DIVISION OF
FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
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MASSWILDLIFE

Request for Certificate of Inclusion for Piping Plover Habitat Conservation Plan
MESA Review Checklist & Application Cover Page

Project Location:

Address/Location	Horseneck Beach State Reservation
City(ies)/Town(s)	Westport

Applicant:

Individual	Priscilla Geigis
Organization	Department of Conservation and Recreation
Mailing address	10 Park Plaza, Suite 6620, Boston MA 02116
Phone & Email	617-626-1250 / priscilla.geigis@mass.gov

Property Owner(s) Information (if different from Applicant): ***Provide separate sheet if multiple landowners***

Individual(s)	
Organization(s)	
Mailing address	
Phone & Email	

Representative (if any):

Individual	Jorge J. Ayub
Organization	Department of Conservation and Recreation
Mailing address	45 Mill St. Foxborough, MA 02035
Phone & Email	857-214-0207 / jorge.ayub@mass.gov

Has this project previously been issued a NHESP Tracking Number (either by previous NOI Submittal or MESA Information Request Form)? Yes If yes, Tracking no. 18-37710

Is coverage for Least Terns also being requested? (Y/N)	Yes			
List additional MESA-listed species in project area (if known):	N/A			

REQUESTED COVERED ACTIVITIES FOR PIPING PLOVER

Covered activity:	***Use of roads and parking lots in the vicinity of unfledged chicks***	***Recreation and beach operations***	***Oversand vehicle use in vicinity of unfledged chicks***	***Total****
*No. requested take exposures**	1-5	1-5	0	5
Max. % of total pairs at site to be exposed				30%
Acreage affected				4
Max. % of total nesting acreage affected for this species at site				20%

* The Total *No. requested take exposures* should be a maximum number of exposures for all Covered Activities combined in a given year (i.e., a not-to-exceed value). As beach operators may not be able to predict which Covered Activities will be implemented in a given year, a range of values or maximum value may be presented for each individual activity. For instance, requested exposures under each of the three activities might be 2 while the Total might be less than 6.

REQUESTED COVERED ACTIVITIES FOR LEAST TERN OR OTHER AVIAN SPECIES (identify species): Least Tern

Covered activity:	*Use of roads and parking lots in the vicinity of unfledged chicks*	*Recreation and beach operations*	*Oversand vehicle use in vicinity of unfledged chicks*	*Total**
*No. requested take exposures**	1-16	1-16	0	16
Max. % of total pairs at site to be exposed				20%
Acreage affected				4
Max. % of total nesting acreage affected for this species at site				20%

* The Total *No. requested take exposures* should be a maximum number of exposures for all Covered Activities combined in a given year (i.e., a not-to-exceed value). As beach operators may not be able to predict which Covered Activities will be implemented in a given year, a range of values or maximum value may be presented for each individual activity. For instance, requested exposures under each of the three activities might be 2 while the Total might be less than 6.

REQUESTED SPECIFIC METHODS ASSOCIATED WITH IMPLEMENTING COVERED ACTIVITIES (check all that apply)

	Piping Plover	Least Tern	Other (identify): _____
Reduced proactive symbolic fencing	✔	✔	☐
Reduced fencing around the nest	✔	✔	☐
Beach raking	✔	✔	☐
Physical deterrents (coverboards, flagging, etc.)	✔	✔	☐
Chick herding	✔	✔	☐
Barriers	✔	✔	☐
Nest moving	✔	✔	☐
Other (briefly identify) Barriers	✔	✔	☐

PROPOSED PIPING PLOVER MITIGATION (Mitigation for other species should be proposed in the IAMP; see below.)

Type	Y/N	Total amount	Pairs to benefit (credits)
*Pay fee for offsite mitigation**	No	$	
Applicant-implemented activities (in lieu of fee):			
· Selective predator management	Yes	Submit details in IAMP (see below)	15
· Increased education & outreach	Yes		MassWildlife will determine value (credits) for these activities
· Increased law enforcement	No		
· Habitat management	No		
· Other	No		

* Mitigation ratios (mitigation credits:exposure) and fees (per pair, nest, brood, or territory) are: Use of Roads and Parking Lots (vehicular, 3:1 or $6,150; non-vehicular, 2.5:1 or $5,800); Recreation & Beach Operations, Oversand Vehicle Use (2.5:1 or $5,800)

OTHER REQUIRED ELEMENTS OF REQUEST FOR COI

*(Please attach. See a*dditional guidance available to applicants; contact coastal.waterbirds@mass.gov.)

☑ Site map – showing parcel boundaries and provide proof of ownership

☐ Written assent of landowner(s) to request coverage, if applicant is not landowner

☑ Site-specific Impact Avoidance and Minimization Plan (IAMP) in format specified by MassWildlife in available guidance

☑ Mitigation plan, including budget

☑ MA Endangered Species Act filing fee

($300 payable to "**Comm of MA – NHESP**"; https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review)

☑ Conservation and Management Permit fee

($600 payable to "**Comm of MA – NHESP**"; https://www.mass.gov/how-to/apply-for-a-conservation-management-permit)

☐ Draft Escrow/Mitigation Fund Agreement, with applicant-specific edits in TrackChanges/redline (if mitigation fee will be paid)

Contact: Coastal.Waterbirds@mass.gov for template agreement.

SUBMITTAL

☑ Mail a hard copy of entire application (including signed cover sheet) with checks, to:
Environmental Review-HCP, MassWildlife-NHESP, 1 Rabbit Hill Rd., Westborough, MA 01581.

☑ Also email entire application to: **Coastal.Waterbirds@mass.gov**.

REQUIRED SIGNATURES

Provide separate sheet if multiple landowners

I hereby certify under the penalties of perjury that the foregoing HCP/MESA filing and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

Signature of Property Owner/Record Owner of Property Priscilla Geigis Date 12/15/2023

Signature of Applicant (if different from Owner) Date

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MASSACHUSETTS
PROJECT REVIEW CHECKLIST

Massachusetts Endangered Species Act M.G.L. c.131A and Regulations (321 CMR 10.00)

Project Details

***Project or Site Name:** Horseneck Beach HCP COI Application

***Street Address/Location:** 5 John Reed Rd., Westport MA

***Town(s):** Westport

***Total Site Acreage:** _____ ***Acreage of Disturbance**[1]**:** 4

Parcel/lot number: _____ **Assessors map/plat number:** _____

Project Description (If necessary, a project/site description can also be provided as an attachment)**:** _____

DCR Request for HCP COI for Horseneck Beach

Registry of deeds information[2]

Registry: _____ **Certificate #** (if registered land)**:** _____

Book: _____ **Page Number:** _____

Do you have a previous NHESP Tracking number? (Yes / No) If yes, please provide: 18-37710

Will this project require a filing with the Conservation Commission and/or DEP pursuant to the Wetlands Protection Act (WPA)? (Yes / No)

Map

***Required:** Enclose a map with the site location clearly marked and centered on the page.

Landowner Info

***Are you the Record Owner**[3] **of the property? (Yes / No)**
***If No, are you a representative of the Record Owner or do you have permission from the Record Owner to submit this request or filing?**[4] **(Yes / No)**

Department of Conservation and Recreation			
***Landowner Name**			
10 Park Plaza, Suite 6620	Boston	MA	02116
***Street Address/Location**	***City/Town**	***State**	***Zip Code**
	617-626-1250		
Email	**Telephone**		

Comments/Purpose of request[5]**:**

_____

_____

[1] Please disclose the full acreage of disturbance associated with the project, including areas outside of Priority Habitat.
[2] If your project contains more than one registered property, please attach a document listing the Registry information for each.
[3] Record Owner means any person or entity holding a legal or equitable interest, right or title to real property, as reflected in a written instrument or recorded deed, or any person authorized in writing by such person.
[4] If you are not the record owner, a statement or proof that you are authorized by the record owner must be attached.
[5] Provide the authorization you have to submit this request if you are not the record owner and not a representative of the record owner.

Applicant Info

Priscilla Geigis			
Applicant Name (if different from Landowner)			
10 Park Plaza	Boston	MA	02116
Street Address/Location	**City/Town**	**State**	**Zip Code**
priscilla.geigis@mass.gov		617-626-1250	
Email (if available)		**Telephone**	

Representative Info

Jorge J. Ayub			
Applicant Name (if different from Landowner)			
45 Mill St.	Foxborough	MA	02035
Street Address/Location	**City/Town**	**State**	**Zip Code**
jorge.ayub@mass.gov		857-214-0207	
Email (if available)		**Telephone**	

**Required Documents*

- [x] USGS map (1:24,000 or 1:25,000) with property boundary clearly outlined
- [ ] Project plans for entire site (including wetland Resource Areas, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work)
- [x] Assessor's map or right-of-way plan of site
- [x] Statement/proof that applicant is the Record Owner or that applicant is a person authorized in writing by the record owner to submit this filing
- [ ] Photographs representative of the site

Projects altering 10 or more acres, must also submit:

- [x] A vegetation cover type map of the site
- [x] Project plans showing Priority Habitat boundaries

The Division will notify you within 30 days if the materials submitted do not satisfy the filing requirements under 321 CMR 10.20. The Division may request additional information, such as, but not limited to, species and habitat surveys. A request for additional information would come within 30 days of receiving a complete filing.

**Filing Fee*

Fee schedule is available at https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review

***Total MESA Fee Enclosed:** $900.00 Payable via check to **Comm. of MA - NHESP**

**Required Signatures*

I hereby certify under the pains and penalties of perjury that the information contained is true and complete to the best of my knowledge.

Priscilla Geigis — 12/15/2023

Signature of Property Owner/Record Owner of Property — Date

Signature of Applicant (if different from Owner) — Date

Please mail this completed form, with the required document and fee to:
NHESP Regulatory Review | MassWildlife Field Headquarters | 1 Rabbit Hill Road | Westborough, MA 01581

MASSACHUSETTS – DEPARTMENT OF CONSERVATION AND RECREATION

DCR Request for Certificate of Inclusion in the Massachusetts Habitat Conservation Plan for Piping Plover

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Horseneck Beach State Reservation

Shorebird Recovery Program
Bureau of Resource Protection
Department of Conservation & Recreation
10 Park Plaza, Suite 6620
Boston, MA 02116

February 07, 2024

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

The Massachusetts Department of Conservation and Recreation (DCR) is requesting a Certificate of Inclusion (COI) for Horseneck Beach State Reservation as part of the agency's application to the participate in the statewide Piping Plover Habitat Conservation Plan (HCP). DCR is requesting the implementation described under the HCP section 1.2.1 Covered Activities:

- (1) "Use of Roads and Parking Lots in the Vicinity of Unfledged Piping Plover Chicks",
- (2a) "Recreation and Beach Operations Associated with Reduced Symbolic Fencing",
- (2b) "Recreation and Beach Operations Associated with Reduced Proactive Fencing of Piping Plover Habitat", and
- (2c) "Recreation and Beach Operations at Piping Plover Nest Sites with Nest Moving"

DCR is requesting up to five (5) Piping Plover nesting territories or breeding pairs for inclusion in the covered activities of approximately 30% of the past three (3) years average of nesting pairs. Additionally, DCR is requesting up to sixteen (16) Least Tern nesting territories or breeding pairs for inclusion in these covered activities, or approximately 20% of the past three (3) years average of nesting pairs. DCR is proposing as mitigation to fund a selective predator control program as approved by the Division of Fish & Wildlife (DFW).

The removal or reduction of symbolic fencing on this site will help maintain access to the beach and reduce potential economic impacts as well as conflicts with recreational activities in a public state beach that can host tens of thousands of visitors annually, and sometimes up to eight thousand visitors in a single day.

In 2016, DCR executed an ecological habitat restoration around the main plaza and its administrative facilities that created and restored 103,000 square feet of new nesting habitat for listed shorebird species. In 2020 - 2021, DCR restored 21,300 square feet of additional impervious surfaces in and around the main plaza and administrative buildings. The newly restored habitat has been used every year since by Piping Plover and Least Terns. In the most recent nesting season (2023), two (2) pairs of Piping Plovers nested successfully in the restored habitat.

DCR may continue to pursue improvements that will increase protection and provide impact minimization, habitat enhancement, increased monitoring, coordinated enforcement, internal DCR staff training, and expanded public education. DCR intends with this application to utilize the HCP as an additional conservation management tool to enhance the success of the Piping Plovers and Least Terns nesting at Horseneck Beach.

The geographic area covered under this application is located along the western shore of Buzzards Bay. Horseneck Beach is a barrier beach that protects the Westport River estuary from the open ocean. The specific area within Horseneck Beach maintains a half-mile of approximately 200-foot-wide sandy beach, as well as a mile and a half of primary dune habitat. The covered activities permitted under this application include all suitable Piping Plover habitat along and around the described length of beach (Figure 1).

Intensive recreational use by visitors from Massachusetts and Rhode Island communities' impact Horseneck Beach and the nearby salt marsh habitat. The presence of breeding Piping Plovers, state-listed Terns, and other coastal bird species of conservation concern share this valuable coastal habitat with tens of thousands of visitors annually. DCR considers the variety of species in our stewardship efforts with a comprehensive approach for conservation at this coastal reservation. The combination of popularity for recreation and importance of habitat protection has created a unique opportunity for wildlife conservation, to proactively educate local residents and visitors from the nearby communities about the coastal conservation goals and statutory protections for focal species.

IMPACT AVOIDANCE AND MINIMIZATION PLAN (IAMP)

I. Site Description

Horseneck Beach has been a popular recreational area since 1893, when the Westport River Bridge connecting Westport Point to the barrier beach was constructed. The Commonwealth of Massachusetts acquired the property in 1956 after The Hurricane of 1938 and Hurricane Carol of 1954 destroyed most of the homes along the beachfront. In 1957, Horseneck Beach became the first public beach in southeastern Massachusetts and has hosted thousands of visitors each year since. The reservation is an attractive destination for visitors from eastern Massachusetts and nearby Rhode Island, as it offers warmer than average water temperatures than most other Massachusetts beaches.

Historically, Horseneck Beach has served as refuge and nesting habitat for populations of Piping Plovers and Least Terns benefitting from the availability of favorable habitats including the dunes and overwashes. The nesting habitat has improved along the entire beach due to recent stewardship and enhancement efforts by DCR. However, portions of the primary nesting habitat continue to be reshaped annually by storm wave activity and high winds during the winter months. This dynamic environment requires DCR to perform yearly maintenance operations to preserve the sand resources on the beach.

A. Acreage

Horseneck State Reservation is approximately 815 acres which comprises all owned features present at the Reservation. Horseneck Beach, which holds the viable and historic nesting habitat for Piping Plovers and Least Terns is approximately 98 acres.

B. Infrastructure

Horseneck Beach maintains three (3) parking lots, two (2) access roads, one (1) administrative building, one (1) paved pedestrian walking trail, two (2) pedestrian boardwalks, two (2) bathhouses, and one (1) outdoor pavilion (Figure 1).

C. Access Points

Horseneck Beach maintains multiple access points to and from the beach proper. Two (2) points of access are offered through over dune boardwalks that connect the parking lot

and bathhouses to the beach. There are two (2) emergency and essential vehicle access points that are paved and connect to the paved pedestrian walking trail that runs parallel to the beach. There are four (4) over-dune access trails that intersect the primary dune from the parking lot and paved pedestrian walking trail to the beach proper. Access to Horseneck Beach can also be achieved through adjacent private properties, walking across the beach front.

D. Types of Habitat and Key Natural Features

Horseneck Beach is a barrier beach system containing sandy dune and shoreline, cobble beach, salt marsh, tidal flats, maritime shrubland and forest. Approximately half the length of the four-mile state reservation consists of sandy and sandy/cobble substrate. A well consolidated dune system with primary and secondary dunes cover approximately half of the total acreage of the state reservation.

E. Site Map

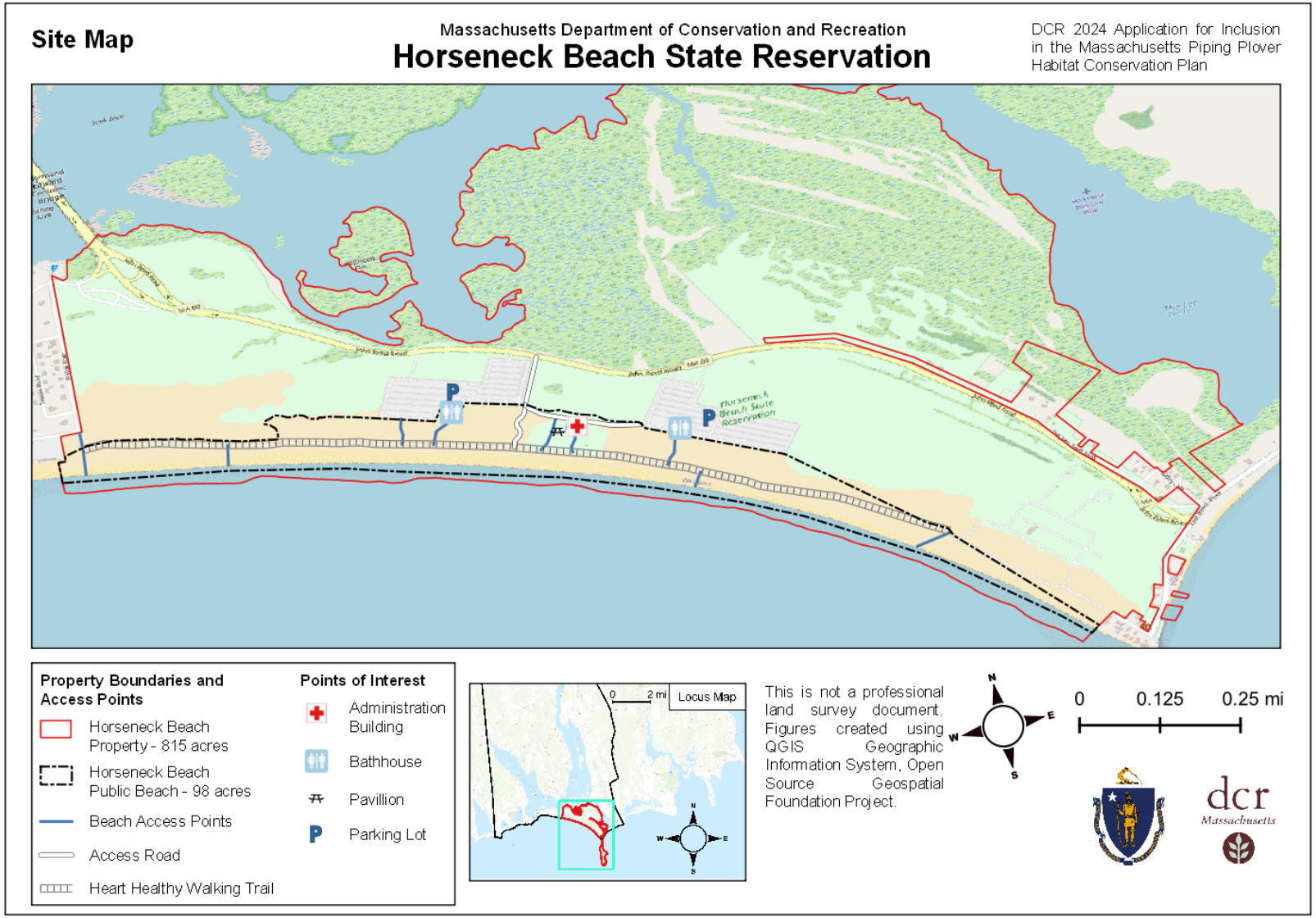

Figure 1 - Site Map

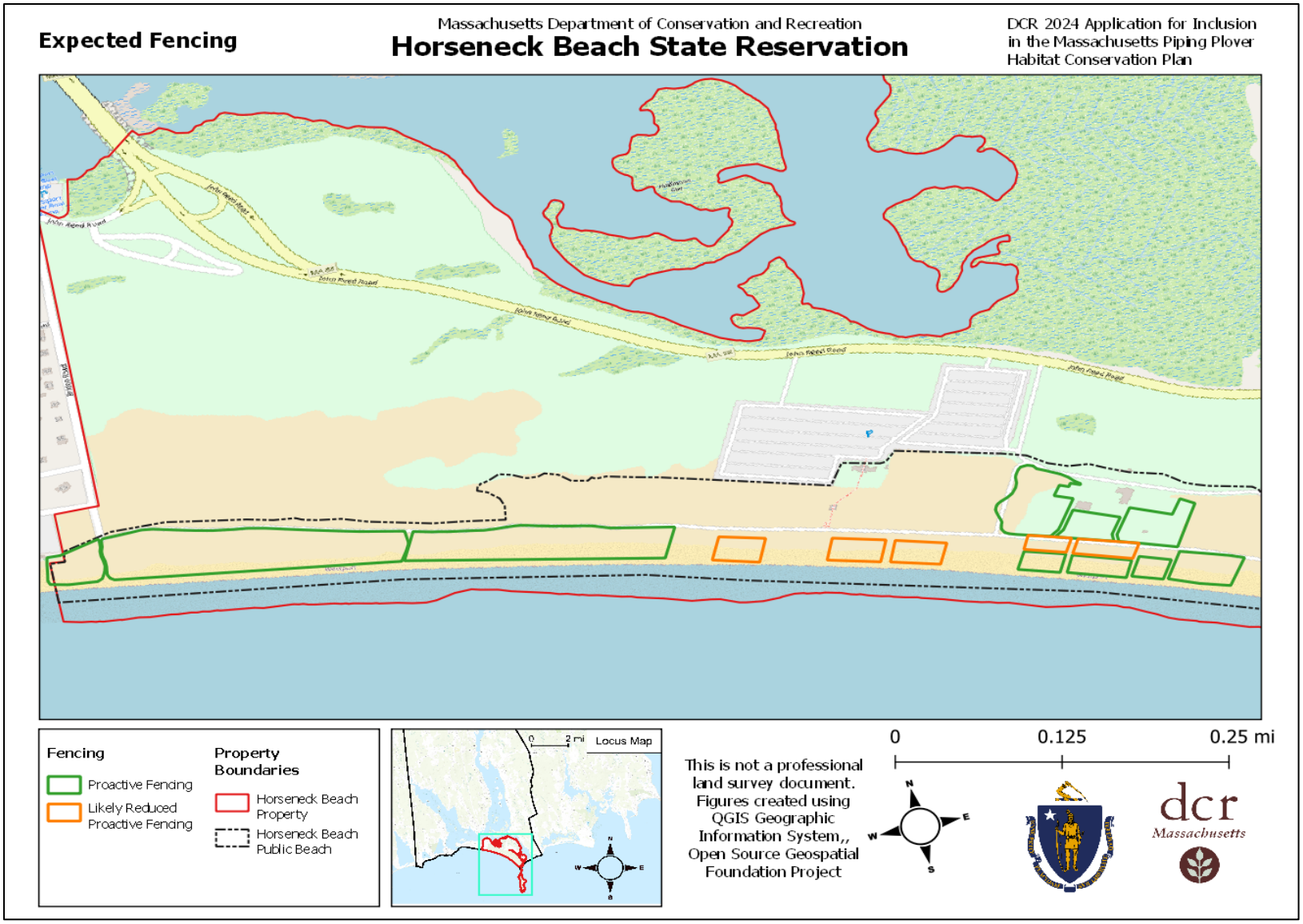

Figure 2 Expected Fencing

F. Supporting Photographs

Not Applicable

II. Ownership and Management Entities

Horseneck Beach is owned and managed by the Massachusetts Department of Conservation and Recreation. Westport Town police and fire department regularly access the site throughout the nesting season to provide enforcement aid and emergency service aid. Massachusetts Environmental Police and State Police also regularly access the site throughout the nesting season to provide further enforcement support.

All enforcement and emergency service personnel are required to patrol on foot during the nesting season and to keep their vehicles within the parking lot areas unless responding to an urgent emergency. Any essential emergency response vehicles are escorted onto the beach and parked in predetermined areas to be present and able to respond to urgent emergencies. These vehicles are escorted off the beach at the end of every day.

III. Responsible Staff

Implementation of the HCP on these sites will be managed by DCR's Office of Natural Resources, with the Senior Coastal Ecologist, Jorge J. Ayub (Appendix A) responsible for preparing and updating the HCP plan and the conservation management strategies on-site. The Senior Coastal Ecologist is a full-time permanent employee. The oversight and implementation of the HCP is also aided by two (2) Shorebird Protection Program Coordinators, which are full-time permanent employees working 40 hours/week, Monday through Friday and on call through weekends and after hours during the shorebird nesting season. The Senior Coastal Ecologist, aided by the Shorebird Protection Program Coordinator, hires, trains, and oversees the daily operation of five (5) Conservation Biologists, who are hired every year as Long Term Seasonal (LTS) employees from approximately March 15th through September 1st (see IAMP Section VII and Appendix A for further details).

IV. Piping Plovers

A. Mapped Distribution

Nesting Piping Plovers have recently been very evenly distributed across the available habitat at Horseneck Beach. The western portion of the beach that is comprised primarily by secondary dunes, small overwash areas, and berm have held the majority of nesting birds. The main recreation beach which has been regularly groomed and is comprised of overwash and berm has held the rest of the nesting population at Horseneck Beach. The restoration areas around the administrative building have held up to three (3) pairs of nesting Piping Plovers, annually, since completion of the project in 2016.

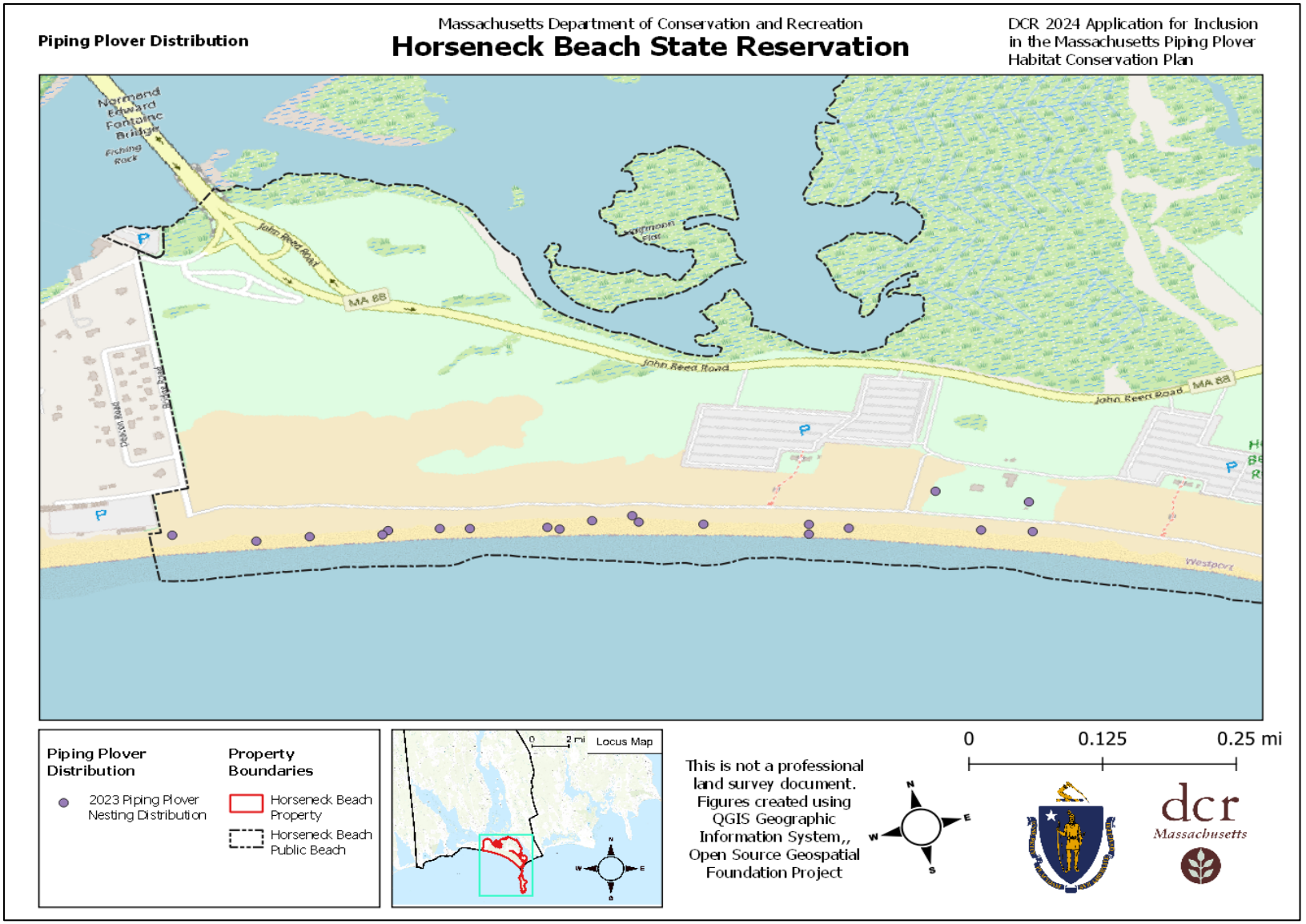

Figure 3 - Piping Plover Distribution

B. Population Size

The 10-year baseline average, set between 2009 and 2018, saw an average of 10.3 breeding pairs of Piping Plover. The most recent 5-year average, set between 2019 and 2023, saw an average of 14.2 breeding pairs or an increase of 38% above the 10-year baseline. This increase in breeding pairs may be attributed to the improved conservation management and habitat restorations performed by DCR. Most recently, Horseneck Beach provided nesting habitat for 18 pairs of Piping Plovers.

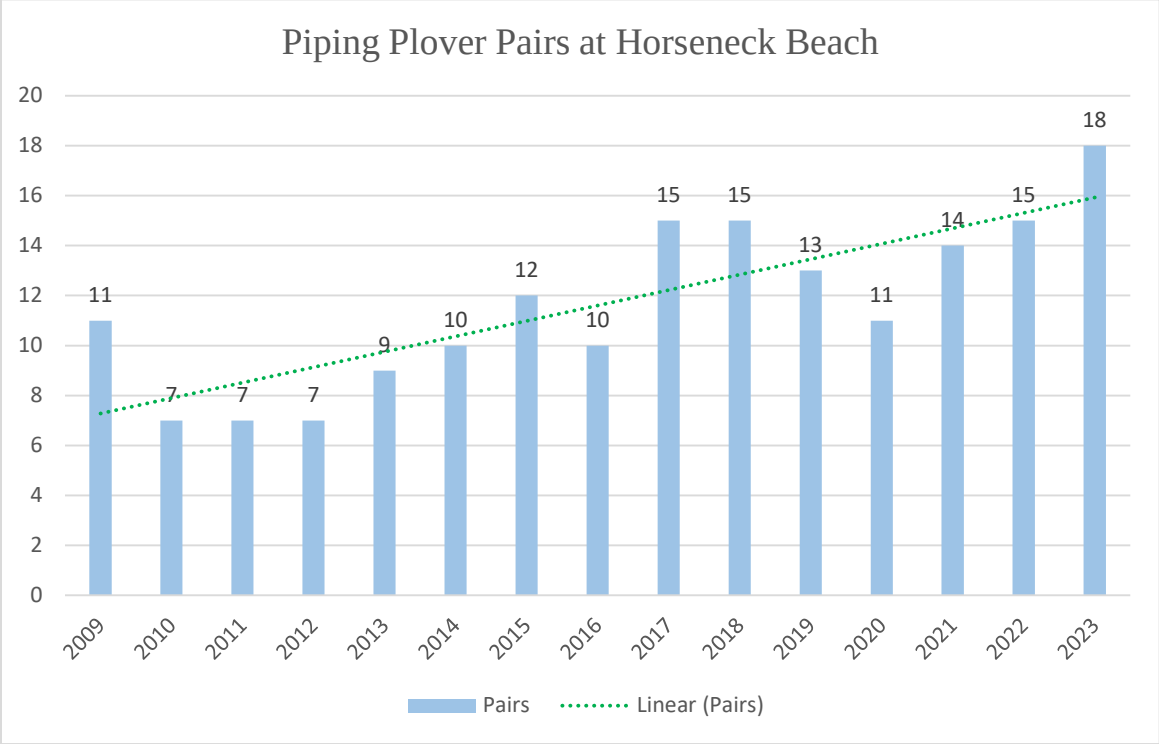

Figure 4 - Horseneck Beach Piping Plover Population

C. Reproductive Success

The 10-year baseline average, set between 2009 and 2018, saw an average productivity of 1.18 fledged chicks per pair. The most recent 5-year average, set between 2019 and 2023, saw an average productivity of 1.08 fledged chicks per pair or a decrease of 8% below the 10-year baseline. This decrease in productivity is likely due to seasonal effects such as certain storm or weather events as well as predator and recreational pressures. Most recently, Horseneck Beach achieved a productivity of 0.39 fledged chicks per pair.

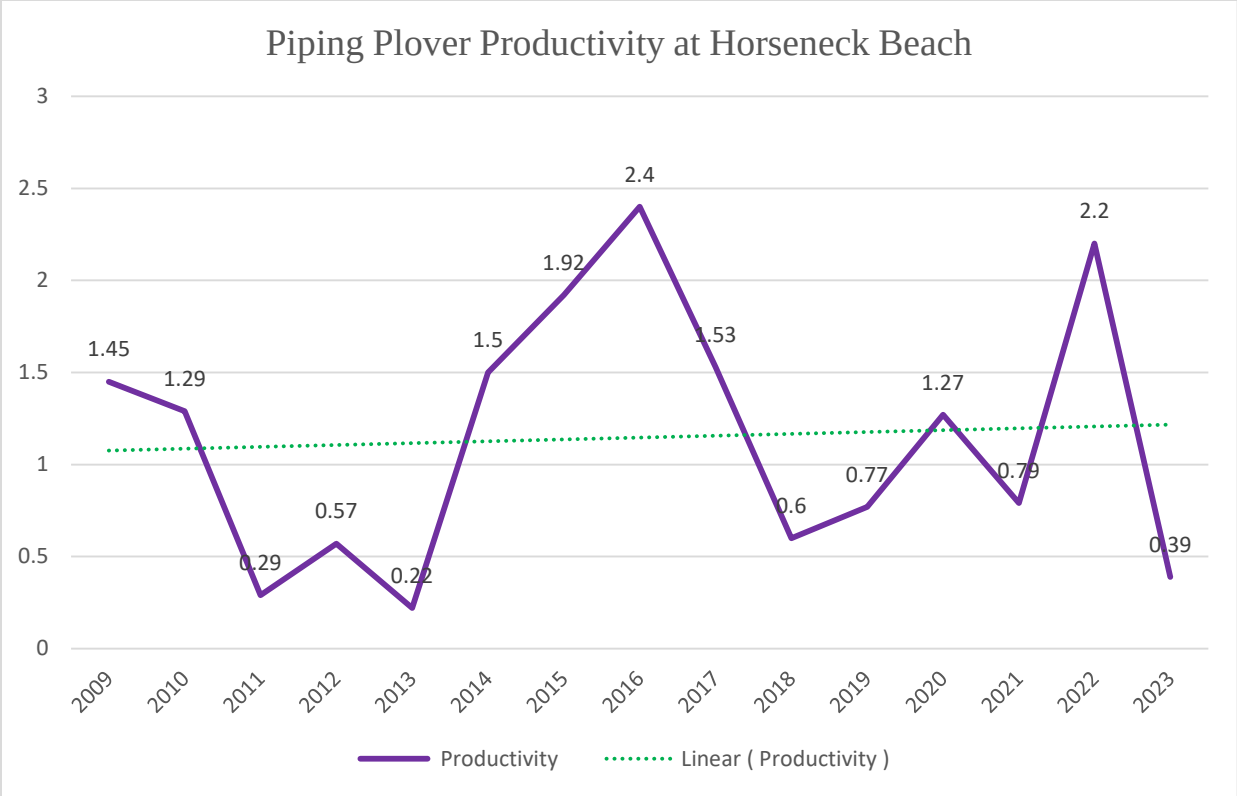

Figure 5 - Horseneck Beach Piping Plover Reproductive Success

D. Threats at the Site

Impacts to productivity on Horseneck Beach in 2023 were attributed mostly to avian predation, predominantly by gulls. DCR Conservation Biologists determined that gull predation likely attributed to the loss of 53 Piping Plover chicks out of the 60 that hatched. Coyote was determined to be the cause of two (2) nest loss out of the four (4) total nests lost during the 2023 season. Additionally, Red fox and American Crow were observed in areas where incubating and brooding pairs were present and likely added additional stresses that limited their individual seasonal success.

Recreational pressures observed at Horseneck have historically and continue to be high with select days within the summer season observing up to 10,000 visitors over the day. These pressures have been documented to have caused nesting disturbances, foraging disturbances, and mortality of chicks.

E. Other Background Information of Significance

Not Applicable.

V. Least Terns

A. Mapped Distribution

Nesting Least Terns have recently been distributed on the eastern and western shoulders of available habitat on the recreation beach at Horseneck Beach. These shoulders of the beach are comprised primarily by small overwash areas, berm, and secondary dune structures and have supported the majority of nesting birds. The main recreation beach which has been regularly groomed and is comprised of overwash and berm has held few colonial outlying pairs. The restoration areas around the administrative building have held up to five (5) pairs of nesting Least Terns, annually, since completion of the project in 2016.

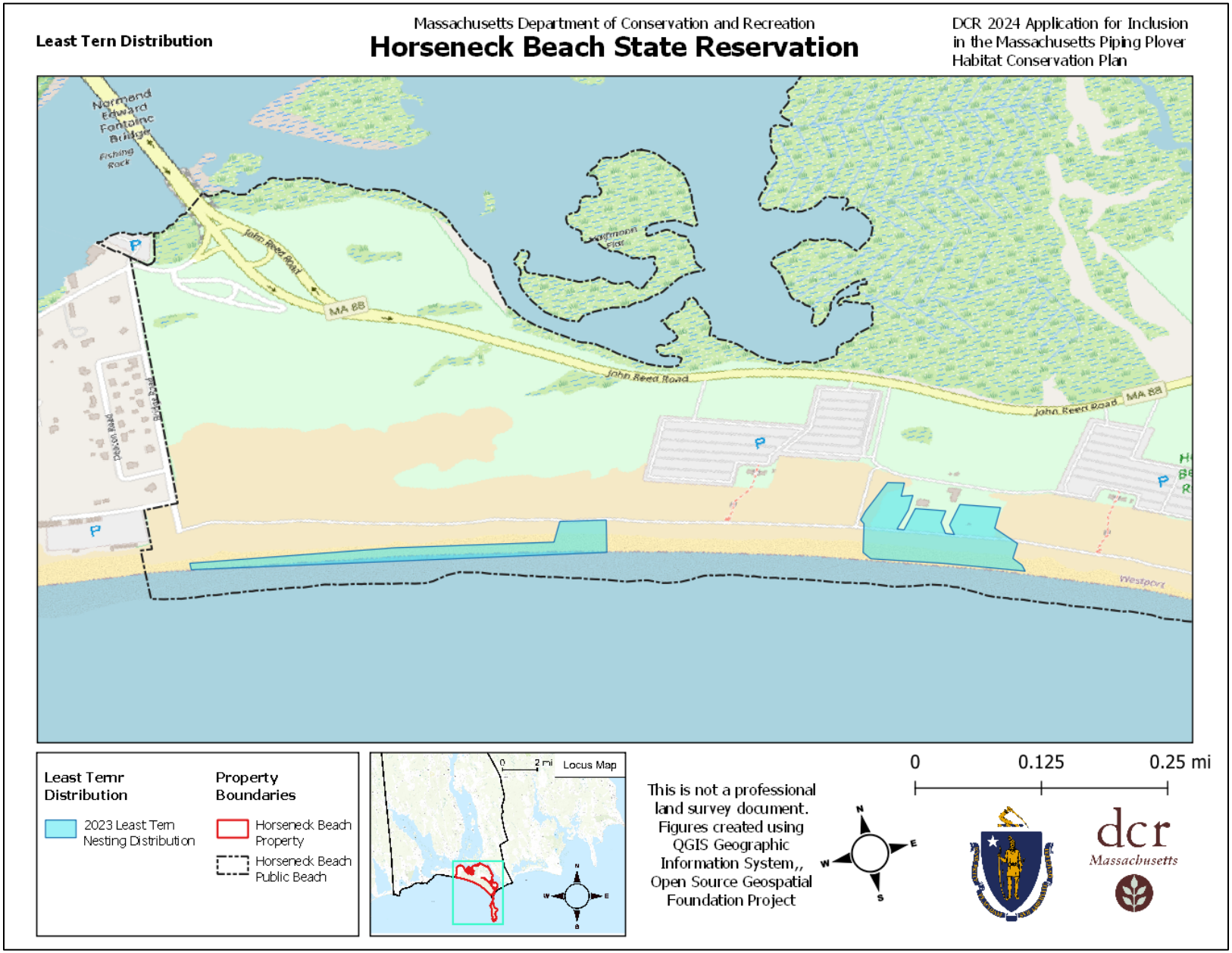

Figure 6 - Least Tern Distribution

B. Population Size

Horseneck Beach has hosted a largely fluctuating Least Tern colony since 2011 with most of the colony preferring to nest along the eastern and western extents of Horseneck's recreational beach. This colony observed is lowest colony count in 2011 and 2012 with 2 pairs and its highest colony count in 2023 with 106 pairs. The 10-year baseline average, set between 2011 and 2020, saw an average of 35.5 breeding pairs of Least Tern. The most recent 3-year average, set between 2021 and 2023, saw an average of 83 breeding pairs, or an increase of 134% above the 10-year baseline. This increase in breeding pairs may be attributed to improved conservation management and habitat restorations performed by DCR. Most recently, Horseneck Beach provided nesting habitat for 106 pairs of Least Terns.

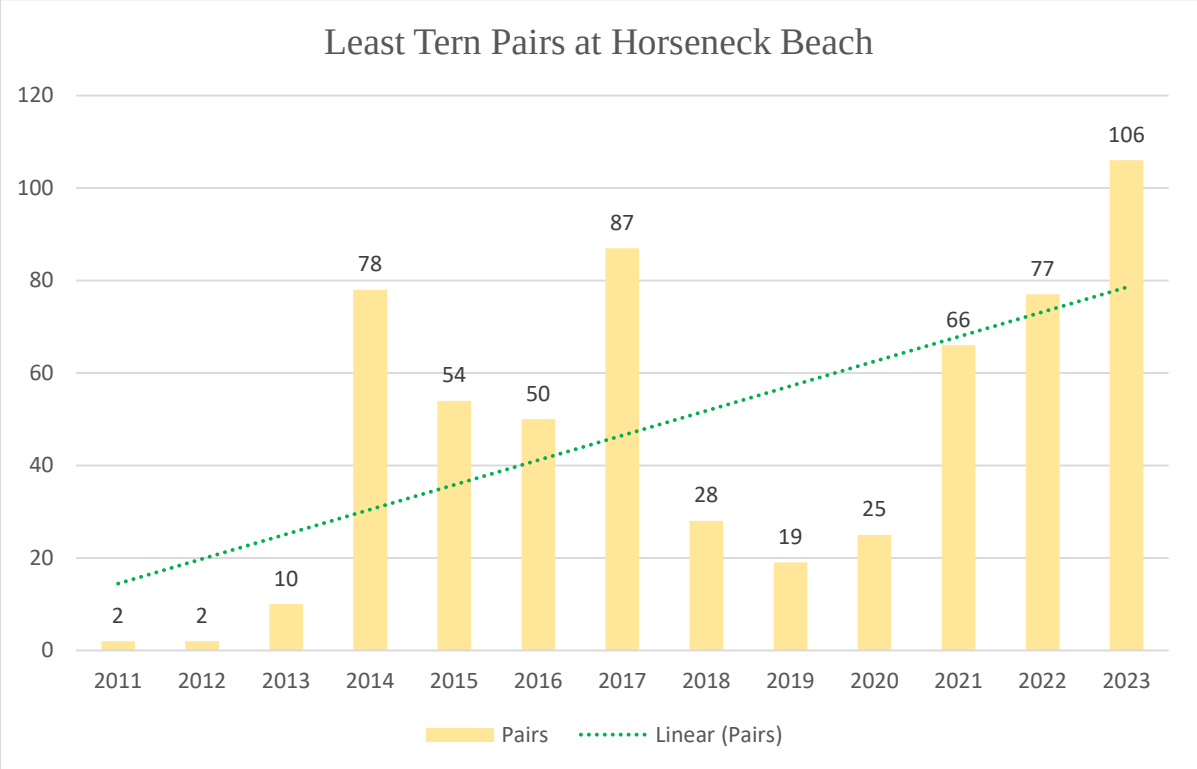

Figure 7 - Horseneck Beach Least Tern Population

C. Reproductive Success

The 10-year baseline average, set between 2011 and 2020, saw an average productivity of 0.44 fledged chicks per pair or rather classified as fair productivity. The most recent 3-year average, set between 2021 and 2023, saw an average productivity of 0.48 fledged chicks per pair, an increase of 9% above the 10-year average, or rather a continued classification of fair productivity. Most recently, Horseneck Beach observed poor productivity of 0.14 fledged chicks per pair.

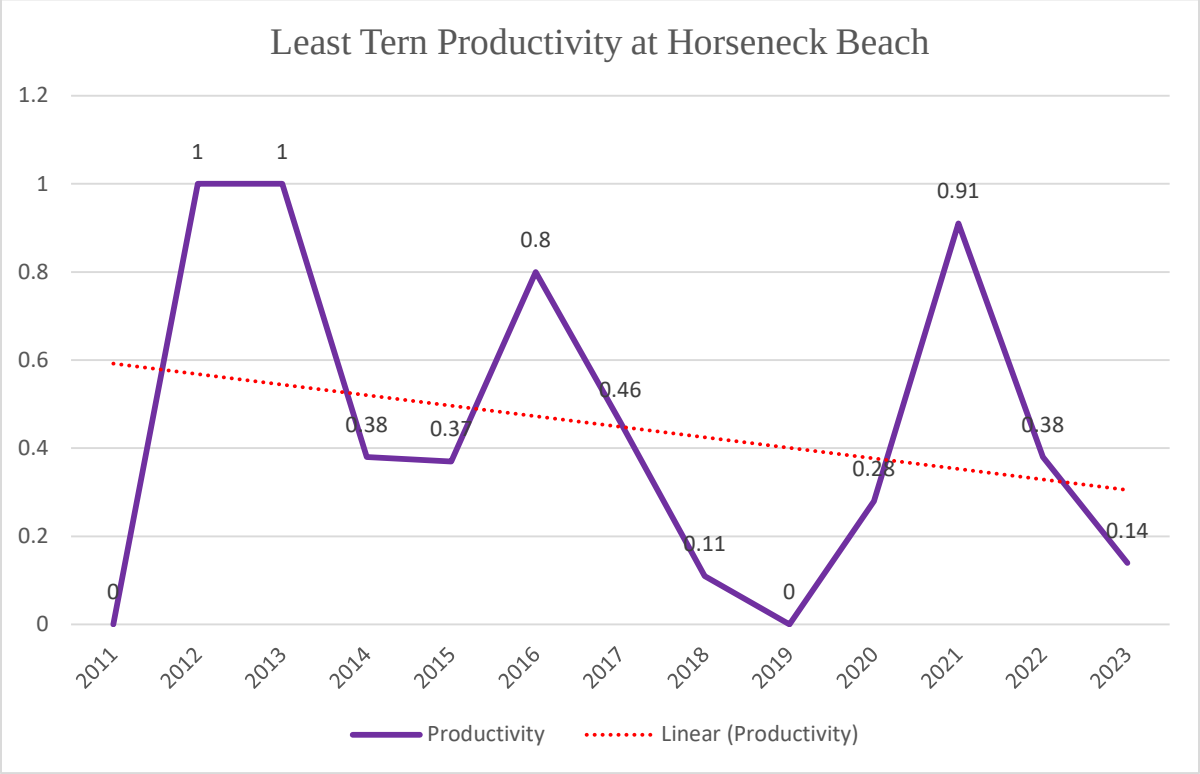

Figure 8 - Horseneck Beach Least Tern Reproductive Success

D. Threats at the Site

Impacts to productivity on Horseneck Beach in 2023 were attributed mostly to mammalian predation, predominantly by coyote. DCR Conservation Biologists recorded 104 instances of Coyote in and around the Least Tern colony and they likely contributed to the steep decline in observed Least Tern chicks throughout the year. Gulls, Red fox, and domestic dogs were also observed in and around the colonies and likely added additional stresses that limited their seasonal successes.

Recreational pressures observed at Horseneck have historically and continue to be high with select days within the summer season observing up to 10,000 visitors over the day. These pressures have been documented to have caused nesting disturbances, foraging disturbances, and mortality of chicks.

E. Other Background Information of Significance

Not Applicable.

VI. Beach Operations and Management

All beach operations and site management activities conducted at the beach during the nesting season are strictly coordinated between DCR Park Operations staff and the Conservation Biologists to ensure compliance with the Guidelines.

A. Beach Hours

Site infrastructure (including parking lots, public restrooms/bathhouses, and Lifeguard services) on Horseneck are operational from half-an-hour before sunrise to half-an-hour after sunset year-round. Horseneck is open and accessible to the public primarily during daylight hours throughout the year, including April 1st – September 30th when nesting and staging Piping Plover and Least Terns may be present.

B. Recreational Activities

Multiple recreational activities are monitored by DCR staff at Horseneck, including but not limited to swimming, beach games, paddle boarding, kayaking, and kite boarding, among others. Most of these activities require DCR staff to be available to guide and direct the recreational use to areas away from protected species and in a way that reduces disturbances created. Other activities, such as kiteboarding, requires more coordination between recreational groups and DCR staff to anticipate the participation of the activity and to direct the recreational use away from protected areas of the beach, minimum of 200 yards from designated areas, to reduce potential disturbances.

C. Parking and Roads

Horseneck manages one (1) main parking lot and one (1) overflow parking lot that is pay-to-park. The main and overflow parking lots have independent road access but are also connected by an access road that also serves as access to the Horseneck Administrative Building.

D. Beach Rules and Regulations

Beach rules and regulations for Horseneck are outlined in *30 CMR 12.04: Rules of Conduct on DCR Properties – Generally* and *30 CMR 12.06: Rules of Conduct on DCR Properties – Beaches (Appendix D),* and guidance with enforcement is provided by DCR Rangers. Regulated activities on DCR properties include but are not limited to: trash disposal, public conduct, recreational activities, commercial use, protection of infrastructure and habitat, research, and use of amplified sound equipment. Pets are not allowed on Horseneck Beach from April 1st through September 15th, and signage reflecting this regulation is posted at every access point. Public outreach is conducted to educate residents and visitors about the potential unintended impacts caused by domestic pets on shorebird nesting.

E. Fencing and Signage

DCR Conservation Biologists deploy, adjust, and maintain symbolic fencing to delineate critical shorebird nesting areas at Horseneck. Significant portions of the suitable nesting habitat that have supported nesting Piping Plovers and Least Terns regularly are proactively fenced by April 1st each year. The remainder of the beach is intensively monitored on a daily basis and symbolic fencing is reactively installed as soon as territorial pair and scraping are detected until the time that all included broods have successfully fledged.

F. Compliance and Law Enforcement

DCR has dedicated one (1) seasonal Ranger to Horseneck to enforce statutes pertaining to the protection of listed shorebirds and deter acts that are in violation of these protections. The position runs from early April to late August. DCR seasonal Rangers coordinate all enforcement efforts with Massachusetts Environmental Police as well as local law enforcement to better manage recreational use of the beach and to effectively gain voluntary compliance of the rules. Enforcement efforts are timed to coincide with high beach use periods including weekends and holidays. The Ranger schedule varies periodically to interact with as many different beach users as possible and provide

maximum coverage. The scope of enforcement and scheduling of rangers may be subject to change due to emergency public safety concerns as has been observed with the COVID-19 pandemic.

G. Commercial/Vendor Activities

Horseneck hosts a single food truck vendor within the outdoor pavilion space adjacent to the Administrative Building. The food truck is placed in position prior to April 1st and remains stationary throughout the summer season. Deliveries are walked in from the access road to the food truck daily. Commercial activities that take place on Horseneck are subject to the provisions of DCR special use permits and their conditions.

H. Events

All major events that take place at Horseneck Beach throughout the shorebird season are coordinated through Conservation Biology staff to ensure that the event remains in compliance with the Guidelines and any required permits conditions to reduce and prevent disturbances to territorial and nesting shorebird species. Organized events that are expected to exceed the ordinary use of Horseneck are subject to a special use permit. These permits are reviewed by the DCR Senior Coastal Ecologist, who provides guidance on acceptable location and any other considerations for maintaining compliance with the Plan. Annual recurrent events at Horseneck include the Horseneck 5k Marathon Run. Other events may vary each year depending on requests for permits, and in the past have included weddings and movie production. The Senior Coastal Ecologist is responsible for adjusting shorebird monitoring staff schedules throughout any such permitted event as needed to ensure adequate coverage of the event. All pairs, nests, and broods are intensively monitored throughout major events and symbolic fencing is increased or reinforced depending on expected event participation and visitation.

I. Maintenance

DCR coordinates the type and timing of any beach maintenance operations, such as, beach raking for trash removal or removal of large debris using heavy equipment, with qualified shorebird monitors to ensure that all protected species are not harassed, killed, or injured by these activities at Horseneck. Horseneck has an approved Operations and Maintenance Plan (OMP), approved under the Massachusetts Wetlands Protection Act (WPA), and reviewed and approved pursuant to the Massachusetts Endangered Species Act (MESA).

J. Installation of Seasonal Infrastructure

Conservation Biologists coordinate and assist operations staff with the installation of all lifeguard chairs and entrance roll-out mats at the start of the nesting season to ensure that no vehicles or activities involved cause disturbance to territorial or nesting pairs of Piping Plovers and Least Terns.

K. Beach Raking

Raking begins on a regular schedule, up to 3 days per week as needed starting after May 15th and throughout the remainder of the recreation season. Raking will not occur before dawn or during inclement weather when visibility is limited. This includes maintenance of buffers around incubating pairs where no mechanized raking occurs and monitoring of the adult Piping Plovers and Least Terns to ensure that raking activities do not cause harassment. Once chicks hatch, refuge continues to be provided in symbolically fenced areas with supplemental buffers where raking is limited. Mechanized raking in the vicinity of chicks may only occur with a qualified shorebird monitor present, who has located all foraging chicks prior to raking and who can halt the operation of the rake if necessary to protect and limit the disturbance to roaming broods.

L. Trash Management

DCR maintains trash receptacles at all major access points from the parking lots into Horseneck Beach. The public is expected to carry their waste off of the beach in order to properly dispose of the refuse in provided bins. All trash bins are emptied at least twice per day in the summer by DCR Operational Staff, and the frequency of the trash pick-up cycle is increased during busy beach weekends or planned events. Operations staff also manage trash left on the beach through trash-picking on foot. Hazardous waste that accumulates in fenced nesting areas is removed by Conservation Biologists when appropriate and at times when disturbance to nesting or brooding pairs would be limited.

M. Management of Wrack/Seaweed

The wrack-line is retained in the vicinity of nesting Piping Plovers and Least Terns, and in adequate levels across the entirety of the beach in order to provide valuable foraging resources for resident and migrating shorebirds.

N. Sand Redistributions and Beach Grading

Beach grading occurs outside of April 1st – September 30th and is accomplished in accordance with the conditions of existing environmental permits to maintain the natural grain size distribution, topography, and grade of the site.

O. Recreational and Essential Vehicles

Recreational vehicles are not permitted on Horseneck at any time of the year. Essential vehicles (such as operations and lifeguard vehicles) are permitted on the beaches only under the guidance and direction of Conservation Biologists. Safe travel corridors are maintained throughout the nesting season and any staff operating vehicles is kept updated on any changes to these travel corridors that may occur. All essential vehicles operating on site within 100 yards of unfledged Piping Plover or Least Tern chicks are escorted on foot by trained staff, and a log of all essential vehicle travel and operators is maintained by the Conservation Biology staff.

VII. Bird Management and Monitoring

A. Management History

DCR has conducted management and monitoring of beach nesting birds at Horseneck since 2018 corresponding with Horseneck's participation with the HCP. Prior to 2018, The Lloyd Center for the Environment was contracted to accomplish all monitoring duties and ensure Horseneck beach remained in compliance with the Guidelines. Horseneck has been managed to accomplish a balance between recreation and conservation. Routine beach raking is achieved throughout the nesting season through careful coordination and guidance provided from the DCR Conservation Biology team to remain in compliance with the Guidelines and avoid instances of Take.

The HCP has been utilized every year since beginning participation to provide the continued management and recreational benefit of Horseneck beach to DCR patrons. One (1) Piping Plover pair have been managed in response to the covered activity of use of roads and parking lots in the vicinity of unfledged chick and five (5) Piping Plover pairs have been managed in response to the covered activity of recreation and beach operations with reduced fencing around the nest. Ten (10) Least Terns pairs have also been managed in response to the covered activity of recreation and beach operations with reduced fencing around the nest. These covered activities were accomplished in accordance with the conditions set in the approved Certificate of Inclusion 2018 and 2021.

B. Entity Currently Conducting Plover and Tern Management and Monitoring

DCR is currently conducting the Plover and Tern management at Horseneck Beach State Reservation.

i. Agreements or Contracts

There are currently no agreements or contracts with other agencies to provide management or monitoring services.

C. Management Techniques

DCR ensures all Piping Plover monitoring and management on Horseneck is conducted in compliance with and exceed the State and Federal Guidelines. DCR management includes proactively fencing historic nesting territories by April 1st. In addition, other sections of the beach are fenced reactively once addition Piping Plover pairs have demonstrated territoriality or scraping. DCR has been successful in providing this kind of protection due to the intensive daily monitoring (7 days per week) that provides coverage for approximately eight (8) to twelve (12) hours.

DCR staff currently follows the protocol framework outlined by the USFWS NWRS. This framework ensures consistent, reliable, repeatable, and appropriate data collection of species abundance, distribution, reproductive success, limiting factors, and responses to habitat changes and management of nesting Piping Plovers at Horseneck. All data is recorded on daily logs that are later analyzed and reported to DFW via PIPLODES and TERNODES (Appendix B)

DCR staff deploy, adjust, and maintain symbolic fencing to delineate critical shorebird nesting areas at Horseneck. Significant portions of viable nesting habitat that have supported nesting Piping Plovers regularly are proactively fenced by April 1st. The remainder of the beach is intensively monitored daily, and reactively fenced as soon as territorial pairs or scraping is detected.

D. Numbers of Bird Monitors, Qualifications, and Duties

For the 2024 nesting season, DCR will hire five (5) Long-term Seasonal Conservation Biologist who will serve as on-the-ground Qualified Shorebird Monitors to cover all management and monitoring needs present at Horseneck Beach. This team will be

supervised by two (2) Full-time Shorebird Program Coordinators with the total program overseen by the Senior Coastal Ecologist.

Full qualifications can be found in Appendix A. Each member of the team will have demonstrated basic knowledge of the principles of conservation science, characteristics of endangered and threatened shorebird species, habitat management, and understanding of the laws and regulations which guide this work. Each member of the team is expected to learn and become proficient in the methods of data collection, behavioral observation, and preparation of technical reports including graphs, charts, and tables.

Each member of the team will be tasked to provide professional scientific services regarding the biological monitoring and the protection and management of the Massachusetts endangered and threatened shorebird species and their habitats. They will collect, analyze, and review biological data through field and office work on endangered and threated species and other features of biological diversity; provide technical assistance and information to the public; help the agency in achieving compliance with laws and regulations and maintaining liaison with other government agencies.

E. Seasonal Staff Scheduling

All Conservation Biologists are hired yearly as Long-term Seasonals from approximately March 15th through August 30th. Conservation Biologists work 40 hours per week, and each team member has a different set of two weekdays off to ensure consistent site coverage throughout the week and during weekends when demand for monitoring covered is highest. Conservation Biologists work a variety of daily shifts depending on site needs – either starting at 5:30am, 7:30am, or at 9:00am during dates and events when later evening coverage is required.

F. Training and Oversight of Monitors

The Senior Coastal Ecologist, with support from the Shorebird Program Coordinator, hires, trains, and oversees daily operations of five (5) Long-term Seasonal Conservation Biologists, who provide the biological monitoring, protection, and stewardship for the nesting shorebirds. Additional training from the Mass Audubon Coastal Waterbird Program is provided through the seasonal term. All training materials including state and federal Guidelines, vehicle escorting and monitoring, and site-specific manuals are housed within a working Microsoft Teams channel and is required review for seasonal staff to acknowledge their understanding.

G. Data Collection and Recording Protocols

Quantitative data including the number of pairs, nests, and chicks are collected daily within the NestStory data collection framework. Qualitative data including individual behaviors and check summaries are also collected daily within the NestStory framework. Locations of pairs, territories, fencing, nests, and roaming broods are collected using NestStory's mapping framework. Supplemental data including weather, predator composition, public visitation, violations, and other management and monitoring details are collected alongside primary data collection requirements. Once the HCP is activated, increased data collection is accomplished through standardized timed observations to achieve, at minimum, an hour of observation of each impacted pair.

H. Data Reporting

Census data for Piping Plovers and Least Terns is collected during their appropriate census window dates, June 1st – 9th and June 5th – 20th respectively. These data are then submitted to DFW by the end of July for initial censusing reports. More complete reporting is submitted to DFW through PIPLODES and TERNODES by September 30th which encompasses all compiled data recorded throughout the season including maps and incident reports.

When the HCP is implemented, weekly reports are submitted through email to DFW for the duration of the implementation. These reports aim to summarize the management and impacts of selected covered activities. These summaries include pair and brood activities in response to the management, violations, adult and chick losses, and general observations. An annual report of HCP activities is submitted to DFW by October 15th which covers all activities and impacts associated with the implementation of the HCP.

I. Public Education and Outreach

DCR holds formal and informal programming on the beach to provide outreach and education to beach users to divert incompatible beach uses from critical nesting areas. These events mostly occur during popular high use times on the beach such as weekends, or in community organized events. DCR also installs interpretive signage at strategic locations across the site in order to achieve passive education in times when Conservation Biology staff is not available for active educational engagements.

VIII. Covered Activities

To improve stewardship of Piping Plovers and other shorebirds, DCR implements protection of shorebirds under management protocols that include impact minimization to nesting shorebirds, habitat enhancement, increased monitoring, coordinated enforcement, internal DCR training, and expanded public education. Partial beach closures, due to placement of protective fencing for shorebirds resulting in area restrictions, continue to be controversial for some of the residents and visitors. In order to address these concerns, DCR is proposing to implement the following covered activities.

A. Proposed Covered Activities

To address these concerns, DCR is proposing to implement the following covered activities.

- **1.** "Use of Roads and Parking Lots in the Vicinity of Unfledged Piping Plover Chicks"
- **2a.** "Recreation and Beach Operations Associated with Reduced Symbolic Fencing around Nests"
- **2b.** "Recreation and Beach Operations Associated with Reduced Proactive Fencing of Habitat"
- **2c.** "Recreation and Beach Operations at Piping Plover Nests with Nest Moving"

DCR will implement the covered activities in cases where the location or size of the symbolic fencing for Piping Plover nests compromises public safety or disrupts routine operations (e.g., inability to deploy lifeguard equipment), or where nesting locations may negatively impact the local economy by canceling organized traditional events, or if the available public recreational area within a portion of the site is deemed reduced to such an extent as to significantly impair recreational and associated economic activity. As authorized by the HCP, subject to appropriate impact minimization procedures, some areas of reduced fencing will be mechanically raked as an ongoing management practice. As described in the HCP, if a Piping Plover nests in an area without symbolic fencing, the nest will be immediately protected with symbolic fencing with a reduced buffer.

In the event of impacted nests hatching, DCR proposes the ability to herd roaming broods on occasions where brood movements will directly impact the recreation and management of the site. Herding may be limited to previously impacted pairs and their broods and particularly broods located within the main recreational section of the beach. During routine raking of the area, herding may be performed to ensure the proper maintenance of the beach is fulfilled. If deployed barriers become compromised and

broods are found within parking lots or roads, chick herding may be performed to return the broods back to desired and protected areas.

DCR is also proposing reduced proactive symbolic fencing to impact up to 16 pairs of Least Terns or no more than 20% of the average colony size of the previous three (3) seasons, whichever is less. This request enhances the scope and impact of covered activities at Horseneck Beach for the recreational benefit and operational capacity of the site.

B. Protocol for Implementing IAMP for each Activity

- **"Use of Roads and Parking Lots in the Vicinity of Unfledged Piping Plover Chicks",** within the limits set by the HCP. In addition, intensive monitoring will be required when chicks are near roadways and parking lots. Signage alerting motorists and beach goers to watch for crossing birds and to obey speed limits must be strategically deployed. DCR may activate this covered activity if a Piping Plover territory is established in a sandy fracture within an impervious surface that may trigger total or partial closure of parking spaces causing financial impacts to the agency. The deployment of barriers may be used to prevent chicks from accessing roads or parking areas in the event of nesting within or in proximity to roads and parking lots. Straw filled construction wattles will be used as deployable barriers and reinforced for wooden stakes. The wattles for deployment are encased in UV degradable plastic netting each being 9 inches in diameter and 25 feet in length. A second tier of wattles may be secured on top of the initial wattle to bolster the barrier if deemed necessary. Wooden stakes, at 1x1x18 inch, may be used to secure wattles into and around the brooding substrate to prevent barriers from shifting or falling through public traffic and/or storm events. If barriers are deployed, their effectiveness will be monitored at a minimum of twice per day, once in the morning and once in the evening and may coincide with required brood checks.

- **"Recreation and Beach Operations Associated with Reduced Symbolic Fencing around Nests",** in areas where beach operation or recreational activities are within 50 years of the nest. A fence will be initially placed and then gradually reduced from 50 yards to no less than 10 yards around the nest. Fencing will be reduced to only the extent necessary to achieve specific recreational or beach operation objectives. If there is a path or major access point within 10 yards, DCR will request from DFW an allowance of less than 10 yards around the nest to maintain paths and access.

- **"Recreation and Beach Operations Associated with Reduced Proactive Fencing of Habitat",** under the maximum exemption limits set by the HCP. The HCP allows exceptions whereby at up to five sites statewide annually may reduce

proactive fencing of up to 20% of habitat or four (4) acres, whichever is less (see HCP Section 5.2.2.3). This measure will minimize the risk of displacing a breeding pair from a given site or of significantly increasing competition from other pairs of Piping Plovers. The covered activity reduces symbolically fenced areas at Horseneck by no more than 20% or four (4) acres, whichever is less. This acreage limit will also include any reductions to symbolic fencing associated with Least Terns. In areas of reduced proactive fencing, DCR may continue the routine operational activities required for recreation and beach management. These activities may include routine mechanical beach raking and placement of mobility mats on top of otherwise viable nesting habitats. These activities may act as nesting deterrents within the reduced proactive fenced areas.

- **"Recreation and Beach Operations at Piping Plover Nests with Nest Moving",** within the limits set by the HCP. Nests will not be moved until at least 48 hours after the clutch is complete. Nests will not be moved during inclement weather, in extreme heat, or during evening hours. Nests will be moved gradually to reduce the risk of abandonment. Nests will be moved using the cylinder/plate/platform method and visual landmarks will be moved with the nest to serve as visual cues for the impacted pair. If incubation is not resumed within 1.5 hours of the nest movement, the nest will be moved halfway back to its original location and monitored for signs of incubation. DCR may request this activation in situations where permitted fence reductions would not resolve operational and/or recreational impacts.

- **Intensive Biological Monitoring for Piping Plovers:** The entire site will be monitored intensively to ensure early detection of territorial and scraping activity, and symbolic fencing will be installed for all nests and territories as described in Section 8. For each instance where DCR identifies an area/territory to be subject to reduced fencing will be recorded and reported to DFW. The Division has indicated that it reserved the right to "assess" a larger square footage impact in some cases based on considerations of changes in symbolic fencing requirements for a given territory over time resulting from changes in habitat use. Frequent monitoring of the entire site should preclude the possibility of a pair being first detected late in the nesting process (i.e., incubation). However, if this circumstance occurs, that territory will not be a candidate for implementation of the covered activity and symbolic fencing will be installed. After removal of the fencing, the area will continue to be monitored intensively, at least twice daily for the first five days after fence removal, and at least 5 – 7 times per week thereafter; and information about the presence of Piping Plovers and their behavior will be recorded. This will include any observations of continued breeding or territoriality in the absence of fencing. In the event that courtship/territoriality is observed, twice daily monitoring will continue until such activity ceases. If nesting occurs in the area of reduced fencing, fencing will

immediately be installed (minimum 10-yard radius around the nest as per HCP section 3.2.2.1). Portions of beach subject to reduced fencing may be mechanically raked in accordance with the monitoring and impact minimization procedures described in section 8.0.27. In the event of hatched and roaming chicks throughout the site, Conservation Biologists will monitor the broods at least twice a day for the duration of their life or until confirmed fledged. Monitoring will consist of understanding the movements and preferred territories of the broods and the erection of additional fencing and signage if broods move into extensively recreated areas (e.g., Heart Healthy Trail) and to inform the public of the presence of vulnerable chicks. NestStory will be used to log and track the exact position of roaming broods throughout the life of the brood. GPS points will be taken multiple times a day during the monitoring and a seasonal brood movement map will be produced to highlight movements to and from areas important to brood development present at Horseneck Beach. DCR Park Operations staff will work with Conservation Biology staff to ensure all OSV operations are conducted under the supervision of a qualified vehicle escort and any vehicle that is operated within 100 meters of an active brood will be monitored and escorted to ensure compliance with the Guidelines and to reduce potential disturbances.

- **Intensive Biological Monitoring for Least Terns:** The entire site will be monitored intensively to ensure early detection of nesting activity. For each instance where DCR identified an area/territory to be subject to a covered activity, DFW will be notified at least 24 hours prior to implementation. Areas subject to covered activities will continue to be monitored intensively (at least twice daily for the first five (5) days and at least five (5) – seven (7) times per week, thereafter), and information about the presence of Least Terns and their behavior will be recorded. In the event that nesting still occurs in an area of reduced fencing, fencing will be immediately installed (minimum 5-yard radius around the nest). Portions of Horseneck Beach subject to reduced proactive or reactive fencing may be raked in accordance with the procedures described in Section 8.0.

C. Monitoring Plan for Covered Activities

If implemented, any covered activities will be monitored daily for the following four (4) weeks or 28 days, or for the duration of the season if necessary. All relevant biological data collected, and any other pertinent operations information will be included in the final report due by October 15th. When covered activities are in effect, DCR will report weekly to DFW. All documentation of seasonal activities will be recorded in the field on standardized datasheets and online data collection services (i.e., NestStory). Data

collection will follow the standard protocol framework as described by the USFWS NWRS. This protocol prioritized the streamlined collection of Site-level, Survey-level, and Nest-level attributes. These attributes include but are not limited to; Daily staffing and monitoring effort in hours, Number of adults present, Nest and brood locational data, estimated age of nest and brood, Nest and Brood Fates (Appendix B).

i. Compliance Monitoring.

NestStory will be used as DCR's primary data recording tool throughout the nesting season for both compliance monitoring (Appendix B). This online data application allows DCR to standardize all monitoring protocols across sites as well as provides a means to record the staffing and monitoring efforts at all sites. A monitor will log into NestStory to begin each monitoring day, record all required daily data including GPS locations of nests and broods, photo evidence of predation pressures, and behavioral observations of individuals and will then log out of NestStory to end their day. This framework allows DCR to determine the monitoring effort at each site as well as keep track of an individual monitor's time at site. All data collected into NestStory will be downloaded, proofed for accuracy, and summarized to be submitted into PIPLODES and TERNODES.

Utilizing data recorded by qualified monitors in NestStory, the DCR Senior Ecologist will maintain logs throughout the nesting season documenting compliance with the terms of the Plan. The logs will document the timing and frequency of all related activities including installation of fences and signage, monitoring checks for sites/pairs/nests/broods, observations of disturbances caused, enforcement and/or education conducted, DCR staff vehicle safety trainings, escorting of essential vehicles, maintenance of vehicle corridors, essential beach operations, implementation of covered activities, and any associated impact minimization efforts. Examples of these logs can be found in Appendix B, and summaries of Plan compliance will be shared with DFW on a weekly basis throughout the nesting season for Piping Plovers and Least Terns. Complete compliance data will be reported to DFW in an annual report as required, and the original logs will be maintained by the DCR for subsequent years.

ii. Effectiveness Monitoring

Similarly tied with compliance monitoring, DCR's effectiveness monitoring will utilize NestStory to standardize all monitoring protocols and provide a means to record the effectiveness of predator mitigation and removal at the site. A monitor will log into NestStory to record GPS locations, photo evidence, presence, and composition of all predators observed. This framework allows DCR to determine the effectiveness of predator mitigation at each site.

Utilizing the data recorded by qualified monitors in NestStory, the DCR Senior Ecologist will maintain logs throughout the nesting season documenting the effectiveness of all mitigation measures including selective predator removal. Examples of these logs can be found in Appendix B, and summaries of Plan effectiveness will be shared with DFW on a weekly basis throughout the nesting season for Piping Plovers and Least Terns. Complete effectiveness data will be reported to DFW in an annual report as required, and the original logs will be maintained by the DCR for subsequent years.

D. Staffing with and without Participation in the Habitat Conservation Plan

DCR staffing of coastal sites is conducted each year to fulfill the increased monitoring needs associated with participation in the HCP. Due to increased scope and frequency of monitoring associated with the Plan participation versus that of sites not subject to the Plan and given that implementation of the HCP is now fully integrated into the DCR's Shorebird Protection Program, the DCR continually hires a sufficiently large team of Long-term seasonal Conservation Biology staff every year to cover the monitoring needs associated with participation in the Plan.

Because implementation of the HCP is fully integrated into the DCR's Shorebird Program, sufficient Long-term seasonal Conservation Biology staff are utilized to conduct the annual needs of the Plan with the associated additional costs (Tables 1 & 2). However, staffing of qualified monitors for DCR sites included in the HCP is approximately 50% greater than would be required for sites without the potential need for implementation, with up to two (2) more Conservation Biologists rostered each year. Monitoring staff under the supervision of the Senior Coastal Ecologist also expands the current scope of work to cover the permitted activities as required by the HCP. The scope includes necessary monitoring for shorebird presence, collection of environmental data, protection and management practices, coordination with regulatory agencies, DCR project management staff and contractors, pre-season training for DCR staff and enforcement personnel, and informal onsite public education/outreach to effectively communicate changes regarding visitor access restrictions. DCR will hire six (6) dedicated Conservation Biologists to monitor Horseneck Beach for 8 – 12 hours a day for seven (7) days a week during the nesting season.

IX. Budget

A. Approved Annual Budget

DCR dedicates existing full-time professional staff, including the Program Director (Senior Coastal Ecologist), Program Coordinator, and Conservation Biology Staff (Qualified Shorebird Monitors) to provide all monitoring and reporting needs required for compliance and protection of listed shorebird and to implement reporting and monitoring associated with activities covered in the HCP. While these staff are already rostered annually to handle the additional staffing needs of the Plan, the annual cost of the program could be expected to be less if Horseneck Beach was not included in the HCP (Tables 1 & 2). Implementation of the HCP requires direction, coordination, and reporting costs beyond the state compliance reporting due by September 30th each year, and the need for increased monitoring intensity associated with the HCP requires DCR to hire one (1) additional seasonal Conservation Biologist for Horseneck to fulfill the conditions of the HCP. Likewise, DCR funds off-site mitigation each year as part of its inclusion in the HCP, which incurs an additional cost that would not be expected in the absence of inclusion. The funding provided for mitigation has been secured through the capital budget process and is available prior to the permitted activities. DCR will provide funding for a selective predator control program through a contract with a licensed and approved vendor (Appendix C). DCR has allocated an annual maximum budget of $50,000 per year to invest in a statewide selective predator control program on preferred mitigation sites like Sandy Point State Reservation, Demarest Lloyd State Park, and West Island State Reservation. The total increased cost if the HCP is implemented for Horseneck Beach would be approximately $60,071.55 annually, including staff time and indirect cost (Table 1 & 2).

B. Budget Breakdown with and without Participation in the Habitat Conservation Plan

Table 1 Estimated Total Annual Program Costs on Horseneck Beach with HCP Implementation and Mitigation

	Monitoring and Reporting Cost	Indirect, Fringe, and Other Associated Cost	Total
Program Direction	$3,881.47	$2,014.10	$5,895.57
Program Coordination	$6,521.93	$3,384.23	$9,906.16
Qualified Monitoring Staff	$45,244.62	$23,477.43	$68,722.06
Mitigation Cost	$31,989.41	$8,797.09	$40,786.50
		Total Cost	**$125,310.28**

Table 2 Estimated Total Annual Program Costs on Horseneck Beach without HCP Implementation

	Monitoring and Reporting Cost	Indirect, Fringe, and Other Associated Cost	Total
Program Direction	$2,814.07	$1,460.22	$4,274.29
Program Coordination	$4,728.40	$2,453.57	$7,181.96
Qualified Monitoring Staff	$35,408.84	$18,373.64	$53,782.48
Mitigation Cost	$0.00	$0.00	$0.00
		Total Cost	**$65,238.73**

MITIGATION PLAN

I. On-site Mitigation Funding

As set forth in the HCP, DCR is proposing mitigation be provided through funding a selective predator management program implemented by a qualified, licensed, and approved vendor at selected DCR sites including Sandy Point State Reservation, Revere Beach, Winthrop Beach, Demarest Lloyd State Park, West Island State Reservation. The mentioned sites are ideal due to the number of nesting pairs present who will benefit; in 2023 thirteen (13) Piping Plover pairs nested at Sandy Point, twelve (12) pairs nested at Revere Beach, eight (8) pairs nested at Winthrop, four (4) pairs nested at Demarest Lloyed, and three (3) pairs nested at West Island. Additionally, due to the geographic location of Sandy Point, DCR mitigation at the site is expected to benefit 25% of the nesting Piping Plover pairs at Parker River National Wildlife Refuge. Selective predator management at these sites will also serve to benefit the Least Tern colonies at Sandy Point, Revere Beach, and Winthrop Beach, with a combined total of 81 nesting pairs in 2023.

DCR intends to utilize to the extent possible its current bank of 111 mitigation credits by the end of year 1 of the new permit. In years 2 and 3 of the permit DCR will procure services from a qualified, licensed, and approved vendor for selective predator management. The mitigation requirement for exposing five (5) pairs of Piping Plovers to the covered activities is fifteen (15) pairs to benefit from a selective predator management work plan. To the extent possible any mitigation credits will be carried forward to subsequent years in a statewide DCR credit pool managed by DFW and applicable to any HCP permits held by DCR.

APPENDIX SECTION

APPENDIX A: STAFF CREDENTIALS AND QUALIFICATIONS

JORGE J. AYUB

MASSACHUSSETTS, U.S.A.
JORGE.AYUB@OUTLOOK.COM

PROFFESIONAL PROFILE

Currently the Senior Coastal Ecologist for the Massachusetts Department of Conservation & Recreation developing and implementing coastal habitat ecological restoration projects and leading the conservation efforts for protection of listed wildlife species and key priority habitats including wetlands, salt marshes, barrier beaches, and other natural coastal communities. I work preparing and reviewing scientific reports and studies on climate change impacts for environmental permits pertaining to construction projects, habitat protection and mitigation control measures. I lead a large team of Conservation Biologists, Science Technicians and contractors in the field and function as environmental compliance liaison with other state and federal regulatory agencies.

HIGHLIGHTS OF QUALIFICATIONS

- Extensive knowledge of the principles of ecology, evolutionary biology and wildlife conservation
- Creative, detail-oriented and committed to quality.
- Ability to guide and deal tactfully with others.
- Extensive knowledge of the principles, practices and techniques of leadership and supervision.

EDUCATION

Harvard University, Cambridge, MA
Professional Certificate: Leadership and Communication; Expected in 2024

Delft University of Technology, Netherlands.
Professional Certificate: Building with Nature – Coastal Restoration; May 2018

University of Massachusetts Boston Honors College; Boston, MA
Graduate Certificate: Sustainability & Clean Energy; May 2015

Johnson & Wales University, Providence, RI.
M.B.A. in Global Leadership; May 2012

National State University (UNED), San Jose, Costa Rica
B.Sc. in Ecology - Natural Resources Management. (Cum Lade), May 2004

WORK EXPERIENCE

2012-Present: Senior Coastal Ecologist, DCR - Commonwealth of Massachusetts
Leading the coastal ecology program for the Department of Conservation & Recreation

2011-2012: Graduate Internship: Marine Invasive Species - Moran Inc. – Providence, RI
Environmental assessments for invasive species impacting maritime ballast water systems (BWS). Analyzed project feasibility for operations and future investments. Developed communication strategies as liaison with customers, government agencies and other partners.

2005-2011: Ecologist & Program Coordinator, Walking Connection – Grand Canyon, AZ.
As a contractor led large scale nature based programs for organized groups and non-profit organizations. Developed a partnership with the Grand Canyon Institute for staff training on local conservation and interpretation services. Optimized operational strategies and worked with 8,000+ participants and help raised over 20 million dollars.

2005-2011: Environmental Educator & Tour Director, EF - Cambridge, MA.
As a consultant developed scholar field workshops and classroom content for environmental programs and performed presentations with graded content in various regions in the United States and abroad. Coordinated and developed environmental educational field programs for academic groups while working with plants, birds, mammals, amphibians, reptiles, and other natural communities. Led other outdoor activities including hiking and rafting.

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1997-2004: Ecologist specialized in wildlife biology and interpretive services – Costa Rica
Developed academic and scientific research for wildlife conservation and for protecting vulnerable natural communities. Created nature-based interpretation programs to successfully educate students and visitors about the importance of environmental protection and sustainable development.

CERTIFICATIONS

- Climate Change; Smithsonian National Museum of Natural History
- Wetlands Assessment and Field Delineation Techniques; UMass Amherst
- Ecological Restoration for Coastal Habitats; NOAA; Waquoit Bay, MA
- Wilderness First Aid and CPR, National Safety Council , USA

OTHER LANGUAGES

Fluent in Spanish

Last name, first name:

POSITION DESCRIPTION, DPA-Form 30-State
Commonwealth of Massachusetts

POSITION TITLE CODE

1. POSITION TITLE
Conservation Biologist III– Shorebird Conservation Program Coordinator

AGENCY
Department of Conservation and Recreation

2. APPROPRIATION/AGENCY CODE	POSITION NO.	REQUISITION NO.	SALARY	DATE PREPARED
				05/20/2022

3. GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES

The basic purpose of this position is to provide professional scientific services regarding the biological monitoring and the protection and management of the Massachusetts endangered and threatened shorebird species and their habitats. Incumbents must have knowledge of all the biological characteristics and behaviors of such endangered and threatened shorebird species.

Incumbents of positions in this series collect, analyze, and review biological data through field and office work on endangered and threatened species and other features of biological diversity; provide technical assistance and information to the public; help the agency in achieving compliance with laws and regulations and maintaining liaison with other government agencies.

Ability to guide and deal tactfully with others to plan and assign work according to the nature of the job to be accomplished, the capabilities of team members and available resources; controlling work through periodic reviews and evaluations; determining team members training needs and providing or arranging for such training; motivating team members to work effectively.

The incumbent will be assigned and provide coverage statewide and utilization of personal vehicle may be required in exchange for mileage reimbursement at the approved rate of the Commonwealth of Massachusetts.

Qualifications required at hire are mandatory (see below).

4. SUPERVISION RECEIVED (Name and title of person from whom incumbent receives direction)
Jorge J. Ayub, Coastal Ecologist

5A. DIRECT REPORTING STAFF	5B. THEIR STAFF
Seasonal staff	

6. DETAILED STATEMENT OF DUTIES AND RESPONSIBILITIES

1. Analyzes data from a variety of sources on endangered and threatened shorebird species to assess population trends or to make management recommendations regarding course of action for the protection and management of these rare species.
2. Collects and reviews biological data through field work to obtain information relative to population trends and environmental impacts in order to make appropriate management recommendations.
3. Provides biological technical assistance and information on such matters as endangered and threatened shorebird species conservation, management and research for distribution to local, state and federal agencies and the scientific community.
4. Supports the agency in maintaining liaison with local, state and federal agencies for data reporting or to resolve issues related to the biological protection of the state's endangered and threatened species of shorebirds and their habitats.
5. Preparing extensive technical reports for public review and managing data and other scientific records for public distribution.
6. Ability to plan, design and implement scientific research and biological recovery projects relative to endangered and threatened species, including the selection of sampling design, frequency, and scientific equipment to be used to accomplish research objectives.
7. Ability in writing proposals to secure funding through available grants for implementation of the program conservation objectives.
8. Ability to supervise and deal tactfully with others, including planning and assigning work according to the nature of the job to be accomplished, the capabilities of team members and available resources; controlling work through periodic reviews and evaluations; determining team members' training needs and providing or arranging for such training; motivating team members to work effectively.
9. Assist in the management of the hiring process for seasonal staff and perform other duties as assigned.

<u>Incumbents of positions at the Conservation Biologist II level or higher also</u>:
1. Design and implement field research studies relative to wetland habitats and other wildlife conservation, including the selection of sampling design, frequency of sampling, and scientific equipment to be used, among others to accomplish research objectives.
2. Review field studies and research projects for compliance with procedures and scientific standards.

7. QUALIFICATIONS REQUIRED AT HIRE

1. Knowledge of the principles, practices and techniques of leadership and supervision.
2. Knowledge of the principles of ecology and population biology.
3. Knowledge of ornithology or other wildlife conservation science related to assigned responsibilities.
4. Knowledge of research methods and techniques followed in conservation biology.
5. Knowledge of all the characteristics and behaviors of endangered and threatened shorebird species.
6. Knowledge of the principles and techniques of endangered and threatened species habitat management.
7. Knowledge of the types and uses of equipment used in conservation biology research and management.
8. Knowledge of the methods used in the preparation of charts, graphs and tables.
9. Ability to read, interpret, apply and explain the policies, procedures, guidelines, laws, rules and regulations governing agency operations and assigned unit activities.
10. Ability to gather information by examining records and documents.
11. Ability to assemble items of information according to established procedures.
12. Ability to determine the proper format and procedure for assembling items of information.
13. Ability to analyze and determine the applicability of conservation biology data, to draw conclusions and make appropriate recommendations.
14. Ability to follow oral and written instructions.
15. Ability to perform arithmetic and statistical computations (addition, subtraction, multiplication and division; and calculate mean, mode, median and standard deviation).
16. Ability to communicate effectively in oral and written expression.
17. Ability to prioritize work assignments.
18. Ability to prepare extensive general and technical reports.
19. Ability to prepare and use charts, graphs and tables.
20. Ability to maintain accurate records.
21. Ability to deal tactfully with others.
22. Ability to establish and maintain professional and harmonious working relationships with others.
23. Ability to exercise sound judgment.
24. Ability to work independently.
25. Ability to operate a motor vehicle.

Additional qualifications required at hire for Conservation Biologist II and higher positions:

1. Ability to plan and assign work for others according to the nature of the job to be accomplished, the capabilities of team members and available resources; controlling work through periodic reviews and evaluations; determining team members‘ training needs and providing or arranging for such training; motivating team members to work effectively.
2. Ability to plan, design and implement scientific research and biological recovery projects.

Based on assignment, the following additional qualifications may be regard at hire for Conservation Biologist II and higher positions:

1. Ability to supervise, including planning and assigning work according to the nature of the job to be accomplished, the capabilities of team members and available resources; controlling work through periodic reviews and/or evaluations; determining team members’ training needs and providing or arranging for such training; motivating team members to work effectively.

8. QUALIFICATIONS ACQUIRED ON JOB

1. Knowledge of the laws, rules, regulations, policies, and procedures governing assigned activities.
2. Knowledge of the types and uses of state or agency forms.
3. Knowledge of electronic software and processing techniques used in data management and reporting.
4. Knowledge of the methods and techniques followed in the inspection of environmental, monitoring equipment and projects.

Additional qualifications acquired on job in Conservation Biologist II positions:

1. Ability to accomplish work objectives when few precedents or guidelines are available.
2. Ability to coordinate the efforts of others in accomplishing assigned work activities.

Based on assignment, the following additional qualification may be acquired on job in Conservation Biologist II positions:

1. Knowledge of the principles, practices and techniques of supervision.

Additional qualifications acquired on job in Conservation Biologist II and higher positions:

1. Ability to accomplish work objectives when few precedents or guidelines are available.

9. MINIMUM ENTRANCE REQUIRMENTS

Conservation Biologist II:

Applicants must have at least (A) three years of full- time, or equivalent part-time or seasonal, professional or technical experience in leadership work involving the protection, conservation and/or management of endangered and protected shorebird species, of which (B) at least one year must have been in a professional capacity, or (C) any equivalent combination of the required experience and the substitutions below.

Substitutions:

I. Bachelor's degree with a major in biology, ecology, zoology, ornithology and wildlife conservation science, or a related field, may be substituted for a maximum of six months of the required (A) experience.*

II. A Graduate degree with a major in biology, ecology, and ornithology or wildlife conservation science may be substituted for a maximum of one year of the required experience. (Education toward such a degree will be prorated on the basis of the proportion of the requirements actually completed).

10. LICENSE AND/OR CERTIFICATION REQUIRMENTS

Based on assignment, possession of a current and valid Massachusetts Class 3 Motor Vehicle Operator's License or its equivalent.

REMARKS:

SIGNATURE OF APPOINTING AUTHORITY

TITLE

AGENCY

PREPARED BY

SIGNATURE OF INCUMBENT

DATE

SIGNATURE OF SUPERVISOR

DATE

POSITION DESCRIPTION, DPA-Form 30-State
Commonwealth of Massachusetts

POSITION TITLE CODE
AGENCY

1. POSITION TITLE
Conservation Biologist I – Shorebird Monitor

2. APPROPRIATION/AGENCY CODE	POSITION NO.	REQUISITION NO.	SALARY	DATE PREPARED

3. GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES

Incumbents of positions in this series collect, analyze, and review biological data through field, and literature work on endangered and threatened species and other features of biological diversity; provide technical assistance and information to public and/or private groups; help the agency in maintaining liaison with various public and private agencies; and perform related work as required.

The basic purpose of this work is to provide professional scientific services regarding the biological monitoring and the protection and management of the state's endangered and threatened species of shorebirds and their habitats.

4. SUPERVISION RECEIVED (Name and title of person from whom incumbent receives direction)
Jorge J. Ayub, Coastal Ecologist

5A. DIRECT REPORTING STAFF	5B. THEIR STAFF

6. DETAILED STATEMENT OF DUTIES AND RESPONSIBILITIES

1. Analyzes data from a variety of sources on endangered and threatened species to assess population trends or to make management recommendations regarding courses of action for the protection and management of these species.
2. Collects and reviews biological data through field work to obtain information relative to population trends and environmental impacts in order to make appropriate recommendations.
3. Provides biological technical assistance and information on such matters as endangered and threatened species conservation, management and research to the agency, for distribution to various local, state and federal agencies and the scientific community.
4. Supports the agency in maintaining liaison with various private, local, state and federal agencies in order to exchange information or to resolve issues related to the biological protection of the state's endangered and threatened species of shorebirds and their habitats.
5. Performs related duties such as preparing general and technical reports and maintaining data and other scientific records.

<u>Incumbents of positions at the Conservation Biologist I level or higher also</u>:
1. Design and implement field research studies relative to endangered and threatened species, including the selection of sampling design, frequency of sampling, and scientific equipment to be used, among others to accomplish research objectives.
2. Review field studies and research projects for compliance with procedures and scientific standards.

7. QUALIFICATIONS REQUIRED AT HIRE (List knowledge, skills, abilities)

Knowledge of the principles of ecology and population biology.
Knowledge of a specific area of biology (i.e. ornithology) or other conservation science related to assigned responsibilities.
Knowledge of research methods and techniques followed in conservation biology.
Knowledge of the characteristics and habits of endangered and threatened species.
Knowledge of the principles and techniques of endangered and threatened species habitat management.
Knowledge of the types and uses of equipment used in conservation biology research and management.
Knowledge of the methods used in the preparation of charts, graphs and tables.
Ability to read, interpret, apply and explain the policies, procedures, guidelines, laws, rules and regulations governing agency operations and assigned unit activities.
Ability to gather information by examining records and documents.
Ability to assemble items of information according to established procedures.
Ability to determine the proper format and procedure for assembling items of information.
Ability to analyze and determine the applicability of conservation biology data, to draw conclusions and make appropriate recommendations.
Ability to follow oral and written instructions.

Ability to perform arithmetic and statistical computations (addition, subtraction, multiplication and division; and calculate mean, mode, median and standard deviation).
Ability to communicate effectively in oral and written expression.
Ability to prioritize work assignments.
Ability to prepare general and technical reports.
Ability to prepare and use charts, graphs and tables.
Ability to maintain accurate records.
Ability to deal tactfully with others.
Ability to establish and maintain professional and harmonious working relationships with others.
Ability to exercise sound judgment.
Ability to work independently.
Ability to operate a motor vehicle.

8. QUALIFICATIONS ACQUIRED ON JOB (List knowledge, skills, abilities)

1. Knowledge of the laws, rules, regulations, policies, and procedures governing assigned activities.
2. Knowledge of the types and uses of state or agency forms.
3. Knowledge of electronic data processing techniques used in solving environmental science problems.
4. Knowledge of the methods and techniques followed in the inspection of environmental, monitoring equipment and projects.

Additional qualifications acquired on job in Conservation Biologist I positions:
1. Ability to coordinate the efforts of others in accomplishing assigned work activities.

Based on assignment, the following additional qualification may be acquired on job in Conservation Biologist I positions:
1. Knowledge of the principles, practices and techniques of supervision.

Additional qualifications acquired on job in Conservation Biologist I and higher positions:
1. Ability to accomplish work objectives when few precedents or guidelines are available.

9. MINIMUM ENTRANCE REQUIREMENTS

Conservation Biologist I:
Applicants must have at least (A) one year of full- time, or equivalent part-time or seasonal, professional or technical experience in work involving the protection, conservation and/or management of endangered and protected species, or (B) any equivalent combination of the required experience and/or the substitution below.
Substitutions:

I. Bachelors or higher degree with a major in biology, ecology, zoology, ornithology and conservation science, or a related field, may be substituted for the required experience.*Education toward such a degree will be prorated on the basis of the proportion of the requirements actually completed.

10. LICENSE AND/OR CERTIFICATION REQUIREMENTS
Based on assignment, possession of a current and valid Massachusetts Class 3 Motor Vehicle Operator's License.

REMARKS:

SIGNATURE OF APPOINTING AUTHORITY

TITLE

AGENCY

PREPARED BY

SIGNATURE OF INCUMBENT

DATE

SIGNATURE OF SUPERVISOR

DATE

APPENDIX B: DATA COLLECTION FOR COMPLIANCE AND EFFECTIVENESS MONITORING

Appendix B: Data Collection for Compliance and Effectiveness Monitoring

USFWS NWRS Data Collection Framework Protocol

Table SOP 2.1. List of site-level attributes to be entered into PIPLweb at the beginning of the season.

Attribute Name	Description	Required
Site Name	Name of site	Y
Site Code	3-7 letter code for each site Note that NWR sites use three-letter LIT code, with 2-4 letters added to each site if there is more than one site per Refuge	Y
Site Boundary	Shapefile or digitized map of site	Y (required for NWRS only)
Predator Management	Yes or No	N

Table SOP 2.3. List of survey-level attributes collected during each survey event.

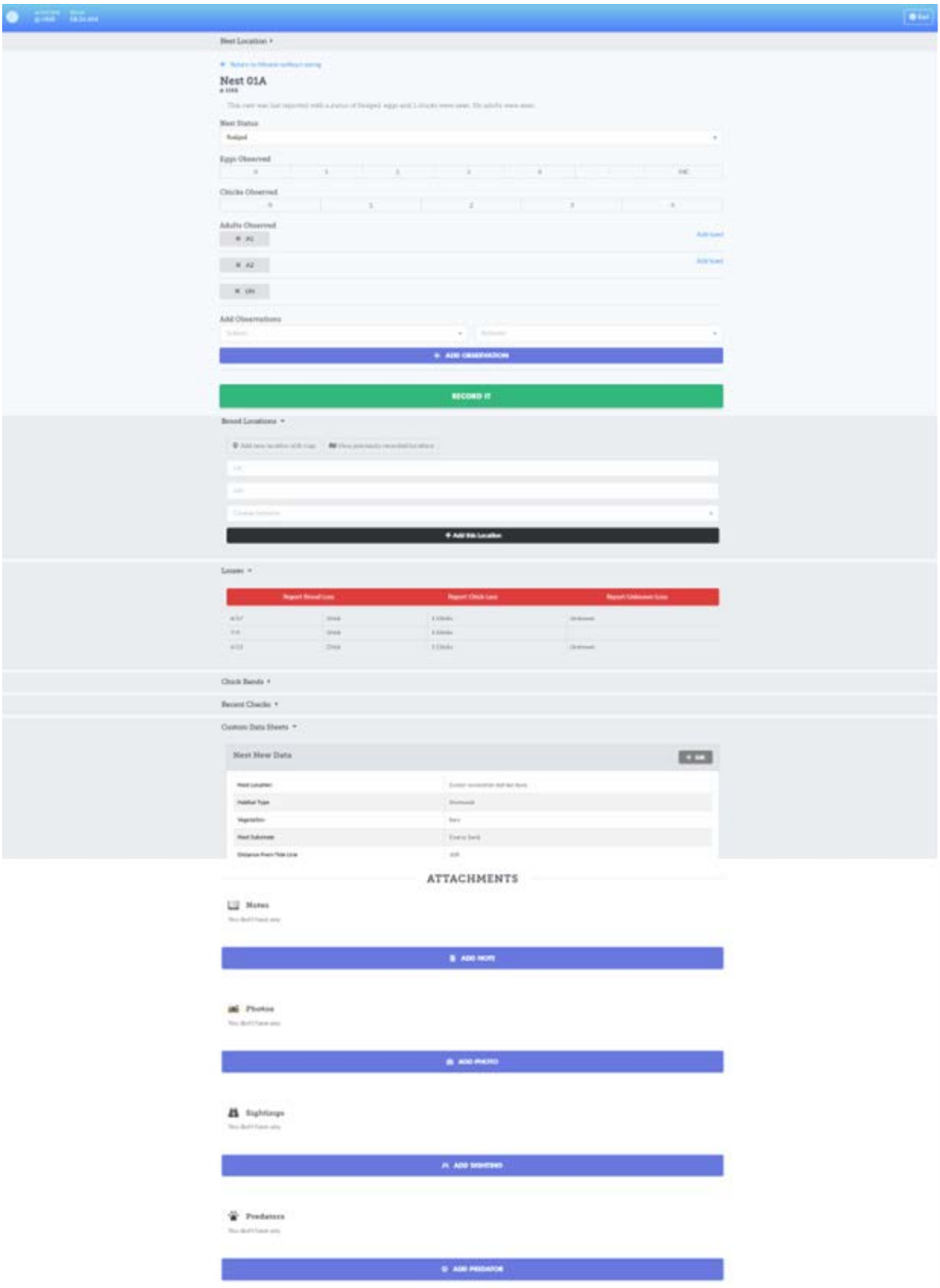
Attribute Name	Description	Required
Site Name	Name of site	Y
Date	Date of survey	Y
Start time	Time monitor starts the survey	Y
End time	Time monitor ends the survey	Y
Number of monitors	Number of monitors conducting the survey	Y
Number adults	Total number of adults observed at the site during the survey	N
Number of territorial pairs	Number of pairs displaying territorial behavior plus number of pairs with current nests	N
Banded birds	Band combinations for each bird, if applicable. Note band information is only stored in PIPLweb for birds associated with established nests (Table SOP 2.4).	N
Comments	Can include comments on ORV use, dog presence, and human disturbance here or any other important observations from the survey	N

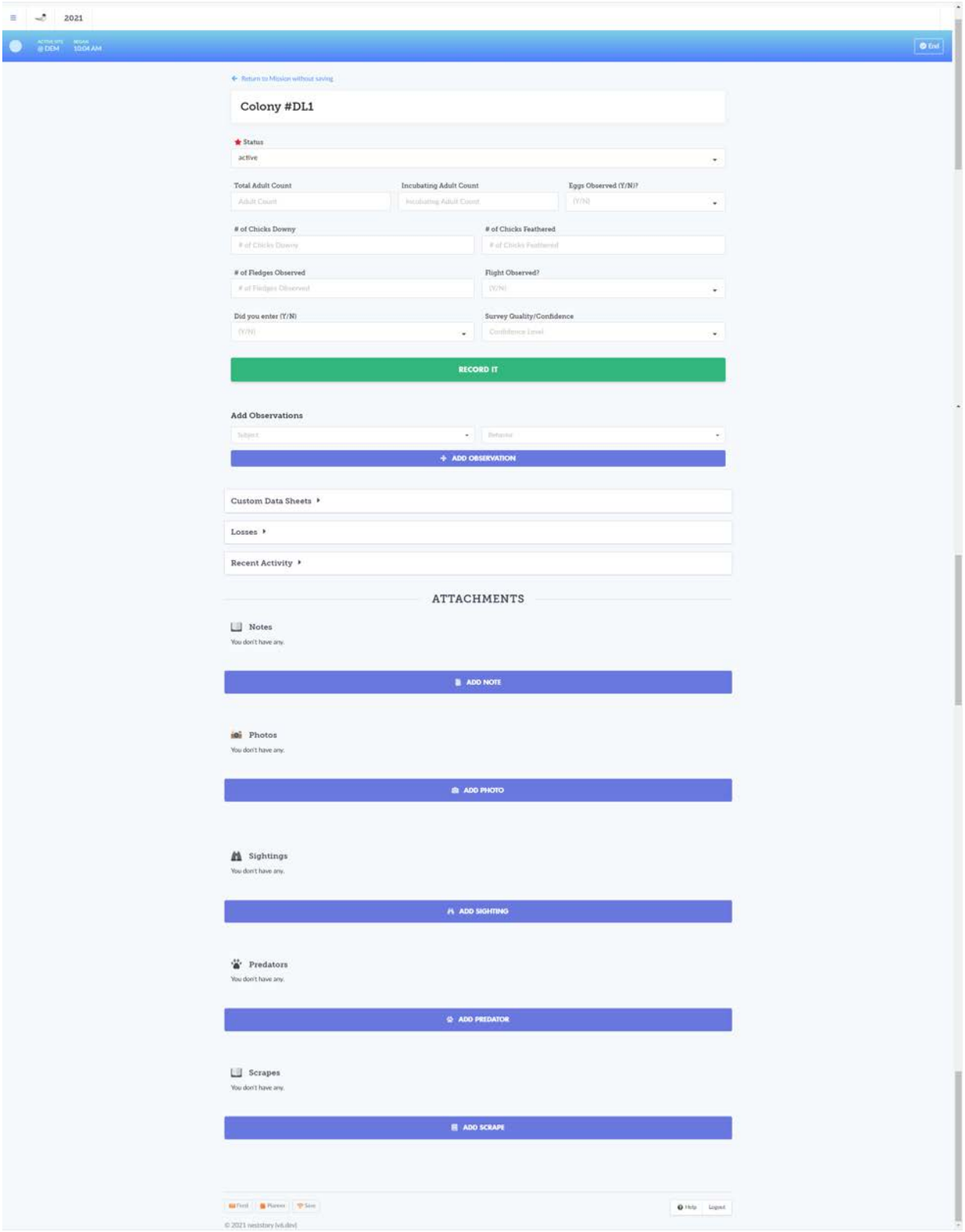
Table SOP 2.4. List of nest-level attributes collected during each survey event. Attributes in bold are only entered once on the data sheet at the top of Nest/Brood Survey Form (SM2).

Attribute Name	Description	Required
Site Name	**Name of site**	**Y**
Nest ID	**Identifier for nest; Pair # coupled with letter; A=first nest, B=second nest, etc. Ex. 01A**	**Y**
GPS coordinates	**x- and y-coordinates for nest location (or brood if nest never found). Can be taken in decimal degrees or UTM.**	**Y**
Coordinate system	**Name or EPSG code of the coordinate reference system used when recording GPS coordinates.**	**Y**
Estimated hatch date	**Estimated date nest hatched (observed or unobserved)**	**N**
Actual hatch date	**Enter Yes if nest hatch observed.**	**N**
Estimated age	**Estimated age of chicks if nest was never found**	**Y**
Brood fate	**Fledged, Lost, Unknown**	**Y**
Band combinations for adult(s) 1 and 2	**Band combinations for pair if applicable (see *Reporting Banded Birds*)**	**N**
Exclosure type	**Standard (defined as circular structure with a 10' diameter and netting top) or Non-standard**	**N**
Exclosure description	**Exclosure description if not standard**	**N**
Date	Date of nest check	Y
Observer	Observer initials	Y
Nest status	Active, Hatched, Abandoned, Depredated, Flooded/ Buried, Unknown Fate, Unknown Cause of Failure, Other Cause of Failure	Y
Number adults	Number of adults near or at the nest	Y
Number of eggs	Number of eggs (if observed; do not need to check every time)	Y
Number of chicks	Number of chicks observed; NA if unhatched	Y
Incubating adult observed	Yes or No	Y
Exclosure	Yes or No	Y
Comments	Comments especially on predator activity and evidence of nest/ brood loss	N

Mission details	Pair specific details	Brood Locations	Predator observations
Date	Date	Date	Date
Type	Site	Time	Site
Site Code	Species	Species	Activity Level
Leader	Nest Code	Site Code	Predator
Start	Pair	Pair	Evidence
End	Start	Nest	Lat
Weather	End	Lat	Lon
Wind	Eggs	Lon	Notes
Temp	Chicks	Behavior	
High/Low	Status		
Humidity	Male Observed		
Rain	Female Observed		
Clouds	Unknown		
Tide	Observer		
Hours Since High Tide			
# of People			
# Unleashed Dogs			
# Leashed Dogs			
# ORVs			
# of Boats			
# Positive Interactions			
# Negative Interactions			
Incident (H, M, L)?			
Tracking			
% of Site Monitored			
# of Scrapes (approx)			
% of Time Monitoring			
% of Time Fencing			
% of Time Raking			
% of Time Special Projects			
% of Time Education			
Comments			

Mission details	Colony specific details	Attachments
Date	Date	Notes
Type	Site	Photos
Site Code	Species	Sightings
Leader	Colony ID	Predators
Start	Colony Location	Scrapes
End	Status	
Weather	Total Adult Count	
Wind	Incubating Adult Count	
Temp	Eggs Observed (Y/N)?	
High/Low	# of Chicks Downy	
Humidity	# of Chicks Feathered	
Rain	# of Fledged Observed	
Clouds	Flight Observed?	
Tide	Did you enter (Y/N)	
Hours Since High Tide	Survey Quality/Confidence	
# of People	Colony Observations	
# Unleashed Dogs		
# Leashed Dogs		
# ORVs		
# of Boats		
# Positive Interactions		
# Negative Interactions		
Incident (H, M, L)?		
Tracking		
% of Site Monitored		
# of Scrapes (approx)		
% of Time Monitoring		
% of Time Fencing		
% of Time Raking		
% of Time Special Projects		
% of Time Education		
Comments		


Nest Location
Nest 01A
Nest Status
Eggs Observed
Chicks Observed
Adults Observed
Add Observations
+ ADD OBSERVATION
RECORD IT
Brood Locations
+ Add this Location
Losses
Chick Bands
Recent Checks
Custom Data Sheets
Nest New Data
ATTACHMENTS
Notes
ADD NOTE
Photos
Sightings
Predators


2021
@ DEM
10:04 AM
End
Return to Mission without saving
Colony #DL1
Status
active
Total Adult Count
Adult Count
Incubating Adult Count
Incubating Adult Count
Eggs Observed (Y/N)?
(Y/N)
# of Chicks Downy
# of Chicks Downy
# of Chicks Feathered
# of Chicks Feathered
# of Fledges Observed
# of Fledges Observed
Flight Observed?
(Y/N)
Did you enter (Y/N)
(Y/N)
Survey Quality/Confidence
Confidence Level
RECORD IT
Add Observations
Subject
Behavior
ADD OBSERVATION
Custom Data Sheets
Losses
Recent Activity
ATTACHMENTS
Notes
You don't have any.
ADD NOTE
Photos
You don't have any.
ADD PHOTO
Sightings
You don't have any.
ADD SIGHTING
Predators
You don't have any.
ADD PREDATOR
Scrapes
You don't have any.
ADD SCRAPE
Help
Logout
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APPENDIX C: MITIGATION PLAN

(Exiting mitigation credits to be utilized for first year and a new service agreement for selective predator management to be updated for second and third year of permit)

APPENDIX D: DCR BEACH RULES AND REGULATIONS

(302 CMR 12.04 & 12.06)

12.04: Rules of Conduct on DCR Properties -- Generally

(1) Each person utilizing any DCR property shall maintain and leave it in a clean and sanitary manner or condition.

(2) All persons must adhere to any and all reasonable requests or directions of DCR personnel or law enforcement officials.

(3) Each person on DCR property shall abide by all applicable local, Commonwealth of Massachusetts and United States laws and regulations.

(4) No person may engage in disorderly conduct including, without limitation, drunkenness, rough play, pushing, shoving, breach of the peace or unnecessary noise offensive to the general public, use of profanity, vulgar or obscene language, or other language that may incite fighting or harm to DCR Personnel or to the public.

(5) No person shall have possession of or discharge any firearm or pellet gun in violation of the laws and regulations of the Commonwealth.

(6) No person shall discharge any weapon that discharges projectiles including, but not limited to, bow and arrow and crossbow, unless such items are being utilized for hunting in compliance with laws and regulations governing such activities.

(7) No person shall have possession of a paint ball gun or paint ball gun ammunition.

(8) No person, unless authorized by law, license, or permit, shall have possession of or discharge any fireworks or other explosives.

(9) No person may sell, distribute, advertise or display cigarettes or other tobacco related products.

(10) No person may possess marijuana, unless for duly authorized medical use, in accordance with state law and regulation.

(11) No person may engage in games or activities which, due to the location or nature of the activity, may cause discomfort, fear or injury to a reasonable person or damage to property.

(12) With the exception of coastal and inland sandy beaches, no person may use or offer for use metal detectors, except with permission from DCR personnel, for the purposes of locating lost personal property.

(13) No person may deposit trash or any waste not generated during a stay at a DCR property in, on or near trash or recycling receptacles or in any other location on DCR property.

(14) No person may enter upon the frozen water of the DCR for the purpose of ice skating, ice fishing, or for motorized or non-motorized purposes, when a prohibition against such use has been posted. A person utilizing said DCR bodies of frozen water engages in such activity at his or her own risk, and DCR assumes no responsibility either implied or express as to the safety of any persons who voluntarily engage in such a known, obvious and inherent risk associated with such frozen water activities.

(15) No person may be naked or otherwise expose genitals, buttocks, or breasts, or change or allow the changing of clothing or diapers except in an appropriate location such as a bathhouse, locker room, bathroom stall, or other similar facility. 302 CMR 12.04(15) does not apply to breastfeeding.

(16) No person may smoke in or on any DCR buildings, structures, camping structures, or in designated swimming, wading, or spray pool areas, or where posted as prohibited.

(17) No person may use or operate a kite-powered apparatus or hang glider on or over any DCR property, except at times and in areas designated for such use.

(18) No person may dive, jump, swim from, throw or launch themselves, or anyone or anything, from any DCR property such as a bridge or overpass, unless such activity has been authorized by DCR and appropriate posting or signage indicates such.

(19) No person shall distribute, erect or affix any handbill, circular, pamphlet, placard, sign, notice, billboard, poster, advertisement, memorial or any printed material on or in any DCR property, except in designated areas, in accordance with posted guidelines, or unless as otherwise duly authorized.

(20) Technical climbing, or mountaineering, of sufficient difficulty to require the use of ropes or other forms of specialized mountain climbing equipment to aid in ascent or descent, shall be allowed only in areas designated for such activity by DCR.

(21) No person may damage, disturb or remove any DCR property or resource, real, natural, personal, cultural or historic, except through hunting, fishing, or trapping

where permitted and carried out in accordance with regulations issued by the Division of Fisheries and Wildlife, or other written authorization by the Department.

(22) No person may conduct archaeological investigation unless permitted by the State Archaeologist in accordance with M.G.L. c. 9 § 27C and approved by the Division Director.

(23) The unanticipated discovery of historic artifacts or human remains shall be reported immediately to DCR.

(24) No tree or other vegetation shall be planted or removed from DCR property unless authorized by the Division Director.

(25) No person shall operate or use a chain saw on DCR property without written DCR authorization such as a volunteer/stewardship agreement or memorandum of agreement.

(26) No memorial, plaque, obstruction or structure shall be placed on, changed or removed from DCR property unless authorized by the Department.

(27) No person shall solicit, sell, rent, advertise or offer to sell or rent, hawk, peddle, display or distribute any goods, wares, tangible or intangible property, merchandise, liquids, edibles, services for hire, render any services for hire, or engage in or conduct any business, commercial or special activity or event on DCR property without an approved permit from the Department prior to engaging in such activities.

(28) Special Use Permit Required. Unless authorized by a special use permit issued in accordance with 302 CMR 12.17(2), no person may:

(a) Consume, possess, distribute, sell or drink alcoholic beverages;

(b) Engage in any lotteries, raffles, gambling and games of chance;

(c) Conduct any commercial use activity or event;

(d) Possess machinery, instruments or equipment of any kind for the use of conducting lotteries, raffles, gambling and games of chance;

(e) Operate or use any audio device, including radio, television, musical instruments, or other noise producing devices, such as electrical generators, or equipment driven by motor or engine, in a manner or at such times that may disturb others. 302 CMR 12.04(28)(e) shall not apply to campgrounds; operation of these devices or equipment at campgrounds shall be subject to the provisions in 302 CMR 12.08;

(f) Operate or use any public address system, whether fixed, portable or vehicle mounted;

(g) Except in an emergency, bring, take off, land or cause to descend on DCR property any airplane, helicopter, sea plane, so-called ultra-light aircraft, or any other apparatus;

(h) Conduct research which may damage, disturb or remove any DCR property or resource, real, natural, personal, cultural or historic;

(i) Promote, sponsor or engage in any race, rally or organized trial events on DCR property;

(j) Conduct parades, games, fairs, carnivals, circuses, bazaars or the like;

(k) Conduct activities for the purpose of fundraising or otherwise soliciting funds;

(l) Use or operate any air propelled power craft or hovercraft on or over any of the lands or waters of the DCR; and

(m) Operate a watercraft for livery or carrying passengers for hire.

(29) Recreational Use Permit Required.

(a) A recreational use permit is required for the use of certain DCR property including, but not limited to, athletic fields and courts, picnic pavilions, designated group day use areas, pools, meeting rooms.

(b) Groups planning organized group activities for 25 or more persons are required to apply for a recreational use permit issued in accordance with 302 CMR 12.17(4). (Certain group activities may require a special use permit issued in accordance with 302 CMR 12.17(2). Such activities are set out at 302 CMR 12.04(28).)

(c) Unless within commonwealth tidelands during daylight hours, a recreational use permit is required for scuba diving and snorkeling in areas not designated as swimming areas. (As to scuba diving or snorkeling in designated swimming areas, please refer to 302 CMR 12.06(7).)

(30) No person may erect or maintain any structure on DCR property, other than camping equipment erected in designated campsite areas, unless authorized by a special use permit or boating and waterfront permit issued in accordance with 302 CMR 12.17(2) or (3), or by a construction and access permit issued in accordance with 302 CMR 11.08: *Construction and Access Permits*.

(31) Youth organizations, agencies, and groups that wish to utilize DCR beaches and designated swimming areas for any group activity must obtain a recreational use permit or special use permit in accordance with 302 CMR 12.17(4) or 12.17(2).

12.06: Rules of Conduct on DCR Properties – Beaches

(1) All persons recreating within the boundaries of that portion of a beach designated for swimming shall adhere to any and all requests or direction from DCR personnel, including, but not limited to, lifeguards or law enforcement officials.

(2) Youth organizations, agencies, and groups that wish to utilize DCR beaches and designated swimming areas for any group activity must obtain a recreational use permit or special use permit in accordance with 302 CMR 12.17(4) or 12.17(2).

(3) No person may swim, bathe, dive or wade from any watercraft, personal watercraft, dock, raft, or pier; nor may any person swim, bathe, dive, or wade from the shoreline of DCR property unless such shoreline is officially designated as a swimming area and such activity occurs during designated swimming hours.

(4) No person may possess any glass or other breakable container within any DCR designated swimming area, including, but not limited to, beverage containers, food containers or personal care items which may pose a safety risk to other users.

(5) No person may utilize any form of smoking materials within designated DCR swimming areas.

(6) No person may use a snorkel within a DCR designated swimming area. DCR personnel may allow such equipment to be used by designated individuals and personnel only during designated structured training programs, during DCR property maintenance, for searches, or for safety and rescue purposes.

(7) Unless within public tidelands during daylight hours, no person may scuba dive or snorkel in DCR designated swimming areas.

(8) No person may utilize any flotation devices within DCR swimming or wading pools, or other waterfront DCR property, unless authorized by DCR personnel. (Flotation devices under 302 CMR 12.06(8) include, but are not limited to, inner tubes, ring buoys, air mattresses, beach balls, swimmies, inflatable novelty toys, noodles, or any other similar devices designed and utilized for the purposes of keeping person(s) afloat.) When such authorization is granted, only specific devices will be allowed, including U.S. Coast Guard approved personal flotation devices (PFDs or life jackets) designed for the size and weight of the wearer; these devices shall be allowed only when a parent or adult is assisting the wearer. Flotation devices designed to be towed by open water swimmers may be allowed in areas where designated by the department.

(9) No person may use or offer for use any equipment, tools, toys, novelty items, snorkels or other such items within a DCR designated swimming area when the use of said items may pose a significant health or safety risk to the user, to bystanders or to any other user within the designated swimming area.

(10) No person or pet, horse, or domesticated animal under a person's custody may enter a sensitive beach habitat posted as restricted.

(11) Pets, horses, and other domesticated animals are not allowed on coastal beaches or in designated swimming areas of inland beaches from May 1st through September 15th each year, unless otherwise posted.

(12) No person may change or allow the changing of any clothing or diapers in or around a DCR designated swimming area except in designated changing locations. All diapers or other similar waste materials shall be disposed of properly in designated receptacles.

(13) No person may utilize a surf board, skim board or boogie board for any purpose within the boundaries of a designated swimming area of a beach without first obtaining permission from DCR personnel.