
 ecological and economic effects that benefit no one.

Thank you for the opportunity to provide comments.

Sincerely,

Andrew Gottlieb

Executive Director

Jo Ann Muramoto, Ph.D.

Director of Science Programs

Attachments:

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Attachment 1, APCC Summary of Cape Cod Herring Counts, 2007-2023, also posted at https://apcc.org/wp-content/uploads/2023/11/Cape-Cod-Herring-Run-Summary-2007-2023-Final.pdf



Attachment 2, APCC, Summary of Cape Cod River Herring Monitoring Program from 2007-2023).

Attachment 3, Cape Cod Conservation District letter dated 4-24-24.

Attachment 4, "DMF Notice to Volunteer River Herring Counting Groups", also posted at https://apcc.org/wp-content/uploads/2022/03/DMF-Herring-counting-notice-to-groups 03.21.2012.pdf



SUMMARY OF CAPE COD HERRING COUNTS, 2007 - 2023

11/9/23

Compiled by Association to Preserve Cape Cod (APCC) and Massachusetts Bays National Estuary Partnership, Cape Cod Region (MassBays)

Estimated run size based on volunteer counts is calculated by the Massachusetts Division of Marine Fisheries using "Visual Count" software.

Boldface black is highest run size

Key:

NA - not available

					(Volunteer Counts)						Water temperature		Water temperature		Water temperature			
	own irewster	Marine water body Cape Cod Bay	Year 2007	Electronic Counts	# Fish Counted 0 2,588	# of E Observations 437	(Visual Counts) 22,348	Plus/Minus N	Peak 10 Min Count 157	Date of Peak Count 5/14/07	at Peak 10-minute count 20.0	First fish counted 4/22/07	when first fish counted	Date when last fish counted 6/1/07	when last fish counted Peak 23.0	Water Temp \ 25.00	Pate of Peak Water Temp	Towns, Organizations & Partners No. Volunte Town of Brewster
,		.,	2008 2009		1,907 1,002	255 233	25,289 11,062	2,938 1,185	233 95	4/25/08 4/29/09	18.0 18.0	4/17/08 4/16/09	12.0 9.0	5/29/08 5/29/09	20.0 19.0	23.00 21.00		APCC, MassBays
			2010 2011 2012		8,576 3,019 3,050	539 287 174	48,099 37,091 41,028	2,172 1,185 3,047	317 136 225	5/16/10 4/30/11 4/18/12	18.0 17.0 17.0	4/6/10 4/7/11 3/23/12	14.0 10.0 15.0	5/25/10 6/1/11 5/25/12	25.0 21.0 20.0	25.00 25.00 23.00		
			2013 2014		9,732 26,572	177 301	153,262 271,363	32,004 16,516	584 481	4/30/13 5/13/14	18.0 18.0	4/14/13 4/21/14	11.0 14.0	5/26/13 6/7/14	16.0 22.0	28.00 22.00		
			2015 2016 2017		19,462 4,331 879	235 158 141	251,530 88,703 20,328	17,110 15,560 4,706	519 193 55	5/8/15 5/1/16 4/30/17	17.0 13.0 17.0	4/14/15 3/26/16 4/11/17	11.0 13.0 11.0	6/20/15 5/26/16 5/29/17	19.0 23.0 17.0	26.00 23.00 23.00		
			2018 2019 2020	204,389 434,583	10,264 5,494	271 207	131,851 104,135	16,853 23,238	432 363	5/9/18 5/9/19	19.5 18.0	4/24/18 4/5/19	12.5 9.5	6/11/18 6/1/19	18.0 18.5	24.00 20.00		
			2021 2022 2023	86173	971 2,469 12,458	63 247 422	NA 39,839 132,389	5,997	157 364	4/27/22 4/16/23	15.0 17.0	4/9/22 4/6/23	10.5 10.0	6/26/22 6/24/23	20.0 18.0	25.00 25.00	5/17/22 6/1/23	
	hatham	Average: Pleasant Bay	2016	241,715	7,048 570	264	91,888 11,969	13,723	245	5/4/16	12.5	3/26/16	NA	5/21/16	20.0	22.00	0,1,23	Town of Chatham
RC-1)			2017 2018 2019	_	74 3,048 2,877	153 257 226	1,645 31,582 49,919	3,421 15,853 17,686	21 625 207	5/12/17 5/1/18 4/19/19	16.0 13.5 10.0	4/21/17 3/31/18 3/30/19	12.5 NA	5/12/17 5/18/18 5/21/19	16.0 15.0 15.0	23.50 17.00 15.50		APCC, MassBays
		Average:	2020 2021		1,642		23,779											
overs Lake Ch RC-2)	hatham	Pleasant Bay	2016 2017		312	128	7,310	45,646	97	5/11/16	17.0	3/22/16	20.0	5/22/16	19.0	20.00		
			2018 2019 2020		520 16	121 76	2,083 NA	1,439 NA	30 11	4/29/18 5/11/19	NA 10.0	4/28/18 4/16/19	NA 10.0	5/19/18 5/11/19	NA 15.0	16.00 15.00		
Bound Brook De)ennis	Average: Cape Cod Bay	2021		283 1,209	84	4,697 34,580	5,711	142	4/23/12	15.0	4/5/12	12.0	5/12/12	19.0	20.00		Town of Dennis
			2013 2014		1,661 593	124 82	33,486 16,117	11,534 3,150	177 170	4/26/13 4/22/14	18.0 15.0	4/13/13 4/21/14	10.0 15.0	5/14/13 5/24/14	17.0 18.0	21.00 22.00		APCC, MassBays Dennis Conservation Trust
			2015 2016 2017		2,088 55 21	176 111 17	25,817 1,453 NA	7,093 893 NA	157 13 18	5/6/15 5/10/16 4/27/17	15.0 22.0 16.0	4/22/15 4/22/16 4/27/17	12.0 20.0 16.0	5/20/15 5/26/16 5/3/17	19.0 20.0 15.0	15.00 20.00		
			2018 2019 2020		7,874 988	220 117 26	127,387 21,652 NA	27,334 5,078	431 88	5/16/18 4/24/19	18.0 19.0	4/25/18 4/16/19	13.0 12.0	5/24/18 5/24/19	20.0 17.0	23.00 24.00		
			2021 2022		23 23	115 129	726 NA	839 NA	8 16	5/1/21 4/25/22	NA 17.0	4/10/21 4/24/22	14.0 14.0	5/1/21 5/5/22	15.0 20.0	23.00 25.00	5/22/22	
cargo Lake De)ennis	Average: Cape Cod Bay	2023		77 1,218 119	142	Insufficient 32,652 NA	NA	23 75	4/15/23 5/31/15	15.0 20.0	4/15/23 5/25/15	15.0	5/16/23	20.0	25.00	5/12/23	Town of Dennis
		.,	2016 2017		0	76	NA	NA	0	NA	NA	NA	NA	NA	NA	21.00		APCC, MassBays Dennis Conservation Trust
			2018 2019 2020		376 115	86 113 33	NA 12,005 NA	NA 3,979	13 50 21 4/	4/29/18 5/21/19 /7/20, 4/14/20	14.0 15.0 10.0	4/26/18 4/15/19 4/7/20	13.0 12.0 10.0	5/15/18 5/28/19 5/7/20	17.0 16.0 NA	22.00 18.00		
			2021 2022 2023		0 13 134	71 133 167	NA NA Insufficient	NA NA	NA 5 61	NA 5/15/22 5/21/23	NA 22.0 19.0	NA 4/19/22 5/1/23	NA 12.0 13.0	NA 5/24/22 5/31/23	NA 21.0 22.0	22.00 22.00 24.00	5/19/21 5/22/22 6/14/23	
	astham	Average: Cape Cod Bay	2014		108 749	295	12,005	2,081	61	5/15/14	18.0	4/14/14	12.0	5/15/14	18.0	20.00	-,,,	Eastham Herring Monitors
aka Herring River, East	stham)		2015 2016 2017		461 153 355	368 284 289	3,204 1,932 4,849	1,238 304 2,293	116 20 53	5/9/15 4/21/16 4/26/17	10.0 10.0 11.0	4/19/15 3/25/16 4/14/17	11.0 13.0 13.0	5/19/15 5/18/16 5/20/17	19.0 13.0 14.0	21.5 19 22		Town of Eastham APCC, MassBays
			2018 2019		355 1,068 652	289 246 292	4,849 12,716 7,406	2,293 3,850 1,397	53 79 68	4/26/17 5/4/18 4/21/19	11.0 16.0 14.0	4/14/17 4/1/18 4/3/19	13.0 9.0 7.0	5/20/17 5/16/18 6/18/19	14.0 16.0 12.0	22 20 18		
			2020 2021 2022		106 60	230 298	2,492 1,327	1,803 476	12	4/15/21 5/2/22	10.0 11.0	4/10/21 4/17/22	NA	5/15/21 6/15/22	19.0	12		
		Average:	2023		163 419	376	3,476 4,675		7	5/2/23	15.7	4/10/23	11.0	5/8/23	19.5	24	6/1/23	
Herring Pond Ea aka Herring Brook, Eas	astham istham)	Cape Cod Bay	2016 2017 2018		35 15 249	291 241 246	378 344 3,310	596 334 1,231	15 9 27	4/22/16 4/29/17 5/4/18	15.7 14.0 15.0	4/8/16 4/27/17 4/13/18	8.0 12.0 8.0	5/11/16 5/10/17 5/15/18	12.0 12.0 18.0	20 21 20		Eastham Herring Monitors Town of Eastham APCC, MassBays
			2019 2020		198	283	1,788	643	14	4/20/19	13.0	4/16/19	10.0	5/20/19	14.0	17		
			2021 2022 2023		57 76 444	211 283 419	785 823 1,769	342 292	12 8 40	4/28/21 5/2/22 5/1/23	NA 13.0	4/10/21 4/14/22 4/13/23	NA 15.0	5/14/21 5/14/22 6/3/23	NA 20.0	NA 22	5/8/23	
Coonamessett River Fa	almouth	Average: Vineyard Sound	2005 (1) 2006		153 37 NA	110 NA	1,314 NA NA	NA NA	5 NA	5/2/05 NA	10.0 NA	4/18/05 NA	10.0 NA	5/18/05 NA	11.0 NA	15 NA		
Note: 1) 5-minute counts at			2007 (2) 2008 (2)		1,127 3,057	82 102	NA NA	NA NA	171 409	5/9/07 5/7/08	12.2 15.0	4/23/07 4/17/08	10.0 NA	5/15/07 5/15/08	12.2 12.8	13.00 16.00		
3): Four 5-min counts/	hour, 7 to 10 P	ount in each, 7 to 10 PM. M D PM, & ad hoc daytime	2009 (2) 2010 (3) 2011 (3)		4,290 1,599 855	111 239 342	NA NA NA	NA NA NA	1,300 213 118	4/28/09 5/2/10 4/29/11	16.0 17.0 16.0	4/19/09 4/19/10 4/12/11	10.0 12.0 11.0	5/18/09 5/15/10 5/11/11	12.0 17.0 11.0	16.00 18.00 16.00		
5): Three 10-min coun & ad hoc daytime coun	nts/hour from 7		2012 (3) 2013)3)		2,338 9,104	277 323	NA NA NA	NA NA	275 776	4/23/12 4/28/13	10.0 12.5	4/11/12 4/14/13	10.0 11.0	5/19/12 5/12/13	16.0 15.0	18.00 15.00		Coonamessett River Trust
Systematic night time of actor of 3 to 5. Most		ad hoc daytime counts by a night.	2014 (4) 2015 (5) 2016 (5)		21,295 11,365 6,354	329 669 521	74,595 81,317	NA 20,323 41,698	2,800 738 834	5/11/14 5/7/15 4/29/16	16.0 17.0 13.0	4/13/14 4/16/15 4/19/16	12.0 12.0 14.0	5/24/14 5/25/15 5/30/16	15.0 18.0 21.0	20.00 25.00 24.00		Town of Falmouth APCC, MassBays
			2017 (5) 2018 (5) 2019		4,469 3,180 5,969	571 507	42,211 31,948 60,540	16,338 5,204 19,147	583 145 463	5/18/17 5/21/18 4/25/19	18.0 15.0 14.5	4/12/17 4/17/18	15.0 8.0 8.0	5/29/17 6/3/18 5/27/19	13.0 17.0 19.0	22.00 19 19.00		
			2020 2021		1,491 6,195	517 20 579	NA 49,225	19,147 NA 14,000	253 686	5/2/20 4/19/21	14.5 15.0 14.0	4/6/19 4/10/21	14.8	5/27/19 5/27/20 5/26/21	19.0	20.30		
		daytime night-time	2022 2022 2023		2,536 9,504	733 913	2,602 3,032	766	375 205 1,823	5/14/22 4/27/22 5/20/23	16.7 14.3 17.4	4/1/22 4/5/23	12.1 12.0			21.10 20.60 20.80	5/31/22 5/31/22 5/21/23	
Herring River Ha	larwich	Average: Nantucket Sound	2009		5,265 2,088	396	43,184 19,336	1,935	161	4/27/09	15.0	4/11/09	8.5	5/31/09	18.0	21.00	3/22/23	Harwich Conservation Trust
			2010 2011 2012		4,821 1,122 10,844	487 486 488	41,254 10,466 101,624	4,966 1,162 14,248	315 103 506	5/3/10 4/26/11 4/25/12	16.0 14.0 16.0	4/2/10 4/11/11 3/24/12	11.0 9.0 12.0	5/26/10 5/27/11 5/29/12	23.0 20.0 22.0	23.00 24.00 24.00		Town of Harwich APCC, MassBays
			2013 2014		9,155 26,725	350 482	91,167 247,894	18,735 23,671	500 672	5/11/13 4/23/14	16.0 12.0	3/31/13 4/6/14	8.0 5.0	5/15/13 5/31/14	20.0 16.0	20.00 20.00		
				344,133 284,936	14,740 6,589 1,348	496 478 472	127,860 63,349 11,980	12,801 19,476 3,157	396 595 87	5/5/15 5/8/16 4/29/17	14.0 11.0 14.0	4/2/15 4/19/16 4/11/17	5.0 10.5 8.0	5/31/15 6/1/16 6/1/17	20.0 22.0 18.0	23.00 26.00		
			2019 1	882,630 1,223,211 905,078	5,489 6,535	498 448	47,698 69,680	12,232 12,210	305 368	5/4/18 4/16/19	14.0 11.0	4/10/18 4/2/19	20.0 10.0	5/31/18 5/31/19	20.0 19.0	20.00 19.00		
			2021 2022	315,715	4,354	425	47,621	11,370	362	5/17/22	14.0	4/5/22	9.0	5/30/22	20.0	24.00		
Mashpee River M	/lashpee	Average: Nantucket Sound	2023	659,284	15,433 8,403 7,047	231	161,962 80,145 114,988	19,626	713	5/1/23	21.0	4/1/23	7.0 5.0	6/1/23 5/29/11	22.0	24.00	6/15/23	Town of Mashpee
			2012 2013		13,969 6,339	193 60	226,754 225,448	59,520 22,337	2,090 616	5/13/12 4/21/13	17.0 12.0	3/21/12 4/1/13	10.0 8.0	5/27/12 5/4/13	22.0 14.0	22.50 18.00		APCC, MassBays
			2014 2015 2016		11,532 5,989 780	107 94 88	341,458 206,863 26,196	179,654 70,042	1,544 1,025 175	5/12/14 5/11/15 4/28/16	16.0 20.0 14.0	4/4/14 4/9/15 4/8/16	5.0 5.0 12.0	5/23/14 5/29/15 6/29/16	18.0 18.5 24.0	18.00 22.00 25.00		
			2017 2018 2019		5,280 8,796 15,333	131 111 186	107,190 372,996 321,312	70,106 85,939 75,359	1,720 1,029 1,000	5/17/17 5/21/18 5/21/19	16.0 15.0 15.0	4/2/17 2/18/18 3/29/19	5.0 5.0 6.0	5/24/17 6/15/18 6/17/19	18.0 19.0 13.0	19.00 19.00 19.00		
			2020 2021		3,161	122	58,557	18,753	423	4/22/21	8.0	3/29/21	NA	5/28/21	18.0	NA	p te - 1	
		Average:	2022 2023		7,798 4,409 7,536	336 230	90,386 75,348 180,625	43,780	1,779 475	5/17/22 5/1/23	16.0 16.0	4/2/22 4/7/23	2.0 10.0	5/30/22 5/29/23	20.0 14.0	24.00 20.00	5/22/22 5/29/23	
Quashnet River M	/lashpee	Nantucket Sound	2011 2012 2013		482 2,409	64 131	NA NA	NA NA 12 524	128 412	5/13/11 5/15/12 5/11/12	14.0 18.0	4/6/11 3/23/12	10.0 15.0	5/20/11 5/22/12 5/27/12	18.0 18.0	18.00 22.00		Town of Mashpee APCC, MassBays
			2013 2014 2015		2,233 1,905 468	178 139 132	37,453 40,854 14,256	12,534 12,447 5,147	176 194 102	5/11/13 5/13/14 5/10/15	17.0 16.0 21.0	4/10/13 4/1/14 4/15/15	8.0 10.0 9.0	5/27/13 5/26/14 5/27/15	17.0 18.0 18.0	23.00 21.00 21.00		
			2016 2017 2018		248 223 889	131 220 57	11,875 8,252 NA	4,436 4,470	40 38 317	5/14/16 5/9/17 5/16/18	16.0 15.0 17.0	4/16/16 4/15/17 4/19/18	10.0 13.5	5/20/16 5/25/17 5/23/18	16.0 17.5 20.0	21.00 19.00 27.00		
			2019 2020		1,035	142	26,671	NA 8,387	109	5/11/19	20.0	4/2/19	7.0 8.0	5/24/19	17.0	20.00		
			2021 2022 2023		322 56 175	242 165 133	5,671 1,327 4,377	1,451 1,195 Large SE	18 23 21	4/29/21 5/15/22 5/21/23	14.0 20.0 17.0	4/1/21 4/10/22 4/8/23	8.5 10.0 11.0	5/20/21 5/17/22 5/21/23	22.0 18.0 17.0	25.00 22.00 19.00	6/7/22 5/30/23	
Santuit River M	Mashpee	Average: Nantucket Sound	2012 2013		870 3,503 NA	34 NA	16,748 143,262 NA	13,605 NA	863 NA	4/17/12 NA	19.0 NA	3/23/12 NA	15.0 NA	5/5/12 NA	14.0 NA	19.00 NA		Town of Mashpee APCC, MassBays
			2014 2015		646 4,248	97 107	20,620 119,182	4,333 30,058	59 367	5/12/14 5/8/15	18.0 20.0	4/6/14 4/14/15	9.0 12.0	5/18/14 5/28/15	19.0 20.0	19.00 23.00		CC, MidaaDdya
			2016 2017 2018		970 1,107 1,102	76 100 58	41,256 40,122 NA	11,662 10,117 NA	160 133 296	5/11/16 4/27/17 4/18/18	15.0 14.0 9.0	4/3/16 4/10/17 4/14/18	10.0 9.0 10.0	5/26/16 5/22/17 5/22/18	21.0 17.0 18.0	23.50 21.00 22.00		
			2019 2020		3,386	116	105,021	17,447	507	4/27/19	14.0	3/29/19	8.0	5/28/19	19.5	20.00		loitial actions of 20115
			2021 2022		3,974 2,405	170 194	75,521 42,507	17,068 8,244	293 197	5/13/21 4/26/22	17.0 18.0	3/29/21 4/3/22	11.0 10.0	5/17/21 6/7/22	19.5 20.0	19.50 25.00	5/13/22	Initial estimate of 234,161 not used by DMF.
		Average:	2023		1,999 2,334	91		w sample size	133	4/14/23	19.0	4/7/23	11.0	6/25/23	18.5	21.00	5/28/23	Shellfish & Waterways
ilgrim Lake O	Orleans	Pleasant Bay	2008 2009		158 108	439 517	1,647 1,090		35 26	4/23/08 4/22/09	20.0 12.0	4/5/08 4/11/09	8.0 10.0	5/19/08 5/13/09	18.0 16.0	24.00 24.00		Committee Town of Orleans
			2010 2011 2012		182 104 551	477 481 497	1,461 1,370 5,931	318 1,371	70 32 64	4/29/10 5/5/11 4/16/12	14.0 16.0 20.0	4/8/10 4/6/11 3/26/12	16.0 11.0 11.0	5/4/10 5/26/11 5/25/12	20.0 21.0 20.5	26.00 26.00 26.00		APCC, MassBays
			2013 2014		313 370	477 449	3,001 4,202	1,371 1,175 2,534	UM	4) 10) 1Z	20.0	J 20 12	11.0	5/31/13	20.3	20.00		
			2015 2016 2017		420 1,539 2,885	420	4,245 19,648 27,551	4,216 8,016	187	4/13/17		4/6/17	6 to 8	5/31/16 5/31/17	14 to 17			
			2018 2019		2,885 2,654 1,865	472 461	28,135 17,876	14,322 11,604	10/	7/13/1/		4/1/18 3/31/19	7 to 10 9 to 15	5/31/17 5/25/18 5/29/19	14 to 17 17 to 23 14 to 18			
			2020 2021 2022		1,479 1,559	520	16,902 10,987	6,463 2,480				3/20/22	10.0					
AUL Co		Average:	2023		2,174 1,091	583	15,348 10,626					3/23/23	9.0	5/29/23	17.0			
Aill Creek Sa	andwich	Cape Cod Bay	2011 2012 2013		16 361 37	111 39 8	NA 8,756 NA	NA 1,078 NA	3 77 21	5/25/11 4/7/12 5/20/13	18.0 10.0 19.0	4/3/11 4/3/12 5/7/13	9.5 8.0 19.0	5/25/11 5/15/12 6/6/13	18.0 20.0 22.0	22.00 20.00 22.00		MassBays
			2014		NA	8	NA	NA	NA	4/9/12	NA	NA	NA	NA	NA	NA		

opper snawnie Pont sandwich	саре сои вау	2012	4089	1	25	NA NA	NA NA	1	4/24/12	15.0	4/24/12	15.0	4/24/12	15.0	22.00		Electronic counter	1
Jpper Shawme Pont Sandwich	Cape Cod Bay	2011		0	23	NΛ	NA	n	NA	NA	NA	NA	NA	NA	17.00		MassBays	- 6
	Average:			199		10.643												
		2023		28	274	532		3	4/16/23	17.5	4/16/23	17.5	4/30/23	16.0	28.00	6/15/23		
		2022		123	247	NA	NA	20	5/20/22	19.0	4/7/22	11.0	5/29/22	18.0	26.00	6/26/22		11
		2021																
		2020		0	9													1
		2019		92	402	1,002	310	9	5/12/19	18.0	4/17/19	15.0	5/22/19	23.0	24.00			28
		2018		510	96	22,711	6,097	75	4/26/18	16.0	4/6/18	6 to 8	6/3/18	22.0	24.00			2
		2017		395	93	20,215	5,137	29	4/14/17	13.0	4/4/17	7.0	6/2/17	17.0	21.00			2
		2016		430	13	NA	NA	200	5/11/16	17.0	4/16/16	9.0	5/14/16	20.0	20.00			2
		2015		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			

(Continued on next page)

				Electronic	# Fish	# of	Estimated Run Size		Peak 10	Date of Peak	Water temperature at Peak 10-minute	First fish	Water temperature	Date when last	Water temperature when last fish		ate of Peak	Towns, Organizations &	
	Town	Marine water body	Year	Counts	Counted	Observations	(Visual Counts)	Plus/Minus	Min Count	Count	count	counted	counted	fish counted	counted P	eak Water Temp \		Partners No	
Herring River	Wellfleet	Cape Cod Bay	2009 2010		1,663 744	235 265	21,870 12,052	3,976 1,595	131 61	4/18/09 4/7/10	11.0 14.5	4/7/09 4/4/10	9.5 13.0	5/25/09 5/30/10	20.0 23.0	20.00 24.00		Friends of Herring River Town of Wellfleet	1
			2011 2012		564 1,192	222 466		1,640	111 122	4/27/11	16.0 13.0	4/10/11	10.5 10.0	5/23/11 5/24/12	8.0 20.0	24.00 22.00		APCC, MassBays	2
			2012		2,035	383		4,179 11,813	220	4/9/12 4/26/13	11.5	3/9/12 4/6/13	7.0	5/26/13	16.0	23.00			2
			2014 2015		4,903 1,480	323 293		7,556 6,207	320 208	4/14/14 4/26/15	12.5 12.0	4/9/14 4/11/15	8.5 8.0	5/26/14 5/25/15	19.0 17.0	22.00 24.00			
			2016		1,379	347	12,874	4,505	143	4/22/16	13.0	3/18/16		5/24/16	20.0	23.00			3
			2017 2018		673 2,426	279 304	8,044 27,083	5,385 11,440	177 288	4/11/17 4/29/18	12.5 14.0	4/7/17 4/11/18	7.0 9.0	5/18/17 5/30/18	22.0 18.0	22.00 24.00			3
			2019		3,244	318	46,009	13,617	214	5/8/19	17.0	4/6/19	9.0	5/29/19	16.0	20.00			3
			2020 2021		1,555 2,640	473 373		3,602 7,830	81 312	4/30/20 5/14/21	9.5 19.0	3/27/20 4/10/21	10.0 11.0	5/27/20 5/23/21	17.0 22.0	15.00			2
			2022		5,215	554	47,384	12,608	416	5/13/22	20.0	3/21/22	9.2	5/31/22	22.0	22.90	6/11/22		2
		Average:	2023		7,040 2,450	495	65,529 27,453	12,248	300	4/28/23	17.5	3/30/23	10.0	6/11/23	18.9	22.80	5/13/23		
om Mathews Pond	Yarmouth	Cape Cod Bay	2014 2015		5,925 2,706	248 141		8,674 9,589	178 174	5/15/14	22.0 20.0	4/18/14 4/4/15	3.0 10.0	5/27/14 5/22/15	20.0 18.0	24		Bass River Rod & Gun Club APCC, MassBays	1
			2015		1,139	137		6,003	76	5/7/15 4/19/16	14.0	4/4/15	10.0	5/22/15	22.0	23.00		APCC, Massbays	
			2017 2018		34 32	93 144		724 819	8 13	5/1/17 5/12/18	17.0 17.0	4/17/17 5/4/18	19.0 20.0	5/2/17 5/16/18	16.0 19.0	23.00 24.00			
			2018		16	92		617	7	5/12/18 5/17/19	14.0	4/22/19	20.0 14.0	5/16/18	14.0	16.00			
			2020 2021		2 1	27 96		489	2	4/1/20 5/12/21	10.0 16.0	4/1/20 5/12/21	10.0 16.0	4/1/20 5/12/21	10.0 16.0	25.00			1
			2022		0	93		NA	NA	NA	NA	NA	NA	3/12/21 NA	NA	NA	NA		
ong Pond	Yarmouth	Average: Nantucket Sound	2016		917	420	18,931 9,270	1,513	56	4/19/16	15.0	3/12/16	10.0	5/21/16	21.0	25		Town of Yarmouth	
			2017		222	271	2,805	1,347	45	4/11/17	11.0	3/13/17	13.0	5/21/17	20.0	24		Cape Cod Salties	- 2
			2018 2019		1 122	107 141		NA 980	1 16	4/23/18 4/15/19	13.0 15.0	4/23/18 4/8/19	13.0 13.0	4/23/18 5/9/19	13.0 19.0	21 20		APCC, MassBays	1
			2020 2021		16	98	394	295	3	4/28/21	13.0	4/8/21	13.0	5/28/21	13.0	13.6			1
			2022					255											
		Average:	2023		94 229	91	Insufficient data		24	5/9/23	19.0	4/3/23	9.0	6/19/23	19.0	25.0	5/31/23		
Trunk River Falmouth	Falmouth	Vineyard Sound	2012		4,158	65			141	4/21/12		3/15/12	NA	5/19/12		NA		Trunk River Volunteers	
			2022 2023		945 2,391	319 223		5,679	165 564	5/4/22 4/30/23	13.0	4/16/22 4/5/23	10.0	5/24/22 5/17/23	14.0	24	4/14/23		1
		Average:			2,498		26,671												
Marstons Mills River Barnstable	r Barnstable	Nantucket Sound	2006		719	378	6,302		NA	4/15/06		4/12/06	NA	5/14/06		NA		Marstons Mills River Watershed	
			2007		1,741	378	13,862		NA	5/3/07		4/20/07	NA	5/17/07		NA		Association (MMRWA)	
			2008 2009		5,232 1,332	342 225			NA NA	4/20/08 4/27/09		4/10/08 4/19/09	NA NA	5/16/08 5/10/09		NA NA		APCC, MassBays	
			2010		478	270	3,944		NA	4/5/10		4/4/10	NA	5/3/10		NA			
			2011 2012		53 10,327	189 479			NA	4/17/11		4/17/11	NA	5/19/11		NA		Three Bays Preservation	
			2013		8,117	509	56,987												
			2014 2015		6,396 3,667	391 540			NA	4/17/15		3/21/15	NA	5/19/15		NA			
																		Barnstable Clean Water	
			2016 2017		2,043 5,251	483 446												Coalition APCC, MassBays	
			2018		1,567	474	10,306	1,139	49	5/3/18	17.5	4/12/18	14.0	5/17/18	14.0	23		,	
			2019 2020		4,521	472	35,092	2,456	104	5/8/19	17.7	4/1/19	14.0	5/22/19	17.3	22			
		Mill Pond	2021		5,736	431	54,713	5,663	186	4/20/21		4/1/21		5/30/21				Barnstable Clean Water Coalition	
																		Barnstable Clean Water	
		Middle Pond	2021		2,077	409	18,851	1,947	99	4/21/21		4/1/21		5/30/21				Coalition Barnstable Clean Water	
		Mill Pond	2022				50,961											Coalition	
		Middle Pond	2022				26,492											Barnstable Clean Water Coalition	
														-11				Barnstable Clean Water	
		Mill Pond	2023		12,952	490	92,723		493	4/15/23	19.2	4/2/23	14.2	5/13/23	20.1	22.7	6/2/23	Coalition Barnstable Clean Water	6
		Middle Pond Average:	2023		6,382 4,366	468	55,926 34,396		351	5/2/23	14.8	4/6/23	9.0	6/12/23	21.0	24.9	5/27/23	Coalition	4
ed Lily Pond	BA	Nantucket Sound	2013		42	190	913	651	12	5/7/13	20.0	4/9/13	11.5	5/7/13	20.0	26.00		Red Lily Pond Project	
			2014 2015		17 7	35 22	NA NA	NA NA	11 2	4/22/14 5/4/15	12.0 26.0	4/22/14 5/4/15	12.0 26.0	5/25/14 5/23/15	20.0 19.0	20.00 26.00		APCC, MassBays	
			2016		•				-	3/4/13	20.0	3,4,13	20.0	3/23/23	13.0	20.00			
			2017 2018																
			2019																
			2020 2021		5	253	127	124	1	5/10/21	14.0	5/10/21	14.0	5/27/21	21.0	20.00			1
			2022		3	303	50	NA.	1	4/25/22	13.0	4/25/22	13.0	5/31/22	20.0	27.00	6/13/22		-
		Average:	2023		1 13	285	22 278		1	5/25/23	21.0	5/25/23	21.0	5/25/23	21.0	28.00	5/26/23		
Centerville River BA	BA	Nantucket Sound	2021		9,285	125		59,777	250	F /0 /00		4/4/00		F (0.0 (0.0	24.0	20.50	6/44/00		
			2022 2023		3,211 10,290	681	18,343 7,300	8,070 Large SE	250 502	5/2/22 5/10/23	14.0 17.0	4/1/22 4/3/23	8.0 9.4	5/30/22 6/10/23	21.0 10.0	26.50 22.80	6/14/22 5/31/23		
ed Brook	ВО	Average: Buzzards Bay	2011		7,595 50	38	80,595 NA	NA	22	4/6/11	NA	4/6/11	NA	5/2/11	15.0	21.00		APCC, MassBays	
iscontinued)			2012		3	30	NA	NA	1	4/28/12	14.0	4/28/12	14.0	5/17/12	16.0	21.00			
edar Lake	FA	Buzzards Bay	2011 2012		249 12	116 30		1,485 NA	59 11	4/14/11 4/26/12	12.5 11.0	4/9/11 4/15/12	9.0 15.0	5/18/11 4/26/12	17.0 14.0	20.00 20.00		APCC, MassBays	
			2013		317	54	13,422	18,478	84	5/8/13	18.0	4/12/13	12.0	5/16/13	16.0	21.00			
			2014 2015		121 883	50 165		NA 8,974	66 129	5/6/14 5/19/15	13.0 18.0	4/9/14 4/15/15	9.0 10.0	5/14/14 5/23/15	15.5 19.0	19.00 22.00			
			2016		242	191	12,953	7,089	75	5/19/16	17.5	4/8/16	11.0	5/26/16	22.0				
olunteer counts di-	scontinued; electron	ic counts started	2017 2018	4,256 1,389	299	42		NA	87	5/24/17	22.0	4/28/17	20.0	5/24/17	22.0	24.00		4,256 (Electronic counter) 1,389 (Electronic counter)	
				831														831 (Electronic counter)	
			2019															831 (Electronic counter)	
			2020	461														831 (Electronic counter)	
							12,984											831 (Electronic counter)	

2



Summary of Cape Cod River Herring Monitoring Program from 2007-2023

April 28, 2024

Prepared by:

Dr. Jo Ann Muramoto, Director of Science Programs

Association to Preserve Cape Cod (APCC) and

Regional Coordinator for the Cape Cod region, Massachusetts Bays National Estuary Partnership

Introduction

This report summarizes the results of the Cape Cod River Herring Monitoring Program, initiated in 2007 by APCC and the Cape Cod regional coordinator for the Massachusetts Bays National Estuary Partnership.

The Association to Preserve Cape Cod (APCC) is a 501(c)(3) organization founded in 1968 to protect and restore the natural resources of Cape Cod. APCC is a Cape-wide organization with members and projects in all 15 towns of Barnstable County. APCC is also the Regional Service Provider for the Cape Cod region of the Massachusetts Bays National Estuary Partnership (MassBays). MassBays is a National Estuary Program designated by EPA in 1995 to protect and restore the estuarine habitats of Massachusetts Bay, Cape Cod Bay, and Ipswich Bay. To achieve these goals, APCC conducts outreach, monitoring and restoration, engagement of citizens, and provides recommendations for public policies.

Background

Since 2007 APCC has supported volunteer herring counts along Cape Cod herring runs, working with the Massachusetts Division of Marine Fisheries (DMF) to ensure counts are done using DMF's method. Reasons for conducting volunteer counts include: a) Since the 2006 ban on fishing, fisheries managers need data on river herring populations to help inform protection and management; b) Count data support herring run restoration projects; and c) Counts engage people, which builds public support for river herring protection and management. We act as a central hub for training, data collection, and sending QAed count data to DMF to calculate run size estimates. We distribute the run size estimates through an annual report to the River Herring Network, through training events, and our website, where a large spreadsheet summarizes all the results.

Volunteer herring count method

Volunteers use a visual count method designed by DMF (Nelson, 2006, DMF Technical Report TR-25) for volunteer groups. Visual counts provide an estimate of the number of herring migrating along a run based on counts obtained from April 1 to June 15, seven days a week, 12 hours each day.

Partners and number of runs with count programs

In 2007 when we began our program, there were three runs being monitored for counts. As of this year, there are 18 herring runs with volunteer count programs located in 12 towns on Cape Cod. Counts are conducted by at least 300+ volunteers in 14 different organizations and groups. At least five state and federal agencies partnered with APCC and counting groups. Partners include:

- o Estimated 300+ volunteers,
- 12 of 15 towns (Barnstable, Brewster, Chatham, Dennis, Eastham, Falmouth, Harwich, Mashpee, Orleans, Sandwich, Wellfleet, and Yarmouth)
- o 14 Organizations:
 - Association to Preserve Cape Cod
 - Bass River Rod & Gun Club
 - Barnstable Clean Water Coalition
 - Cape Cod Commercial Fishermen's Alliance
 - Cape Cod Salties
 - Coonamessett River Trust
 - Dennis Conservation Trust
 - Eastham Conservation Foundation
 - Friends of Herring River, Wellfleet
 - Harwich Conservation Trust
 - Massachusetts Bays National Estuary Partnership
 - Ovster Pond Environmental Trust
 - Red Lily Pond Project
 - River Herring Warden Network
- o Five agencies:
 - Massachusetts Division of Marine Fisheries
 - NOAA Restoration Center, Gloucester
 - Barnstable County Cooperative Extension / WHOI Sea Grant
 - Cape Cod Conservation District
 - USDA Natural Resources Conservation Service

Annual summary of run size estimates

Each year, APCC provides a summary of run size estimates of river herring calculated by DMF based on volunteer counts. In December 2023, APCC released our annual summary, which indicated a mixed bag with both good and bad news. The good news was that the 2023 herring run size estimates were generally better than in 2022, and two runs had their best year ever since their volunteer counts began. The bad news was that over the longer term of five to eleven years,

most herring runs have declined in size; i.e., most runs saw their all-time highs in the past. The list below compares run size estimates in 2023 with all-time high numbers in bold face font.

Cape Cod Bay run size estimates:

- Mill Creek, Sandwich: 532 in 2023; the all-time high was 22,711 in 2018;
- Stony Brook, Brewster: 132,389 in 2023 was up from 39,839 in 2022; the all-time high was 271,363 in 2014;
- Tom Mathews Pond, Yarmouth: Counts were not done this year as the pond was being restocked with herring to attempt to restart the run; last year's run size estimate was 0, down from the **all-time high of 70,169 in 2014**.
- Herring River, Eastham: 3,476 in 2023 was up from 1,327 in 2022; **the all-time high was 12,716 in 2018**;
- Herring Brook, Eastham: 1,769 in 2023 was up from 823 in 2022; the all-time high was 3,310 in 2018;
- Herring River, Wellfleet: The **all-time high of 65,529 occurred this year**, up from 47,384 in 2022. Herring River was the only run on the Cape Cod Bay side to see an all-time high in 2023. However, this increase is considered to be minor—the fact remains that the Herring River run remains in the 10,000s range.
- On the Cape Cod Bay side, five (5) runs have declined since 2014-2018. The Herring River in Wellfleet saw its highest run size in 2023 since counts began but this increase is considered minor.

Nantucket Sound run size estimates:

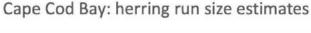
- Mashpee River, Mashpee: 75,348 in 2023 was down from 90,386 in 2022; the all-time high of 372,996 was in 2018;
- Quashnet River, Mashpee: 4,377 in 2023 was up from 1,327 in 2022; **the all-time high was 40,854 in 2014**;
- Santuit Pond, Mashpee: 44,757 in 2023 was up from 42,507 in 2022; the all-time high was 143,262 in 2012;
- Coonamessett River, Falmouth (daytime): 3,032 in 2023 was up from 2,602 in 2022; the all-time high was 81,317 in 2016;
- Trunk River, Falmouth: **40,250 in 2023** was up from 13,092 in 2022.
- Herring River, Harwich: 161,962 in 2023 was up from 47,621 in 2022; **the all-time high was 247,894 in 2014**;
- Marstons Mills River, Barnstable (Mill Pond): **All-time high of 92,723 occurred in 2023**, up from 50,961 in 2022.
- Red Lily Pond, Barnstable: 22 in 2023 was down from 50 in 2022; the all-time high was 913 in 2013;
- Centerville River, Barnstable: 7,300 in 2023 was down from 18,343 in 2022; the all-time high was 216,143 in 2021.
- Pilgrim Lake, Orleans: 15,348 in 2023 was up from 10,987 in 2022; the all-time high was 28,135 in 2018.
- On the Nantucket Sound and Pleasant Bay side, eight (8) runs have declined since 2012-2018. In 2023 the Marstons Mills River saw its best year since volunteer counts began.

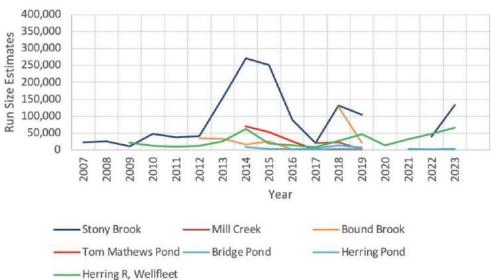
Conclusions and Discussion

Over time, most Cape Cod runs remain low: 13 runs have declining run size estimates over a period of time ranging from 2012 to 2018: five runs on Cape Cod Bay and eight on Nantucket Sound. These results suggest that overall, despite some minor gains in 2023, herring abundance in Cape Cod runs remains low.

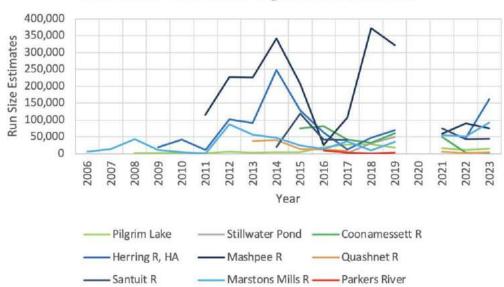
Many of the declining herring runs were restored or are in the planning stage for restoration. Declining runs include seven which were restored and four which are in the planning stage for restoration.

2) These patterns are shown in the graphs below.





Nantucket Sound: herring run size estimates



Of great concern is that fact that some runs have nearly disappeared. Several runs that used to number in the ten thousand to several tens of thousands range have decreased to low numbers—less than a thousand—in recent years. Examples of dramatically decreasing runs include runs on Cape Cod Bay (Mill Creek in Sandwich, Bound Brook in Dennis, Tom Mathews Pond in Yarmouth), Nantucket Sound (Red Lily Pond in Centerville, and Long Pond/Parkers River in Yarmouth).

Reasons for declining river herring

Fisheries agencies and scientists point to several reasons for declining herring numbers in freshwater: barriers to fish migration, water pollution, water withdrawals, climate change, and overfishing in both freshwater and marine environments.

However, barriers to fish migration are being addressed by numerous restoration projects. Water pollution is being monitored through a new Cape Cod Freshwater Initiative to monitor pond water quality to inform pond restoration. Water withdrawals are managed by regulatory agencies. Fishing in freshwater has been prohibited since 2006. Overfishing now can only arise from fishing trawlers at sea, therefore river herring need more protection from overfishing at sea.

Overfishing at sea conflicts with restoration of herring runs in inland waters

APCC and many other organizations, municipalities, and state and local agencies have made huge investments in restoring river herring runs—this should be matched by better protection at sea. State, local, and federal agencies and organizations, including APCC, have expended enormous effort and resources to restore herring runs in order to help restore river herring populations. On Cape Cod, millions of dollars have been spent to restore herring runs—and millions more dollars will be spent—because people want to see river herring return and be part of a healthy ecosystem. In addition, the significant number of stakeholders—volunteers, agencies, organizations, that support herring restoration and monitoring need to be considered as users who would benefit from greater herring numbers.

Healthy ecosystems require healthy river herring populations

Finally, our coastal and freshwater ecosystems rely on healthy river herring populations. River herring are an important food source for many commercially and recreationally important fish species and wildlife, including birds and mammals, rely on river herring adults and juveniles as food.

Acknowledgements

APCC thanks the many individuals, organizations, and agencies that made this program possible. These include but are not limited to:

- Estimated 300+ volunteers
- 12 towns (Barnstable, Brewster, Chatham, Dennis, Eastham, Falmouth, Harwich, Mashpee, Orleans, Sandwich, Wellfleet, and Yarmouth)

- Organizations
 - Massachusetts Bays National Estuary Partnership
 - Cape Cod Conservation District
 - Cape Cod Salties
 - Bass River Rod & Gun Club, Yarmouth
 - Barnstable Clean Water Coalition
 - Coonamessett River Trust, Falmouth
 - Eastham Conservation Trust
 - Friends of Herring River, Wellfleet
 - Harwich Conservation Trust
 - Oyster Pond Environmental Trust
 - Red Lily Pond Project
 - River Herring Warden Network
 - Cape Cod Commercial Fishermen's Alliance
- Agencies:
 - Massachusetts Division of Marine Fisheries
 - NOAA Restoration Center, Gloucester
 - Barnstable County Cooperative Extension / WHOI Sea Grant
 - USDA Natural Resources Conservation Service

Resources

MA Division of Marine Fisheries:

 Nelson, 2004: A Guide to Statistical Sampling for the Estimation of River Herring Run Size Using Visual Counts. MA DMF Technical Report 25, https://www.mass.gov/files/documents/2016/08/om/tr-25.pdf

Nicholas Tyack, 2011. A Summary of Volunteer River Herring Counts in Massachusetts. NOAA Fisheries Service, Habitat Restoration Center, Northeast Regional Office, 55 Great Republic Drive, Gloucester, MA 01930.

Association to Preserve Cape Cod, Herring Monitoring Program:

- Count Form, Instructions, Blank Schedule, Herring ID, other information, and our website data entry system: https://apcc.org/our-work/science/community-science/herring/
- Schedule of training events and list of count coordinators is provided at APCC's Herring Monitor Hub: https://apcc.org/our-work/science/community-science/herring/hub/

River Herring Network at https://riverherringnetwork.org

- Best practices for herring run management
- Links to herring monitoring groups and news
- Annual meeting registration and presentations



303 Main Street, West Yarmouth, MA 02673 *
tel: (508) 771-8757 * fax: (855) 596-7671 * e-mail: cccd@capecodcd.org
web: www.capecodcd.org

Cape Cod Conservation District 303 Main Street West Yarmouth, MA 02673

April 24, 2024

Jo Ann Muramoto MassBays Regional Coordinator, Cape Cod Association to Preserve Cape Cod (APCC) 482 Main Street Dennis, MA 02638

Re: Natural Resource and Conservation Service (NRCS) funding summary for fish passage restoration under the Cape Cod Water Resources Restoration Project (CCWRRP)

Jo Ann Muramoto,

The Cape Cod Conservation District (CCCD), in partnership with the Natural Resources Conservation Service (NRCS), is pleased to provide a summary of allocated and anticipated funds for fish passage restoration projects under the Cape Cod Water Resources Restoration Project (CCWRRP). The CCWRRP is a Cape Cod watershed-wide plan that aims to improve river herring access to 4,200 acres of spawning habitat, restore over 1,500 acres of degraded salt marsh, and improve water quality of over 7,300 acres of shellfish beds. Since the plan's release in 2006, NRCS has allocated over \$8,400,000 for fish passage restoration with the Cape Cod Towns contributing over \$1,800,000. The CCCD anticipates an additional approximately \$13,800,000 of funding to be available from NRCS and an additional \$4,400,000 to be contributed by the various Towns. With the already allocated NRCS and Town funding and anticipated funding, the CCWRRP aims to meet its goal of improving river herring migration and access to spawning habitat.

We strongly urge you to consider the fish passage restoration efforts and allocated funding on Cape Cod during your scoping for Amendment 10 concerning river herring management in offshore waters. If you have any questions, please contact the CCCD Program Manager, Martha Craig at Martha. Craig@usda.gov or at 508-439-9980.

11. 4

Sincerely.

Mark R Forest

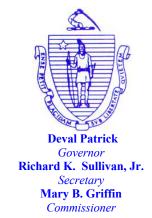
Chair, Cape Cod Conservation District Board of Supervisors



Commonwealth of Massachusetts

Division of Marine Fisheries

251 Causeway Street, Suite 400 Boston, Massachusetts 02114 (617)626-1520 fax (617)626-1509



MEMORANDUM

March 21, 2012

From: John Sheppard, MarineFisheries

River herring volunteer counting groups

We wish to thank Nicholas Tyak and Eric Hutchins of the NOAA-NMFS Restoration Center for their efforts in coordinating, processing, analysis and reporting results of herring run size estimates from several coastal river systems in Massachusetts from last year (and where available, previous years as well). Their efforts along with those of Dr. Jo Ann Muramoto of the Association to Preserve Cape Cod and the Massachusetts Bays Program were essential in organizing volunteer groups and the execution of a monitoring protocol that is consistent among each group.

The Massachusetts Division of Marine Fisheries (MarineFisheries) has reached an agreement with NOAA to transfer the responsibilities of data collection and processing, analysis and reporting to the staff of MarineFisheries. The MarineFisheries Anadromous Fish Dynamics and Management Program is responsible for the management and investigations regarding the anadromous fish resources of the Commonwealth. As part of our management responsibilities, MarineFisheries is committed to long-term monitoring at various coastal rivers throughout the Commonwealth through population estimation and biological sampling. We seek to expand our monitoring efforts to obtain population estimates from all coastal watersheds and this is accomplished largely through the contributions of town officials, Natural Resource Departments, Watershed Associations, and volunteer counting groups.

MarineFisheries has the interest and resources to store and disseminate all data for each run. Using the protocols and guidelines established in the MarineFisheries Technical Report (TR-25; Nelson 2006: http://www.mass.gov/dfwele/dmf/publications/tr 25.pdf) which is implemented in the MarineFisheries software program and stored in a Microsoft Access master database, MarineFisheries staff can process, analyze and report the results. We kindly ask that all volunteer counting groups please send their count data to MarineFisheries (ATTN: John Sheppard) 1213 Purchase Street, 3rd Floor, New Bedford, MA 02740. Count data can also be sent electronically (preferably in EXCEL format) to john.sheppard@state.ma.us. We thank you for your continued cooperation and look forward to working with you this spring.