

MA ENDANGERED SPECIES ACT (G.L. c.131A) CONSERVATION AND MANAGEMENT PERMIT

DATE	July 15, 2014
CONSERVATION PERMIT NO.:	014-244.DFW
NHESP FILE NO.	14-33037
PERMIT HOLDER	Town of Orleans
PROJECT	Off Road Vehicle Escorting Past Piping Plover Chicks

Pursuant to the authority granted in the Massachusetts Endangered Species Act (“MESA”) (G.L. c. 131A) and its implementing regulations (321 CMR 10.23), the Director of the Massachusetts Division of Fisheries & Wildlife (the “Division”) hereby issues a Conservation and Management Permit to the Town of Orleans (the “Permit Holder”). This permit authorizes the “taking” of the State-listed Piping Plover (*Charadrius melodus*) which is listed as “threatened” pursuant to the MESA, arising out of the late season (after July 15) off-road vehicle escorting program beach at Nauset Beach South, Orleans, Massachusetts (the “Property”).

The Division has determined that the Project would result in a “take” of the Piping Plover through disturbance and heightened risk of mortality for up to two broods of unfledged Piping Plover chicks exposed to up to 180 vehicles or up to 360 vehicle trips/day.

Under the authority granted by and in accordance with MGL c131A§3 and 321 CMR 10.23, the Director may permit the taking of a State-listed Species for conservation and management purposes provided that there is a long-term Net Benefit to the conservation of the impacted species. If the Director determines that the applicant for a permit has avoided, minimized and mitigated impacts to the State-listed Species consistent with the following Performance Standards, then the Director may issue a conservation and management permit, provided:

- (a) the applicant has adequately assessed alternatives to both temporary and permanent impacts to State-listed Species;
- (b) an insignificant portion of the local population would be impacted by the Project or Activity, and;

(c) the applicant agrees to carry out a conservation and management plan that provides a long-term Net Benefit to the conservation of the State-listed Species that has been approved by the Director, as provided in 321 CMR 10.23(5), and shall be carried out by the applicant.

The Director has determined that the applicant for this permit has met the above noted Performance Standards and that the conservation and management plan described herein provides a long-term Net Benefit to the conservation of the Piping Plover.

Pursuant to this permit, intensive monitoring of Piping Plover chicks in the vicinity of the proposed escorted vehicles will be implemented in order to minimize the risk of direct mortality; an education and outreach program will be implemented to raise awareness about the escort program, piping plover conservation status, and the impacts of predators and other threats on piping plover productivity; and funding will be provided for off-site conservation projects to benefit plovers breeding in Massachusetts. In addition, depending on observed Piping Plover productivity levels on Nauset Beach, additional on-site mitigation measures such as non-lethal predator control may be implemented during the second and third years of the three-year escorting program. Finally, all other aspects of Piping Plover and Least Tern management will be conducted in accordance with Guidelines for Managing Recreational use of Beaches to Protect Piping Plovers and their Habitats in Massachusetts (dated 21 April 1993; the "Guidelines"), and predator exclosures will be deployed around Piping Plover nests if requested by the Division.

Therefore, the Project can be permitted pursuant to the MESA. This Conservation and Management Permit (the "Permit") is issued to condition the Project and to provide a long-term Net Benefit to the Piping Plover.

In accordance with the documents submitted to the Division entitled:

- "Town of Orleans Over Sand Vehicle Access Habitat Conservation Plan" (dated July 3, 2014; the "HCP");
- "Vehicle Escort Plan" (dated March 2014; Attachment 1)
- "Escrow Agreement" (Attachment 2)

and any other plans and documents referenced herein, this Conservation and Management Permit is issued with the following conditions:

Conditions:

1. This Permit authorizes limited escorting of recreational vehicles past up to two broods of unfledged Piping Plover Chicks in the Poche Overwash (the "Permit Area") of Nauset Beach (the "Plan Area"), as further described in the HCP, after July 15 of each year, during any three (3) calendar years of the five (5) beach season permit period, subject to conditions specified by this permit. (the "Covered Activity").
2. This Permit shall not preclude the review of projects or activities in the Plan Area that are subject to the Wetlands Protection Act regulations (310 CMR 10.37, 10.58(4)(b), 10.59), as applicable, by the Natural Heritage & Endangered Species Program ("NHESP") of the Division.

3. Division representatives shall have the right to enter and inspect the Plan Area subject to this Permit at reasonable hours to evaluate permit compliance and require the submittal of any reasonable information not otherwise required by this Permit but deemed necessary by the Division to complete its evaluation.
4. Any change to the proposed Covered Activity or any plan or procedure identified in this Permit shall require the Permit Holder to inquire of the Division, in writing, whether the change is significant enough to require the filing of a new Conservation and Management Permit Application, and or require additional long-term Net Benefit for affected State-listed species. The Division retains the right to require the submittal of additional, reasonable information to evaluate the plan change.
5. This Conservation and Management Permit shall apply to, and inure to the benefit of, the Permit Holder and any successor-in-interest of the Permit Holder, or to a subsequent successor-in-control of the Plan Area or portion thereof subject to this Conservation and Management Permit should Permit Holder convey its record ownership of the Plan Area to said successor-in-control, as well as to any contractor or other person performing work conditioned by this Conservation and Management Permit. Within three days of the transfer of an interest in the property or a portion thereof, any successor-in-interest or subsequent successor-in-control [ie, subsequent owners or operators] of the Plan Area or a portion thereof shall provide the Division with a letter indicating (1) that the successor is the successor-in-interest of the Permit Holder or the successor-in-control [ie, current owner or operator] of the Plan Area or a portion thereof, and (2) that said successor will perform the obligations of the Permit Holder as set forth in this Conservation and Management Permit.
6. Prior to the start of the Covered Activity, the Permit Holder shall notify the Division in writing of the name, address, business and home telephone numbers of the manager responsible for compliance with this Conservation and Management Permit. The Permit Holder shall provide updated information in writing to the Division should new or additional manager be hired after the Project has commenced.
7. The Permit Holder shall comply with all Conditions of this Permit and carry out the Covered Activity consistent with the HCP and all Division-approved plans and supporting documents except as otherwise approved by the Division in writing.
8. In managing the Plan Area, the Permit Holder shall comply with all pertinent aspects of the Guidelines as they pertain to both state-listed Piping Plovers and terns in order to ensure compliance with MESA, with the exception of the activities and procedures expressly authorized by this permit.
9. Escorted ORV use shall begin no earlier than July 15th of any given calendar year, and shall be conducted in accordance with the Vehicle Escort Plan (Attachment 1). The Town of Orleans is in discussion with the US Fish & Wildlife Service (FWS) regarding possible changes to the Escort Plan associated with obtaining a FWS Incidental Take Permit. Prior to the implementation of any changes, the Permit Holder shall submit a revised Escort Plan to the Division for review, in accordance with Paragraph 4 of this Permit. In any year when the Permit Holder intends to carry out the Covered Activity, the Permit Holder shall notify the Division at least 48 hours in advance of the anticipated start date.

10. The Permit Holder shall fully implement the Mitigation Measures as described in Section X of the HCP. Prior to the start of the Covered Activity, the Permit Holder shall execute an Escrow Agreement in substantially the same form as Attachment 2. In any year when off-site mitigation funds are required, prior to the start of the Covered Activity for said year the Permit Holder shall provide the Division with proof of deposit of \$10,000 into the escrow account.
11. Section X of the HCP envisions an adaptive mitigation plan with mitigation in years two and three tied to observed on-site Piping Plover productivity (#fledglings/pair) in the prior year, and revised annual mitigation Work Plans to be submitted by the Permit Holder to the Division. To determine productivity the Permit Holder shall submit data on Plover Census Forms to the Division by October 1 of each year this Permit is in effect, and the Division shall make the final productivity determination. Draft Mitigation Work Plans shall be provided to the Division for review by December 31 and the Division shall provide comment or approval of each Work Plan within 30 days of receipt of said plan. No vehicle escorting shall be allowed until such time as the Division approves the applicable Work Plan.
12. Summary and annual reporting shall be conducted in accordance with the procedures and time frames specified in the HCP. The annual report to be provided to the Division by December 31 of each year shall contain a detailed description and assessment of both the vehicle escorting plan and any on-site mitigation and educational efforts carried out during the prior year.
13. This permit shall not be construed to authorize non-compliance with any applicable, federal, state, or municipal law, statute, or regulation, including but not limited to the Endangered Species Act. The Permit Holder shall not carry out the Covered Activity until such time as the United States Fish & Wildlife Service issues an Incidental Take Permit, or other written approval, authorizing the Covered Activity.
14. A violation of any condition of this Conservation and Management Permit will result in an unauthorized Take pursuant to M.G.L. c. 131A and may be subject to civil and or criminal penalties pursuant to M.G.L. c. 131A. In the event of non-compliance, the Division reserves the right to suspend or revoke this Permit.
15. Notice of Appeal Rights: This Determination is a final decision of the Division of Fisheries and Wildlife pursuant to 321 CMR 10.23. Any person aggrieved by this decision shall have the right to an adjudicatory hearing at the Division pursuant to M.G.L. c. 30A, s.11 in accordance with the procedures for informal hearings set forth in 801 CMR 1.02 and 1.03.

Any notice of claim for an adjudicatory hearing shall be made in writing and be accompanied by a filing fee in the amount of \$500.00. The notice of claim shall be sent to the Division by certified mail, hand delivered or postmarked within 21 days of the date of the Division's Determination to:

Wayne MacCallum
Director
Division of Fisheries and Wildlife
Field Headquarters
One Rabbit Hill Road
Westborough, MA 01581

Any notice of claim for an adjudicatory hearing shall include the following information:

1. The file number for the project;
2. The complete name, address and telephone number of the person filing the request, and the name, address and telephone number of any authorized representative;
3. The specific facts that demonstrate that a party filing a notice of claim satisfies the requirements of an "aggrieved person," including but not limited to (a) how they have a definite interest in the matters in contention within the scope of interests or area of concern of M.G.L. c. 131A or the regulations at 321 CMR 10.00 and (b) have suffered an actual injury which is special and different from that of the public and which has resulted from violation of a duty owed to them by the Division;
4. A clear statement that an adjudicatory hearing is being requested;
5. A clear and concise statement of facts which are grounds for the proceeding, the specific objections to the actions of the Division and the basis for those objections; and the relief sought through the adjudicatory hearing; and a statement that a copy of the request has been sent by certified mail or hand delivered to the applicant and the Record Owner, if different from the applicant.


 Jack Buckley, Deputy Director
 Massachusetts Division of Fisheries & Wildlife

On this 16th day of July, 2014, before me, the undersigned notary public, personally appeared Jack Buckley, Deputy Director, proved to me through satisfactory evidence of identification, which was personal knowledge, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.




 Lauren C. Glorioso, Notary Public
 My Commission expires: February 6, 2020

Conservation Permit 014-244.DFW
Issued this 16th day of July, 2014
Activities and Reporting must be completed by: December 31, 2018

 **LAUREN C. GLORIOSO**
NOTARY PUBLIC
Commonwealth of Massachusetts
My Commission Expires
February 6, 2020

ACKNOWLEDGEMENT AND ACCEPTANCE OF ALL TERMS OF THIS CONSERVATION PERMIT

The undersigned below agrees that commencement of any work authorized by and described in this Conservation and Management Permit constitutes acknowledgement and acceptance of all terms of this permit.

Signatory 1 Organization

COMMONWEALTH OF MASSACHUSETTS

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared _____, proved to me through satisfactory evidence of identification which was _____ to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Notary Public

SEAL

My commission expires: _____

Distribution List

Orleans Board of Selectmen
Orleans Town Manager
Orleans Natural Resources Manager
Orleans Conservation Commission
DEP Southeast Regional Office, Wetlands Program

ATTACHMENT 1 Vehicle Escort Plan March 2014

1. Vehicle Escort Program – Elements:

a. *Program Administrator(s):* Natural Resources Manager
Beach Director

b. *Escort Protocol:*

Start date: On or after July 15th annually

Frequency: Twice daily

On-beach access: 07:00 – 10:00

Off-beach egress: 15:00 – 18:00

Number of vehicles: 180 (3 groups of up to 60 vehicles / group, single file, spaced approximately one vehicle length apart)

Intervals: 30 minutes per group with 30 minutes rest period between groups. Monitoring of chicks, as described below, to continue during rest periods.

c. *Escort (Vehicle) Corridor dimensions and locations:* The escort corridor referred to in the escort program occurs within the ITP permit area (described in section IV). The specific location of the escort corridor is intended to be adaptive and variable so that for each escort session, the escort corridor may shift along the identified route depending on piping plover and least tern locations and/or movements as shown in the Variable Escort Route Map (see attachment #5). Updated corridor boundaries shall be reported daily to the Program Administrator or their designee by monitor(s) prior to commencement of escorts. The escort corridor is not to exceed 2,100 feet in length. This length is calculated by adding a 200-yard escort buffer in front of 1,500 feet of the actual escort convoy (60 vehicles x 25 feet per vehicle which includes space between vehicles). The escort corridor is not to exceed 30 feet in width (10' on each side of the 10' vehicle track), for a total impact area of approximately 63,000 square feet or 1.45 acres.

d. *Personnel (monitors) and Required Qualifications:* One beach patrol officer and up to three monitors will be required to escort the vehicle caravan past a brood of chicks. One monitor will be deployed to walk directly in front of the vehicle caravan and scout the area for chicks. The other monitor(s) will be deployed to monitor the locations of chicks such that no one monitor is ever responsible for monitoring more than two chicks (the “chick monitors”). Monitors must be qualified according to established USFWS or MADFW definitions. The Program Administrator or their designee, prior to escorts beginning each day, may appoint a “lead chick monitor”. The lead chick monitor will work directly with the beach patrol officer and other monitor(s) in a supervisory role. The beach patrol officer will have the authority to revoke/suspend current over-sand beach stickers. Depending on factors including the number of chicks in each brood, the

separation distance between broods, escorting past two broods may require additional personnel (see below).

2. **Escorting Procedures:**

a. *Basic Procedures for escorting past one brood:*

- i. A pre-determined area of the Nauset Beach (Orleans) parking lot, or another pre-determined area free of protected species, will be identified for (staging) of non-essential vehicles.
- ii. At least 1/2 hour prior to commencement of vehicle escorts, the chick monitor(s) will proceed along the designated vehicle route and surrounding area to determine locations of plover chicks. Each chick monitor will be responsible for monitoring the location of no more than two chicks. Once the chick monitor(s) have established the locations of chicks, they will notify the Program Administrator or their designee, and no escorts shall proceed unless authorized. At this time, personnel at the staging area, as well as the beach patrol officer will be notified that it is acceptable for the caravan to proceed onto the beach. In the event that all chicks are not located, vehicle escorts will be delayed until such time that all chicks are accounted for or it has been determined by the chick monitor(s) that there are no chicks in the over-sand vehicle corridor.
- iii. The caravan will be met by the beach patrol officer and a monitor (the one assigned to walk in front of the caravan), at a location on the beach at least 200 yards either side (North/South) of the brood(s). At this point, the caravan will assemble into a tightly packed single file led by the monitor on-foot.
- iv. Before allowing the caravan to proceed, the beach patrol officer will contact the lead chick monitor who will confirm that the locations of all chicks are still being monitored, that all chicks are accounted for, and/or it is safe for the caravan to proceed. During vehicle escort, monitor(s) shall maintain constant visual on any plover chicks using binoculars from a distance of no less than 200 feet. Disturbance, if any, of the chicks shall be minimized. Once the lead chick monitor determines that the last vehicle in the caravan has passed at least 200 yards from the nearest chick, escorting will end and the vehicles may proceed to use the sections of beach previously determined to be free of piping plover and least tern chicks, in accordance with state and federal guidelines.
- v. In order to avoid adverse effects to the habitat and allow unimpeded chick passage across the OSV corridor when vehicles are not present, the vehicle "ruts" will be raked across and through the established vehicle tracks at the end of each AM and PM escort session. This will create a 10-foot wide "passage" over/through the existing OSV trail. This process shall be repeated every 200 yards along the entire Pochet OSV corridor (Possible Permit Area).
- vi. If at any time during the escorting process, the chick monitor(s) lose visual contact with one or more chicks, the vehicles will be allowed to continue on their way and the 1/2 hour between escorts will be used to determine the presence of the chick(s) in the area or absence of chicks in the corridor. Monitors will document in the daily report the approximate time that visual contact with the chick(s) was lost and efforts made to relocate it.

- vii. If at any time a chick monitor determines that chicks have approached within 100 feet of the caravan, in or near the direction of travel, the caravan will be halted to allow time for the chicks to move out of the area. The Program Administrator, chick monitor(s), or their designee, will have the independent authority to halt the caravan at any time for any reason. The caravan will not resume until the lead chick monitor determines that it is safe to do so. Monitors will document in the daily report the approximate time that the caravan was halted and the duration of the stopped caravan.
 - viii. As state and federal guidelines require non-essential vehicles to stay at least 200 yards away from plover chicks (or greater distances without intensive monitoring), the Program Administrator or their designee will deploy monitor(s) on an as-needed basis throughout the day to ensure that vehicles do not approach the foraging area including a 200 yard moving buffer zone around it. For this reason, to minimize staffing requirements, the Town of Orleans may elect to temporarily close an area of beach within several hundred yards of the chick foraging area to vehicle activity.
 - ix. The same procedures described above will be used to escort the caravan of vehicles back off the beach, from 15:00-18:00.
- b. *Basic Procedures for escorting past two broods:*
- i. Two broods in close proximity (<400 yards apart) – extra chick monitor(s) will be deployed to monitor all the chicks in both broods simultaneously (≤ 2 chicks/monitor). The caravan will proceed past both broods without stopping (except if chicks are present ≤ 100 feet from vehicles, see No. 6, above), led by the monitor on foot, as described above. This is necessary because the caravan cannot safely stop in a zone free of chicks, and allow the monitors to redeploy to locate the next brood of chicks, without risking the possibility of inadvertently impacting the first brood. The Town of Orleans may elect to follow this procedure for broods >400 yards apart (with the monitor who walks in front of the caravan redeploying at least 100 yards before encountering the second monitored brood), or proceed with fewer staff, as described below.
 - ii. >400 yards apart – Prior to escorting past the first brood, a monitor will confirm the current location of the second brood, as follows. After proceeding at least 200 yards past the first brood as described above, the monitor(s) will scan the area in front of the caravan for chicks, and the caravan will stop temporarily at least 200 yards past the first brood and at least 100 yards shy of the second brood. The chick monitor(s) will then move ahead of the caravan, locate all chicks, and the caravan will proceed past the second brood as described in the “Basic Procedures” section above.
3. **Contingency Plan:**
- a. *Personnel availability:* At least two, and up to three monitors (i.e., one monitor per 2 plover chicks) will be required to escort the caravan past a brood, depending on the number of chicks. The monitor(s) assigned to escort vehicles and to monitor the affected broods, will be in addition to the current monitors employed

by the Town of Orleans. In the event that one of these employees is unavailable to perform an escort, one of the Program Administrators or their designee shall assume this duty.

- b. *Inclement weather:* Weather forecasts will be monitored on a daily basis by the Program Administrator or their designee. In the event that a storm warning is predicted by the National Weather Service, or any other weather warning that could jeopardize public safety within a 24 hour period, all vehicle escorts shall, by the Program Administrator or their designee, be cancelled immediately and for the duration of said hazardous conditions. Vehicle escorts may not resume until the Program Administrator or their designee has given the all-clear. It shall be presented in writing prior to purchasing an OSV sticker that when taking part in the escort program, all users shall use the beach at their own risk. Exiting escorts will not take place do to unpredicted weather. OSV sticker holders shall be informed in writing that a “shelter in place” policy will go into effect until the inclement weather has passed, or scheduled exiting escorts have begun.
- c. *Medical or family emergencies:* OSV sticker holders shall be advised verbally and in writing at the time of OSV sticker application, via affidavit, that egress from the beach outside of the escort time windows shall be strictly prohibited. In the event of a medical or family emergency, anyone requesting an exemption from this prohibition shall be required to immediately notify one of the Program Administrators at the Nauset Beach Administration Building. If the exemption is granted, one beach patrol officer and one monitor shall escort the vehicle off of the beach and the vehicle shall not be allowed to return for the remainder of that day.

ATTACHMENT 2
ESCROW AGREEMENT

ESCROW AGREEMENT
DRAFT 7/14/14

This ESCROW AGREEMENT (this "Agreement") is entered into as of this ____ day of _____, _____ by and between the Massachusetts Division of Fisheries and Wildlife, by and through the Natural Heritage and Endangered Species Program, having a principal place of business at 1 Rabbit Hill Road, Westborough, MA, 01581 ("NHESP"); the Town of Orleans (proponent) having a principal place of business at 19 School Road, Orleans, MA 02653; and Michael D. Ford, having a principal place of business at 72 Massachusetts 28, West Harwich, MA 02671 ("Escrow Agent"). NHESP, Town of Orleans and Escrow Agent are referred to herein collectively as the "Parties".

1. Recitals

a. The Conservation and Management Permit No. 014-244.DFW ("Permit") issued by NHESP to the Town of Orleans contains financial assurance provisions in paragraph 10 of the Conditions section requiring that the Town of Orleans ensure that funds are available in the sum of up to three annual payments of \$10,000, the final amount of funding to be determined as set forth in the Permit, (the "Funds") for the restoration, management, and or monitoring of Piping Plovers, their predators, or their habitats in Massachusetts and/or conservation research, for the benefit of Piping Plover populations in Massachusetts.

b. The Parties agree the Funds shall be paid by the Town of Orleans to the Escrow Agent and held in an interest bearing escrow account ("Escrow Account") (further defined in paragraph 2 below) and expended pursuant to the terms and conditions described below to mitigate for the take of the Piping Plover in connection with off-road vehicle use and escorting in the vicinity of unfledged Piping Plover Chicks (the "Activity"), at Nauset Beach in Orleans, Massachusetts.

The Parties enter into this Agreement for the purpose of defining the terms and conditions under which the Funds shall be held and disbursed.

NOW THEREFORE, after consideration of the above recitals, Town of Orleans, NHESP and the Escrow Agent hereby covenant and agree as follows:

2. Escrow Account

a. Town of Orleans shall deliver the Funds to the Escrow Agent in the amounts, schedule and manner set forth in paragraphs 10 and 11 of Permit and as further described in the Habitat Conservation Plan referenced therein.

b. All funds delivered by Town of Orleans to the Escrow Agent shall be deposited by the Escrow Agent in an interest bearing account or held in obligations by the US Government at one or more banks ("Depository Bank"), said accounts to be at all times insured by the Federal Deposit Insurance Corporation and which shall pay interest on the Funds at a reasonable rate. The Depository Bank shall be entitled to charge the Escrow Account for services related to maintenance of the Escrow Account at a rate not exceeding the Bank's standard charges to other customers for similar services.

c. The Escrow Account shall be opened by the Escrow Agent and funds may be

withdrawn only by the Escrow Agent and no other person. Disbursements shall be made from the Escrow Account only in accordance with the terms of this Agreement.

d. The Escrow Agent shall maintain a record of all deposits, income, disbursements, and other transactions of the Escrow Account. Upon request, the Escrow Agent shall provide to any of the Parties a written accounting of all transactions. The Parties shall have the right to inspect all books and records of the Escrow Agent relating to the Escrow Account at reasonable times upon request. Escrow Agent's computation of the Funds is correct in the absence of manifest error.

e. The Escrow Agent shall keep possession of the book(s) and bank statements of the Escrow Account until such time as it is terminated in accordance with the terms of this Agreement, or until a successor Escrow Agent is appointed as provided herein.

3. Disbursements

From time to time, NHESP may, on or before the date which is eight (8) years from the date of this Agreement, request in writing the Escrow Agent to deliver all or portions of the Funds, plus any interest thereon, for the purposes described in paragraph 1.a of this Agreement. Upon receipt of such written request, the Escrow Agent shall deliver the requested portion of the Funds to NHESP or any party designated in writing by NHESP. Delivery of the Funds in accordance with the terms of this Agreement shall be made by cashier's check, or by federal funds wire transfer, at the option of the payee.

a. The Escrow Agent may make disbursements to the Depository Bank for services rendered in maintaining said account.

b. If, at the end of eight years from the date of this Agreement, any portion of the Funds is still held in escrow under this Agreement, then NHESP shall, within six (6) months after such date, develop a plan for the use of any remaining Funds by NHESP or any party designated in writing by NHESP for further management for the benefit of the Piping Plover in Massachusetts.

c. The Escrow Agent shall release any remaining Funds to NHESP or any party designated in writing by NHESP in accordance with such plan.

4. Termination of Agreement

This Escrow Agreement shall terminate, and the Escrow Agent shall be relieved of all liability, after all funds in the Escrow Account have been properly disbursed in accordance with the terms and conditions of this Agreement. When the Escrow Account is terminated, the Escrow Agent shall provide a final accounting of all transactions hereunder to the Parties.

5. Duties and Liabilities of Escrow Agent

a. The sole duty of the Escrow Agent under this Agreement is to receive funds from the Town of Orleans and to hold the funds for disbursement according to Section 3 above. The Escrow Agent shall be under no duty to pass upon the adequacy of any documents, to determine whether any of the Parties are complying with the terms and provisions of this

Escrow Agreement, or to determine the identity or authority of any person purporting to be a signatory authorized by Town of Orleans or NHESP.

b. The Escrow Agent may conclusively rely upon, and shall be protected in acting on, a statement, certificate, notice, requisition, order, approval, or other document believed by the Escrow Agent to be genuine and to have been given, signed and presented by a duly authorized agent of Town of Orleans or NHESP. The Escrow Agent shall have no duty or liability to verify any statement, certificate, notice, request, requisition, consent, order, approval or other document, and its sole responsibility shall be to act only as expressly set forth in this Agreement. The Escrow Agent shall not incur liability for following the instructions contemplated by this Agreement or expressly provided for in this Agreement or other written instructions given to the Escrow Agent by the Parties. The Escrow Agent shall be under no obligation to institute or defend any action, suit or proceeding in connection with this Escrow Agreement, unless first indemnified to its satisfaction. The Escrow Agent may consult with counsel of its choice including shareholders, directors, and employees of the Escrow Agent, with respect to any question arising under or in connection with this Agreement, and shall not be liable for any action taken, suffered or omitted in good faith. The Escrow Agent shall be liable solely for its own willful misconduct.

c. The Escrow Agent may refrain from taking any action, other than keeping all property held by it in escrow if the Escrow Agent: (i) is uncertain about its duties or rights under this Escrow Agreement; (ii) receives instructions that, in its opinion, are in conflict with any of the terms and provisions of this Agreement, until it has resolved the conflict to its satisfaction, received a final judgment by a court of competent jurisdiction (if it deems such action necessary or advisable), or it has received instructions executed by both Town of Orleans and NHESP.

d. Escrow Agent is acting, and may continue to act, as counsel to Town of Orleans in connection with the subject transaction, whether or not the Funds are being held by Escrow Agent or have been delivered to a substitute impartial party or a court of competent jurisdiction. Escrow Agent is not acting as counsel to Town of Orleans in Escrow Agent's capacity as escrow agent.

e. Each of the Parties admits, acknowledges and represents to each of the other Parties that it has had the opportunity to consult with and be represented by independent counsel of such party's choice in connection with the negotiation and execution of this Agreement. Each of the Parties further admits, acknowledges and represents to the other Parties that it has not relied on any representation or statement made by the other Parties or by any of their attorneys or representatives with regard to the subject matter, basis or effect of this Agreement.

6. Escrow Agent's Fee

a. The Escrow Agent shall be entitled to compensation from _____ for its basic services under this Escrow Agreement. The Escrow Agent may bill the _____ directly for such services in accordance with the fee schedule attached to this Escrow Agreement as Exhibit B. Payments for services provided by Escrow Agent shall not be made from Escrow Funds. {optional, as per permittee's arrangement with the Escrow Agent}

7. Investment Risk

a. In no event shall the Escrow Agent have any liability as a result of any loss occasioned by the financial difficulty or failure of any institution, including Depository Bank, or which holds United States Treasury Bills, or other securities, or for failure of any banking institution, including Depository Bank, to follow the instructions of the Escrow Agent. Without limiting the generality of the foregoing, in no event shall the Escrow Agent incur any liability as the result of any claim or allegation that the Escrow Agent should have invested the escrow funds in United States Treasury Bills rather than hold same on deposit at the Depository Bank, or vice versa.

8. Notices

a. All notices permitted or required by this Agreement shall be in writing and shall be deemed duly provided when deposited in the United States mail, postage prepaid, certified or registered mail, return receipt requested, to the other Parties at the addresses set forth in the first paragraph of this Agreement. The Party providing notice may choose alternate methods, including hand delivery, Federal Express, or other recognized overnight courier. Notices provided by hand delivery; Federal Express or other recognized overnight courier shall be deemed duly provided when received at the addresses set forth in the first paragraph of this Agreement.

b. All notices, certification, authorizations, requests or other communications required, or permitted to be made under this Escrow Agreement shall be delivered as follows:

To the NHESP:

Assistant Director
Natural Heritage and Endangered Species Program
ATTN: Regulatory Review, CMP ___ (insert Permit Number Here)
Division of Fisheries and Wildlife
1 Rabbit Hill Road, North Drive
Westborough, MA 01581

To the Town of Orleans:

Town Manager
Town Hall
19 School Road
Orleans, MA 02653

To the Escrow Agent:

Attorney Michael D. Ford
72 Massachusetts 28
West Harwich, MA 02671

or to such other place or to the attention of such other individual as a Party from time to time

may designate by written notice to all other Parties.

9. Resignation, Removal, or Successor Escrow Agent

a. If, for any reason, the Escrow Agent is unable or unwilling to continue to act as Escrow Agent, he/she shall give written notice to the other Parties of his/her inability or unwillingness to continue as Escrow Agent. The parties shall agree upon a successor agent, formally appoint the successor agent, and provide written notification to the Escrow Agent of the subsequent appointment within ten (10) business days. The Escrow Agent shall then, within three (3) business days after receiving notice of subsequent appointment, deliver to the successor escrow agent all cash and other property held by the Escrow Agent under this Escrow Agreement. Upon such delivery, all obligations of the Escrow Agent under this Escrow Agreement shall automatically cease and terminate. If no successor escrow agent is designated within the prescribed ten (10) day period, or if notice of subsequent appointment is not received within such period, then the Escrow Agent may, at its option at any time thereafter, deposit the funds and any documents then being held by it in escrow into any court having appropriate jurisdiction, and upon making such deposit, shall thereupon be relieved of and discharged and released from any and all liability hereunder, including without limitation any liability arising from the Funds, or any portion thereof so deposited.

b. The Escrow Agent may be removed at any time by a written instrument or concurrent instruments signed by the NHESP and Town of Orleans and delivered to the Escrow Agent.

c. If at any time hereafter, the Escrow Agent shall resign, be removed, be dissolved, or otherwise become incapable of acting, or the position of the Escrow Agent shall become vacant for any of the foregoing reasons or for any other reason, the Parties hereto shall promptly appoint a successor Escrow Agent. Upon appointment, such successor Escrow Agent shall execute and deliver to his/her predecessor and to the Parties hereto an instrument in writing accepting such appointment hereunder. Thereupon, without further act, such successor Escrow Agent shall be fully vested with all the rights, immunities, and powers, and shall be subject to all the duties and obligations of his/her predecessor, and the predecessor Escrow Agent shall promptly deliver all books, records, and, other property and monies held by him/her hereunder to such successor Escrow Agent.

10. Interest

a. All interest income accrued on funds in the Escrow Account shall become part of the Escrow Account and shall remain in the Escrow Account. The Escrow Agent may disburse funds to Town of Orleans to pay federal and state taxes on accrued interest. Said disbursement may be made by the Escrow Agent only after receiving a written confirmation from Town of Orleans, with a copy sent to the NHESP, of all itemized federal and state tax liabilities incurred by interest accrued on the Escrow Account.

11. Miscellaneous

a. This Escrow Agreement shall be binding upon, and shall inure to the benefit of the respective Parties hereto and their successors and assigns.

b. This Agreement shall be governed by and be construed in accordance with the laws of the Commonwealth of Massachusetts.

c. This Agreement shall be interpreted as an instrument under seal.

d. This Agreement may be executed in any number of counterparts, each of which shall constitute an original, and all counterparts shall constitute one Agreement.

e. This Escrow Agreement may not be amended, altered, or modified except by written instrument duly executed by all of the Parties hereto.

f. If the term, condition or provision of this Agreement, or the application thereof to any circumstances or party hereto, ever shall be held to be invalid or unenforceable, then in each such event the remainder of this Agreement or the application of such term, condition, or provision to any other circumstance or party hereto (other than those as to which it shall be invalid or unenforceable) shall not be thereby affected, and each term, condition and provision hereof shall remain valid and enforceable to the fullest extent permitted by law.

g. Each individual and entity executing this Agreement hereby represents and warrants that he, she or it has the capacity set forth on the signature pages hereof with full power and authority to bind the party on whose behalf he, she or it is executing this Agreement to the terms hereof.

12. Effective Date

a. This Agreement shall take effect on the latest date of execution by the NHESP, Town of Orleans, or Escrow Agent.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the parties have caused this Escrow Agreement to be duly executed as of the day and year first written above.

FOR THE MASSACHUSETTS DIVISION
OF FISHERIES AND WILDLIFE:

Name:
Title:

COMMONWEALTH OF MASSACHUSETTS

_____, SS _____, 2009

On this __ day of __, 2009, before me, the undersigned notary public, personally appeared _____, and proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public
My commission expires:

FOR _____ (proponent):

Company Name

By: _____.

By: _____
Name: _____
Its: _____

STATE OF _____

_____, ss _____, 2009

On this __ day of __, 2009, before me, the undersigned notary public, personally appeared _____, and proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public
My commission expires:

FOR THE ESCROW AGENT:

Company Name

By: _____
Name:
Title:

COMMONWEALTH OF MASSACHUSETTS

_____, ss _____, 2009

On this __ day of __, 2009, before me, the undersigned notary public, personally appeared _____, and proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public
My commission expires:



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
SE 54-2246
MassDEP File #
eDEP Transaction #
Orleans
City/Town

A. General Information

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. From: Orleans
Conservation Commission

2. This issuance is for (check one):
a. Order of Conditions b. Amended Order of Conditions

3. To: Applicant:

a. First Name _____ b. Last Name _____
Town of Orleans-Board of Selectmen (Acting as Park Commissioners)
c. Organization _____
19 School Road
d. Mailing Address _____
Orleans MA 02653
e. City/Town _____ f. State _____ g. Zip Code _____

4. Property Owner (if different from applicant):

a. First Name _____ b. Last Name _____
c. Organization _____
d. Mailing Address _____
e. City/Town _____ f. State _____ g. Zip Code _____

5. Project Location:

0 Smith Neck Road-Nauset Beach South Orleans
a. Street Address _____ b. City/Town _____
38 14
c. Assessors Map/Plat Number _____ d. Parcel/Lot Number _____

Latitude and Longitude, if known: _____
d. Latitude _____ e. Longitude _____



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A. General Information (cont.)

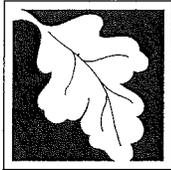
6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
 Barnstable Doc: 60173
 a. County Doc: 60173
 Book 1041 Page 392
 Book 994 Page 172
 c. Book d. Page
7. Dates: 4/14/14 6/24/14 6/25/14
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed): Off Road Vehicle (ORV) and Beach Management Plan for Nauset Beach South
- N/A N/A
 b. Prepared By c. Signed and Stamped by
N/A N/A
 d. Final Revision Date e. Scale
Town of Orleans: ORV Trails Nauset Beach South Date Stamped 6/24/14
 f. Additional Plan or Document Title g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:
 Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:
- a. Public Water Supply b. Land Containing Shellfish c. Prevention of Pollution
 d. Private Water Supply e. Fisheries f. Protection of Wildlife Habitat
 g. Groundwater Supply h. Storm Damage Prevention i. Flood Control
2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



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B. Findings (cont.)

Denied because:

- b. the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

- 3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and Bank or Bordering Vegetated Wetland boundary (if available) _____ a. linear feet

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	_____ a. linear feet	_____ b. linear feet	_____ c. linear feet	_____ d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	_____ a. square feet _____ e. c/y dredged	_____ b. square feet _____ f. c/y dredged	_____ c. square feet	_____ d. square feet
7. <input type="checkbox"/> Bordering Land Subject to Flooding Cubic Feet Flood Storage	_____ a. square feet _____ e. cubic feet	_____ b. square feet _____ f. cubic feet	_____ c. square feet _____ g. cubic feet	_____ d. square feet _____ h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding Cubic Feet Flood Storage	_____ a. square feet _____ c. cubic feet	_____ b. square feet _____ d. cubic feet	_____ e. cubic feet	_____ f. cubic feet



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B. Findings (cont.)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
9. <input type="checkbox"/> Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

- | | | | | |
|---|---|--|-------------------------|-------------------------|
| 10. <input type="checkbox"/> Designated Port Areas | Indicate size under Land Under the Ocean, below | | | |
| 11. <input type="checkbox"/> Land Under the Ocean | a. square feet | b. square feet | | |
| | c. c/y dredged | d. c/y dredged | | |
| 12. <input checked="" type="checkbox"/> Barrier Beaches | Indicate size under Coastal Beaches and/or Coastal Dunes below | | | |
| 13. <input checked="" type="checkbox"/> Coastal Beaches | <u>No Alteration</u>
a. square feet | <u>No Alteration</u>
b. square feet | cu yd
c. nourishment | cu yd
d. nourishment |
| 14. <input checked="" type="checkbox"/> Coastal Dunes | <u>No Alteration</u>
a. square feet | <u>No Alteration</u>
b. square feet | cu yd
c. nourishment | cu yd
d. nourishment |
| 15. <input checked="" type="checkbox"/> Coastal Banks | <u>No Alteration</u>
a. linear feet | <u>No Alteration</u>
b. linear feet | | |
| 16. <input type="checkbox"/> Rocky Intertidal Shores | a. square feet | b. square feet | | |
| 17. <input checked="" type="checkbox"/> Salt Marshes | <u>No Alteration</u>
a. square feet | <u>No Alteration</u>
b. square feet | c. square feet | d. square feet |
| 18. <input type="checkbox"/> Land Under Salt Ponds | a. square feet | b. square feet | | |
| | c. c/y dredged | d. c/y dredged | | |
| 19. <input type="checkbox"/> Land Containing Shellfish | a. square feet | b. square feet | c. square feet | d. square feet |
| 20. <input type="checkbox"/> Fish Runs | Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above | | | |
| | a. c/y dredged | b. c/y dredged | | |
| 21. <input checked="" type="checkbox"/> Land Subject to Coastal Storm Flowage | <u>No Alteration</u>
a. square feet | <u>No Alteration</u>
b. square feet | | |



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B. Findings (cont.)

* #22. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

22. Restoration/Enhancement *:
 a. square feet of BVW _____ b. square feet of salt marsh _____
23. Stream Crossing(s):
 a. number of new stream crossings _____ b. number of replacement stream crossings _____

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. the work is a maintenance dredging project as provided for in the Act; or
 - b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 6/25/2017 unless extended (See Page 9).
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
 "File Number SE 54-2246 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS

19. **The work associated with this Order (the "Project") is (1) is not (2) subject to the Massachusetts Stormwater Standards. If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:**

a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.

b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:

- i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
- ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
- iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;
- iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;
- v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.



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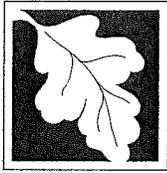
C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following: *i.*) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and *ii.*) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
 1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

Standard Conditions on Orders dated 6/24/14 & Off Road Vehicle (ORV) and Beach Management Plan for

Nauset Beach South dated 6/18/14, that shall continue over time subject to the annual review & approval as set

forth in Section F of this document.



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D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No
2. The Orleans Conservation Commission hereby finds (check one that applies):

- a. that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw _____ 2. Citation _____

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

Orleans Wetlands Regulations

1. Municipal Ordinance or Bylaw _____ 2. Citation _____

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

Standard Conditions on Orders dated 6/24/14 & Off Road Vehicle (ORV) and Beach Management Plan for Nauset Beach South dated 6/18/14, that shall continue over time subject to the annual review & approval as set forth in Section F of this document. See attached Off Road Vehicle (ORV) and Beach Management Plan for Nauset Beach South dated 6/18/14.



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E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

6/25/14
1. Date of Issuance

Please indicate the number of members who will sign this form.

6
2. Number of Signers

This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

[Handwritten signatures]

[Handwritten signatures]

by hand delivery on

by certified mail, return receipt requested, on

Date

June 25, 2014
Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request of Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
SE 54-2246
 MassDEP File #

 eDEP Transaction #
Orleans
 City/Town

G. Recording Information

This Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Orleans
 Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Orleans
 Conservation Commission

Please be advised that the Order of Conditions for the Project at:

0 Smith Neck Road-Nauset Beach South SE 54-2246
 Project Location MassDEP File Number

Has been recorded at the Registry of Deeds of:

County Book Page

for: Property Owner

and has been noted in the chain of title of the affected property in:

Book Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

**PLANS APPROVED by ORLEANS
CONSERVATION COMMISSION**

Off Road Vehicle (ORV) and Beach Management Plan
for Nauset Beach South

FILE # SES4-2246

BY [Signature] DATE 6/24/14

ENGINEER [Signature]

FINDINGS

A. THE ACTIVITY

The Town of Orleans seeks a permit under the provisions of the State Wetland Protection Act MGL ch 131 Section 40 and the Town of Orleans Wetlands Protection Bylaw consisting of the operation of Off Road Vehicles (ORV's) on Nauset Beach South, 310 CMR 10.29. Although the permit requested is narrowly defined to ORV use, where ORV use/management issues overlap pedestrian and boating uses, it is herein recognized by the Conservation Commission and the Park Commissioners that these uses will be controlled in a manner consistent with permitting requirements for the ORV use, such as signage, fencing, plantings, temporary closures, etc.

The area of Nauset Beach South is shown on Assessors' Maps as the following: Map 38, Parcels 13 and 14; Map 45, Parcel 11 and 50; Map 52, Parcel 10; Map 59, Parcel 1; Maps 73, Parcel 1. The combined parcels contain 700+/- Acres. This area starts at the end of the existing public beach parking lot, and continues in a southerly direction to Chatham town line, where the barrier beach extends into Chatham to its terminus.

The Orleans Conservation Commission so finds that the area in which the proposed activity will take place is a Barrier Beach (310 CMR 10.29), a resource area which itself contains the following wetland resource areas: Land Subject to Coastal Storm Flowage (310 CMR 10.02 (1)(d)), Land Under the Ocean (310 CMR 10.25), Coastal Beaches (310 CMR 10.27), Coastal Dunes (310 CMR 10.28), Salt Marshes (310 CMR 10.32), and Rare Species Habitat (310 CMR 10.37).

For the above cited regulations, provided that where the proposed activity involves alteration of a resource area, the issuing authority shall presume the resource area to be significant to the interests noted in the regulations governing that specific area unless that presumption is overcome by a clear showing otherwise. The Commission therefore adopts the presumptions of significance for the resource areas cited in the previous paragraph.

B. PROJECT COMPLIANCE WITH MGL 131 ch. 5.40 PERFORMANCE STANDARDS

Project compliance with MGL ch, 131 s.40 performance standards as cited in the attached regulations: Coastal Beaches, 310 CMR 10.27; Coastal Dunes, 310 CMR 10.28 ; Barrier Beaches, 310 CM R 10.19; and Rare Species Habitat, 310 CMR 10.37.

The proposed project calls for the following activities, designed to prevent any impact of ORV usage upon the resource areas of the Nauset Beach South cited above:

1. Placement of signage and wooden barrier posts, to be located as necessary to confine ORV traffic to defined access ways, maintained by hand, and spaced an average of 100 feet apart; signage to be attached to posts and/or fencing where possible; such posts to be placed in such a manner as not to disturb vegetative cover;
2. Placement of symbolic fencing and/or predator exclosures, as necessary, around potential nesting habitat, actual nesting, and foraging sites;
3. Placement of fencing barriers for access closures and/or openings, as deemed necessary for tern and plover habitat, nesting, and foraging protection. The Commission finds that the above activities, as controlled by the conditions herein, meet the performance standards set forth in 10.27 (3),(6), and (7);10.28 (3),(5), and (6); 10.29 (3) and (4). See "Rare Species" for compliance with 10:27.
4. With regard to the primary activity proposed, ORV usage itself, the Commission finds the following:

a. Coastal Dunes: 310 CMR 10.28

- i. An evaluation of ORV access and egress trail location, field inspection of the ORV trails, show them to be sensitive to environmental concerns with respect to sinuosity and topography. The existing layout is not believed to promote wind tunneling, erosion, or wave overwash. Therefore, the Commission finds that based on the history and references of record, maintenance of the existing ORV trail routes is appropriate, and meets the performance standards set forth in 310 CMR 10.28 as follows:

10.28 (3)(b) Use of existing access and egress corridors through the dunes will be restricted to corridors already without vegetation due to previous ORV use. No further de-vegetation and consequent destabilization should occur given appropriate posting as required in the Special Conditions.

10.28 (3)(c) It is recognized that the ongoing use of an ORV corridor may cause limited modification to small dune areas. However, the Commission finds that due to the orientation, location, restriction in size, and proposed

maintenance activities, no significant increase from storm or flood damage is anticipated.

10.28 (3)(d) No interference with the landward movement of Coastal Dunes will occur as a result of the Special Conditions that provide for managing ORV traffic on the existing ORV trails of Coastal Dunes, with the possible exception of temporary alternate routes, provided in response to plover and tern protection needs, will be permitted.

10.28 (3)(f) See section on Rare Species

ii. Ocean Side North/South Corridor

Given the Special Conditions requiring that this corridor be a minimum of 15 feet seaward of the toe of the Coastal Dune, no change in vegetation should occur, and the performance standards set forth in 10.28 (3)(b) and (c) should be met. (10.28 (3) See section on Rare Species). Furthermore, the general location of the ocean side ORV corridor is typically westerly of the normally occurring wrack line.

b. Coastal Beaches: 310 CMR 10.27 (3)(7)

The continued use of the existing ORV corridors may cause temporary limited impact to the profile (form) of the beach area. The Commission recognizes that given the climatic and geologic characteristics of Nauset Beach South, these changes will not result in increasing the potential for wind and wave erosion.

The Commission recognizes that sediment disturbed by the passage of ORVs is not lost from the Beach resource area, and that significant sediment movement is not attributable to ORV use. Therefore, it finds ORV use as proposed will not result in a significant decrease to beach volume, and that such significant changes in beach volume are more likely to be influenced by climatic and/or meteorological factors (also see Rare Species 10.27 (7)).

SPECIAL CONDITIONS

A. PREAMBLE

The Orleans Conservation Commission, in setting forth the following Special Conditions, intends that these conditions be flexible enough to reflect the needs of the changing environment they are designed to protect. The Nauset Barrier Beach system has been

shown to be extremely dynamic over time. Significant changes in geomorphic form and wildlife habitat have occurred both prior to and during recreational uses of this resource area. The challenge for this Conservation Commission is to manage the competing uses of this Barrier Beach system under the provisions of both the Massachusetts Wetlands Protection Act, MGL 131 Section 40 and the Town of Orleans Wetland Protection Bylaw, Chapter 160 of the Code of the Town of Orleans.

These Conditions are designed to:

- Protect Coastal Resource areas and identify wetland interests for the Nauset Beach South Barrier Beach system as it currently exists;
- Allow for the ongoing recreational use of the Barrier Beach system;
- Allow for the continued historic uses and access of the twelve fowling & fishing camps located on the Town of Orleans Nauset Beach South;
- Allow for access to private property on Pochet Island; Require management of ORV use to be sensitive to any potential environmental impacts to the Nauset Beach South Barrier Beach system;
- Require greater restrictions on ORV users with respect to environmental education, scheduled and unscheduled temporary closures of access routes, etc;
- Require future management of the Barrier Beach system resource area to include hiring of specially qualified personnel to conduct detailed monitoring of and reporting on wildlife and wildlife habitat areas, which will serve as basis for modifying permitted management procedures/policies;
- Require interdisciplinary and agency cooperation which will result in sensitive, flexible, and responsive management of the Barrier Beach system.

B. RULES AND REGULATIONS

The Board of Selectmen, acting, and hereafter referred to, as the Park Commission, is responsible for implementing and enforcing the Rules and Regulations for ORV use on Nauset Beach South. These regulations shall be reviewed annually by the Conservation Commission and at a minimum require the following:

- a) The maximum limit of ORV's permitted on the beach at any one time shall be determined by the Natural Resource Manager after taking into consideration the general beach and nesting conditions. Based on management since the 2007 breach, the limit of ORV's permitted on the beach at any one time shall be 375 ORV's. This number shall include those vehicles passing through Orleans to the Town of Chatham portion of the beach but shall not include the ORV's used to access the 12 camps and the private homes/cottages on Pochet Island, as they have their own dedicated parking areas.

- b) Posting of temporary closures due to tide conditions or nesting considerations.
- c) Driving on the Bay (west) side, along the shoreline, is prohibited, with the exception of driving upon the existing ORV trails and spurs off of the main trail or the private drives to camps.
- d) Driving on the low beach may be permitted during the winter season between the first Friday in November to the Friday before Memorial Day, and at any additional specially designated times and places to avoid disturbance of nesting birds.
- e) Parking is permitted seaward of a 37' corridor consisting of 15' from the toe of the dune, plus 12' for the vehicle track, plus a 10' margin between the vehicle track and parking area.
- f) Closure of the beach between the hours of 11 PM and 6 AM except for active fishing and fowling and self contained vehicles. Driving anywhere outside of the designated ORV corridors is prohibited.
- g) In posted areas near bird nesting, a speed limit of 5 mph shall be enforced.
- h) No jet ski launching or landing.
- i) No kite flying from March 15 to September 15.
- j) Pets shall only be allowed as designated by the Nauset Beach Rules and Regulations for ORV's. Rules and Regulations on pets shall be developed to maximize protection of nesting shorebirds and shorebird habitat.
- k) All ORV permittees must view an educational film /slide presentation prior to issuance and renewal of an ORV permit.
- l) Minimum permissible equipment standards including but not limited to tire size and pressure as listed in regulations issued by Park Commissioners.
- m) Any other conditions responsive to significant environmental changes and/or any conditions necessary to protect the Nauset Beach South Barrier Beach system, public health, safety, and welfare of the users and/or property owners.
- n) Fines and penalties may be invoked, as necessary, by the Park Commissioners.
- o) Walking between the bayside and the ocean side shall be prohibited in all but designated areas. No walking is to be allowed upon vegetated dunes, slopes or bare dune faces. No activity, i.e. sand sliding, dune jumping, or similar, is permitted at any time.

C. CLOSURE OF THE BAY (WEST) SIDE TO ORV TRAFFIC

Salt Marsh, tidal flats, and shellfish beds which adjoin the Pleasant Bay side of the beach are extremely sensitive to ORV use. Therefore, ORV use should not be permitted in these resource areas other than via existing ORV access corridors. Where the existing access corridors terminate, so shall the ORV use. Resources being accessed from the end of these ORV corridors for fishing, fowling, or passive recreation shall be via foot travel only. Furthermore, the Department of Natural Resources shall install signage, as necessary, at these locations indicating no ORV use.

Barrier Beaches migrate landward due to windblown sediment and overwash events of the Barrier Beach system, 310 CMR 10.29 (1). Therefore, the operation of ORVs on the landward side of the Barrier Beach, other than in existing ORV trails (corridors), could serve to inhibit dune formation through the creation of additional ruts and the crushing of ammophila rhizomes. This could potentially inhibit the landward migration of the inside beach, while the ocean side is continually dynamically eroded, and at times accreted, by wave action and long shore sediment transport. The net effect of these processes could be an ever narrower Barrier Beach, increasingly susceptible to overwash and inlet formation. This result would violate the performance standards for Coastal Dunes, which prohibit any modification of Dune form that would increase the potential for storm or flood damage, or any interference with the landward or lateral movement of the Dune, 310 CMR 10.28(3) and 10.29(3). Therefore, with the possible exception of temporary alternate routes discussed with the Commission, as described below, the westerly side of the Barrier Beach shall remain closed to ORVs, as previously described, except for emergency use by town officials and essential vehicles.

D. TEMPORARY ALTERNATIVE ROUTES:

The Town of Orleans has proposed that should the ORV corridor or ORV trail network be closed to protect shorebirds, alternate routes may be approved on a temporary basis. When considering a location of a temporary route, the route will be designed to provide greater protection for nesting shorebirds.

In answer to the concern that such temporary alternate routes could inhibit the landward migration of the Barrier Beach in violation of the performance standards and CMR 10.28 and 10.29, the Conservation Commission recognizes that there is evidence relating to the seasonal climatic/meteorologic energy levels and historical storm or wind patterns documented during the summer months and evidence relating to the textural components (coarse sand and gravel) of the back shore area which would indicate it was unlikely that the limited seasonal use of proposed alternative routes, would result in

increasing potential for storm and flood damage in violation of 310 CMR 10.28 (3)(c) or interfere with the landward movement of the Dunes of the Barrier Beach in violation of 10.28 (3)(d) and 10.29 (3).

When the need to protect specific habitat, nesting, and/or foraging sites by closure of the access routes is necessary, the Town may propose temporary access routes. When specific temporary routes are proposed, they will be done so after consultation with the Conservation Agent, Natural Resources Manager, and staff from the NHESP. If the Commission finds that such routes meet the performance standards cited in the relevant regulations, the Commission may approve temporary alternate ORV access route or routes.

E. RARE SPECIES

In addition to Piping Plovers and Least Terns that receive special protection measures under the Federal and or State Endangered Species Acts, and have specific management requirements detailed herein, the Commission recognizes that Nauset Beach South is habitat for other migratory waterbirds and shorebirds. Use of this habitat may be for nesting, resting, or feeding, either in the nesting season or during bird migration. The performance standards and management guidelines documented here for use in protecting Rare Species may be applied, as needed, to benefit other nesting shorebirds at the recommendation of the Natural Resource Manager.

1. Project Compliance with Performance Standards

The Conservation Commission finds that a potential to alter the resource area within part of the mapped habitat for State-listed rare species does exist. However, the Commission finds that the project as proposed and conditioned herein, inclusive of the hiring of a qualified habitat specialist and incorporation of temporary beach closure measures, should provide the protection necessary so that no effect will result within these specified habitat sites.

The presumption that the maintenance activities requested in order to continue ORV use of Nauset Beach South will impact specified habitat sites, in the opinion of this Conservation Commission, has been overcome and rebutted by the proposed species management plan. This management plan will require, among other measures, observation and tracking of the Plover and Tern species to determine exact habitat sites, including foraging routes; it will require temporary closures of the identified sites and routes to ORV and pedestrian use; and it will provide placement of fencing and predator barriers to afford habitat protection. The Commission, as the issuing authority, therefore finds that the project as proposed, and herein conditioned, should not result in an impact to

specified habitat sites identified for Plover and Tern populations on Nauset Beach South. If however, these conditions prove inadequate to protect the wetland interests defined in MGL 131, Section 40, or to ensure that there is no impact on rare species habitat as required by CMR 10.37, the Commission reserves the right to impose the necessary additional conditions and restrictions upon the use of ORVs on the Nauset Beach South.

2. Plover Monitor

The Park Commission, in cooperation with the Conservation Commission, shall be responsible for the hiring of a suitably qualified person to serve as a Piping Plover and Tern Habitat Analysis Specialist, hereafter referred to as "Monitor," responsible to the Director of Natural Resources. The Monitor will be employed annually from April 1 through August 31 to provide technical information relative to the habitat and characteristics of the Piping Plover and Tern populations on Nauset Beach, and will be responsible for alerting the Director of Natural Resources and the Conservation Commission, or their designated agents, as to the need to temporarily close access to ORV traffic during plover nesting and fledgling activity periods. The Monitor will also be responsible for providing the Parks Commission and the Conservation Commission regular updates on plover and tern activity, as well as a season-end report.

3. Limitation of access to prime nesting habitat areas

a. Vehicular Access

Parking in or vehicular access through identified Plover and Least Tern habitat as determined annually by the Plover Monitor and Natural Resources Manager, shall be prohibited. This restriction will not necessarily prohibit vehicular access past (i.e. northward/southward) such areas if consistent with specific management guidelines.

b. Boater and Pedestrian Access

It has been the custom for visitors to the Nauset Beach South to arrive by boat. Generally, this takes place in the area of the barrier beach terminus currently located outside the Town of Orleans. Disturbance of the birds by these pedestrians may be minimized by installing posts, signs, and fencing to indicate closed areas. Pedestrians will be encouraged to use the designated walkways thereby helping to protect dune form, vegetation, and birds.

Pedestrians shall be excluded from existing wash over areas in a manner which does not interfere with, or cause any effect to, the ability of such wash over areas to serve as nesting habitat for Shorebirds.

4. Piping Plovers

The beach management strategy for the Plovers includes devoting the highest priority to encouragement of the earliest arriving birds to nest as quickly and successfully as possible: i.e. minimizing human disturbance. The result, in addition to a high reproductive success rates, may be to minimize the period during which the beach is closed to ORV use.

Spring Arrival (March 16 - April 30)

Piping Plovers return from their southern winter quarters to establish nesting territories along Cape Cod beaches in early spring.

Management

Prior to the arrival of Piping Plovers, potential nesting areas shall be visited by a person familiar with their habitat requirements to evaluate the natural changes that have occurred through the winter, and to identify areas of suitable nesting habitat. The suitable nesting habitat shall be posted, with endangered species nesting area signs, and delineated with symbolic fencing, prior to the arrival of plovers (no later than April 1) to reduce the potential disturbance of this potential habitat by beachgoers for Plovers establishing their nesting territories. Vehicular access into or through posted areas shall be prohibited, though vehicles may pass by such areas at this time.

Laying and Incubation of Eggs (April 20 – August10)

Normally the nest, a shallow scrape in the sand, is placed at the toe of the dune, in a wash-over, or along the spring tide wrack line. The first of the sand-colored eggs is laid in late April and may contain a full clutch of 4 eggs a week after the first egg is laid. Then both adults incubate the eggs, alternating every few hours, for the next 28 days.

Management

When a monitor determines a nest is to be enclosed, a welded wire fence shall be placed around the nest, using a design recommended by the Massachusetts Division of Fisheries and Wildlife. Endangered species signs shall be placed

outside the symbolically fenced area to add additional protection. Vehicular access within the symbolically fenced area shall be prohibited.

Before the eggs hatch, it is necessary to close the beach and to level the ORV ruts to prevent an adverse effect on the young hatchlings. This must be accomplished within a 28 day period after incubation commences. If ruts are to be leveled by natural process, one week should be allowed, and the beach should be closed 21 days after the last egg is laid or the start of incubation. If ruts are to be leveled by hand, the beach could remain open a few additional days. When plover nests are found after the last egg has been laid, making it impossible to predict hatch date, restrictions on vehicles should begin on a date determined by 1 of 3 scenarios:

1) If a plover nest found with a complete clutch is monitored twice per day, at dawn and dusk (before 0600 hrs and after 1900 hrs), vehicle use may continue until hatching begins. Nests should be monitored at dawn and dusk to minimize the time that hatching may go undetected if it occurs after dark. Whenever possible, nests should be monitored from a distance with spotting scope or binoculars to minimize disturbance to incubating plovers.

2) If a plover nest is found with a complete clutch before May 22 (the earliest recorded hatch date for piping plovers in Massachusetts), and is not monitored twice per day, at dawn and dusk, then restrictions on vehicles should begin May 22.

3) If a plover nest is found with a complete clutch on or after May 22, and is not monitored twice per day, at dawn and dusk, then restrictions on vehicles should begin immediately.

Hatching Eggs and Movement of Young (May 20 - August 20)

Piping Plovers have precocial young, capable of walking and feeding themselves within 24 hours after hatching. The most vulnerable stage in their breeding cycle is the period when hatchlings are less than 10 days old, when they accompany the adults in their feeding forages. Normally, all eggs in a clutch hatch within a 24 hour period between the hatching of the first and last eggs. The hatchlings then accompany the adults to feed on small invertebrates along the wrack line, toe of the dunes, and inter-dunal blowouts. During their first week, the young usually do not wander more than 100 yards from their original nest site. They do not use the nest after the first couple of days from their hatch

date, but depend on their cryptic coloration to blend in with their surroundings. If an adult Plover sounds an alarm note, the young either run for cover beneath one of the adults, or seek cover in vegetation, among stones, along the wrack line, or in a vehicle rut. Plover chicks over a week old may accompany the adults for greater distances, up to 1/4 mile, and spend increasingly more of their time foraging along the wrack line and out into the intertidal zone.

Management

Plover chicks on Nauset Beach South may be seen foraging with adults in areas anywhere between the Bay and the ocean intertidal zones in areas where there is little vegetation to obstruct their movements. Because they may go from the ocean side to the bay side within minutes, using existing blowouts and over wash areas, they are vulnerable to vehicular travel through these areas at all times. Additionally, the ruts left by vehicles are known to trap young chicks that subsequently may be run over by another vehicle using the same ruts, or they remain trapped in the rut, may die from exhaustion, or are found in the rut by a predator.

Therefore, when unfledged plover chicks are present, vehicles should be prohibited from all dune, beach, and intertidal habitat within 100 yards of either side of a line drawn through the nest site and perpendicular to the long axis of the beach. The resulting 200 yard-wide area of protected habitat for plover chicks should extend from the ocean-side low water line to the bay-side low water line or to the farthest extent of dune habitat if no bay-side intertidal habitat exists. However, vehicles may be allowed to pass through portions of the protected area that are considered inaccessible to plover chicks because of steep topography, dense vegetation, or other naturally-occurring obstacles. If unfledged plover chicks move outside the original 200 yard-wide area of protected habitat, then the boundaries of the protected area should be adjusted to provide at least a 100 yard buffer between chicks and vehicles.

Fledging of the Young (June 28 - August 20)

Young plovers are capable of flying short distances within 30 days of their hatch date. Typically, these novice fliers remain with the adults, foraging in the same general area anywhere from a few days, to the rest of the summer. Adults may lead fledged young to more remote portions of neighboring beaches if they are disturbed by recreation or predation.

Management

Once the Monitor has determined that the young have fledged or left the beach, the area may be re-opened to vehicular traffic.

5. Least Terns

Nauset Beach South has been home to Least Tern nesting colonies.

Spring Arrival (May 7 - July 10)

Least Terns return from their winter quarters in South America to establish nesting colonies ranging in size from a dozen pairs to over 1000 pairs. Least Terns have used Nauset Beach South, and data over past years shows that colony size has varied annually.

Management

Prior to the arrival of Least Terns, potential nesting areas shall be visited by a person familiar with their habitat requirements to evaluate the natural changes that have occurred through the winter, and to identify areas of suitable nesting habitat. The suitable nesting habitat shall be posted, with endangered species nesting area signs, and delineated with symbolic fencing, prior to the arrival of the Terns to reduce the potential disturbance of this potential habitat by beachgoers. Vehicular access into or through posted areas shall be prohibited, though vehicles may pass by such areas at this time. On Nauset Beach South, it is likely that the protected area will have to be adjusted to encompass additional portions of the colony.

Laying and Incubation of Eggs (May 20 - August 5)

Most clutches of 2-3 eggs are laid in early June. The nests are simple scrapes in the sand or on bare stone between the wrack line and the toe of the dune, or in an open blow-out.

The adults incubate the eggs for 21 days after the last egg is laid. It is not uncommon for Least Terns to lose nests to storms or high tides. Least Terns will attempt to discourage mammalian, avian, or human intruders who come near their nests by attacking in unison, calling loudly, and dropping their "white wash."

Management

Incubation is the most vulnerable stage for breeding Least Terns. The presence of people, dogs, kites, and predators too close to a colony causes the entire flock of nesters to leave their nests during the disturbance. If the disturbance lasts more than 15 minutes, the eggs may be destroyed by exposure to the sun, rain, or wind-blown sand. Therefore, it is critical that the Monitor for the colony adjust the perimeter of the fence and signs to include a buffer zone wide enough to prevent disturbance to incubating adults.

Hatching of Eggs and Movement of Young (June 9- August 25)

The 2 to 3 semi-precocial young are active within 24 hours of hatching. Least Tern young are fed by the adults. Although the young are capable of running within a week of hatching, they typically do not wander more than 15 feet from their nest depression during the first 10 days. However, at ages between 10 and 28 days, they will run long distances to flee an intruder, find better locations for hiding, or await the return of adults with food. These older juveniles, over 14 days old, are often difficult to see. Their plumage is camouflaged, and they hide in vegetation and cover on the wrack line.

Management

When unfledged least tern chicks are present, vehicles should be prohibited from all dune, beach and intertidal habitat within 100 yards of either side of lines drawn through the outermost nests in the colony and perpendicular to the long axis of the beach. The resulting area of protected habitat for least tern chicks should extend from the ocean-side low water line to the bay-side low water line or the farthest extent of dune habitat if no bay-side intertidal zone exists. If unfledged chicks move outside the original protected area, then the boundaries of the protected area should be adjusted to provide at least a 100-yard wide buffer between unfledged chicks and vehicles. However, vehicles may pass through any portions of the protected area considered inaccessible to least tern chicks because of distance, steep topography, dense vegetation, or other naturally-occurring obstacles. Because least tern chicks disperse from nests shorter distances and at older ages than plover chicks, under some circumstances it may be possible to allow passage of vehicles through portions of least tern chick habitat if, in the opinion of the Division of Fisheries and Wildlife, this can occur without substantially increasing threats to least tern chicks or their habitats.

Fledging of Young (July 9 - September 10)

Least Terns young are capable of weak flight about 28 days after hatching. Most young in a colony fledge in mid-to late July in Massachusetts, unless the colony has been abandoned because of by tides, storms, or predators, and the survivors re-nest. Once the young are capable fliers, they are led by the adults further from the busy colony to quieter portions of beaches and sandbars. The young will even fly out to the fishing grounds where they rest on the water and wait to be fed.

Management

The Monitor of the colony will determine when the Terns have left the nesting area. As long as Least Terns are landing in the fenced area, it is likely that they are still nesting or rearing young. Most Least Terns will have left Massachusetts by late August or early September.

6. Diamond Back Terrapins

Diamond Back Terrapins have been observed nesting during both day and night on certain portions of the Nauset Barrier Beach system. Diamond Back Terrapin nesting sites, or habitat, needs to be protected and managed. Females venture onto land to nest typically once from mid-June to mid-July.

Efforts shall be made by the Monitor to identify and take protective measures to ensure successful nesting and nest protection. Efforts shall include alerting the appropriate state agency when Terrapin tracks are located on the beach. When tracks lead to nests, nests should be reported to the appropriate state agency so that a licensed specialist can provide onsite monitoring, nest relocation and or management for nesting success.

F. MANAGEMENT AND ANNUAL REVIEW

Management of the resource areas in terms of ongoing use, use restrictions , etc. will be the primary responsibility of the Park Commission and Natural Resources Department, with provisions for annual review of management guidelines and personnel hirings to be made cooperatively with Conservation Commission input prior to April 1st.

Changes in management, in relation to Rare Species, such as waivers of ORV closure requirements, by the State and Federal Agencies, may be allowed, upon notice to the Conservation Commission (e.g. Conservation & Management Permit).

As part of the overall ORV management plan, the Park Commission will instruct the Natural Resources Department personnel to maintain the approved ORV corridors and to install posts, fencing, and signage as subsequently approved by the Conservation

Commission. Additionally, the Conservation Commission will instruct the Department of Natural Resources personnel to continue ongoing re-vegetation and nourishment efforts, if needed, as described and approved by the Conservation Commission. These actions and the overall ORV management plan will be reviewed and approved annually by the Conservation Commission, based upon the reports and recommendations resulting from the implementation of this ORV Management Plan.

G. ENFORCEMENT

The Park Commission shall require additional enforcement patrol of the Nauset Beach South ORV corridor to include expanded patrol coverage during off-peak usage, specifically weekday and pre-season periods. Should expanded patrol prove inadequate to protect the natural and wild life resources which are the subject of this ORV Management Plan, the Conservation Commission may require additional enforcement.

Overall, the enforcement and management responsibility of Nauset Beach South as described by this ORV Management Plan, is designated by state and local statutory requirements to Town of Orleans officials. In this instance, primary enforcement responsibility will be shared by the Conservation Commission, Park Commission, and their respective agents.

**BEACH RELATED REVENUE
FISCAL YEARS 2003 - 2013**

IN THOUSANDS

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>AVG</u>
NAUSET	483	446	412	573	560	603	495	538	574	648	626	542
SKAKET	184	85	91	119	129	140	132	139	141	144	144	132
ORV	336	468	429	421	270	214	257	231	225	279	226	305
OTHER							117	112	106	120	136	118

MASSACHUSETTS PIPING PLOVER CENSUS FORM

Year: 2013

Observer(s): Paul Wightman, Pat Johnson, Nathan Lake

Site Name: Nauset Spit (Heights) includes all of the area north of the public parking lot and public beach and designated as Areas 1, 2, 3, 4, 5, 6, 7, 8, 9, to the tip of Nauset (Spit). Also includes Skaket Public Beach (separate public beach off site) with 1 single nest. Also includes New Island, which is under National Park Service jurisdiction, was monitored by Town until 6/24/13, thereafter by National Park Service monitor. Also includes nests on public beach to Aspinet Road.

Town: Orleans

Ownership: Town of Orleans

⇒ *Please attach a map of this site that shows locations of all nests and any pairs that did not nest. **GIS NEST SITE MAPS ATTACHED on 8 ½ X 11 sheets.***

Agency: Dawson L. Farber IV
 Natural Resources Manager
 Harbormaster/Shellfish Constable
 Town of Orleans, MA
 19 School Rd.
 Orleans, MA 02653
 P: (508)240-3755
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Telephone: 508-240-3755 **Email:** Dawson Farber IV, Natural Resources Manager.
dfarber@town.orleans.ma.us
 Shorebird Monitor: Paul Wightman **Email** lawwight2003@yahoo.com

Census Results:	Index Count ^a	Total Count ^b
No. of Pairs	16	16
Unpaired Adults	1	1

Census remarks (includes notes on pairs that did not nest [dates present, behavior]): Monitoring was undertaken primarily at dawn and dusk during census period. Monitoring was increased to dawn and dusk during mating, nesting, egg laying and incubation periods. Monitoring at dawn and dusk periods was also applied with unfledged chicks, attending adults and their primary habitat. Nest A1 & A2 located on public beach -- NO ORV traffic and was included with Nauset Heights index count for short and long form.

Nest Names Designations: "NS" stands for Nauset Heights and includes all area including the public beach and north of the main parking area, including all nests designated as "A" which stands for Aspinet Road at the public beach area where no ORV traffic is allowed. **"No evidence of re-nest.** List pairs not present during Index Count period:

Pair **P11** located at the (Pochet Washout) was a re-nest late season, counted during Index count period. Pair **SB2** was present during census count, but lost nest due to predation by Gull just prior to enclosure and is believed to have re-nested just south of the town line between Chatham and Orleans. The **NS2** nest may be re-nest from New Island which was predated with 1 egg before the North Beach but no solid evidence. Although New Island is under NPS jurisdiction it was counted during census period. All other pairs that were counted during index remained to establish nests due to use of enclosures and no late spring or early summer storms resulting in stable conditions for nesting.

List pairs not present during Index Count period: All present during count (excepting New Island). This area NPS jurisdiction.

Send to: Scott Melvin, Mass Wildlife, One Rabbit Hill Rd., Westborough, MA 01581 scott.melvin@state.ma.us 508-389-6345 (off.)

April 2013^c *Chicks are considered "fledged" if they are ≥ 25 days old or are observed in flight for ≥ 50 ft., whichever occurs first.*

Month	Approx. # of visits to site per period
Apr. 1- 15:	15
Apr. 16-30:	15
May 1-15:	15
May 16-31:	15
June 1-15:	15 -30
June 16-30:	15- 30
July 1-15:	15- 30
July 16-31:	15- 30

Report specifications of predator enclosures used:

Enclosure Design	A	B	C
Shape	circular	Not utilized	Not utilized
Diameter/Length of side	10 ft		
Size of wire mesh	2 in x 4 in		
Total Height	4 ft		
Height above ground:	3 ft 8 in		
Depth buried:	4 -6 inc		
Cover material	bird netting		
Cover spacing/Mesh size	3/4 in		

Management actions taken or needed/Remarks:

Monitoring of nests occurred primarily at dawn during index count with periodic dusk counting and observations at dusk. Once nests were established and eggs were laid, monitoring occurred each day at dawn and dusk, including all periods when unfledged chicks hatched. Potential nesting habitat was fenced using symbolic fencing, erected prior to nesting period and adjusted based on nest sites. Standard Type “A” enclosures were utilized on the majority of nests after 3 eggs had been laid by adults. Enclosures placed where adult attachment to the nest site was observed and rated as a “high confidence” that nest would not be abandoned if enclosed. Although some nest abandonment did take place, it was primarily observed as being due to mammal harassment of adults. Monitoring was always conducted from a distance with field glasses and enclosures were inspected daily. No predator control methods have been implemented on habitat for many years, therefore predators, primarily American Black Crow, Red Fox and Coyotes were the main predators of eggs and chicks. Nests were enclosed immediately if found with 4 eggs. When enclosures were used, incubation resumed and was observed by adults within 5-10 minutes of enclosing nest with type “A” predator control device. The use of enclosures is believed to have created protection from predation of eggs as well as resulting in a stable period for incubation to occur by adults. While there were several nests abandoned due to predator harassment of adults, without the use of enclosures, egg predation and/or adult predation or abandonment of nests by adults, may have been higher due to the exceedingly high number of predators observed. Chick predation was high due to the number of predators frequenting the nest sites daily and nightly and hunting in nest area habitats and foraging habitats.

Vehicle Restrictions for Unfledged Chicks and nest sites at Nauset Heights: The Director closed ORV traffic from Area 3 to Area 9 at the (Spit) on May 26, 2013 due to a 4 egg nest found just north of Area 3. A barricade was immediately erected well in excess of the 200 yard guideline to protect NS4 a 4 egg nest found 100 yards south of Pole number 4. This prevented ORV traffic north of the barricade. All of Nauset Heights was closed to ORV traffic on June 21, 2013 and remained closed due to the proximity of one nest “A2” based on projected hatch date. The ORV trail and traffic remained closed until the chicks fledged on July 23, 2013. Nauset Heights was gradually opened moving north to the Spit as chicks fledged. It was not fully opened to ORV traffic until August. 15, 2013. No spring storms occurred so there was minimal loss due to storm surge

^a The **Index Count** includes pairs observed during the **June 1-9** count period, and pairs determined to have been present during that period based on laying or hatching dates.

^b Pairs included in the **Total Count** must have been present at the site for ≥ 2 weeks and exhibited courtship or territorial behavior during that period, if not actual nesting.

Site Name: Nauset Spit (Heights)

Year: 2013

Observer(s): Paul Wightman, Pat Johnson, Nathan Lake

Pair No.		Nest No.	No. eggs laid	No. eggs hatched	No. chicks fledged	Date clutch found	No. eggs when clutch found	Date clutch completed (if known)	Date nest hatched (H) or failed	Enclosure Report		
										Y/N	Design (A)	Date installed
1	A-1 Public Beach	4	3	2-3	05/18/13	4	Unknown	6/15/13 H	Y	A	5/18/13	
2	A-2 Public Beach	4	4	3	5/30/13	4	Unknown	6/23/13 H	Y	A	5/30/13	
3	NS 1 Area 8	4	0	0	5/18/13	1	5/20/13	06/07/13 Abandoned	Y	A	5/18/13	
4	NS 2 Area 8	2	0	0	5/17/13	1	06/20	5/19/13 Predated	N	N/A	N/A	
5	NS 3 Area 7	2	0	0	05/25/13	3	5/27/13	6/1/13 Abandoned	Y	A	5/25/13	
6	NS 4 Area 3	4	4	0	05/26/13	4	05/26 based on hatch date	6/23/13 H	Y	A	5/26/13	
7	NS 5 Area 8	1	0	0	5/28/13	1	N/A	N/A	N	N/A	N/A	
8	NS 6 Area 6	4	2	2	5/30/13	2	6/3/13	6/30/13	Y	A	6/1/13	
9	NS 7 Area 8	1	0	0	6/1/13	1	N/A	6/2/13 Failed	N	N/A	N/A	
10	NS 8 Area 4	4	0	0	6/3/13	1	6/8/13	06/12	N	A	6/6/13	

^c Chicks are considered "fledged" if they are ≥ 25 days old or are observed in flight for ≥ 50 ft., whichever occurs first.

^a The **Index Count** includes pairs observed during the **June 1-9** count period, and pairs determined to have been present during that period based on laying or hatching dates.

^b Pairs included in the **Total Count** must have been present at the site for ≥ 2 weeks and exhibited courtship or territorial behavior during that period, if not actual nesting.

Site Name: Nauset Spit (Heights)

Year: 2013

Observer(s): Paul Wightman, Pat Johnson, Nathan Lake

Page 4 of 6

Nest No.	Cause of egg mortality/supporting evidence ^d	Nest No.	Cause of chick mortality/supporting evidence ^d
NS 1	Unknown. Nest Abandoned after predator harassment. Fox tracks positively identified at base of enclosure circling enclosure. Monitored 6/6/13 still incubating. On morning of 6/7/13 monitoring revealed nest abandoned. Red fox tracks and prints outside enclosure and at base. Digging in several spots at base of enclosure. Mammal harassment probable cause of abandonment.	NS 1	No Chicks
NS 2	American Black Crow. Crow predation of nest two egg nest found on 5/15/ 2 eggs, predated by American Black Crow on 5/19/13. Fresh Crow tracks at nest site and on top of nest. NS2 re-nested new nest named NS3.	NS 2	No Chicks
NS 3	Nest found on 5/25/13 with 3 eggs. Compete on 5/27/13. Nest enclosed on 5/25/13. Nest abandoned on 6/1/13 reason unknown. Red fox tracks in vicinity of enclosure. No evidence of adult predation found.	NS 3	No Chicks
NS 4	Four eggs hatched on 6/23/13. Chicks disappeared on 6/25/13. Reason not known but fox tracks observed at enclosure base and foraging habitat. American Black Crows also present at nest site daily.	NS 4	Red fox tracks observed at nest within 3'-5' site nightly.
NS 5	1 egg nest found on 5/28/13 predated on 6/1/13 by American Black Crow tracks positively identified at nest site on to of nest.	NS 5	American Black Crow tracks on top of and running over nest site.
NS 6	1 egg did not hatch.	NS 6	1 Chick unknown
NS 7	1 egg nest found on 6/1/13 predated on 6/2/13 predator not indentified.	NS 7	No Chicks
NS 8	Nest found 6/3/13 abandoned 7/14/13 Coyote and Red Fox tracks at base of enclosure and digging Nest were abandoned and adults not observed again.	NS 8	Coyote tracks at nest site. TRACKS OBSEVED WITHIN 2-5' of nests and covered the ground over the entire foraging habitat daily. Can not speculate as to chick mortality.

^d Give cause of egg or chick loss for each nest or brood, if known or strongly suspected; please provide details of supporting evidence. Use additional pages if necessary.

^a The **Index Count** includes pairs observed during the **June 1-9** count period, and pairs determined to have been present during that period based on laying or hatching dates.

^b Pairs included in the **Total Count** must have been present at the site for ≥ 2 weeks and exhibited courtship or territorial behavior during that period, if not actual nesting.

Site Name: Nauset Spit (Heights)

Year: 2013

Observer(s): Paul Wightman, Pat Johnson, Nathan Lake

No. eggs laid	No. eggs hatched	No. chicks fledged ^c	Date clutch found	No. eggs when clutch found	Date clutch completed (if known)	Date nest hatched or failed	Enclosure Report			
							Nest No.	Y/N	Design (A, B...)	Date installed
NS9 Area 8	2	0	0	06/14/13	1	N/A	6/6/13	N	N/A	N/A
NS10 Area 7	4	3	0	6/16/13	2	6/20/13	7/13/13 Hatched	Y	A	6/18/13
NS11 Area 9	4	3	0	6/20/13	1	N/A	06/19/13	N	N/A	N/A
NS12 Area 8	1	0	0	6/21/13	1	N/A	6/30/13 Predated	N	N/A	N/A
SK1 Skaket Beach		0	0	06/10	1	N/A	06/19 High tide	Y	N/A	5/16/13
NI- 1 New Island NPS Jurisdiction	4	0	0	6/6/13	3	6/10/13	Between 6/25/13/ and 7/7/13 Note: Not monitored daily between these dates Re: NPS jurisdiction.	N	N/A	N/A

^c Chicks are considered "fledged" if they are ≥ 25 days old or are observed in flight for ≥ 50 ft., whichever occurs first.

^d Give cause of egg or chick loss for each nest or brood, if known or strongly suspected; please provide details of supporting evidence. Use additional pages if necessary.

^a The **Index Count** includes pairs observed during the **June 1-9** count period, and pairs determined to have been present during that period based on laying or hatching dates.

^b Pairs included in the **Total Count** must have been present at the site for ≥ 2 weeks and exhibited courtship or territorial behavior during that period, if not actual nesting.

Site Name: Nauset Spit (Heights)

Year: 2013

Observer(s): Paul Wightman, Pat Johnson, Nathan Lake

Page 6 of 6

Nest No.	Cause of egg mortality/supporting evidence ^d	Nest No.	Cause of chick mortality/supporting evidence ^d
NS 9 NS12 SK 1 NI-1	2 eggs lost reason unknown. 4 eggs lost reason unknown. 4 eggs lost to high tide. Reason for egg loss unknown. NOT COUNTED IN CENSUS NPS Jurisdiction.	NS10 NS11	3 chicks lost within 19 days, Red Fox tracks at nest site nightly. 3 chicks lost within 16 days. Red Fox tracks at nest site nightly as follows: RED FOX TRACKS OBSERVED WITHIN 2-3' of nests and covered the entire foraging habitat nightly and observed by Monitors daily. CROW TRACKS walked over the nest where eggs missing and when chicks missing the crow tracks were observed within several feet of the nest and over much of the foraging habitat and intermingled with plover tracks of chicks and adults. Can not speculate as to cause of egg or chick mortality.

^d Give cause of egg or chick loss for each nest or brood, if known or strongly suspected; please provide details of supporting evidence. Use additional pages if necessary.

Send to: Scott Melvin, Mass Wildlife, One Rabbit Hill Rd., Westborough, MA 01581 scott.melvin@state.ma.us 508-389-6345 (off.)

Site Name: Nauset Spit (Heights)

Year: 2013

Observer(s): Paul Wightman, Pat Johnson, Nathan Lake

MASSACHUSETTS PIPING PLOVER CENSUS FORM

Year 2013

Site Name: North Beach: Includes all of the area South of the main public parking lot and public beach and designated as areas between Cut 1, 2, 3, 4, 5, to Chatham Town Line. Cut 6 is Chatham.

Town: Orleans.

Ownership: Town of Orleans

⇒ *Please attach a map of this site that shows locations of all nests and any pairs that did not nest. GIS NEST SITE MAPS ATTACHED on 8 ½ X 11 sheets.*

Observer(s): Paul Wightman, Pat Johnson, Nathan Lake

Agency: Dawson L. Farber IV,

Natural Resources Manager

Harbormaster/Shellfish Constable, Town of Orleans, MA

19 School Rd, Orleans, MA 02653

P: (508)240-3755 F: (508)240-3388

Telephone: (508) 240-3775 Email: dfarber@town.orleans.mau.us.

Census Results:	Index Count ^a	Total Count ^b
No. of Pairs	16	16
Unpaired Adults	1	1

Census remarks (include notes on pairs that did not nest [dates present, behavior]): 17 pairs were identified and observed during the census period. All pairs present and listed during the index count period nested due to good weather conditions and no spring storms. 1 pair SB2 lost their 3 egg nest due to predation by a Black Back Gull. The pair subsequently re-nested on the Chatham side of the town line approximately 50' north of the area designated as Cut 6. **Nest Name Designations: "P"** stands for **Pochet Washout Area**. This area includes a large storm wash over area running from the frontal beach to the west side of breach and wash over area and includes the mud flats west of the frontal beach adjacent to a tributary of Broad Creek and Pochet Island. The area also includes the *new wash over* area recently created in 2013 by a winter storms with a large breach of the dune system and wash over on the west side of the ORV trail adjacent to Cut 1. **"SB"** stands for **South Beach** and includes all of the area north of Chatham Town line. All ORV trails and Cuts were closed in accordance with the regulations.

List pairs not present during Index Count period: All pairs were present during the census period. The **SB2** pair established a nest 100'+ from the Chatham town line. The pair lost their nest due to predation by a Black Back Gull only a few hours before monitors were about to place a type "A" enclosure over the 3 egg nest. 1 adult present at SB2 disappeared when SB2 nested.

Month	Approx. # of visits to site per period
Apr. 1- 15:	15
Apr. 16-30:	15
May 1-15:	15
May 16-31:	16
June 1-15:	15 -30
June 16-30:	15- 30
July 1-15:	15 -30
July 16-31:	16 -30

Report specifications of predator enclosures used:

Enclosure Design	A	B	C
Shape	circular		
Diameter/Length of side	10 ft		
Size of wire mesh	2 in x 4 in		
Total Height	4 ft		
Height above ground:	3 ft 8 in		
Depth buried:	4 in to 8 in		
Cover material	bird netting		
Cover spacing/Mesh size	¾ in		

Page 2 of 4**Management actions taken or needed/Remarks:**

Sites were monitored on daily basis throughout nesting season. Potential nesting habitat was fenced off with symbolic fencing well before the nesting periods and arrival of Piping Plovers. The new large wash over area created by the severe 2012/2013 winter storms located adjacent to Cut 1, on the west side of the ORV trail was fenced off with symbolic fencing shortly after the breach and wash over was created, and prior to the pair establishing a nest and using the wash over area as foraging habitat. Vehicles were prohibited from beach access when active piping plover broods were present. Dogs prohibited on beach from May 15th through August 24, 2013 at which point the last of the unfledged chicks at nest P9 chicks fledged. Monitoring of nests took place at both dawn and dusk throughout nesting season once chicks hatched and during the census period. As monitoring progressed, symbolic fencing was adjusted with increased buffer areas where it was determined that additional protection was necessary to protect a nest site(s). The Standard Type "A" enclosures were utilized on the majority of nest after 3 eggs had been laid by adults, and the Monitors were confident that the adults had established a strong attachment to their nest sites with all Monitors required to be in agreement that a high rate of attachment to the nest had occurred, thus decreasing adult abandonment of the nest. Monitoring was always conducted from a distance, in the early morning or late afternoon and not during excessively hot days. Three people were always used when possible to enclose a nest within 20 minutes time. Field glasses were used to monitor nests and enclosures from a distance of 100 feet, to insure the enclosures were intact, and the adults could move freely in and out on all sides and that they had accepted the enclosure with minimum stress being observed. Due to the fact that no predator control methods have been implemented on entire habitat for many years enclosures provided protection from the high number of predators observed, Crows, Red Fox, and Coyotes. Nests were enclosed if found with 4 eggs immediately. Adults resumed incubation within 5-10 minutes of completion of enclosures. The use of enclosures is believed to have created protection from predation of eggs as well as creating a stable period and environment for incubation to occur by adults. While there were some nests abandoned due to predator harassment of adults, there was justification for the use of enclosures with high historical rates of predation of eggs. Large flocks of crows were observed daily monitoring. Red Fox tracks observed nightly within several feet of nest sites. Tracks of Red Fox and Coyotes were observed covering chick foraging habitat areas. Without speculating, the high rate of chick disappearance could not be documented with solid evidence. However, these were the primary predators in 2013.

Vehicle Restrictions for Unfledged Chicks at nest sites at North Beach. North Beach (all of the habitat south of the parking lot to Chatham Town Line was closed to ORV traffic on June 3, 2013 and did not re-open until August 23, 2013 when the 2 chicks hatched at the P9 nest were reported as fledged by Monitors. All Federal & State Guidelines were strictly adhered to. Dogs were prohibited on main beach from April 15th through September 15th. The main predators observed and were, American Black Crows by day, Red Fox, Coyotes, by night. During dawn monitoring each day, weather permitting, Red Fox and Coyote tracks were observed at nest sites and in foraging habitats. No spring storms occurred so there was minimal loss of nests due to storm surge. The P 9 nest was located in the primary dune at the frontal beach at Cut 1. This was a 4 egg nest which hatched out 2 chicks. Two eggs did not hatch for unknown reasons. The entire ORV trail from the access gate to the Chatham town line was closed once the chicks hatched and opened when they fledged. Their habitat was primarily the "new habitat from 2102/2013 storm wash over on the west side of the ORV trail in the new wash over area feeding primarily in the mud flats at low tide adjacent to the access road to Pochet Island.

^a The **Index Count** includes pairs observed during the **June 1-9** count period, and pairs determined to have been present during that period based on laying or hatching dates.

^b Pairs included in the **Total Count** must have been present at the site for ≥ 2 weeks and exhibited courtship or territorial behavior during that period, if not actual nesting.

Site Name: North Beach Orleans

Year: 2013

Observer(s): Paul Wightman, Pat Johnson, Nathan Lake

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Pair No.	Nest No.	No. eggs laid	No. eggs hatched	No. chicks fledged ^c	Date clutch found	No. eggs when clutch found	Date clutch completed (if known)	Date nest hatched or failed	Enclosure Report		
									Y/N	Design (A, B...)	Date installed
11	P1	4	3	1	5/5/13	2	5/10/13	6/5/13	Y	A	5/8/13
12	P2	4	2	2	5/5/13	1	5/12/13	6/8/13	Y	A	5/10/13
13	P3	4	2	0	5/7/13	1	5/14/13	6/15/13	Y	A	5/13/13
14	P4	4	4	4	5/19/13	1	5/15/13	6/12/13	Y	A	5/13/13
15	P5	4	0	0	5/16/13	1	5/17/13	5/30/13	Y	A	5/16/13
16	P6	2	0	0	6/4/13	2	N/A	6/15/13	Y	A	6/7/13
17	P7	4	0	0	6/10/13	1	7/15/13	7/5/13	Y	A	6/15/13
18	P8	2	0	0	6/13/13	2	N/A	6/14/13	N	A	N/A
19	P9	4	2	2	6/17/13	2	6/24/13	7/21/13	Y	A	6/24/13
20	P10	1	0	0	6/22/13	1	N/A	6/24/13	N	N/A	N/A
21	P11	3 1 egg lost to tide re-nest	2	0	6/24/13	1	2	7/22/13	N	N/A	N/A
22	SB1	4	4	2	5/6/13	1	5/12/13	6/8/13	Y	A	5/10/13

Site Name: North Beach

Year: 2013

Observer(s): Paul Wightman, Pat Johnson, Nathan Lake

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Page 4 of 4		No. eggs laid	No. eggs hatched	No. chicks fledged ^c	Date clutch found	No. eggs when clutch found	Date clutch completed (if known)	Date nest hatched or failed	Exclosure Report		
Pair No.	Nest No.								Y/N	Design (A, B)	Date installed
23	SB2	3	0	0	5/11/13	1	Predated	5/14/13	N	N/A	N/A
24	SB3	4	3	0	5/17/13	4	Unknown	6/8/13	Y	A	5/17/13
25	SB4	4	0	0	5/13/13	1	6/6/13	6/9/13	Y	A	6/4/13
26	SB5	1	0	0	6/16/13	1	Unknown	6/26/13	Y	A	6/19/13
27	SB6	4	4	1	6/17/13	4	Unknown	7/11/13	N	A	N/A

^c Chicks are considered "fledged" if they are ≥ 25 days old or are observed in flight for ≥ 50 ft., whichever occurs first.

Nest No.	Cause of egg mortality/supporting evidence ^d	Nest No.	Cause of chick mortality/supporting evidence ^d
P1	Unknown 2eggs did not hatch.	P1	1 chick missing 3 days after hatch.
P2	Unknown 2 eggs did not hatch.	P3	2 chicks missing 2 days after hatch reason unknown.
P3	Unknown 2 eggs did not hatch.	P11	2 chicks missing 9 days after hatch reason unknown.
P5	Nest abandoned predation of 1 adult by unknown predator. Remains collected stored in freezer. Predation of adult nest abandoned. 2 eggs.	SB1	4 eggs hatched 2 chicks missing 8 days after hatch reason unknown.
P6	Abandoned. Reason unknown. No evidence re-nests.	SB6	3 chicks missing after 13 days after hatch reason unknown.
P8	Lost to high tide.		Note: Only evidence of possible chick loss is Coyote tracks and Red Fox tracks at nest sites within 3' of nest and covering entire foraging habitat
P9	2 eggs did not hatch reason unknown.		
P10	Nest lost to high tide 1 egg.		
P11	Re-nest of P10 no egg loss 2 eggs laid		
SB2	1 egg did not hatch reason unknown.		
SB3	4 eggs lost to high tide.		
SB4	3 eggs abandoned an in nest. Red Fox Tracks nearby within 3 feet.		
SB5	Abandoned 3 eggs remained in enclosure. Red Fox tracks digging at base of enclosure.		

^d Give cause of egg or chick loss for each nest or brood, if known or strongly suspected; please provide details of supporting evidence. Use additional pages if necessary.

Original File Page 160
Send to: Scott Melvin, Mass Wildlife, One Rabbit Hill Rd., Westborough, MA 01581 scott.melvin@state.ma.us 508-389-6345 (off.)
Site Name: Nauset Spit (Heights) **Year:** 2013 **Observer(s):** Paul Wightman, Pat Johnson, Nathan Lake

NOTE: Of the 27 pairs of Plovers which nested only 21 chicks fledged.

NOTE: Nests were not assigned “a” or “b” for re-nests originating on new Island or re-nesting on Nauset Spit. One possible pair was involved, however, due to infrequent monitoring of New Island which was under NPS jurisdiction. It was impossible to determine if the pair on New Island re-nested on Nauset Spit. Nauset staff was informed at the outset of the season and census collecting period that this area was within the jurisdiction of NPS and would be monitored by their staff. Nauset Staff only monitored infrequently thereafter. No new nests observed on N1-1. Failed due to high tide.

The only positively identified re-nest was P11. This pair’s first nest P10 was lost to a high tide and laid 2 more eggs in the P11 nest which hatched. The chicks were missing after several days from hatch. No evidence for the loss of 2 chicks could be determined.

Additional Notes for Nauset Beach 2013 PIPL Census

Nauset Spit:

- This area encompasses everything north of the Nauset Beach parking lot to Nauset inlet.
- Two pairs nested early in the season, but lost their nests nearly a month prior to the census (May 8th). Following the loss of these nests, the pairs were not sighted again in these areas. We cannot reasonably say these pairs remained in the area and have reported them as having left prior to the census period and moved to Chatham as their nest was lost to gulls with 3 eggs hours before we made about to enclose.
- Evidence of harassment by predators and possible adult mortality led to removal of all enclosures on 6/12. The Crow population is growing and is very prevalent on the north and south sides, keying in on chicks, enclosures and monitoring activity. Crows were the main predator. It should be noted that the OoC, now 23 years old, has never been re-visited by the Orleans Conservation Commission. The enclosures mandated under said OoC may be contributing to these high loss numbers.

Pochet Washover Area and Nauset Beach:

- This area encompasses everything south of the Nauset Beach parking lot to the Chatham town line. At least 3 nests were believed to have lost chicks to crows, fox and/or coyotes which have high populations on the North beach side.
- Overall, the number of red fox, crows and coyotes appear to be on the rise throughout the area. Several dens have been identified by monitors. There were also frequent reports from locals of fox sightings, with animals seen walking the wrack line each night.
- The Town is considering applying for a Conservation Land Management Permit to eliminate and reduce the number of predators in order to create a balance between predator species and plovers. As of the date of this report, no final decision had been made by the town's administration.

Tern Colonies (Nauset Spit and Pochet Washover area):

- Tern populations are ranging from 55-60, for all colonies (both north and south). The north colony (Nauset Spit) did not produce any chicks due to nightly predation of eggs. Broken egg shells were discovered daily by monitors. Black Back Gulls and crows and believed to be the primary predators.

ORLEANS HISTORICAL COMMISSION
TOWN HALL, 19 SCHOOL STREET, ORLEANS, MA 02643

April 3, 2014

RE: Environmental Review for Habit Conservation Plan

Dear Mr. Kelly;

The Orleans Historical Commission reviewed the Habitat Conservation Plan at the last meeting March 28, 2014. It was moved and seconded "That to the best of our current knowledge, there are no known historic or archaeological sites that will be affected by the proposed activities in the Habitat Conservation Plan.

Sincerely,

Ann Sinclair, Chair



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
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May 23, 2014

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Habitat Conservation Plan for the Town of Orleans –
Adaptive Management for Non-Essential Vehicle Access
PROJECT MUNICIPALITY : Orleans
PROJECT WATERSHED : Cape Cod
EEA NUMBER : 15192
PROJECT PROPONENT : Town of Orleans
DATE NOTICED IN MONITOR : April 23, 2014

Pursuant to the Massachusetts Environmental Policy Act (MEPA) (M.G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** the preparation of an Environmental Impact Report (EIR).

Project Description

As described in the Environmental Notification Form (ENF), the project consists of a proposed Habitat Conservation Plan "Adaptive Management for Non-Essential Vehicle Access" (HCP) developed by the Town of Orleans (Town) to manage breeding piping plovers and their habitats at Nauset Beach in Orleans. The CMP will guide management and regulatory activities along Nauset Beach for the next three years to protect the piping plover from an incidental take that might otherwise result from recreational use of the beach. Town beach management will include: hiring dedicated staff to install symbolic fencing to protect nesting habitat; enforcing restrictions on the use of certain areas at certain times by pedestrians and over-sand vehicles (OSVs) in accordance with state and federal guidelines; hiring specifically trained bird monitors to document plover reproductive success; installation of predator exclosures around nest areas, and a variety of other measures designed to protect and increase plover reproductive activity. Due to the extended beach closures to OSV use over the past decade, the Town is also proposing to implement limited, late-season escorting of OSV caravans through known nesting habitat in

order to avoid complete closure of the beach past two broods of piping plover chicks during the late phase of plover reproductive activity.

The HCP does not propose any changes to the management of least tern and diamond-backed terrapin species and does not require any additional state or federal permits for these species nor is it anticipated to result in a “take” of these species.

The HCP will address several of the Town’s concerns regarding continued piping plover protection including:

- access past the 0.8-mile long area known as the Pochet Wash-Over where there is nesting and related piping plover activity – which is presented as the primary means of access to the majority of Nauset Beach;
- significant decline in revenue from the OSV management program due to increasing and predictable annual OSV access closures; and
- despite a significant investment of resources and funding, including restricted OSV access, the piping plover fledge success rate has not improved at Nauset Beach notwithstanding Town management in compliance with the Order of Conditions and guidelines set forth by U.S. Fish and Wildlife Services (USFWS) and Natural Heritage and Endangered Species Program (NHESP).

The Town, in collaboration with USFWS and NHESP, has prepared the HCP with a proposed three-year term, to address potential effects on piping plover resulting from Town management activities on Nauset Beach and to work toward the conservation and increasing recovery of the coastal population of the species. The Town has engaged in public outreach efforts including a panel discussion on the HCP sponsored by the Orleans Citizens Forum which was attended by NHESP, Mass Audubon and others. Specifically, the HCP proposes to allow three caravans of vehicles, with up to sixty vehicles per caravan, to be escorted through the nesting habitat area (on or after July 15) by trained monitors in the morning (three-hour period) and then again late in the afternoon (three-hour period) in order to guide these vehicles through this narrow stretch and assist them off the beach.

Project Background

The Town has been managing Nauset Beach in Orleans in accordance with state and federal guidelines for managing recreational beaches to protect piping plovers and their habitats. Although piping plovers remain vulnerable, the number of breeding pairs in Massachusetts has increased significantly in the past 25 years due in large part to effective management of both plovers and recreational activities by landowners and beach managers.

The Town received an Order of Conditions from the Orleans Conservation Commission in 1991 that includes a Beach Management Plan requiring protection of rare and endangered species in compliance with state and federal guidelines. In order to comply with the Wetlands Protection Act (WPA) and avoid a “take” of piping plovers, the Town currently restricts, when necessary, use of OSVs on portions of Nauset Beach during the breeding season (April 1 to August 31) to minimize potential adverse effects on nesting populations. These seasonal use

restrictions have been implemented annually since 1991. In 2006, the southern portion of Nauset Beach experienced its first complete OSV access closure due to protection of nesting and related piping plover activity. A complete OSV closure has been required during each consecutive season since 2006. Closures have generally been increasing in length; the 2013 closure was the longest on record (83 consecutive days). The entire extent of the beach (approximately six miles) is passable on foot; restrictions limit the area accessible by OSV to approximately one mile.

Project Site

Nauset Beach is an undeveloped barrier beach located between the Atlantic Ocean and Pleasant Bay. The beach has been actively used by OSVs for decades, and accommodates thousands of recreational visitors to the beach annually. The beach includes numerous coastal resource areas, and is located within the Pleasant Bay Area of Critical Environmental Concern (ACEC). The beach includes areas of Priority Habitat for piping plovers and least terns.

The ENF describes the Possible Permit Area (PPA) in order to set a boundary within which an adaptive and variable Actual Permit Area (Escort Corridor) may be determined. The PPA is approximately 0.8 miles in length (north to south). The Town acknowledges that due to the dynamic nature of the Pochet Wash-Over, the boundaries of the PPA are approximate. For the purposes of the HCP, both the northern and southern boundaries of the PPA are defined as the general location where the sandy eroded and sparsely vegetated wash-over area transitions into dense vegetation on both sides of the existing OSV corridor.

The Escort Corridor will be located in a further defined subset of the PPA. The specific location of the Escort Corridor is intended to be adaptive and variable so that for each escort session, the Escort Corridor may shift along the identified route depending on piping plover and least tern locations and/or movements as depicted in a Variable Escort Route Map included in the ENF. Updated corridor boundaries shall be reported daily to the Program Administrator by monitors prior to commencement of escorts. The Escort Corridor will not exceed 2,100 feet in length consisting of a 600-foot escort buffer in front of 1,500 feet of the actual escort (60 vehicles x 25 feet per vehicle which includes space between vehicles). The Escort Corridor will not exceed 30 feet in width (10 feet on each side of the 10-foot vehicle track). The total project area will be approximately 1.45 acres.

Permitting and Jurisdiction

The project is undergoing MEPA review and requires preparation of an ENF pursuant to 301 CMR 11.03(11)(b) because it requires a State Agency Action and is proposed within a designated ACEC. The project will require a Conservation and Management Permit (CMP) from NHESP. The project will also require an Incidental Take Permit (ITP) from USFWS and a new Order of Conditions from the Orleans Conservation Commission (and, on appeal only, a Superseding Order of Conditions from the Massachusetts Department of Environmental Protection (MassDEP)). The project may be subject to federal consistency review by the Massachusetts Office of Coastal Zone Management (CZM).

Because the Town is not seeking Financial Assistance from the Commonwealth for the project, MEPA jurisdiction extends to those aspects of the project that are within the subject matter of required or potentially required State Agency Actions and that may cause Damage to the Environment as defined in the MEPA regulations. In this case, MEPA jurisdiction extends to rare species and wetlands.

Review of the ENF

The HCP includes a description of project activities, an analysis of impacts to state-listed species, a limited analysis of alternatives, and outlines the elements of the conservation program, which includes minimization and mitigation measures for impacts to piping plovers. It includes a detailed description of the escorting procedures, contingency provisions, and violations and reporting requirements. The ENF indicates that the actions proposed within the HCP are the only alternative to address the multiple issues previously mentioned in this Certificate.

The HCP, if approved, will remain in effect for three years, at which time the Town and reviewing agencies will have an opportunity to evaluate the effectiveness of the program, and submit modifications for a revised HCP for review and approval. I note CZM's support of the project and efforts made by the Towns of Orleans and Chatham to balance the protection of the barrier beach habitat with the historic and cultural use of this beach for public use and recreation. Similarly, I note the comments from NHESP indicating that, notwithstanding the potential for conflict over curtailment of human activities and loss of beach revenue due to increased plover populations and their associated restrictions, successful management such as that exhibited by the Town creates opportunities for flexible permitting approaches that can meet MESA permitting standards. Comments from the Cape Cod Commission indicate that the provisions in the HCP for adaptive management, managing changed and unforeseen circumstances, and the limited time-frame of three years, appear to be reasonable terms under which to gauge the merits of the HCP. I encourage the Town to continue to work closely with NHESP and USFWS as they begin to implement adaptive management measures aimed at maintaining this balance of resource protection and public access.

Comments from Mass Audubon and the Cape Cod and Islands Group of the Sierra Club (Sierra Club) request additional analysis of the preferred alternative including: selecting a date later in the breeding season such as in August; reducing the number of caravans; reducing the number of OSVs per caravan; reducing the number of proposed caravans per week; eliminating caravans when chicks are less than a certain age; and reducing the monitor to chick ratio to 1:1. As recommended by CZM, Mass Audubon, and the Sierra Club, I encourage the Town to identify its rationale for identifying the number of vehicles allowed in a caravan.

The Town will file the HCP with NHESP as an application for a CMP. I expect NHESP will review and consider the comments provided on this ENF from Mass Audubon, Sierra Club and others. In addition, I am requiring the Town to distribute the draft permit to all organizations and/or individuals that commented on the ENF so that they may review the draft permit and associated requirements.

Rare Species and Wetlands

Wetlands resource areas on Nauset Beach include Barrier Beach, Coastal Beach, Coastal Dune, Coastal Bank, and Land Subject to Coastal Storm Flowage. Due to the nature of proposed activities, the project will have temporary impacts to existing wetland resource areas. The project will be reviewed for its consistency with the WPA by the Orleans Conservation Commission and by MassDEP. The Town has submitted a new Notice of Intent filing for the project to the Orleans Conservation Commission. The project will result in a "take" of the piping plover (threatened), a protected species under MESA (321 CMR 10.00) and the federal Endangered Species Act (ESA), and will require a CMP from NHESP.

The HCP proposes that all piping plover management will be carried out in accordance with the NHESP's Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns, and Their Habitats in Massachusetts, with the exception of the late season escorted ORV caravans. As described in the HCP, intensive monitoring of chicks is proposed when the ORV caravans, led by a plover monitor on foot, pass in the vicinity of unfledged chicks to ensure the vehicle corridor is clear for the caravan. One beach patrol officer and up to three monitors will be required to escort the caravan past a brood of chicks. The beach patrol monitor will halt the caravan at any time if visual contact with the chicks is lost by the assigned chick monitors. Intensive monitoring will minimize the risk of direct harm to chicks, although some disruption of chick behavior and increased risk is unavoidable. In addition, the HCP proposes several on and off-site mitigation measures designed to benefit piping plovers including: education and outreach; providing \$10,000 for funding of off-site management and/or monitoring to benefit piping plovers as determined by NHESP; and implementation of an adaptive management plan for non-lethal predator control. The HCP indicates that if adequate funding is not secured through the Town operating budget for implementation and mitigation, then the escorting program and related actions will not be implemented.

The HCP identifies reporting requirements. Chick numbers, chick locations, and travel corridor locations/dimensions will be provided to the Program Administrator by the senior bird monitor daily, prior to commencing OSV escorts. Any violations or incidents/accidents associated with the escort program, including take of a chick(s) will be immediately reported to NHESP and USFWS. In the event of an alleged incident related to the escort program, the Program Administrator in coordination with a shorebird monitor will cooperate with and assist Town, State, and Federal officials with the incident investigation. The Town will submit a brief biweekly summary report to NHESP and USFWS and will also submit to them an escort monitoring report, by December 31 of each calendar year, describing at a minimum, the estimated age of chicks in each brood when escorting was initiated. As recommended by CZM, the escort monitoring report could also include additional information including fledging success, escorting dates, number of broods, number of chicks escorted past on each date, number of caravan passings, number of vehicles in each caravan, duration of each escort, and any documented "take" of chicks resulting from the vehicle escorting program. This annual report should also be submitted to CZM for its review.

The Town will comply with state guidelines for the management of OSV when least terns, a state-listed species located in the project area, are present; therefore no take will occur

and no MESA permit for least terns will be required. The Town is required to ensure that all state-listed species and their habitats located within the project area including the diamond-backed terrapin are protected in accordance with state and federal guidelines. The HCP should identify how state-listed terns and terrapins will be protected and managed if they enter the PPA.

In order to qualify for a CMP, the Town must demonstrate that it will avoid, minimize and mitigate impacts to state-listed species consistent with the following performance standards: (a) assessment of alternatives to both temporary and permanent impacts to state-listed species; (b) an insignificant portion of the local population would be impacted by the project; and (c) a long-term Net Benefit to the conservation of the state-listed species impacted will be provided. NHESP indicates that it appears that the proposed HCP will qualify for a CMP. Because the piping plover is also federally listed, the state CMP will not become effective until such time as the USFWS issues a compatible ITP pursuant to Section 10 of the ESA.

I note the comments from Mass Audubon regarding the Town's provision of mitigation as a net benefit to the piping plover. Mass Audubon asserts that the Town cannot claim existing mitigation measures such as hiring dedicated staff, providing symbolic fencing, and restrictions on OSV use as mitigation or net benefit for new uses that would result in a "take" of the species. I refer the Town to the comments provided by Mass Audubon and the Sierra Club on the protection of plovers from OSV impacts including establishing a cap on the cumulative number of broods present in the OSV corridor, and providing more information on the details of the escort plan to support the rationale for selection of escort timing, escort area limits, the number of monitors, and the protection of plovers within ruts and when out of visual range. I expect that the Town and NHESP will consider these comments as it refines the HCP and address how the net benefit standard will be met.

Conclusion

The ENF has sufficiently defined the nature and general elements of the project for the purposes of MEPA review and demonstrated that the project's environmental impacts will be avoided, minimized and/or mitigated to the extent practicable. Based on the information in the ENF, review of comments, and after consultation with State Agencies, I find that no further MEPA review is required at this time. NHESP has sufficient permitting authority to require additional analysis of project alternatives, impacts and mitigation, as warranted. The Town of Orleans will provide a copy of the draft CMP to each individual and/or organization that commented on the ENF.

May 23, 2014

Date



Richard K. Sullivan Jr.

Comments received:

05/05/2014 Massachusetts Division of Marine Fisheries (DMF)
05/07/2014 Massachusetts Office of Coastal Zone Management (CZM)
05/07/2014 Massachusetts Natural Heritage and Endangered Species Program (NHESP)
05/12/2014 Town of Orleans Planning Board
05/12/2014 Kenneth M. Johnson
05/13/2014 Massachusetts Department of Environmental Protection – Southeast Regional
Office (MassDEP/SERO)
05/13/2014 Cape Cod Commission
05/13/2014 Cape Cod and Islands Group – Sierra Club
05/13/2014 Mass Audubon (1)
05/15/2014 Town of Orleans Conservation Commission
05/16/2014 Mass Audubon (2)

RKS/PPP/ppp