## INVENTORY OF TERNS, LAUGHING GULLS, AND BLACK SKIMMERS NESTING IN MASSACHUSETTS IN 2017



Bill Byrne, MassWildlife

# Prepared by: Carolyn Mostello, Kiah Walker, Amanda Veinotte, and Jennifer Longsdorf Massachusetts Division of Fisheries & Wildlife October 2019



### 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!

#### **ABSTRACT**

Cooperators in Massachusetts surveyed approximately 215 coastal sites in 2017 for the presence of breeding Roseate Terns (*Sterna dougallii*), Common Terns (*Sterna hirundo*), Arctic Terns (*Sterna paradisaea*), Least Terns (*Sternula antillarum*), Laughing Gulls (*Larus atricilla*), and Black Skimmers (*Rhynchops niger*). Of approximately 177 sites with a history of nesting by these species, 87 sites were occupied by nesting birds, plus two new nesting sites. Compared to 2016 numbers, total nesting pairs of Roseate Terns (2,264 pairs) increased 10%, Least Terns (2,940 pairs) decreased 9%, and Common Terns (18,059) increased 5%. Laughing Gulls (2,745 pairs) and Arctic Terns were roughly stable. Black Skimmers (8 pairs) appear to be slowly increasing. Earliest and median first egg dates across sites were 6 May/23 May for Common Terns, 7 May/28 May for Least Terns, 9 May/23 May for Roseate Terns, 26 May/26 May for Laughing Gull, and 26 May/12 June for Black Skimmer.

#### INTRODUCTION

Coastal waterbirds are a vulnerable group of species. Of Massachusetts' four nesting tern species, the Common Tern, the Least Tern, and the Arctic Tern are listed as "Special Concern" pursuant to the Massachusetts Endangered Species Act. The Roseate Tern is listed as "Endangered" pursuant to both the Massachusetts and U.S. Endangered Species Acts.

Terns, Laughing Gulls, and Black Skimmers in Massachusetts are protected and monitored by an extensive network of cooperators throughout the state. These cooperators provide census data and other reproductive information to the Massachusetts Division of Fisheries & Wildlife (MassWildlife). This allows wildlife managers to determine abundance and status of, and threats to, these species.

This report summarizes data on distribution, abundance, and productivity of terns, Laughing Gulls, and Black Skimmers in Massachusetts during the 2016 nesting season.

#### **METHODS**

**Sites Surveyed:** Cooperators are asked to survey all sites at which terns, Laughing Gulls, and Black Skimmers have been known to nest. Some cooperators also survey additional sites with no history of nesting by these species. Any new nesting sites are reported.

Timing of Census: Depending upon the species, either one or two censuses are conducted. The "A-period count" (or "peak season" count) is conducted between 5 and 20 June. Laughing Gulls, Black Skimmers, and all tern species are censused during the A-period. For Roseate and Common Terns, the count is ideally conducted as closely as possible to the first hatch. Laughing Gull and Black Skimmer counts are timed to be coincident with Common Tern counts, and Arctic Tern counts with counts of any sympatric nesting seabird species. Least Tern colonies ideally are visited multiple times during the A-period window, and maximum estimates are reported. The "B-period count" (or "post-peak" count) is conducted after 20 June. For Roseate Terns, the B-count is timed 25 days after the A-count. For Arctic Terns and Black Skimmers, which nest in very low numbers in the state, any additional pairs that appear after 20 June are reported. A B-count for Least Terns is not necessary unless there is a significant change in numbers from the A-count, or a site that was not used during the A-period window was used after 20 June. Because Least Terns frequently shift among sites in response to disturbance, B-counts do not contribute to the overall census numbers (to avoid double-counting the same birds); however, the B-count does document use of the site. B-counts are not required for Common Terns or Laughing Gulls.

**Survey Method:** Observers are asked to classify their survey method as one of the following: Nest Count, Partial/Extrapolated Nest Count, Incubation Count, or Adult Count. All counts are expressed as "number of pairs". Nests must contain at least one egg to be counted, unless it is obvious that chicks have already hatched. Empty scrapes and abandoned nests are not counted, unless they are known to have been active during the census window. Adults are only counted if it appears that they are nesting at a site; birds that are not suspected to be nesting at a site (e.g., resting or feeding birds) are not counted as nesting pairs. The number of breeding adults present (i.e., in the nesting area, not loafing on the shoreline) is multiplied by a correction factor of 0.8 to arrive at the number of pairs.

Survey Quality and Productivity Estimate: Observers are asked to rate the quality of their survey as Low Confidence, Reasonable Confidence, or High Confidence. Observers also provide a qualitative assessment of productivity: none, poor, fair, good, or excellent. In a few cases, typically for Roseate and Common Terns at large colonies where detailed monitoring occurs, quantitative estimates of productivity (e.g., fledglings/nest) are provided. In Appendix A, productivity assessments expressed as ranges indicate uncertainty; multiple estimates separated by commas represent values for different subcolonies within a site.

Data Reporting and Quality Control: A majority of observers enter data into the Tern Online Data Entry System (TERNODES); others complete a standard "Massachusetts Tern Census Form". Data requested includes: monitoring effort; management and research actions/needs; dates of pre-A-, A-, and B-counts; number of pairs observed during counts; survey method; quality of survey; qualitative and quantitative productivity estimates; number of fledglings; method of determining productivity; dates of first adults observed, first eggs laid, first eggs hatched, first young fledged, and last young observed; comments; and other site uses. Maps delineating the nesting areas are submitted. All data are reviewed by MassWildlife. If necessary, observers are contacted to obtain missing data and clarify ambiguities. When the needed information could not be obtained, best professional judgment was used to assign final values or data were noted as preliminary in Appendix A.

**Notes on Chronology:** "Date first adults observed" is not synonymous with date adults arrive on site, because adults may not be observed when they first arrived: frequency of site visits prior to egg-laying is relatively low and attendance of birds at colony sites early in the nesting season is sporadic. Similarly, "Last date young observed" is not synonymous with last fledgling departure date: the date the last fledgling departs may be missed (e.g., due to low frequency of monitoring late in the season); fledglings at the site may not have hatched there (e.g., some may just be staging); and, in some colonies, no young survive to fledge (i.e., the date could refer to the last date that live, unfledged chicks were seen). Clarification of terminology in TERNODES in the future will help to reduce ambiguities.

When dates were reported as a range, the median of the date range was used in calculations if the range spanned five days or fewer. Ranges spanning greater than 5 days were excluded from analyses. Median dates refer to the among-site values (i.e., the median of the "first" or "last" dates reported by different sites), not the within-site median dates for individual birds or nests.

#### **RESULTS AND DISCUSSION**

In 2017, 177 sites with a history of nesting terns, Laughing Gulls, or Black Skimmers were surveyed. Eighty-nine sites were occupied by nesting birds of one or more of these species. Results for each site are summarized in Appendix A. Thirty-eight additional sites with no record of nesting terns, Laughing Gulls, or Black Skimmers were surveyed (**Appendix B**); no nesting birds were recorded at these sites in 2017.

#### **Nesting Chronology**

For Roseate Terns and Least Terns, median dates of first eggs laid and first chicks hatched were slightly later (1 – 4 d) than in 2016. For Common Terns, median date of first eggs laid was later (23 May vs. 18 May in 2016), but median date of first chicks hatched was earlier (10 June vs. 12 June in 2016). Laughing Gulls also laid first eggs later (26 May vs. 20 May in 2016) but hatched first chicks earlier (16 June vs. 25 June). Black Skimmers nested much later than in 2016, with a median first lay date of 12 June (vs. 26 May in 2016) and a median first hatch date of 5 July (vs. 25 June in 2016). Timing of nesting season events is summarized in **Table 1.** 

**Table 1.** Nesting chronology for terns, Black Skimmers, and Laughing Gulls in Massachusetts in 2017.

2017		Roseate Tern	Common Tern	Arctic Tern <sup>c</sup>	Least Tern	Black Skimmer	Laughing Gull
Date first adults observed	Earliest date (site)	20-Apr (Bird I., Marion)	20-Apr (Bird I., Marion)	16-May (Penikese I., Gosnold)	28-Apr (S. Monomoy I., Chatham)	10-Jun (Norton Point Beach, Edgartown & Cape Pogue Elbow/The Narrows, Edgartown)	14-Apr (S. Monomoy I., Chatham)
	Median <sup>a</sup> (n) <sup>b</sup>	20-May (8)	21-May (21)	28-May (2)	18-May (83)	10-Jun (4)	30-May (2)
Date first eggs laid	Earliest date (site)	9-May (Bird I., Marion)	6-May (Ram I., Mattapoisett)	10-Jun (Ram I., Mattapoisett )	7-May (South Shore Marshes, Fairhaven)	26-May (Norton Point Beach, Edgartown)	26-May (S. Monomoy I., Chatham)
	Median (n)	23-May (6)	23-May (10)	10-Jun (1)	28-May (64)	12-Jun (4)	26-May (1)
Date first chicks hatched	Earliest date ( <i>site</i> )	3-Jun (Bird I., Marion)	30-May (Ram I., Mattapoisett	n/a <sup>d</sup>	16-Jun (S. Monomoy I., Chatham & Winthrop Beach, Winthrop)	4-Jul (Cape Pogue Elbow/The Narrows, Edgartown)	16-Jun (S. Monomoy I., Chatham)
	Median (n)	13-Jun (5)	10-Jun (6)	n/a	26-Jun (40)	5-Jul (3)	16-Jun (1)
Last date young	Latest date (site)	26-Jul (S. Monomoy I., Chatham)	24-Aug (S. Monomoy I., Chatham)	n/a	6-Sep (North Spit, Orleans)	24-Aug (S. Monomoy I., Chatham)	Nd <sup>e</sup>
observed	Median (n)	26-Jun (1)	13-Aug (4)	n/a	3-Aug (32)	24-Aug (1)	nd

<sup>&</sup>lt;sup>a</sup> Median dates refer to the among-site values (i.e., the median of the "first" or "last" dates reported by different sites), not the within-site median dates for individual birds or nests.

#### **Abundance and Distribution**

**Roseate Tern:** Roseate Terns increased 9.6% to **2,264 pairs** (vs. 2,066 pairs in 2016), the highest number recorded in recent history. The Northeast U.S. population (Maine through New York) increased 10.6% to 4,446 pairs (vs. 4,021 pairs) (Roseate Tern Recovery Team, unpubl. data).

Roseates nested at at least six sites (possibly seven) in 2017. The largest colony was at Ram I., Mattapoisett (1,555 vs. 886); productivity was 1.16 fledglings/nest. Bird I., Marion was the second-largest site at 595 pairs (vs. 1,153); productivity was 0.60 fledglings/nest. Penikese I., Gosnold supported 90 pairs (vs. 11); productivity was 1.29 fledglings/nest. While Bird I. is usually the largest Roseate Tern colony in the state, some pairs likely shifted to nearby Ram and Penikese following restoration work on

<sup>&</sup>lt;sup>b</sup> n – number of sites

<sup>&</sup>lt;sup>c</sup> Arctic Tern values are for a mixed Arctic Tern/Common Tern pair.

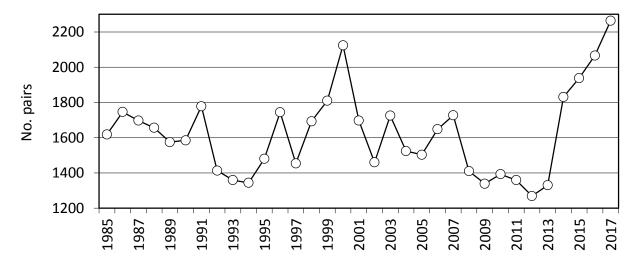
<sup>&</sup>lt;sup>d</sup> n/a – not applicable

<sup>&</sup>lt;sup>e</sup> nd – no data

Bird. Twelve pairs (vs. 0) nested at Cape Pogue Elbow/The Narrows, Edgartown; productivity was excellent. South Monomoy I., Chatham supported 11 pairs (vs. 12); productivity was 0.81 fledglings/pair. Seven pairs (vs. four) nested at Norton Point Beach, Edgartown prior to the A-period but did not produce any fledglings. Although one pair of Roseate Terns was present at Arruda's Point/The Jetties, Edgartown throughout the summer, no nest was ever found.

The two largest A-period colonies supported 95% of the state's Roseate Tern pairs.

Since 1985, Roseate numbers in the state have fluctuated between 1,269 and 2,264 pairs, averaging 1,623 pairs during this time period (**Fig. 1**).



**Figure 1.** Number of nesting Roseate Tern pairs in Massachusetts, 1985-2017.

**Common Tern:** Massachusetts' Common Tern population increased 5.1% to the highest number recorded in recent history, **18,059 pairs** (vs. 17,175 pairs in 2016) distributed across 29 sites.

The South Monomoy I. Common Tern colony grew to 11,723 pairs (vs. 10,505) and had very good productivity (1.53 fledglings/pair). Numbers increased slightly at Ram I. (3,545 vs. 3,527; 1.21 fledglings/nest), the second largest colony. Bird I. supported 1,652 pairs (vs. 2,193; 0.81 fledglings/nest). Numbers increased at Penikese I. (784 vs. 531); productivity was excellent (1.85-2.16 fledglings/nest). No other sites numbered more than 100 pairs of Common Terns.

The ten largest A-period colonies supported more than 99% of the state's Common Tern pairs; 94% of the state's pairs were concentrated in the three largest colonies.

From 1985 to 2003, Common Tern numbers rose rapidly in Massachusetts. Although the rate of population growth has slowed since then, numbers have continued to inch upwards. Since 1985, population size has ranged from 6,483 to 18,059 pairs (mean 13,208 pairs) (Fig. 2).

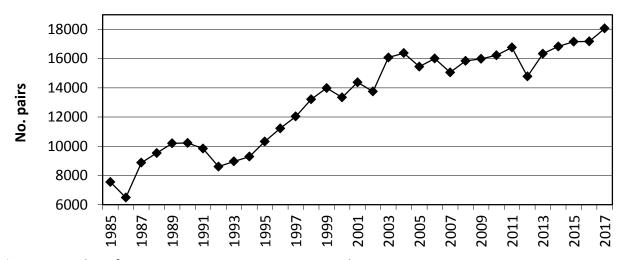


Figure 2. Number of nesting Common Tern pairs in Massachusetts, 1985-2017.

**Arctic Tern:** In 2017, one Arctic Tern nested with a Common Tern on Ram I., but the nest overwashed prior to hatch. No Arctic Terns nested in Massachusetts in 2016, but an Arctic Tern (likely the same individual) nested with a Common Tern on Penikese I. from 2007 to 2014. The banded Common Tern in 2017 was retrapped on the nest at Ram I. before it was overwashed, so its identity could be confirmed. . An Arctic Tern was also seen on Penikese I. in 2017, but no nest was detected.

Since 1985, numbers of this range-edge species have ranged from 0 to 29 pairs (mean 7 pairs), with an overall downward trend (Fig. 3).

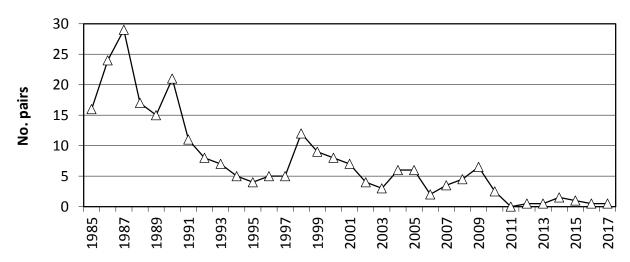


Figure 3. Number of nesting Arctic Tern pairs in Massachusetts, 1985-2017.

**Least Tern:** Least Terns nested at 70 sites in Massachusetts in 2017 and numbered **2,940 pairs** (vs. 3,230 in 2016; -9.0%).

South Monomoy I. had the largest Least Tern colony at 770 pairs (vs. 839); productivity varied with subcolony (zero to good). Other sites with at least 100 pairs were Cape Pogue Elbow/The Narrows (233 vs. 10; poor to excellent depending on subcolony), Crane Beach, Ipswich (172 vs. 115; poor), Gray's Beach, Yarmouth (152 vs. 57; zero), and Spring Hill, Sandwich (137 vs. 46; poor).

The ten largest A-period Least Tern sites supported 64% of the pairs. The three largest A-period sites supported 36% of the pairs. Since 1985, numbers of Least Terns have ranged from 2,109 to 4,309 pairs with a mean of 2,960 pairs (**Fig. 4**). The overall trend is positive, but there has been considerable volatility in the numbers. It is unknown how much of this is due to the difficulties inherent in estimating Least Tern population sizes versus true changes in abundance.

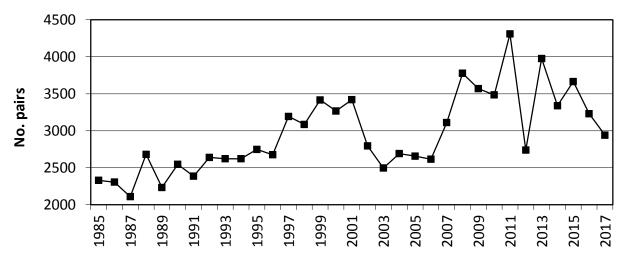


Figure 4. Number of nesting Least Tern pairs in Massachusetts, 1985-2017.

**Black Skimmer:** In 2017, **eight pairs** of Black Skimmers nested during the A-period (vs. 6 in 2016). Three sites were occupied. During the A-period, seven pairs nested at Cape Pogue Elbow/The Narrows (vs. zero in 2016), and one nested at South Monomoy I. (vs. zero in 2016). During the B-period, two additional pairs nested at Cape Pogue Elbow/The Narrows, and one pair nested at Norton Point (vs. six A-period in 2016).

Black Skimmers, which are at the northern end of their breeding range in Massachusetts, have ranged from 0 to 8 pairs (mean 4 pairs) since 1985, and appear to have increased since 2014 (**Fig. 5**).

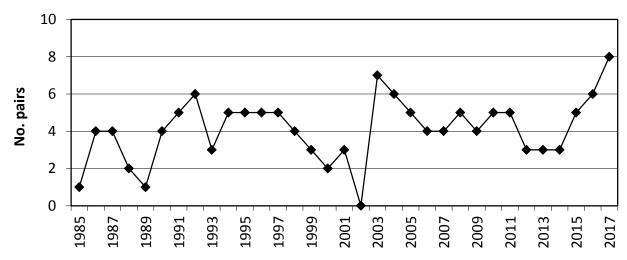


Figure 5. Number of nesting Black Skimmer pairs in Massachusetts, 1985-2017.

**Laughing Gull:** Laughing Gull numbers were stable at **2,745 pairs** (vs. 2,751 in 2016). They nested at the usual two sites: South Monomoy I. (2,714 vs. 2,738; poor) and Plymouth Long Beach (31 vs. 13; zero).

From 1985 to present, Laughing Gulls have averaged 1,310 pairs, ranging between 542 and 2,751 pairs (**Fig. 6**). The overall trend since 1998 has been strongly upward; the population has nearly quadrupled since then. Because Laughing Gulls compete with Common and Roseate Terns for space and resources and are predators of terns, documenting their distribution, numbers, and interactions with our terns is important.

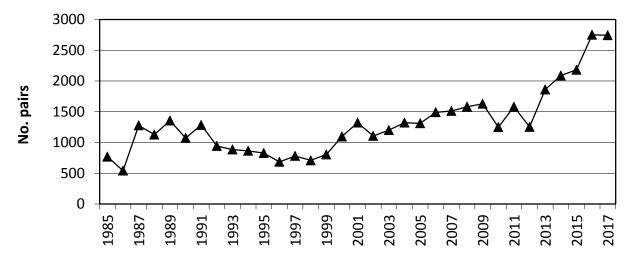


Figure 6. Number of nesting Laughing Gull pairs in Massachusetts, 1985-2017.

#### **ACKNOWLEDGEMENTS**

We thank dozens of cooperators who worked at these sites and collected and submitted data for this report.

**Appendix A.** Numbers of pairs and productivity of terns, Laughing Gulls, and Black Skimmers nesting in Massachusetts in 2017. All sites were censused unless noted as "nd" (no data). Data in parentheses refer to B-period (post-peak) counts. Data in brackets were collected prior to the A-period census window.

	Ros	eate Te	ern	Com	mon T	ern	Are	ctic Ter	'n	Le	ast Tern		Blac	k Skimr	ner	Laugh	ing Gu	ull		
Site Name,	No			No			No			No			No			No				
Town	pairs	M <sup>a</sup>	<b>P</b> <sup>b</sup>	pairs	M	P	pairs	M	P	pairs	M	Р	pairs	М	P	pairs	М	Р	Source <sup>c</sup>	Notes
NORTH SHORE																				
Bagwell Island,																				
Ipswich	0			0			0			0			0			0			ECGA	
Blackwater																				
River Group,																				
Salisbury	0			0			0			0			0			0			ECGA	
Central Square,																				
East Boston	0			51	Α		0			0			0			0			Zendah	
Chaces Island,										_						_				
Newbury	0			0			0			0			0			0			USFWS	
Chelsea Creek,																				
East Boston-	0			_									0						7	
Chelsea	0			6	Α		0			0			0			0			Zendah	
Clubhead Creek,	0			1	N		0			0			0			0			ECGA	
Rowley	0			1	IN		U			172	NI.		U			U			ECGA	
Crane Beach, Ipswich	0 (0)			0 (0)			0 (0)			(119)	N (N)	Р	0 (0)			0 (0)			TTOR	
General	0 (0)			0 (0)			0 (0)			(113)	(14)	-	0 (0)			0 (0)			TTOK	
Edwards Bridge,																				
Rte 1A, Revere-																				
Lynn	0			30	Α		0			0			0			0			Zendah	
Ipswich Salt																				
Marshes,																				
Ipswich	0			0			0			0			0			0			ECGA	
Jeffrey's Point,																				
East Boston	0			5	Α		0			0			0			0			Zendah	
Lords Island,																				
Ipswich	0 (nd)			3 (nd)	Α		0 (nd)			0 (nd)			0 (nd)			0 (nd)			ECGA	
										[21]										
Lovell's Beach,										26	[A] A									
Boston	0 (0)			0 (0)			0 (0)			(47)	(A)	G	0 (0)			0 (0)			MAS	
Mystic River																				
Bridge,																				
Sommerville-																				
Everett	0			52	Α		0			0			0			0			Zendah	
Newburyport																				
Town Beach ,				- 4-1			_ ,_,													New nesting
Newburyport	0 (0)			0 (0)			0 (0)			0 (9)	(A)	G	0 (0)			0 (0)			MAS	site

	Ros	eate Te	ern	Com	mon T	ern	Arc	ctic Ter	n	Le	ast Tern		Blac	k Skimr	ner	Laugh	ing G	ull		
Site Name,	No			No			No			No			No			No				
Town	pairs	$\mathbf{M}^{a}$	$\mathbf{P}^{\mathrm{b}}$	pairs	М	P	pairs	М	Р	pairs	M	Р	pairs	М	P	pairs	М	Р	Source <sup>c</sup>	Notes
Parker River																				
NWR, Newbury/																				
Rowley	0			0			0			36	N	Р	0			0			USFWS	
Plum Island																				
River Group,					Α,															
Newbury	0			6	N		0			0			0			0			USFWS	
Rainsford																				
Island, Boston	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			NPS	
Roger Island,				- 4 10																
Ipswich	0 (nd)			0 (nd)			0 (nd)			0 (nd)			0 (nd)			0 (nd)			ECGA	
Sandy Point																				
State																				
Reservation Beach, Ipswich	0 (0)			0 (0)			0 (0)			0 (6)	(A)	0	0 (0)			0 (0)			MAS	
Snake Island,	0 (0)			0 (0)			0 (0)			0 (0)	(A)	U	0 (0)			0 (0)			IVIAS	
Winthrop	0			0			0			0			0			0			NPS	
Winthrop	U			U			U			U			U			0			INFS	
Beach,										90	I (A,									
Winthrop	0 (0)			0 (0)			0 (0)			(35)	1)	Р	0 (0)			0 (0)			DCR	
Woodbridge	- (-)			- (-)			5 (5)			()	-7	-	- (-)			- (-)				
Island,																				
Newburyport	0			0			0			0			0			0			USFWS	
Yirrell Beach,																				
Winthrop	0			0			0			0			0			0			Winthrop	
SOUTH SHORE																				
Duxbury Beach,										[77]										
Duxbury,										75	[A] A									
Plymouth	0 (0)			0 (0)			0 (0)			(44)	(A)	0	0 (0)			0 (0)			MAS	
Ellisville Harbor																				
State Park,				- 4-1			- 4-1													
Plymouth	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Ellisville Shifting																				
Lots Preserve ,	0.(0)			0 (0)			0 (0)			0 (0)			0 (0)			0.(0)			NAAC	
Plymouth Fourth Cliff,	0 (0)			0 (0)			0 (0)			0 (0)	Α		0 (0)			0 (0)			MAS	
Scituate	0 (0)			0 (0)			0 (0)			8 (13)	A (A)	G	0 (0)			0 (0)			MAS	
Juluate	0 (0)			0 (0)			0 (0)			0 (13)	(^)	٦	0 (0)			0 (0)	N		IVIAS	
Plymouth Long																	(			
Beach,					N					98	N						N			
Plymouth	0			40 (2)	(N)	0	0			(97)	(N)	F	0			31 (6)	)	0	Plymouth	

	Ros	eate Te	rn	Com	mon T	ern	Ar	ctic Ter	'n	Le	ast Tern		Blac	k Skimr	ner	Laugh	ing G	ull		
Site Name,	No			No			No			No			No			No	Ī			
Town	pairs	$\mathbf{M}^{\mathrm{a}}$	<b>P</b> <sup>b</sup>	pairs	М	Р	pairs	М	Р	pairs	М	Р	pairs	М	Р	pairs	М	Р	<b>Source</b> <sup>c</sup>	Notes
Sagamore																				
Beach -																				
Sandwich,																				
Sandwich	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Scusset Beach																				
State																				
Reservation,																				
Sandwich	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Spinnaker																				
Island, Hull	0			0			0			0			0			0			NPS	
The Glades,					[A]															
Scituate	0			[11] 2	Α		0			0			0			0			MAS	
Third Cliff,											Α									
Scituate	0 (0)			0 (0)			0 (0)			36 (7)	(A)	0	0 (0)			0 (0)			MAS	
UPPER CAPE				1		1	1				1					•				
Black Beach,																				
Falmouth	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Craigville Beach,																				
Barnstable	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Dead Neck																				
Sampsons										l										
Island,										27	A	_								
Barnstable				2	Α	0				(76)	(A)	F							MAS	
Dowses Beach,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			De constalata	
Barnstable	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			Barnstable	
East Sandwich,	0 (0)			0 (0)			0 (0)			[1] 0	[A1]		0 (0)			0 (0)			2446	
Sandwich	0 (0)			0 (0)			0 (0)			(0)	[N]	0	0 (0)			0 (0)			MAS	
Carrie Danah										[45]	[NI]									
Grays Beach,	0 (0)			F2 /24\	A (A)		0 (0)			152	[N]	_	0 (0)			0 (0)			N4AC	
Yarmouth	0 (0)			52 (31)	(A)	Р	0 (0)			(1)	A (I)	0	0 (0)			0 (0)			MAS	
Great Island																				
Causeway, Yarmouth	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Great Island	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)	1		CAIVI	
Beach Club -																				
Smith Point,										[20] 0	[A] A									
Yarmouth	0 (0)			0 (0)			0 (0)			(1)	(A)	0	0 (0)			0 (0)			MAS	
Kalmus Beach,	0 (0)			0 (0)			0 (0)			[30]	(~)	U	0 (0)			0 (0)			14172	
Barnstable	0 (0)			0 (0)			0 (0)			15 (0)	[A] A	0	0 (0)			0 (0)			Barnstable	
Long Beach,	0 (0)			0 (0)			0 (0)			13 (0)	[A] A	U	0 (0)			0 (0)	-		Darristable	
Barnstable	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
שווואנמטופ	0 (0)			0 (0)	<u> </u>	l	0 (0)			J (U)			0 (0)			0 (0)	<u> </u>		IVIAS	

Site Name, No Town pairs M P P P pairs M P P P P P P P P P P P P P P P P P P		Ros	eate Te	ern	Com	nmon T	ern	Ar	ctic Ter	'n	Le	ast Tern		Blac	k Skimı	mer	Laugh	ing G	ull		
Marama   Beach   Cown   Revert   Cown   Reve	•	_	2	h	-			_			_			_			_				
Swan River , Dennis		pairs	M°	P	pairs	M	P	pairs	M	P	pairs	М	P	pairs	M	Р	pairs	М	P	Source	Notes
Dennis   O(D)																					
Popponesset   Solt, Mashpee   O()	, , , , , , , , , , , , , , , , , , , ,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)				
Spit, Mashpee		0 (0)			0 (0)			0 (0)				F 4 3		0 (0)			0 (0)			MAS	
Sandy Meck   Beach Park   Remarkable		0 (0)			0 (0)			0 (0)					_	0 (0)			0 (0)			NAAC	
Beach Park   Banstable   0 (0)		0 (0)			0 (0)			0 (0)			(16)	(A)		0 (0)			0 (0)			IVIAS	
Barnstable											73	_									
Scorton Neck   Crorrey	-	0 (0)			0 (0)			0 (0)						0 (0)			0 (0)			Barnstable	
(Torrey), Sandwich 0 (0)		0 (0)			0 (0)			0 (0)			(13)	(,,,		0 (0)			0 (0)			Burnstable	
Sandwich   O (0)												Α									
Scorton Shores, Sandwich		0 (0)			0 (0)			0 (0)			4 (40)		F	0 (0)			0 (0)			MAS	
Seguil Beach,   Yarmouth   O (0)	Scorton Shores,	. ,									` '	, ,		` '			, ,				
Yamouth         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         MAS           South Cape Beach, Mashpee         0 (0)         0 (0)         0 (0)         211 (48)         A         0 (0)         0 (0)         MAS           Spring HII, Sandwich         0 (0)         0 (0)         0 (0)         137 (68)         A         A         0 (0)         0 (0)         MAS           Squaw Island, Barnstable         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         MAS           Town Neck Beach, Sandwich         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         MAS           Trunk River, Falmouth         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         MAS           West Dennis Beach, Dennis         0	Sandwich	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
South Cape	Seagull Beach,																				
Beach, Mashpee   0 (0)   0 (		0 (0)			0 (0)			0 (0)						0 (0)			0 (0)			MAS	
Spring Hill,   Sandwich   O(0)   O(																					
Sandwich         0 (0)         0 (0)         0 (0)         (68)         (A)         P         0 (0)         0 (0)         MAS           Squaw Island, Barnstable         0 (0)         0 (0)         0 (0)         13   1   13   1   14   0         0 (0)         0 (0)         MAS           Town Neck Beach, Squaw Island, Falmouth         0 (0)         0 (0)         0 (0)         3 (25)         (A)         P         0 (0)         0         MAS           Trunk River, Falmouth         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         MAS           West Dennis Beach, Dennis         0         0 (0)         0 (0)         24         A         F         0 (0)         0 (0)         MAS           Weychmere-Werkel-Bank St, Harwich         0 (0)         0 (0)         1 (13)<		0 (0)			0 (0)			0 (0)					F	0 (0)			0 (0)			MAS	
Squaw Island, Barnstable         0 (0)         0 (0)         [13] 1 [A] I 0 0 0 (0)         0 (0)         MAS           Town Neck Beach, Sandwich         0 (0)         0 (0)         3 (25) (A) P 0 (0)         0 (0)         MAS           Trunk River, Falmouth         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         MAS           Washburn Island, Falmouth         0 (0)         0 (0)         24 A F 0 (0)         0 (0)         MAS           West Dennis Beach, Dennis         0         0         0         0         0         0         0         0         Dennis           Wychmere-Wychmere-Werkel-Bank St, Harwich         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0		2 (2)			0 (0)			a (a)					_	2 (2)			2 (2)				
Barnstable   O (0)		0 (0)			0 (0)			0 (0)			(68)	(A)	Р	0 (0)			0 (0)			MAS	
Town Neck Beach, Sandwich 0 (0) 0 (0		0 (0)			0 (0)			0 (0)			[12] 1	[4]	0	0 (0)			0 (0)			NAAC	
Beach, Sandwick		0 (0)			0 (0)			0 (0)			[13] 1	[A] I	U	0 (0)			0 (0)			IVIAS	
Sandwich         0 (0)         0 (0)         0 (0)         3 (25)         (A)         P         0 (0)         0 (0)         MAS           Trunk River, Falmouth         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         0 (0)         MAS           Washburn Island, Falmouth         0 (0)         0 (0)         24         A         F         0 (0)         0 (0)         MAS           West Dennis Beach, Dennis         0 <td></td> <td>Α</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>												Α									
Trunk River, Falmouth 0 (0) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	· ·	0 (0)			0 (0)			0 (0)			3 (25)		Р	0 (0)			0			MAS	
Falmouth 0 (0) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		, ,			,			. ,			` ,	, ,		,							
Island, Falmouth         0 (0)         0 (0)         24         A         F         0 (0)         0 (0)         MAS           West Dennis Beach, Dennis         0         0         0         0         0         0         0         0         0         0         0         Dennis         New nesting site; Least Terns were courting and screping during the census window but did not have laid Harwich         1 (21)         [A] A         [A] A         0         0 (0)         0 (0)         MAS         MAS         MAS         eggs.		0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Falmouth         0 (0)         0 (0)         24         A         F         0 (0)         0 (0)         MAS           West Dennis Beach, Dennis         0         0         0         0         0         0         0         0         0         Dennis         New nesting site; Least Terns were courting and scraping during the census window but did not appear to Merkel-Bank St, Harwich         1 (21)         [A] A         [A] A         0         0 (0)         0         MAS         Mas	Washburn																				
West Dennis Beach, Dennis         0         0         0         0         0         0         Dennis           Wychmere- Merkel-Bank St, Harwich         0 <td>· · · · · · · · · · · · · · · · · · ·</td> <td></td>	· · · · · · · · · · · · · · · · · · ·																				
Beach, Dennis         0         0         0         0         0         0         Dennis           Wychmere-Merkel-Bank St, Harwich         0 (0)		0 (0)			0 (0)			0 (0)			24	Α	F	0 (0)			0 (0)			MAS	
New nesting site; Least Terns were courting and scraping during the census window but did not appear to have laid Harwich 0 (0) 0 (0																	_				
Site; Least Terns were courting and scraping during the census window but did not appear to have laid Harwich 0 (0) 0 (0	Beach, Dennis	0			0			0			0			0			0			Dennis	NI.
Terns were courting and scraping during the census window but did not appear to have laid Harwich 0 (0) 0 (0																					
Courting and scraping during the census window but did not appear to have laid Harwich 0 (0) 0 (																					,
Scraping during the census window but did not appear to have laid Harwich 0 (0) 0 (0																					
Wychmere-         Merkel-Bank St,         12(0)         (A)         0 (0)																					
Wychmere-         Merkel-Bank St,         [21]         [A] A         [A] A         [B] A         [A] A         [B] A <td></td>																					
Wychmere- Merkel-Bank St, Harwich 0 (0) 0																					
Wychmere- Merkel-Bank St, Harwich         0 (0)         0 (0)         0 (0)         12 (0)         (A)         0 (0)         0 (0)         MAS         eggs.																					
Merkel-Bank St, Harwich         0 (0)         0 (0)         [21]         [A] A																					
Harwich 0 (0) 0 (0) 0 (0) 12 (0) (A) 0 0 (0) 0 (0) MAS eggs.											[04]										
		0 (0)			0 (0)			0 (0)						0 (0)			0.(0)			NAAC	
	LOWER CAPE	0 (0)			Ι υ (υ)			0 (0)			12 (0)	(A)	U	0 (0)			U (U)			IVIAS	eggs.

	Ros	eate Te	rn	Com	mon Te	ern	Are	ctic Ter	n	Le	ast Tern		Blac	k Skimn	ner	Laugh	ing G	ull		
Site Name,	No			No			No			No			No			No				
Town	pairs	M <sup>a</sup>	<b>P</b> <sup>b</sup>	pairs	M	P	pairs	M	P	pairs	М	Р	pairs	M	P	pairs	М	Р	Source <sup>c</sup>	Notes
Ballston Beach,																				
Truro	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
	0																			
Ballston, Truro	0 (0)			0 (0)			0 (0)			0 (3)	(I, N)	0	0 (0)			0 (0)			NPS	
Beach Point,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)				
Truro Cahoon Hollow,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Wellfleet	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			NPS	
weimeet	0 (0)			0 (0)			0 (0)			0 (0)	[I, N]		0 (0)			0 (0)			NP5	
Coast Guard										[4] 15	I, N									
Beach, Eastham	0 (0)			0 (0)			0 (0)			(15)	(I, N)	Р	0 (0)			0 (0)			NPS	
Corn Hill Beach,	0 (0)			0 (0)			0 (0)			(13)	(1, 14)	'	0 (0)			0 (0)			141.5	<del></del>
Truro	0 (0)			0 (0)			0 (0)			25	Α	Р	0 (0)			0 (0)			MAS	
Forest Beach,	0 (0)			0 (0)			0 (0)			[10]	,,	•	0 (0)			0 (0)			1417.5	
Chatham	0 (0)			0 (0)			0 (0)			28	[A] A		0 (0)			0 (0)			MAS	
Harding Beach,	- (-)			- (-)			- (-)				. ,		- (-)			- (-,			-	
Chatham	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Harding Shores,																				
Chatham	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Jeremy Point,																				
Wellfleet	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			NPS	
Lieutenant																				
Island - NW,																				
Wellfleet	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Minimoy Island,	a (a)			2 (2)			2 (2)			a (a)			2 (2)			0 (0)				
Chatham	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			USFWS	ļ
North (Nauset)							0			65									Ch - H	
Beach, Chatham North Beach	0			0			0			65 [2] 0	Α	G	0			0			Chatham	
Island, Chatham	0 (0)			0 (0)			0 (0)			(0)	[N]	0	0 (0)			0 (0)			Chatham	
North	0 (0)			0 (0)			0 (0)			(0)	[IN]	0	0 (0)			0 (0)			Chatham	<del></del>
Monomoy																				
Island, Chatham	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			USFWS	
North Spit,	- (-)			- (-)			- (-)			- (-)			- (-)			- (-)				
Orleans	0			0			0			62	N	F	0			0			Orleans	
Race Point											[1] 1,									
North,										[8] 36	N (I,									
Provincetown	0 (0)			0 (0)			0 (0)			(42)	N)	G	0 (0)			0 (0)			NPS	
Race Point																				
South																				
(Armstrong										[11]	[1] 1,									
Beach),	0 (0)			0 (0)			0 (0)			20	N (I,		0 (0)			0 (0)			NDC	
Provincetown	0 (0)			0 (0)			0 (0)			(33)	N)	G	0 (0)			0 (0)	]		NPS	<u></u>

	Ros	eate Te	ern	Com	mon T	ern	Ar	ctic Ter	'n	Le	ast Tern		Blac	k Skimr	ner	Laugh	ing G	ull		
Site Name,	No			No			No			No			No			No				
Town	pairs	M <sup>a</sup>	<b>P</b> <sup>b</sup>	pairs	М	P	pairs	М	P	pairs	M	Р	pairs	М	Р	pairs	М	Р	<b>Source</b> <sup>c</sup>	Notes
Race Point																				
South (Race											[N] I,									
Point Beach),										[4] 19	N (I,									
Provincetown	0 (0)			0 (0)			0 (0)			(22)	N)	G	0 (0)			0 (0)			NPS	
Race Point																				
South,	0 (0)			0 (0)			0 (0)			0 (=)	(1,	_	0 (0)			0 (0)			****	
Provincetown	0 (0)			0 (0)			0 (0)			0 (7)	N)	F	0 (0)			0 (0)			NPS	
Ridgevale Beach, Chatham	0			0			0			10	Α	0	0			0			MAS	
South Beach -	U			U			U			10	A	U	U			U			IVIAS	
Middle Island,																				
Chatham	0 (0)			0 (0)			0 (0)			0 (8)	(1)	F	0 (0)			0 (0)			MAS	
South Beach	0 (0)			0 (0)			0 (0)			0 (0)	(.,		0 (0)			0 (0)				
(Nauset),																				
Orleans	0			0			0			17	N	F	0			0			Orleans	
South Beach																				
(North of Break)																				
, Chatham	0			0			0			0			0			0			MAS	
South Beach																				
(South of Break)	a (a)			2 (1)		_	a (a)					Ε,	2 (2)			a (a)				
, Chatham	0 (0)			0 (1)		0	0 (0)			33		Р	0 (0)			0 (0)			MAS	
South		N.								770		_		N.						
Monomoy Island, Chatham	11 (7)	N (N)	G	11,723	N	G	0 (0)			770 (3)	I (N)	0, G	1 (1)	N (N)	F	2,714	N	Р	USFWS	
South Sunken	11 (/)	(IV)	G	11,725	IN	<u> </u>	0 (0)			(5)	1 (14)	u	1 (1)	(IV)	Г	2,/14	IN	Р	USFVVS	
Meadow,																				
Eastham	0 (0)			0 (0)			0 (0)			3 (0)	Α	0	0 (0)			0 (0)			MAS	
Tern Island,	,						,			[24] 0			, ,			. ,				
Chatham	0 (0)			0 (0)			0 (0)			(0)	[A]	0	0 (0)			0 (0)			MAS	
BUZZARDS BAY																				
Acoaxet,																				
Westport	0 (0)			1 (0)	Α		0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Barney's																				
Joy/Little Beach,	- (-)						- 4-1									- 4-1				
Dartmouth	0 (0)		4.60	0 (0)		0.00	0 (0)			26	Α	Р	0 (0)			0 (0)			MAS	
Bird Island,	505	N.	1.00	1 653	N.	0.80	0			0			0			0			DEW	
Marion	595	N	fl/n	1,652	N	fl/pr	0			0	[N]		0			U	-		DFW	
Demarest Lloyd State Park,										[5] 6	[N] A (I,									
Dartmouth	0			0			0			(13)	A (I, N)	Р	0			0			LCE	
Fishing Rock,	3			-			3			(13)	14)	<u> </u>	3			<u> </u>			-01	
Westport	0			1	N		0			0			0			0			MAS	
	3			-	.,		•			,	1	l	,				<u> </u>			

	Ros	eate Te	ern	Com	nmon T	ern	Ar	ctic Te	'n	Le	ast Tern		Blac	k Skimr	ner	Laugh	ing G	ull		
Site Name,	No			No			No			No			No			No				
Town	pairs	M <sup>a</sup>	<b>P</b> <sup>b</sup>	pairs	М	P	pairs	М	P	pairs	M	P	pairs	M	P	pairs	М	Р	<b>Source</b> <sup>c</sup>	Notes
Gooseberry																				
Neck, Westport	0			0			0			0			0			0			LCE	
Horseneck																				
Beach State										[24]	[N] I,									
Reservation,	a (a)			a (a)			a (a)			87	N (I,	G,	2 (2)			2 (2)				
Westport	0 (0)			0 (0)			0 (0)			(33)	N)	Р	0 (0)			0 (0)			LCE	
Long Island, Fairhaven	0			0			0			0			0			0			DFW	
Nonguitt,	U			U			U			U			U			U			DFW	
Dartmouth	0			3	Α		0			0			0			0			MAS	
Pine Island	U			3	А		U			U			U			U			IVIAS	
(Angelica Point																				
and Strawberry																				
Point),																				
Mattapoisett	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			DFW	
Ram Is.,																				
Mattapoisett,			1.16			1.21														
Mattapoisett	1555	N	fl/n	3,545	N	fl/n	0.5	N	0	0			0			0			DFW	
Richmond Pond,																				
Westport	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			TNCRI	
Round Hill																				
Beach,										_						_				
Dartmouth	0			0			0			0			0			0			MAS	
Salters Pond, Dartmouth	0 (0)			1 (0)			0 (0)			[1] 0	[4]	0	0 (0)			0 (0)			NAAC	
South Shore	0 (0)			1 (0)			0 (0)			(0)	[A]	U	0 (0)			0 (0)			MAS	
Marshes,										[5] 14	[A] A									
Fairhaven	0			0			0			(2)	(A)	0	0			0			DFW	
Speaking Rock,	Ü						0			(2)	(71)		Ŭ						5. **	
Westport	0			6	Α		0			0			0			0			MAS	
Timmy's Rock,					Α,														-	
Dartmouth	0 (0)			2	N		0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Winsegansett																				
Heights,																				
Fairhaven	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			LCE	
ELIZABETH ISLANI	DS																			
Cuttyhunk,											Α									
Gosnold	0 (0)			0 (0)			0 (0)			75 (8)	(A)	Р	0 (0)			0 (0)			MAS	
						1.85 -														
Penikese Island,	00 (5)	N (N)	1.29	784	N (NI)	2.16	0 (0)			0.(0)			0 (0)			0.(0)			DEM	
Gosnold	90 (5)	(N)	fl/n	(330)	(N)	fl/n	0 (0)			0 (0)			0 (0)			0 (0)			DFW	
MARTHA'S VINEY	ARD																			

	Ros	eate Te	ern	Com	mon T	ern	Ar	ctic Ter	'n	Le	ast Tern		Blac	k Skimı	mer	Laugh	ing G	ull		
Site Name,	No			No			No			No			No			No			_	
Town	pairs	M <sup>a</sup>	<b>P</b> <sup>b</sup>	pairs	М	P	pairs	M	P	pairs	М	P	pairs	М	P	pairs	М	Р	Source	Notes
Arruda's Point / The Jetties ,		A								42	A									One pair of Roseate Terns was present during the A- and B- periods; no nest was
Edgartown	1 (1)	(A)	0	0 (0)			0 (0)			(40)	(A)	G	0 (0)			0 (0)			TTOR	encountered
Bend-in-the- Road Beach, Edgartown	0 (0)			0 (0)			0 (0)			0 (0)		-	0 (0)			0 (0)			MAS	
Big Gravel Island, Oak Bluffs	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Black Point Pond, Chilmark	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			BW	
Cape Pogue Elbow / The Narrows, Edgartown	[1] 12 (16)	[A] A, N (A, N)	0, E (~2 fl/n)	[10] 16 (16)		Е, Р	0 (0)			[188] 233 (266)	[N] A, N (A, N)	Е, Р	7 (9)	A (A, N)	1.9 fl/pr	0 (0)			TTOR	
Cedar Tree Neck, West Tisbury	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			BW	
Chilmark Pond Preserve, Chilmark	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MVLBC	
Chilmark Pond, Chilmark Cow Bay,	0 (0)			0 (0)			0 (0)			0 (44)	Α	Р	0 (0)			0 (0)			BW	
Edgartown Dogfish Bar,	0 (0)			0 (0)			0 (0)			8 (0)	Α	0	0 (0)			0 (0)			MAS	
Aquinnah East Tashmoo,	0 (0)			1 (0)	ı	0	0 (0)			38 (4)	A (I)	0	0 (0)			0 (0)			BW	
Tisbury Eastville Beach,	0 (0)			0 (0)			0 (0)			0 (0)		_	0 (0)			0 (0)			MAS	
Oak Bluffs  Edgartown Great Pond (Job's Neck), Edgartown	0 (0)			0 (0)			0 (0)			40 (0)	A	Б О	0 (0)			0 (0)			MAS BW	

	Ros	eate Te	ern	Com	mon T	ern	Ar	ctic Ter	n	Le	ast Tern		Blac	k Skimr	ner	Laugh	ing G	ull		
Site Name,	No			No			No			No			No			No				
Town	pairs	M <sup>a</sup>	<b>P</b> <sup>b</sup>	pairs	М	P	pairs	М	P	pairs	М	Р	pairs	М	P	pairs	М	Р	Source <sup>c</sup>	Notes
Edgartown																				
Great Pond,	0						0			2	١.		0						1 1 1 D C	
Edgartown	0			0			0			2	Α	0	0			0			MVLBC	
Edys Island, Chilmark	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Harthaven, Oak	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			IVIAS	
Bluffs	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Haystack Island,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			1411.0	
Edgartown	0 (0)			45	Α	Р	0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Lamberts Cove,							` ′			` '			` ′			` '				
West Tisbury	0			0			0			0			0			0			BW	
Leland / East																				
Beach,																				
Edgartown	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			TTOR	
Little Beach /																				
Eel Pd.,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			BW	
Edgartown Little Gravel	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			BW	
Island, Oak																				
Bluffs	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Little Neck,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)				
Edgartown	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			TTOR	
Lobsterville																				
Beach,																				
Aquinnah	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Mink Meadows																				
/West Chop,	- 4-1			_ ,_,								_								
Tisbury	0 (0)			0 (0)			0 (0)			15	Α	0	0 (0)			0 (0)			MAS	
Nomans Land																				
Island NWR, Chilmark	0			4	N		0			0			0			0			USFWS	
Cimiliaik	U			1 7	14	l	J			J	l	l	J						031 443	

	Ros	eate Te	ern	Com	mon T	ern	Are	ctic Ter	'n	Le	ast Tern		Blac	k Skimı	ner	Laugh	ing G	ull		
Site Name,	No			No			No			No			No			No			_	
Town	pairs	M <sup>a</sup>	<b>P</b> <sup>b</sup>	pairs	М	P	pairs	M	P	pairs	М	P	pairs	M	P	pairs	M	Р	Source <sup>c</sup>	Notes
																				An undeter-
																				mined number of
																				Common
																				Tern and
																				Least Tern
																				nests were
																				lost to
																				overwash
																				and
											Fa.13									predation
Norton Point	[7] 0			[5 0] 0	[NI]					[>118	[N]		[2] 0	[NI]						before the
Beach, Edgartown	[7] 0 (0)	[N]	0	[>9] 0 (7)	[N] (N)		0 (0)			] 3 (29)	N (N)		[2] 0 (1)	[N] (N)	0	0 (0)			TTOR	5/28 pre-A count date.
Oyster Pond,	(0)	[IN]	0	(*)	(14)		0 (0)			(23)	(14)		(±)	(14)	0	0 (0)			TTOK	count date.
Edgartown	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			BW	
Paqua Pond,	nd						nd			nd			nd			nd				
Edgartown	(nd)			nd (nd)			(nd)			(nd)			(nd)			(nd)			BW	
Paul's Point,																				
West Tisbury	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			BW	
Pease's Pond,	0						0			0			0						DW	
Edgartown Quansoo,	0			0			0			0 40	Α		0			0			BW	
Chilmark	0 (0)			0 (0)			0 (0)			(20)	(A)	0	0 (0)			0 (0)			MAS	
Sarsons Island,	` '			. ,			( )			,	, ,		. ,			, ,				
Oak Bluffs	0 (0)			25	Α	F	0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Seven Gates,																				
West Tisbury	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			BW	
South Beach,	0			0			0			0			0			0			BW	
Edgartown Squibnocket	U			U			U			U			U			U			DVV	
Beach/Long																				
Beach, Chilmark	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			BW	
Stonewall	` '			` '									` '							
Beach, Chilmark	0			0			0			8	Α	0	0			0			BW	
Sylvia State																				
Beach																				
Edgartown ,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
Edgartown Sylvia State	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			IVIAS	
Beach Oak																				
Bluffs, Oak																				
Bluffs	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	

	Ros	eate Te	rn	Com	mon T	ern	Ar	ctic Ter	'n	Le	ast Tern		Blac	k Skimr	ner	Laugh	ing G	ull		
Site Name,	No			No			No			No			No			No				
Town	pairs	M <sup>a</sup>	<b>P</b> <sup>b</sup>	pairs	М	P	pairs	М	P	pairs	М	P	pairs	М	P	pairs	М	Р	<b>Source</b> <sup>c</sup>	Notes
Tisbury Great																				
Pond, West	[0] 0			[0] 0			[0] 0			[15]	[A] A		[0] 0			[0] 0			MVLBC,	
Tisbury	(0)			(0)			(0)			25 (6)	(A)		(0)			(0)			MAS	
Wasque,																				
Edgartown	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			TTOR	
Watcha Pond,																				
West Tisbury	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			BW	
West Tashmoo,	- 4-1									[24] 0	[A,									
Tisbury	0 (0)			0 (0)			0 (0)			(0)	N]	0	0 (0)			0 (0)			BW	
Yorke - Allen																				
Point,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			NAAC	
Edgartown	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
NANTUCKET Capaum Pond,										l	l	1						Г	l	
Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			NCF	
Coatue,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			IVCI	
Nantucket	0 (0)			0 (0)			0 (0)			35	N	Р	0 (0)			0 (0)			NCF	
Coskata-East	0 (0)			0 (0)			0 (0)			33	.,		0 (0)			0 (0)			1101	
Beach,																				
Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			TTOR	
Coskata-West	,			` '			, ,			, ,			, ,			` ′				
Beach,																				
Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			TTOR	
											[A]									
Eel Point,										[50] 3	N	0,								
Nantucket	0 (0)			0 (0)			0 (0)			(5)	(N)	E	0 (0)			0 (0)			NCF	
Great Point,																				
Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			TTOR	
Hummock and																				
West Hummock																				
Ponds, Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			NCF	
Little Neck,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			INCF	
Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			NCF	
Monomoy	3 (0)			J (U)			3 (0)			3 (0)			3 (0)			3 (0)			1,01	
Creeks,																				
Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			NCF	
Muskeget Is.,	- (-)			- \-1			- (-)			- \-/			(-)			- \-'			-	
Nantucket	0			0			0			0			0			0			MAS	
Muskeget																				
Shoals,																				
Nantucket	0			0			0			6	Α	0	0			0			MAS	

	Roseate Tern			Common Tern			Arctic Tern			Least Tern			Black Skimmer			Laughing Gull				
Site Name,	No			No			No			No			No			No				
Town	pairs	$\mathbf{M}^{a}$	$\mathbf{P}^{\mathrm{b}}$	pairs	М	Р	pairs	М	Р	pairs	М	Р	pairs	М	Р	pairs	М	Р	<b>Source</b> <sup>c</sup>	Notes
Nantucket NWR																				
(Great Point),											N									
Nantucket	0			0			0			5 (15)	(N)	Р	0			0			USFWS	
Polpis Harbor																				
(Medouie Creek																				
and Pocomo																				
Meadows),	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)				
Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			NCF	
Quidnet/Sesach acha																				
Pond/Greenhills																				
, Nantucket	0 (0)			0 (0)			0 (0)			0 (1)	(1)	0	0 (0)			0 (0)			MAS	
Sheep Pond,	0 (0)			0 (0)			0 (0)			0 (1)	(.,		0 (0)			0 (0)			1417.13	
Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			NCF	
Smith's Point,	- (-)			- (-,			- (-)			- (-)			- (-)			- (-,				
Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			MAS	
South Pastures																				
(Madequecham																				
Valley to Tom																				
Nevers),																				
Nantucket	0			0			0			0			0			0			NCF	
Squam Pond,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			NCE	
Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			NCF	
The Galls, Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			TTOR	
The Glades,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			TTOK	
Nantucket	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			TTOR	
The Haulover ,	0 (0)			0 (0)			0 (0)			0 (0)			0 (0)			0 (0)				
Nantucket	0			0			0			0			0			0			NCF	
Tom Nevers/																				
Wanoma,																				
Nantucket	0 (0)			0 (0)			0 (0)			64	Α	F	0 (0)			0 (0)			MAS	
Tuckernuck Is																				
Whale Point,										to at a	Fa. 17									
Nantucket	0			0			0			[30] 0	[N]	0	0			0			TLT	
UMass Field																				
Station,	0			0			0			0			0			0			NCF	
Nantucket Wauwinet,	U			U			U			U			U			U	-	<b> </b>	INCF	
Nantucket	0 (0)			0 (0)			0 (0)			28	Α	F	0 (0)			0 (0)			MAS	
Western Ave,	0 (0)			0 (0)			0 (0)			[184]		<u> </u>	0 (0)			0 (0)	-		IVIAS	
Nantucket	0 (0)			0 (0)			0 (0)			10 (0)	[A] A	0	0 (0)			0 (0)			MAS	
Hantacket	0 (0)			0 (0)	ı 1		0 (0)			10 (0)			0 (0)			0 (0)	<u> </u>	l	ואותט	

	Roseate Tern			Common Tern			Arctic Tern			Least Tern			Black Skimmer			Laughing Gull				
Site Name,	No			No			No			No			No			No				
Town	pairs	M <sup>a</sup>	Pb	pairs	M	P	pairs	M	P	pairs	M	P	pairs	M	P	pairs	М	P	Source <sup>c</sup>	Notes
TOTAL 2017																				
NESTING PAIRS	2,264			18,059			0.5			2,940			8			2,745				
TOTAL 2016																				
NESTING PAIRS	2,066			17,175			0.5			3,230			6			2,751				
PERCENT																				
CHANGE FROM																				
2016	9.6			5.1			0			-9.0			33.3			-0.2				

<sup>&</sup>lt;sup>a</sup> Method: A = adult count; E = partial/extrapolated count; N = nest count. See text of "Methods" for more details.

<sup>&</sup>lt;sup>b</sup> Productivity: 0 = none; P = poor; F = fair; G = good; E = excellent. Quantitative estimates are given as fledglings/nest or fledglings/pair.

c In addition to the names of towns, counties, and individuals, the following abbreviations are used: BW=BiodiversityWorks; DCR=Massachusetts Department of Conservation and Recreation; DFW=Massachusetts Division of Fisheries & Wildlife; ECGA=Essex County Greenbelt Association; LCE=Lloyd Center for the Environmental; MAS=Massachusetts Audubon Society-Coastal Waterbird Program; MVLBC=Martha's Vineyard Land Bank Commission; NCF=Nantucket Conservation Foundation; NPS=National Park Service; TLT=Tuckernuck Land Trust; TNCRI=The Nature Conservancy - Rhode Island; TTOR=The Trustees of Reservations; USFWS=U.S. Fish & Wildlife Service.

**Appendix B.** Sites not included in Appendix A that were surveyed for nesting terns, Black Skimmers, and Laughing Gulls in 2017. These sites had no record of nesting birds of these species in 2017 or, to our knowledge, in any previous year.

knowledge, in any previous year.	1
Site Name, Town	Source
NORTH SHORE	
Salisbury Beach State Reservation-North, Salisbury	MAS
Salisbury Beach State Reservation-South, Salisbury	MAS
SOUTH SHORE	
Saquish, Plymouth	MAS
UPPER CAPE	
Allens Harbor, Harwich	MAS
Bone Hill Road, Barnstable	MAS
Crosby Landing Beach, Brewster	MAS
Grey Neck Road Beach, Harwich	MAS
New Seabury, Mashpee	MAS
Radio City Beach, Yarmouth	MAS
Red River Beach, Harwich	MAS
Saquatucket Beach, Harwich	MAS
Wings Island, Brewster	MAS
Woodneck Beach, Falmouth	MAS
LOWER CAPE	
Hatches Harbor, Provincetown	MAS
Morris Island Dredge Spoil, Chatham	MAS
Pleasant St. Beach, Chatham	MAS
BUZZARDS BAY	
Cromeset, Wareham	MAS
Little Harbor Beach, Wareham	MAS
Long Beach Point, Wareham	MAS
ELIZABETH ISLANDS	
Naushon Is Crescent Beach, Gosnold	DFW
Naushon Is Kettle Cove, Gosnold	DFW
Naushon Is Tarpaulin Cove, Gosnold	DFW
Naushon Is West Beach, Gosnold	DFW
MARTHA'S VINEYARD	
Beach Road Causeway, Tisbury	MAS
Caleb's Pond, Edgartown	BW
Cape Higgon, Chilmark	BW
Cracktuxet Trust Beach, Edgartown	BW
Lagoon Pond-Maciel Marine/Ferry Boat Island, Tisbury	MAS
Lighthouse Beach, Edgartown	BW
Lucy Vincent Beach, Chilmark	BW
Philbin Beach, Aguinnah	BW
Spring Point, Chilmark	BW
NANTUCKET	
Capaum Pond, Nantucket	NCF
Little Neck, Nantucket	NCF
Monomoy Creeks, Nantucket	NCF
Sheep Pond, Nantucket	NCF
South Pastures (Madequecham Valley to Tom Nevers), Nantucket	NCF
UMass Field Station, Nantucket	NCF
	1

<sup>&</sup>lt;sup>a</sup> See **Appendix A** for full names of Sources