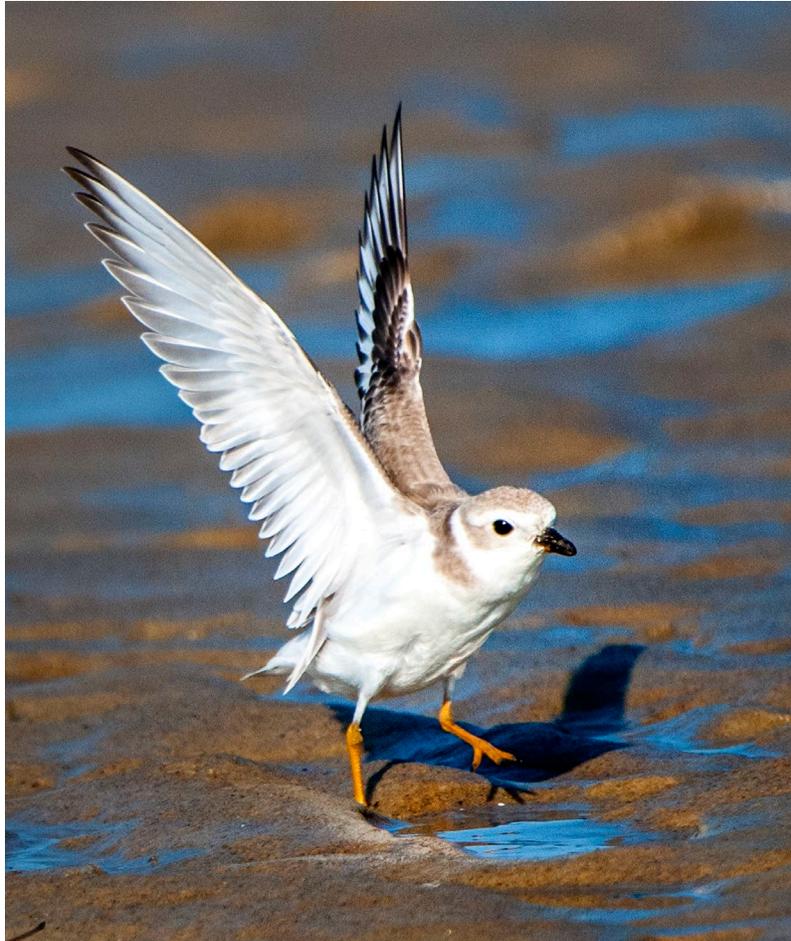


SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS



Bill Byrne, MassWildlife

Prepared by:

Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries & Wildlife
February 2023

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

ABSTRACT

This report summarizes data on abundance, distribution, and reproductive success of Piping Plovers (*Charadrius melodus*) in Massachusetts during the 2022 breeding season. Observers reported breeding pairs of Piping Plovers present at 209 sites; 150 additional sites were surveyed at least once, but no breeding pairs were detected at them. The population increased 6.8% relative to 2021. The **Index Count** (statewide census conducted 1-9 June) was **1,013 pairs**, and the **Adjusted Total Count** (estimated total number of breeding pairs statewide for the entire 2022 breeding season) was **1,033 pairs**. A total of 1,330 chicks was reported fledged in 2022, for an overall productivity of **1.31 fledglings per pair**, based on data from 98.6% of pairs.

SUPPORT ENDANGERED SPECIES CONSERVATION

Contribute on your state income tax form or send a check
made payable to Commonwealth of MA: NHESP to
1 Rabbit Hill Road, Westborough, MA 01581.



For more information, please call
(508) 389-6360 or visit mass.gov/nhesp

THANK YOU FOR YOUR SUPPORT!

INTRODUCTION

Piping Plovers are small, sand-colored shorebirds that nest on sandy beaches and dunes along the Atlantic Coast from North Carolina to Newfoundland. The U.S. Atlantic Coast population of Piping Plovers has been federally listed as *Threatened*, pursuant to the U.S. Endangered Species Act, since 1986. The species is also listed as *Threatened* by the Massachusetts Division of Fisheries and Wildlife pursuant to the Massachusetts' Endangered Species Act.

Population monitoring is an integral part of recovery efforts for Atlantic Coast Piping Plovers (U.S. Fish and Wildlife Service 1996, Hecht and Melvin 2009a, b). It allows wildlife managers to identify limiting factors, assess effects of management actions and regulatory protection, and track progress toward recovery. In this report, we summarize data on abundance, distribution, and reproductive success of Piping Plovers breeding in Massachusetts in 2022, as observed and reported by a coast-wide network of cooperators.

METHODS

Monitoring and management of Piping Plovers and other coastal waterbirds in Massachusetts is carried out by wildlife biologists, seasonal shorebird monitors, beach managers, researchers, and volunteers affiliated with over 20 federal and state agencies, local municipalities, local and regional land trusts, private conservation organizations, and universities. Cooperators monitored 359 sites in Massachusetts in 2022 for the presence of breeding Piping Plovers.

Abundance

We measure abundance of Piping Plovers in terms of breeding pairs, defined as pairs observed with either a nest or unfledged chicks or that exhibited site tenacity and evidence of pair bonding and territoriality. We report three different measures of abundance: the *Index Count*, *Unadjusted Total Count*, and *Adjusted Total Count*. The *Index Count*, as reported since 1990, is the total number of pairs tallied statewide each year during a 9-day count period in late May and early June, standardized each year for the entire Atlantic Coast. In 2022, the *Index Count* period was 1-9 June. The objective of the *Index Count* is to estimate population size with minimal double-counting of pairs that may move between or within sites, thereby providing an index to population trends that is likely to be more precise than counts based on observations made over the entire breeding season. The *Index Count* likely minimizes double-counting because it occurs over such a short period of time. However, it probably underestimates the actual number of breeding pairs because it does not include pairs that leave the state before, arrive after, or are present but simply go undetected during the 9-day *Index Count* period.

For sites for which "0" is reported for the *Index Count* but "ND" is reported for the *Total Count*, this indicates that the site was surveyed during the *Index Count* period (1-9 June) and no breeding pairs were detected, but during the rest of the breeding season, it was either not surveyed or was surveyed too infrequently during May and June to confidently conclude that no pairs were present for at least 2 weeks. To be included in the *Total Count*, a pair must have exhibited territoriality and pair bonding for a minimum of two weeks.

Since 2000, we have reported two different "Total Counts." The *Unadjusted Total Count* is simply a tally of the total number of pairs reported for all sites over the course of the entire nesting season, with limited effort made to adjust for any pairs that may have been double-counted if they nested unsuccessfully at one location and then re-nested at another. We then derive an *Adjusted Total Count* by

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

calculating the average of the *Index Count* and the *Unadjusted Total Count*, rounded to the nearest whole number of pairs.

The *Unadjusted Total Count* likely overestimates the actual population by double-counting pairs that establish nesting territories at more than one location in a given year. Without banded birds, however, it is impossible to accurately determine whether late-nesting pairs may have nested earlier at a different site or whether they simply did not arrive or begin breeding activities until June. It is too subjective, and likely inaccurate, to try to adjust the *Total Count* of pairs each year by not tallying late-nesting pairs (*i.e.*, pairs reported as “new” pairs that nested after the first week in June) based on the assumption that these birds were probably already counted earlier in the season. We believe that the *Adjusted Total Count* is the most accurate estimate of the actual number of breeding pairs in Massachusetts because it falls midway between the *Index Count* and *Unadjusted Total Count*, which we suspect slightly underestimate and overestimate, respectively, the actual breeding population.

Reproductive Success

The primary measure of reproductive success that we report is *Productivity*, measured as number of chicks fledged per pair. The denominator of this ratio is the number of breeding pairs for which fledging data were reported; this includes not only pairs that successfully fledged chicks but also pairs that cooperators believed did not nest, pairs that nested unsuccessfully (eggs did not survive to hatch), and pairs whose chicks failed to fledge. Since 2000, we have reported two different estimates of *Number of pairs with fledge data*. As with counts of breeding pairs, estimates of the number of pairs for which fledging data are reported will be biased if double-counting of pairs occurs. Double-counting will overestimate the number of pairs in the denominator of the productivity ratio, and thereby will underestimate actual productivity. To reduce the potential bias associated with double-counting, we multiply the *Unadjusted number of pairs with fledge data* (a tally of the total number of pairs with fledge data reported for all sites, with limited effort made to adjust for pairs that may have been double counted) by the ratio of the *Adjusted Total Count* to the *Unadjusted Total Count* to arrive at the *Adjusted number of pairs with fledge data*.

Median Lay and Hatch Dates

The median estimated date of first egg laid was calculated by using known and estimated dates of first egg laid. Two days were subtracted from Date Clutch Found when the nest was found at two eggs and four days were subtracted from Date Clutch Found when the nest was found at three eggs. For nests that were found at four eggs, only nests that successfully hatched were used in calculations, and 33 days were subtracted from the hatch date to estimate dates of first egg laid to account for the egg-laying period (6 days) plus the mean incubation period (27 days). The median estimated hatch date was calculated using the known hatch date. For hatch dates that consisted of date ranges, the median date was used as the estimated hatch date. All nests with the aforementioned data were used to calculate both the median estimated date for the first egg laid and hatch date.

Data reporting and quality control

All data were reported by cooperators who filled out a standard Massachusetts Piping Plover Census Form for each site monitored, in most cases using the Piping Plover Online Data Entry System ([PIPLODES](#)). These forms are used to report data on number of breeding pairs (*Index Count* and *Total Count*); frequency of site visits; design(s) and installation dates of predator exclosures; dates of nest discovery, completion, and hatching or failure; number of eggs on the date the nest was discovered; total numbers of eggs laid, eggs hatched, and chicks fledged; reasons for egg and chick loss, if determined; and comments regarding census results, limiting factors, and management needs. Maps of sites showing the

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

locations of all nests were submitted with census forms. After reviewing census forms, if necessary, we contacted cooperators to obtain missing or incomplete data, resolve inconsistencies, and clarify ambiguities. When we could not obtain the needed information, we used best professional judgment to assign final values or noted data as preliminary; any such instances are noted in Appendix 1.

RESULTS

Observers reported breeding Piping Plovers at 209 sites in Massachusetts in 2022. An additional 150 sites were surveyed one or more times during May and June, but no breeding pairs were detected at them (**Appendix 1**). The **Unadjusted Total Count** of the number of breeding pairs of Piping Plover was **1,053** (vs. 986 in 2021). The **Adjusted Total Count** was **1,033 pairs**, a 6.8 % increase over 2021 (967 pairs). The **Index Count** was **1,013 pairs** (vs. 948 pairs in 2021) or 98.1% of the **Adjusted Total Count**.

Distribution of breeding pairs by region (**Figure 1**) was similar to 2021, with slight decreases on the Lower Cape (27%; vs. 30% in 2021), Martha's Vineyard (7%; vs 9% in 2021), and North Shore (15%; vs 17% in 2021) and slight increases on the Upper Cape (21%; vs. 18% in 2021) and South Shore (13%; vs. 11% in 2021). Twenty-five sites with ten or more breeding pairs accounted for 53.8% of the Massachusetts breeding population, while 129 sites with three or fewer pairs accounted for 13.9% of the population.

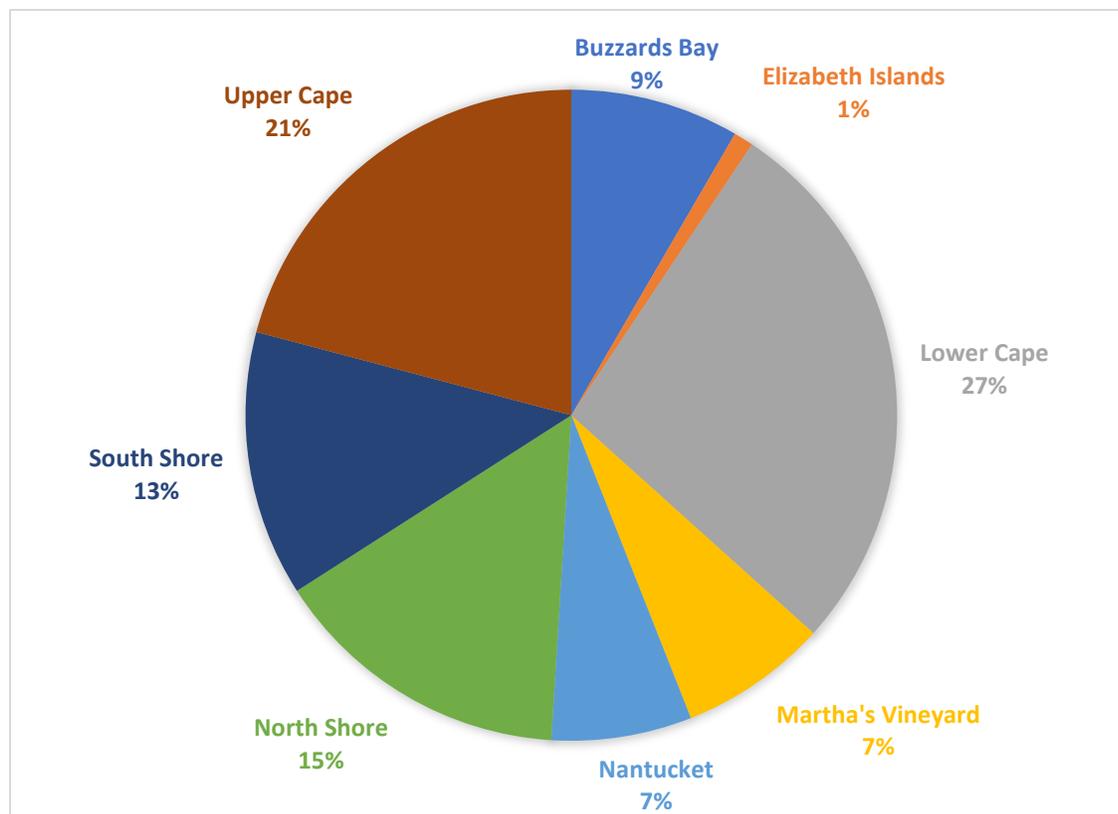


Figure 1. Distribution of Piping Plover breeding pairs by Massachusetts region in 2022, based on Adjusted Total Counts for each region.

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

In total, 1,330 chicks were reported fledged, resulting in overall productivity of **1.31 fledglings/pair**, based on data from 1,038 of 1053 pairs (98.6%; the *adjusted number of pairs with fledge data* divided by the *unadjusted total count*).¹ This represents a 23.6% increase in productivity relative to 2021 (1.06 fledglings/pair). Productivity varied by region, ranging from 1.60 on the Upper Cape down to 0.91 fledglings/pair on Martha's Vineyard (**Table 1**). Productivity data were not available for the Elizabeth Islands due to limited survey effort.

Table 1. Productivity (fledglings per pair) of Piping Plovers in Massachusetts by region in 2021-2022.

Region	2022	2021
Buzzards Bay	0.92	1.16
Elizabeth Islands	NA	NA
Lower Cape	1.32	0.97
Martha's Vineyard	0.91	0.43
Nantucket	0.96	1.05
North Shore	1.15	0.76
South Shore	1.38	1.43
Upper Cape	1.60	1.37

Nest failure rates were substantially lower in 2022 (47.4%) than in 2021 (58.0%). Causes of nest loss are shown in **Figure 2**. The largest causes of nest loss were predation (likely and suspected) and overwash/flooding. Predation accounted for a higher proportion of nest loss in 2022 (55%) than in 2021 (51%), while overwash/flooding (21%) was lower compared to 2021 (25%), likely due to a major multiday storm over Memorial Day weekend in 2021. **Figure 3** shows suspected predators of nests likely and suspected to have been depredated.

¹ The *unadjusted number of pairs with fledge data* was 1,038 (out of 1,053 unadjusted total pairs). The *adjusted number of pairs with fledge data* was 1,019.

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

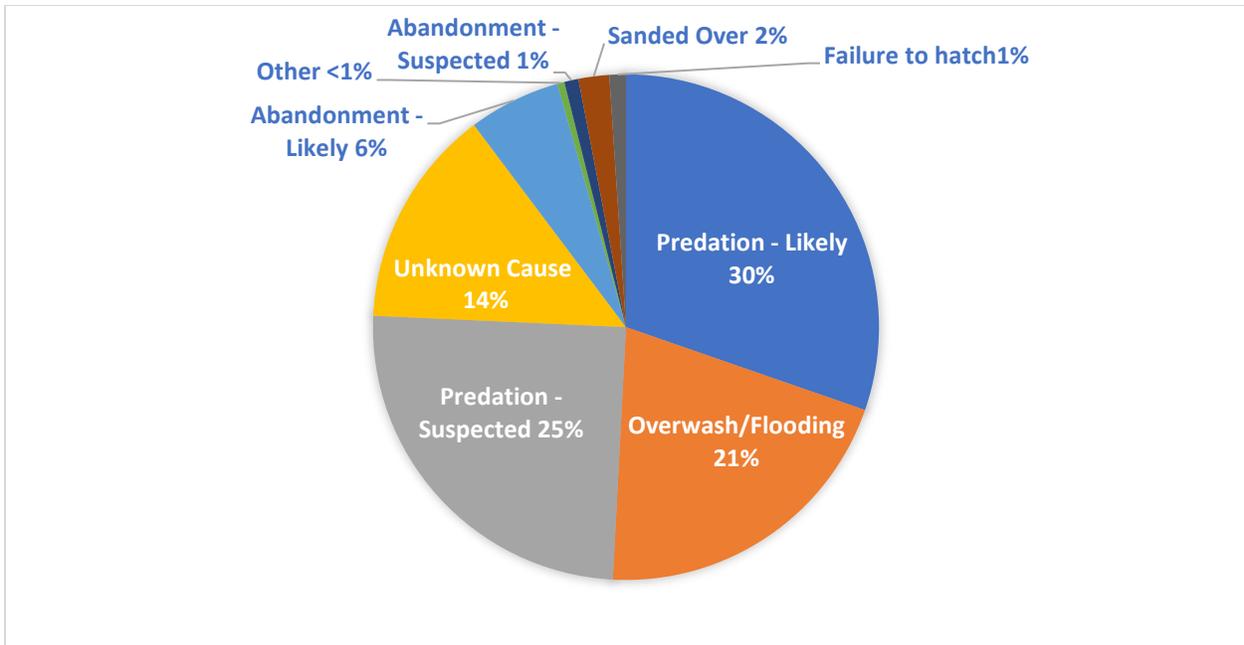


Figure 2. Causes of Piping Plover nest loss in Massachusetts, 2022 (n=663 nest failures).

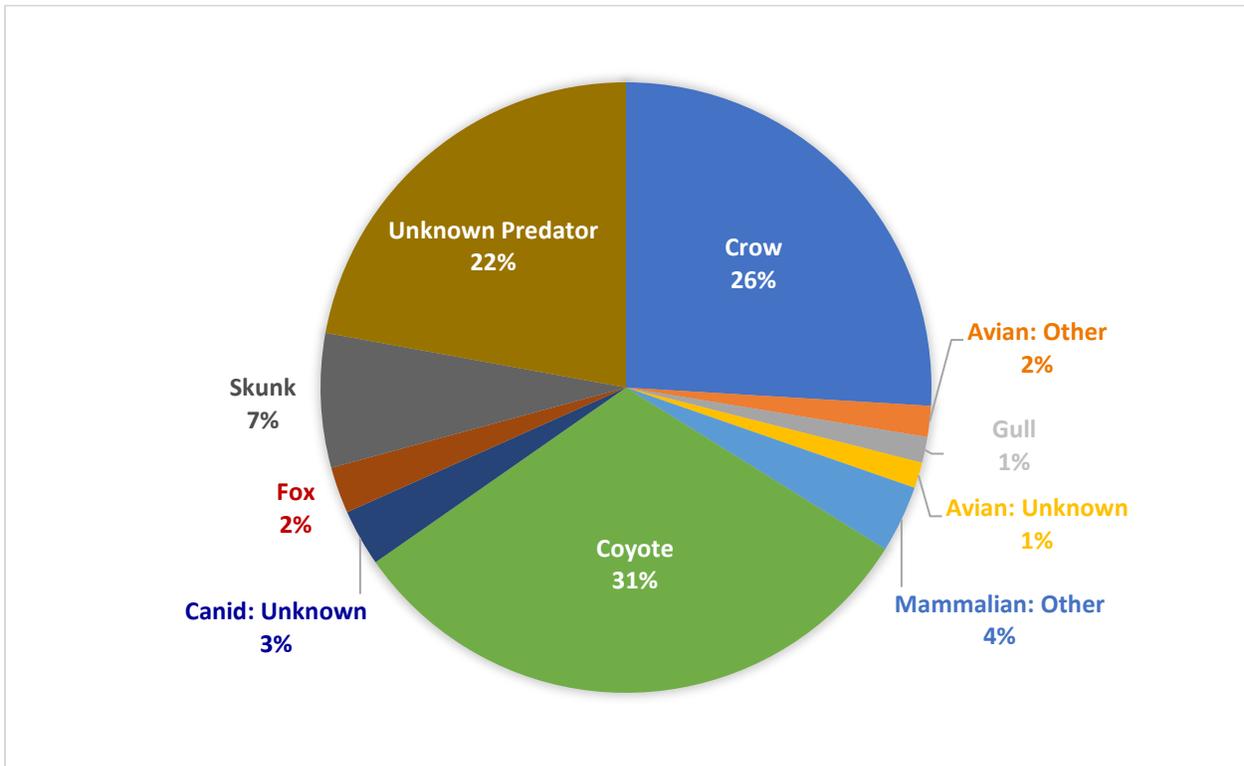


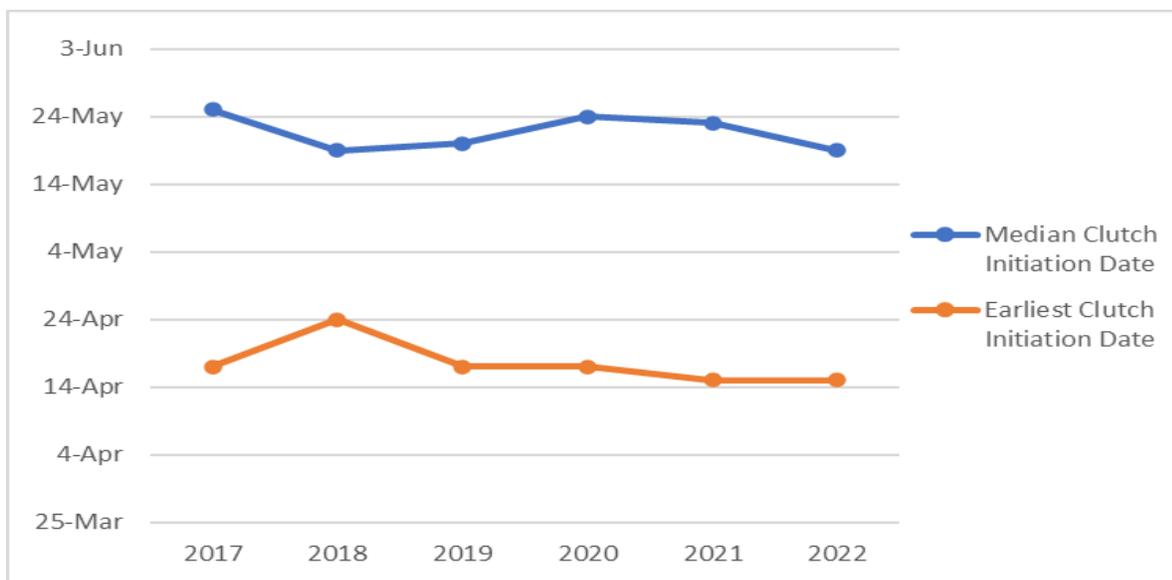
Figure 3. Presumed predators of Piping Plover nests likely and suspected to have been depredated in Massachusetts, 2022 (n=366, presumed depredated nests).

In 2022, the earliest clutch initiation date was estimated to be 15 April at Eastville Beach (Oak Bluffs). Statewide, the median clutch initiation date was 20 May (23 May in 2021). The earliest approximate

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

hatch date was 18 May, at Eastville Beach (Oak Bluffs) and Padanarum Harbor (South Dartmouth; 14 May in 2021). The median hatch date statewide was 19 June (22 June in 2021). Trends over time in earliest and median clutch initiation date and earliest and median hatch date are shown in **Figure 4**.

A)



B)

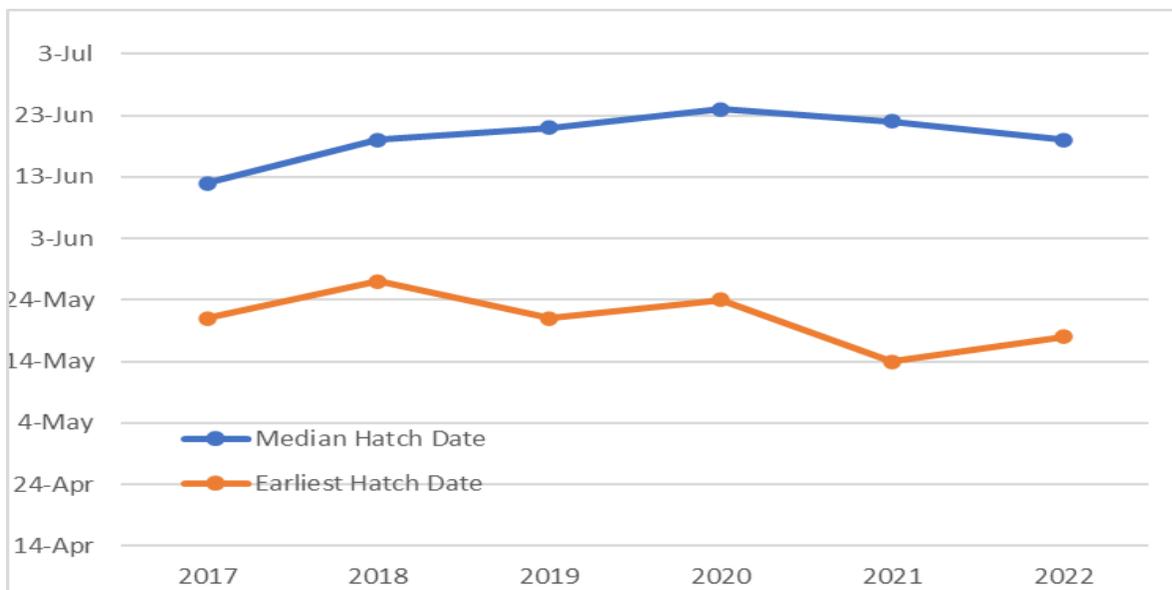


Figure 4. Piping Plover earliest and median clutch initiation date (A) and earliest and median hatch date (B) between 2017-2022 in Massachusetts.

Hatch rates increased (52.6%; n=1,348 nests with known fates) relative to 2021 (42.0%; n=1,435), and nesting attempts per pair decreased to 1.34 vs. 1.52 in 2021 (based on *adjusted total counts*). Hatch

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

rates for enclosed (11.1% of total known-fate nests) and unenclosed (88.9% of total known-fate nests) nests were 71.3% (n=150) and 50.3% (n=1,198), respectively, as compared to 61.4% (n=223) and 38.4% (n=1,212) in 2021. The nest abandonment rate for enclosed nests (7.3%; 11 of 150 nests) was substantially higher than for unenclosed nests (2.5%; 30 of 1,198 nests with known fates), and lower compared to the 11.7% abandonment rate for enclosed nests (26 of 223 nests) but similar to the 2.6% result for unenclosed nests (31 of 1,212 nests) in 2021.

Long term trends in breeding Piping Plover population size and productivity are shown in **Figure 5**. The five-year running average of productivity has declined overall since 1995; however, there is a noticeable increase since reaching a low point in 2013. Since 2018, the five-year average of productivity has been above the approximately 1.2 fledglings per pair thought to be necessary to maintain a stable population (Melvin & Gibbs 1996)², and the breeding population has increased dramatically over that period. In fact, since state-wide monitoring began, this is the first year where the estimated number of territorial pairs has exceeded 1,000 in the state of Massachusetts, far exceeding the goal of 625 pairs throughout New England identified in the Piping Plover Atlantic Coast Population Recovery Plan. Although the New England Piping Plover population has exceeded the population recovery goal, that is not the case for other regions along the Atlantic Coast.

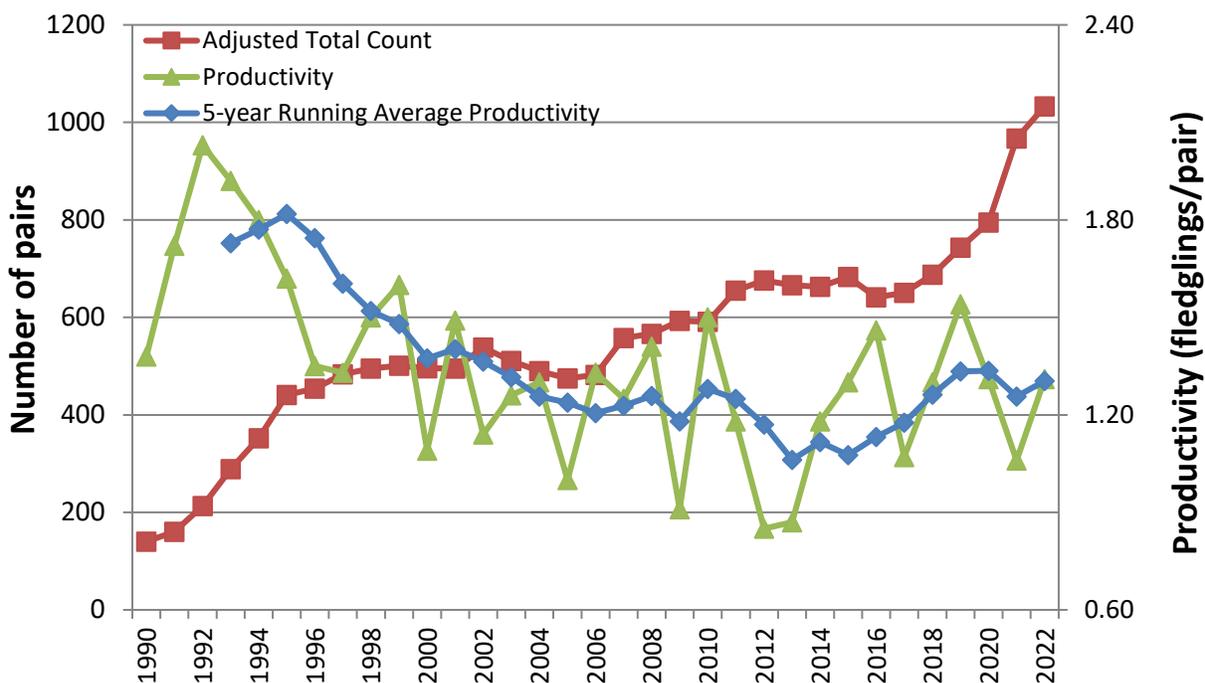


Figure 5. Piping Plover abundance (adjusted total count) and productivity (fledglings/pair) in Massachusetts, 1990-2022.

ACKNOWLEDGEMENTS

² Melvin and Gibbs (1996) suggest that the actual fecundity needed to maintain a stable population may be slightly lower than the estimate derived from their model. Other researchers have also suggested that early estimates of fecundity needed for a stable population may have been high (e.g., Catlin et al. 2015).

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

This report was prepared by Andrew Vitz with assistance from Marcela Liljeström, Amanda Veinotte, and Carolyn Mostello. We extend our sincere thanks to the many biologists, seasonal shorebird monitors, beach managers, landowners, and volunteers who participated in conservation efforts on behalf of Piping Plovers and other coastal waterbirds in Massachusetts in 2022. We also thank the more than 20 state and federal agencies, local municipalities and county government, local and regional land trusts, private conservation organizations, volunteers, and universities that supported their efforts. We especially thank all the individuals who participated in population monitoring and submitted the data that are summarized in this report.

LITERATURE CITED

- Catlin, D.H., J.D. Fraser, and J.H. Felio. 2015. Demographic responses of piping plovers to habitat creation on the Missouri River. *Wildlife Monographs* 192:1-42.
- Hecht, A. and S. M. Melvin. 2009a. Population trends of Atlantic Coast Piping Plovers, 1986-2006. *Waterbirds* 32:64-72.
- Hecht, A. and S. M. Melvin. 2009b. Expenditures and effort associated with recovery of breeding Atlantic Coast Piping Plovers. *J. Wildlife Management* 73:1099-1107.
- Walker, K. 2019. *Summary of the 2018 Massachusetts Piping Plover Census*. Massachusetts Division of Fisheries and Wildlife. 25 pp.
- Melvin, S.M. and J.P. Gibbs. 1996. Viability analysis for the Atlantic coast population of piping plovers. Pp. 175-186 in *Piping Plover (Charadrius melodus) Atlantic Coast population revised recovery plan*. U.S. Fish and Wildlife Service, Hadley, MA. 245 pp.
- U.S. Fish and Wildlife Service. 1996. *Piping Plover (Charadrius melodus) Atlantic Coast population revised recovery plan*. U.S. Fish and Wildlife Service, Hadley, MA. 245 pp.

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Appendix 1. Abundance, distribution, and productivity of Piping Plovers in Massachusetts, 2022.

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledged data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
NORTH SHORE							
Cape Hedge Beach, Rockport	1	1	0	1	0	ECGB	Several volunteer monitors
Carson Beach, Boston	0	0	0	0	0	DCR	
Coffins Beach – Castles, Gloucester	0	0	0	0	0	ECGA	
Coffins Beach - Bradford, Gloucester	0	0	0	0	0	ECGA	
Coffins Beach - East End, Gloucester	1	1	0	1	0	ECGA	No nest found
Constitution Beach, East Boston	ND	ND	ND	0	ND	MAS	
Crane Beach, Ipswich	49	49	75	49	0	TTOR	
Good Harbor Beach, Gloucester	2	2	6	2	0	Gloucester	
L Street Bathhouse, Dorchester	4	4	5	4	0	MAS	
Logan Airport, Boston	0	0	0	0	0	USDA	
Lovell's Beach, Boston	0	0	0	0	0	MAS	
Nahant State Beach, Nahant	4	4	3	4	0	DCR	
Newbury Town Beach, Newbury	5	7	7	7	0	MAS	One pair thought to have moved to PRNWR
Newburyport Beach, Newburyport	2	2	2	2	0	MAS	
Parker River NWR, Newbury/Rowley	32	37	55	37	0	USFWS	
Rainsford Island, Boston	0	0	ND	0	ND	MAS	
Revere Beach-North, Revere	7	7	7	7	0	DCR	
Revere Beach-South, Revere	8	8	0	8	0	DCR	
Salisbury Beach, Salisbury	2	2	0	2	0	DCR	
Sandy Point, Ipswich	16	17	7	16	0	DCR	
Snake Island, Winthrop	0	0	ND	0	ND	MAS	2 birds periodically foraging

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledge data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Two Penny Loaf, Gloucester	0	ND	ND	0	ND	ECGA	Site surveyed 1x after index period
West Beach, Beverly	1	1	0	1	0	ECGA	Site not visited after 6/15
Winthrop Beach, Winthrop	8	8.5	4	8.5	1	DCR	
Yirrell Beach, Winthrop	2	2	5	2	0	Winthrop	
SOUTH SHORE							
Boathole, Plymouth	1	1	3	1	0	DBR	
Bumpkin Island, Hull	0	0	ND	0	ND	MAS	
Duxbury Beach, Duxbury	40	40	73	40	0	DBR	One pair did not lay eggs
East Beach, New Bedford	1	1	1	1	0	LCES	
Ellisville Harbor State Park, Plymouth	0	0	0	0		MAS	
Ellisville Shifting Lots Preserve, Plymouth	4	4	6	4	0	MAS	
Fourth Cliff, Scituate	1	2	2	2	0	MAS	
Grape Island, Weymouth	0	0	ND	0	ND	MAS	
Humarock, Scituate	0	ND	ND	0	ND	MAS	Not surveyed after IC
Nantasket Beach, Hull	13	13	5	13	0	MAS	
Nantasket DCR, Hull	0	0	0	0	0	MAS	
Peddock's Island, Hull	1	1	0	1	0	MAS	
Pleasant Beach, Cohasset	1	1	0	1	0	MAS	
Plymouth Long Beach, Plymouth	47.5	47.5	60	47.5	0	Plymouth	0.5 is for extra female at one nest
Rexhame Beach, Marshfield	1	1	2	1	0	MAS	
Sagamore Beach, Bourne	3	3	3	4	0	MAS	1 pair not included in TC, 1 pair not included in IC
Sagamore Beach, Plymouth	0	0	ND	0	ND	MAS	
Saquish, Plymouth	4	4	13	4	0	GSC	
Saquish, Plymouth	1	1	2	1	0	DBR	
The Glades, Scituate	3	3	0	3	0	MAS	
Third Cliff, Scituate	11	11	10	11	0	MAS	
Wollaston Beach, Quincy	2	2	5	2	0	DCR	
UPPER CAPE							

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledge data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Acapesket Beach, Falmouth	0	0	ND	0	ND	MAS	
Bank Street Beach, Harwich	2.5	2.5	6	2.5	1	Harwich	
Bass River Beach, Yarmouth	ND	ND	ND	0	ND	MAS	
Bassetts Island, Bourne	2	2	0	2	0	MAS	
Bayview Ave/Howe's, Dennis	2	1	3	2	0	MAS	
Bayview, Dennis	0	0	0	0	0	Dennis	
Belmont Condos, Harwich	0	1	0	1	0	MAS	
Black Beach, Falmouth	1	1	0	1	0	MAS	May be same pair that nested on Woodneck Beach
Bone Hill Road, Barnstable	ND	ND	ND	0	ND	MAS	
Chapin Beach, Dennis	5	5	0	5	0	Dennis	
Coast Guard Beach, Truro	0	0	0	0	0	MAS	
Cold Storage Beach, Dennis	0	0	0	0	0	Dennis	
Corporation Beach, Dennis	0	0	0	0	0	Dennis	
Craigville Beach, Barnstable	1	1	0	1	0	MAS	Male also territorial at Memorial/Covell's Beach
Crosby Landing, Brewster	2	2	1	2	0	MAS	
Crowes Pasture (Cole's Pond) / Quivett Neck, Dennis	6	6	9	6	0	Dennis	
Dead Neck Sampsons Island, Barnstable	19	19	37	19	0	MAS	
Depot Street, Dennis	0	0	0	0	0	Dennis	
Dowses Beach, Barnstable	1	1	1	1	0	Barnstable	
Dr. Botero, Dennis	1	1	0	1	0	MAS	
East Sandwich Beach, East Sandwich	3	3	3	3	0	Sandwich	
Falmouth Harbor Jetty, Falmouth	1	1	1	1	0	MAS	
Flume Pond, Falmouth	0	0	0	0	0	MAS	
Fortes Beach, Barnstable	1	1	4	1	0	MAS	
Glendon Beach, Dennis	0	0	0	0	0	Dennis	
Gray's Beach, Yarmouth	2	2	unknown	2	0	MAS	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledge data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Great Island Causeway, Yarmouth	3	3	2	3	0	MAS	
Great Island - Smith Point, Yarmouth	6	6	7	6	0	MAS	
Haigis to Inman Rd., Dennis	0	0	0	0	0	Dennis	
Harbor View, Dennis	0	0	0	0	0	Dennis	
Howe's St. Beach, Dennis	0	0	0	0	0	Dennis	
Inman Beach, Dennis	0	0	0	0	0	Dennis	
Kalmus Beach, Barnstable	4	4	2	4	0	Barnstable	
Linnell Landing Beach, Brewster	ND	ND	ND	0	ND	MAS	
Little Island Beach, Falmouth	0	0	ND	0	ND	MAS	
Long Beach, Barnstable	3	4	1	4	0	MAS	
Mashnee Dike, Bourne	1	1	0	1	0	USACOE	Pair believed to have renested at Stony Point Dike
Mayflower Beach, Dennis	0	0	0	0	0	Dennis	
Memorial Beach/Covell's, Barnstable	0	0.5	0	0.5	1	MAS	Male eventually paired/nested on Cragville Beach
Menauhant Beach, Falmouth	1	1	0	1	0	MAS	
Menauhant Yaucht Club, Falmouth	1	1	1	1	0	MAS	
Metcalf Memorial, Dennis	0	0	0	0	0	Dennis	
Mussel Point, Barnstable	ND	ND	ND	0	ND	MAS	
New Seabury, Mashpee	6	6	0	6	0	MAS	
Paine's Creek, Brewster	ND	ND	ND	0	ND	MAS	
Popponesset Spit, Mashpee	7	7	16	7	0	MAS	
Radio City Beach, Yarmouth	1	1	0	1	0	MAS	
Raycroft Beach, Dennis	0	0	0	0	0	Dennis	
Red Jacket Inn, Yarmouth	0	0	0	0	0	MAS	
Red River Beach, Harwich	1	1.5	3	1.5	1	Harwich	
Rushy Marsh Pond, Barnstable	0	0	0	0	0	MAS	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledge data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Sagamore Beach – Sandwich, Sandwich	6	7	10	7	0	MAS	1 pair that did not lay eggs nested on Scusset Beach
Sandy Neck Beach Park, Barnstable	50	50	97	50	0	Barnstable	
Saquatucket Beach, Harwich	0	0	ND	0	ND	MAS	
Scorton Neck (Torrey), Sandwich	7	7	17	7	0	MAS	
Scorton Shores, East Sandwich	1	1	4	1	0	Sandwich	
Scorton Shores, Sandwich	1	2	2	2	0	MAS	
Scusset Beach State Reservation, Sandwich	1	2	0	2	0	MAS	
Sea St./ Keyes Beach, Barnstable	ND	ND	ND	0	ND	MAS	
Sea Street, West Dennis	0	0	0	0	0	Dennis	
Sea Street Beach, Dennis	0	0	0	0	0	Dennis	
Seagull Beach, Yarmouth	10	10	18	10	0	MAS	1 territorial pair did not lay eggs
Sesuit Harbor Beach, Dennis	0	0	0	0	0	Dennis	
Sippewisset, Falmouth	1	1	4	1	0	MAS	
South Cape Beach, Mashpee	5	5	6	5	0	MAS	
South Village Beach, Dennis	1	1	4	1	0	Dennis	
Spring Hill Beach, Sandwich	6	6	19	7.5	0	Sandwich	3 unpaired adults seen during index count
Squaw Island, Barnstable	8	8	14	8	0	MAS	
Squaw Island Road, Barnstable	0	0	0	0	0	MAS	
Standish Way/Colonial Acres, Yarmouth	ND	ND	ND	0	ND	MAS	
Stone Horse Yacht Club, Harwich	ND	ND	ND	0	ND	MAS	
Surf Drive, Falmouth	0	0	0	0	0	MAS	
Swan River/Miramar, Dennis	3	3	6	3	0	MAS	
Town Neck Beach, Sandwich	2	2	2	2	0	Sandwich	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledge data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Trunk River/Moors, Falmouth	1	2	4	2	0	MAS	
Washburn Island, Falmouth	3	3	1	3	0	MAS	
West Dennis Beach, Dennis	12	12	26	12	0	Dennis	
Wings Island, Brewster	0	ND	ND	0	ND	MAS	Site not monitored after index count
Winstead Inn, Harwich	1	1	0	1	0	MAS	
Woodneck Beach, Falmouth	0	1	0	1	0	MAS	Thought to be same pair on Black Beach
Wychmere, Harwich	5	5	15	5	0	MAS	
24 Willis Lane, Falmouth	0	1	0	1	0	MAS	
LOWER CAPE							
Armstrong Beach, Provincetown	11	11	25	11	0	NPS	
Ballston Town Beach, Chatham	0	0	0	0	0	MAS	
Ballston, Truro	3	2	2	3	0	NPS	1 pair included in IC nested at Newcomb Hollow
Beach Point, Truro	2.5	3	4	3.5	1	MAS	
Between Corn Hill Beach and Beach Point, Truro	ND	ND	ND	0	ND	MAS	
Boat Meadow, Eastham	ND	ND	ND	0	ND	MAS	
Bound Brook, Wellfleet	2	2	6	2	0	NPS	
Cahoon Hollow, Wellfleet	1	1	0	1	0	NPS	Pair also nested at Newcomb Hollow
Chatharbor Lane, Chatham	ND	ND	ND	0	ND	MAS	
Clafin Landing/Chatham Bars Inn, Chatham	ND	ND	ND	0	ND	MAS	
Coast Guard Beach, Eastham	9.5	9.5	11	9.5	1	NPS	
Coast Guard Beach, Truro	0	0	0	0	0	MAS	
Coast Guard Truro, Truro	7	7	8	7	0	NPS	
Cockle Cove, Chatham	1	1	0	1	0	MAS	
Corn Hill Beach, Truro	1	1	4	1	0	MAS	
Duck Harbor, Wellfleet	6	6	8	6	0	NPS	
Dyer Prince Beach, Eastham	0	1	0	1	0	MAS	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledge data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Exit 9, Provincetown	3	3	9	3	0	NPS	
Field Point /Fox Is. WMA, Wellfleet	1	1	0	1	0	MAS	
First Encounter Beach, Eastham	1	1	0	1	0	MAS	
Fisher Beach, South Truro	4	4	12	4	0	MAS	
Fisher Beach, Truro	1	1	3	1	0	MAS	
Forest Beach, Chatham	2	2	0	2	0	MAS	
Great Is., Wellfleet	7	7	14	7	0	NPS	1 pair failed and renested at Jeremy Point
Harding Beach, Chatham	5	5	14	5	0	MAS	
Harding Shores, Chatham	ND	ND	ND	0	ND	MAS	Not surveyed after Index Count
Hatches Harbor, Provincetown	4	4	6	4	0	NPS	
Head of the Meadow, Truro	4	4	5	4	0	NPS	
Herring Cove, Provincetown	2	2	5	2	0	NPS	
Head of the Meadow, Truro (Town Beach)	0	0	0	0	0	MAS	
High Head, Truro	4	4	13	4	0	NPS	
Indian Neck, Wellfleet	1	1	0	1	0	MAS	
Jeremy Point, Wellfleet	6	8	7	8	0	NPS	1 pair previously nested at Great Island
Lecount Hollow, Wellfleet	0	0	0	0	0	NPS	
Lieutenant Island – SW, Wellfleet	1	1	0	1	0	MAS	
Lieutenant Island-NW, Wellfleet	1	1	1	1	0	MAS	
Lieutenant Island - The Hook, Wellfleet	ND	ND	ND	0	ND	MAS	
Linnell Lane, Chatham	1	1	4	1	0	Chatham	
Longnook, Truro	2	2	4	2	0	NPS	
Marconi Beach, Wellfleet	1	1	0	1	0	NPS	
Marconi Station, Wellfleet	5	5	13	5	0	NPS	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledged data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Minimoy Island, Chatham	3	3	0	3	0	USFWS	2 pairs that did not lay eggs were territorial >2 wks
Mission Bell, Provincetown	5	5	11	5	0	NPS	
Morris Island, Chatham	ND	1	0	1	0	USFWS	
Morris Island Dike/ Hardings Beach Point, Chatham	0	0	0	0	0	MAS	
Mouth of Herring River - Mayo Beach, Wellfleet	ND	ND	ND	0	ND	MAS	
Nauset Light Beach, Eastham	0	0	0	0	0	NPS	
Newcomb Hollow, Wellfleet	1	3	2	3	0	NPS	1 pair nested at Cahoon Hollow and another pair arrived from Ballston, where it did not lay eggs
North (Nauset) Beach, Chatham	20	20	40	21	0	Chatham	
North Beach Island, Chatham	21	21	9	21	0	Chatham	
North Monomoy Island, Chatham	ND	1	0	1	0	USFWS	
North Spit, Orleans	19.5	20	25	20	1	Orleans	
Old Wharf, Wellfleet	ND	ND	ND	0	ND	MAS	
Pleasant St. Beach, Chatham	ND	ND	ND	0	ND	MAS	
Quitnesset, Chatham	5	5	9	5	0	MAS	
Rock Harbor/Dyer Prince Rd, Eastham	ND	ND	ND	0	ND	MAS	
Rock Harbor, Orleans	ND	ND	ND	0	ND	MAS	
Race Point Beach, Provincetown	4	4	10	4	0	NPS	
Race Point North, Provincetown	11	11	14	11	0	NPS	
Race Point South, Provincetown	2	2	4	2	0	NPS	
Ridgevale Beach, Chatham	3	3	7	3	0	MAS	
Ryder Beach, Truro	ND	ND	ND	0	ND	MAS	
Skaket Beach, Orleans	ND	ND	ND	0	ND	MAS	
Scatteree Landing, Chatham	ND	ND	ND	0	ND	MAS	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledge data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
South Beach - Middle Island, Chatham	5	6	2	6	0	MAS	
South Beach (Nauset), Orleans	20.5	22	26	22	1	Orleans	Unpaired male scraping during IC
South Beach (North of Break), Chatham	3	3	7	3	0	MAS	
South Beach (South of Break), Chatham	9	9	ND	0	0	MAS	Site only surveyed twice the entire season
South Monomoy Island, Chatham	40	41	39	41	0	USFWS	4 pairs that did not lay eggs included in TC and IC
South Sunken Meadow, Truro	1	1	0	1	0	MAS	
Tern Island, Chatham	3	3	0	3	0	MAS	
White Crest Beach, Wellfleet	0	0	0	0	0	NPS	
Wood End/Long Point, Provincetown	14	15	12	15	0	NPS	
BUZZARDS BAY							
Baker's Beach, Westport	2	2	0	2	0	LCES	
Barney's Joy/Little Beach, Dartmouth	23	24	14	24	0	MAS	
Beach Ave, Westport	0	0	0	0	0	MAS	
Blankenship Cove, Marion	ND	ND	ND	0	ND	MAS	
Brandt Island, Mattapoisett	ND	ND	ND	ND	ND	DFW	Not surveyed
Cedar Island, Wareham	ND	ND	ND	0	ND	MAS	
Cockeast Pond (Elephant Rock), Westport	2	2	0	2	0	TNCRI	
Cromeset, Wareham	ND	ND	ND	0	ND	MAS	
Demarest Lloyd, Dartmouth	5	5	0	5	0	DCR	
East Beach, Westport	2	2	0	2	0	MAS	
Horseneck Beach, Westport	15.5	15.5	33	15.5	1	DCR	
Little Harbor Beach, Wareham	4	6	6	6	0	MAS	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledge data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Little Island, Marion	ND	ND	ND	0	ND	MAS	
Long Beach Point, Wareham	2	2	2	2	0	MAS	
Meadow Island, Marion	0	ND	ND	0	ND	MAS	
Nonquitt, Dartmouth	3	3	6	3	0	MAS	
Padanaram Harbor, South Dartmouth	2	2	5	2	0	MAS	
Pine Island (Angelica Point and Strawberry Point), Mattapoisett	ND	ND	ND	ND	ND	DFW	Site not surveyed
Planting Island Cove, Marion	0	ND	ND	0	ND	MAS	
Ram Is., Marion	ND	ND	ND	ND	ND	DFW	Site not surveyed
Ram Is. Mattapoisett, Mattapoisett	0	0	0	0	0	DFW	
Richmond Pond, Westport	1	1	0	1	0	TNCRI	
Round Hill Beach, Dartmouth	0	0	0	0	0	MAS	
Salters Pond, Dartmouth	5	5	7	5	0	MAS	
South Shore Marshes, Fairhaven	ND	ND	ND	ND	ND	DFW	Site visited only once (before IC)
Stewart's Island, Marion	ND	ND	ND	0	ND	MAS	
Stony Point Dike, Wareham	2	3	2	3	0	USACOE	1 pair also nested at Mashnee Dike
Swift's Beach, Wareham	ND	ND	ND	0	ND	MAS	
Ward's Rock, Fairhaven	ND	ND	ND	0	ND	MAS	Site surveyed 1x (5/25/22)
West Island, Fairhaven	3	3	0	3	0	DCR	
West Island, Fairhaven	3	5	0	5	0	LCES	
Westport Town Beach, Westport	6	6	4	6	0	MAS	
Winsegansett Heights, Fairhaven	1	1	0	1	0	LCES	
ELIZABETH ISLANDS							
Church's Beach, Gosnold	ND	ND	ND	0	ND	MAS	
Copicut Neck, Gosnold	ND	ND	ND	ND	ND	MAS	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledged data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Cuttyhunk, Gosnold	5	5	7	5	0	MAS	
Nashawena Island-Canapitsit, Gosnold	ND	ND	ND	ND	ND	DFW	Site not surveyed
Nashawena Island Quicks Hole, Gosnold	3	3	ND	0	ND	DFW	Site surveyed 1x
Naushon Is. - Crescent Beach, Gosnold	2	2	ND	0	ND	DFW	Site surveyed 1x
Naushon Is. - French Watering Hole, Gosnold	0	ND	ND	0	ND	DFW	Site surveyed 1x
Naushon Is. - Kettle Cove, Gosnold	1	1	ND	0	ND	DFW	Site surveyed 1x
Pasque Island-Robinson's Hole, Gosnold	1	1	ND	0	ND	DFW	Site surveyed 1x
Naushon Is. - Tarpaulin Cove, Gosnold	2	2	ND	0	1	DFW	Site surveyed 1x
Naushon Is. - West Beach, Gosnold	0	ND	ND	0	ND	DFW	Site surveyed 1x
Pasque Island-Cobbly, Gosnold	0	ND	ND	0	ND	DFW	Site surveyed 1x
Pasque Island-Quicks Hole, Gosnold	1	1	ND	0	ND	DFW	Site surveyed 1x
Pasque Island-Robinson's Hole, Gosnold	1	1	ND	0	ND	DFW	Site surveyed 1x
MARTHA'S VINEYARD							
Arruda's Point / The Jetties, Edgartown	2	2	0	2	0	TTOR	
Bend-in-the-Road Beach, Edgartown	0	0	0	0	0	MAS	
Big Gravel Is., Oak Bluffs	0	0	0	0	0	MAS	
Black Point Pond, Chilmark	0	0	0	0	0	BW	
Caleb's Pond, Edgartown	0	0	0	0	0	BW	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledged data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Caleb's Pond Preserve, Edgartown	0	0	0	0	0	MVLBC	
Cape Higgon, Chilmark	0	ND	ND	0	ND	BW	Site not surveyed after index count
Cape Pogue Elbow / The Narrows, Edgartown	6	6	3	6	0	TTOR	
Cedar Tree Neck, West Tisbury	0	0	0	0	0	BW	
Chappaquiddick Point Beach, Edgartown	0	0	0	0	0	MVLBC	
Chilmark Pond, Chilmark	1	1	0	1	0	BW	
Chilmark Pond Preserve, Chilmark	0	0	0	0	0	MVLBC	
Cove Meadow Preserve, Edgartown	0	0	0	0	0	MVLBC	
Cow Bay, Edgartown	0	0	0	0	0	MAS	
Cracktuxet Trust Beach, Edgartown	ND	ND	ND	0	ND	BW	Site visited only 1x
Dogfish Bar, Aquinnah	7	7	4	7	0	BW	
Dougs Cove Preserve, Oak Bluffs	0	0	0	0	0	MVLBC	
East Tashmoo, Tisbury	0	0	0	0	0	MAS	
Eastville Beach, Oak Bluffs	1	1	3	1		MAS	
Edey's Island, Chilmark	0	0	0	0	0	MAS	
Edgartown Great Pond (Job's Neck), Edgartown	7	8	5	8	0	BW	
Edgartown Great Pond Beach, Edgartown	0	0	0	0	0	MVLBC	
Great Rock Bight Preserve, Chilmark	0	0	0	0	0	MVLBC	
Harthaven, Oak Bluffs	1	1	1	1	0	MAS	
Haystack Island, Edgartown	0	0	0	0	0	MAS	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledged data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
James Pond Preserve, West Tisbury	0	0	0	0	0	MVLBC	
Lagoon Pond-Maciel Marine/Ferry Boat Island, Tisbury	0	0	0	0	0	MAS	
Lamberts Cove West, Tisbury	1	1	0	1	0	BW	Pair thought to be same as at Paul's Point
Leland / East Beach, Edgartown	5	5	5	5	0	TTOR	
Lighthouse Beach, Edgartown	3	3	8	3	0	BW	
Little Beach / Eel Pd., Edgartown	6	7	10	7	0	BW	
Little Gravel Is., Oak Bluffs	0	0	0	0	0	MAS	
Little Neck, Edgartown	0	0	0	0	0	TTOR	
Lobsterville Beach, Aquinnah	3	4	7	4	0	MAS	
Long Point, West Tisbury	1	1	0	1	0	TTOR	
Lucy Vincent Beach, Chilmark	1	1	1	1	0	BW	
Menemsha Neck Preserve, Aquinnah	0	0	0	0	0	MVLBC	
Mink Meadows, Tisbury	2	2	2	2	0	MAS	
Moshup Beach, Aquinnah	1	1	3	1	0	MVLBC	
Nomans Land Island NWR, Chilmark	ND	ND	ND	0	ND	USFWS	
Norton Point Beach, Edgartown	11	11	6	11	0	TTOR	
Oyster Pond, Edgartown	0	0	0	0	0	BW	
Paqua Pond, Edgartown	0	0	0	0	0	BW	
Paul's Point, West Tisbury	0	1	0	1	0	BW	Pair moved after 5/28 - possibly to Lamberts Cove
Pease's Pond, Edgartown	0	ND	ND	0	ND	BW	Site surveyed 1x (during index count)
Philbin Beach, Aquinnah	1	1	0	1	0	BW	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledged data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Quammox Preserve, Edgartown	0	0	0	0	0	MVLBC	
Quansoo, Chilmark	3	3	0	3	0	MAS	
Sarson Is., Oak Bluffs	ND	ND	ND	0	ND	MAS	
Sepiessa Point Reservation, West Tisbury	0	0	0	0	0	MVLBC	
Seven Gates, West Tisbury	0	1	1	1	0	BW	
Short Cove Preserve, West Tisbury	0	ND	ND	0	ND	MVLBC	Site surveyed once after IC
South Beach, Edgartown	0	ND	ND	0	ND	BW	
Spring Point, Chilmark	1	1	1	1	0	BW	
Squibnocket Beach/Long Beach, Chilmark	2	2	1	2	0	BW	
Squibnocket Pond Reservation, Aquinnah	2	2	1	2	0	MVLBC	
Stonewall Beach, Chilmark	0	0	0	0	0	BW	
Sylvia State Beach Edgartown, Edgartown	0	0	0	0	0	MAS	
Sylvia State Beach Oak Bluffs, Oak Bluffs	1	1	0	1	0	MAS	
Tashmoo Preserve, Tisbury	0	0	0	0	0	MVLBC	
Tisbury Great Pond Beach, West Tisbury	1	1	0	1	0	MVLBC	
Wasque, Edgartown	1	1	3	1	0	TTOR	
Watcha Pond, West Tisbury	1	1	0	1	0	BW	
West Tashmoo, Tisbury	1	2	3	2	0	BW	
Wilfrids Pond Preserve, Tisbury	0	0	0	0	0	MVLBC	
Yorke - Allen Point, Edgartown	0	0	0	0	0	MAS	
NANTUCKET							
40th Pole, Nantucket	2	2	4	2	0	Nantucket	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledge data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Capaum Pond, Nantucket	0	0	0	0	0	NCF	
Chase Links, Nantucket	1	1	0	1	0	MAS	
Coatue, Nantucket	12	13	14	13	0	NCF	
Coatue Harbor, Nantucket	0	0	0	0	0	TTOR	
Coskata-West Beach, Nantucket	3	3	6	3	0	TTOR	
Coskata-East Beach, Nantucket	0	0	0	0	0	TTOR	
Dionis Beach, Nantucket	2	2	2	2	0	Nantucket	
Eel Point, Nantucket	12	12	9	12	0	NCF	
Great Point, Nantucket	0	1	0	1	0	TTOR	
Hallowell Lane Beach, Nantucket	1	1	2	1	0	Nantucket	USFWS area of Great Point not included
Hither Creek, Nantucket	0	0	0	0	0	MAS	
Hoicks Hollow, Nantucket	0	0	0	0	0	MAS	
Hummock and West Hummock Ponds, Nantucket	0	0	0	0	0	NCF	
Jetties Beach, Nantucket	1	2	0	2	0	Nantucket	
Little Neck, Nantucket	0	0	0	0	0	NCF	
Long Pond, Nantucket	0	0	0	0	0	NCF	
Low Beach, Nantucket	4	4	7	4	0	Nantucket	
Madaket Beach, Nantucket	1	1	4	1	0	Nantucket	
Millie's Bridge, Nantucket	ND	ND	ND	0	ND	MAS	
Monomoy Creeks, Nantucket	0	0	0	0	0	NCF	
Muskeget Island, Nantucket	5	5	ND	5	0	MAS	
Nantucket NWR (Great Point), Nantucket	1	1	1	1	0	USFWS	
Polpis Harbor (Medouie Creek and Pocomo Meadows), Nantucket	0	0	0	0	0	NCF	
Quaise Point, Nantucket	0	0	0	0	0	Nantucket	

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledged data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Quidnet/Sesachacha Pond/Greenhills, Nantucket	1	1	0	1	0	MAS	
Sheep Pond, Nantucket	0	0	0	0	0	NCF	
Smith's Point, Nantucket	0	0	0	0	0	MAS	
Smith Point / Esther Is., Nantucket	5	5	4	5	0	Nantucket	
South Pastures (Madequecham Valley to Tom Nevers), Nantucket	0	ND	ND	0	ND	NCF	
Squam Pond, Nantucket	0	0	0	0	0	NCF	
Squam Pond, Nantucket	1	1	0	1	0	MAS	
Surfside/Western Ave., Nantucket	0	0	0	0		Nantucket	
The Galls, Nantucket	1	1	0	1	0	TTOR	
The Glades, Nantucket	0	0	0	0	0	TTOR	
The Haulover, Nantucket	0	0	0	0	0	NCF	
Tuckernuck Is. - Bigelow's Point, Nantucket	1	1	3	1	0	TLT	
Tuckernuck Is. – Charlie's Point/South Beach, Nantucket	ND	ND	ND	0	ND	TLT	
Tuckernuck Is. - East Pond, Nantucket	0	0	0	0	0	TLT	
Tuckernuck Is. - North Pond2, Nantucket	2	2	7	2	0	TLT	
Tuckernuck Is. - Whale Point, Nantucket	10	13	5	13	0	TLT	
UMass Field Station, Nantucket	0	0	0	0	0	NCF	
Wanoma/Tom Nevers, Nantucket	0	0	0	0	0	MAS	
Washing Pond, Nantucket	2	2	4	2	0	MAS	1 pair did not lay eggs - likely nested at Chase Links

SUMMARY OF THE 2022 MASSACHUSETTS PIPING PLOVER CENSUS

Site	Index Count ^a (no. pairs)	Total Count ^b (no. pairs)	No. chicks fledged ^c	No. pairs with fledge data ^c	No. unpaired adults ^d	Source ^e	Notes ^f
Wauwinet, Nantucket	0	0	0	0	0	MAS	
Western Ave, Nantucket	0	0	0	0	0	MAS	
187 Eel Point, Nantucket	1	1	2	1	0	Nantucket	

^a *Index Count* = number of pairs counted between 1-9 June 2020, the standardized *Index Count* period for the Atlantic Coast population.

^b *Total Count* = total number of territorial or breeding pairs present at a site for at least 2 weeks during the breeding season.

^c *Chicks fledged* are defined as chicks \geq 25 days of age or observed in flight, whichever occurs first. Number of *Pairs with fledge data* includes all pairs for which number of *chicks fledged* was determined; this includes not only pairs that successfully fledged chicks, but also pairs for which no nests were found, pairs that nested unsuccessfully, and pairs whose chicks failed to fledge.

^d *Unpaired adults* = total number of territorial single adults present at a site for at least 2 weeks during the breeding season.

^e Source = primary source(s) that provided monitoring data: Barnstable = Town of Barnstable, BW = BiodiversityWorks, Chatham = Town of Chatham, DCR = Department of Conservation and Recreation, Dennis = Town of Dennis, DFW = Massachusetts Division of Fisheries & Wildlife, ECGA = Essex County Greenbelt Association, GSC = Gurnet Saquish Corporation, LCES = Lloyd Center for Environmental Studies, MAS = Massachusetts Audubon Society, MVLBC = Martha's Vineyard Land Bank Coalition, Nantucket = Town of Nantucket, NCF = Nantucket Conservation Foundation, NPS = National Park Service, Orleans = Town of Orleans, Plymouth = Town of Plymouth, TLT = Tuckernuck Land Trust, TTOR = The Trustees of Reservations, USACOE = U.S. Army Corps of Engineers, USFWS = U.S. Fish & Wildlife Service, Winthrop = Town of Winthrop

^f Pairs that moved between sites (as indicated in "Notes") were not double-counted in tallies.