Section 10 Discussion

John Kelly

From:	Paul Fulcher
Sent:	Saturday, May 31, 2008 3:51 PM
To:	John Kelly
Subject:	FW: report
Attachments:	A Report To Paul Fulcher.doc

John,

Here is a report I received from Peter Trull whom I hired to complete a predator survey in the area between Nauset Inlet and little Pochet Island. This was completed to try to assess the numbers of each species and the real problem predators for Piping Plovers And Least Terns on Nauset Beach.

Paul

From: Peter Trull [mailto:petrull@comcast.net]
Sent: Tuesday, May 27, 2008 7:29 AM
To: Paul Fulcher
Subject: report

Paul,
I finished writing this up this morning. The time between my last assessment and the Wednesday meeting is short. I tried to put all of the information you requested in a succinct but thorough report.
Please advise. I will answer any unanswered questions you may have tonight.
Call and leave a message with any urgent concerns 508-237-0580.
Peter

A Report To Paul Fulcher, Park Superintendent, Orleans, Massachusetts.

An Assessment of Mammalian and Avian Diversity and the Potential for Depredation of Piping Plover *Charadrius melodus* and Least Tern *Sterna albifrons* at Two Areas of Nauset Beach, Orleans, Massachusetts

By
Peter Trull
May 26, 2008

Peter Trull 18 Elbow Pond Drive Brewster, Massachusetts 02631 email- petrull@comcast.net

Introduction:

The area of Nauset Beach, from the south side of Nauset Inlet (Nauset Heights), south to the expansive wash over fan adjescent to Little Pochet Island, a distance of approximately four (4) miles, is a dynamic and classic barrier beach ecosystem with the Atlantic Ocean to the east. At the approximate center of this stretch is a large, public ocean beach including an expansive parking area, restaurant, bathhouses and offices for beach and park personnel. The purpose of this study was to identify, assess, and photograph tracks of as many species of organisms as possible within two (2) nesting areas, and assess the potential for predation on beach nesting birds during the breeding season (presently underway in the early stages) of 2008.
Tracks of the following animals were identified and photographed;

Mammals:

White-footed mouse - *Peromyscus leucopus**

Meadow Vole - *Microtus pennsylvanicus**

Eastern Cottontail Rabbit - *Sylvilagus floridanus**

Striped Skunk - *Mephitis mephitis*

Opossum - *Didelphis virginiana*

Raccoon - *Procyon lotor*

Red Fox - *Vulpes vulpes*

Eastern Coyote - *Canis latrans var.*

Domestic Dog - Canis familiaris

Birds:

Herring Gull - *Larus argentatus*

Mourning Dove - *Zenaida macroura**

American Crow - *Corvus brachyrhynchos*

Horned Lark - *Eremophila alpestris**

Common Grackle - *Quiscalus quiscula*

** Not considered to be predatory on beach nesting birds, but as prey species, these may attract predators to the area.*

Discussion:

The four (4) species that were found extensively throughout both nesting areas on all visits were Striped Skunk, Eastern Coyote, American Crow and Herring Gull. These animals' tracks were observed on each visit *n=6,* in all sections of both nesting areas. Historically, Red Fox has been evident as a key predator at this site, but only one set of tracks was observed, away from the nesting area. Sarcoptic mange may be a factor in low numbers of Red Fox in the area.

Eastern Coyote tracks were not seen in any greater numbers that three at one time. This pattern occurred only once. On May 14 I observed tracks of two coyotes walking together, joined by a third, the three greeted each other, then separated. Coyotes traveled daily from the residential area of Nauset Heights, often by way of Priscilla landing, out to the beach, north to the inlet and back, most often walking entirely through the posted area, sometimes along the post/string line. Since the preferred food of the Eastern Coyote is small rodents, the mice and voles that are abundant in the dunes may be the reason for the nightly foraging into the dunes, as no interest in the exclosures and incubating plovers was apparent in the track patterns of any coyotes I observed. In the 1999 research paper Top Dogs Maintain Diversity, published in the scientific journal NATURE, one of the worlds most prestigious journals, E. S. Burnt, found a higher diversity in ground nesting birds in the presence of Eastern Coyote because the larger canid caused a decline in numbers by driving off the so-called "mesopredators"; skunk, raccoon, opossum and domestic cat. Eastern Coyote tracks were recorded in both the north and south nesting areas. **Track patterns indicated from three (3) to five (5) Eastern Coyotes using the area from the southern wash over to the Nauset Heights nesting area.**

Striped Skunk tracks were observed widely in the southern area of the wash over/ Pochet site, covering all sections of the area. A skunk moves in zig-zags and circles through an area actively seeking out any food items. Skunks are omnivorous, opportunistic feeders. Skunk tracks were also observed at the Nauset Heights nesting area, but no further north than the area of post #4. As more and more people use the beaches into the months of June and July, I suggest Striped Skunk will become a more apparent visitor to the Nauset Heights section. **No more than one set of skunk tracks was observed at one time in any area, and I never recorded more than three (3) sets of skunk tracks on any visit over the entire four mile stretch of barrier beach. To suggest that only three (3) Striped Skunks are in the entire nesting area of both sites seems unlikely.....There is a high probability of an increased skunk population as the weeks progress.** In recent years, Striped Skunk populations on the outer cape have declined due to the onset of the rabies virus. A population recovery is under way today.

American Crow tracks were observed throughout both nesting areas and individual crows were observed in both areas on each visit. Crows are intelligent birds and omnivorous feeders. Tracks showed that crows moved widely through both areas, walking long distances in random travel. On May 12, 2008, Elizabeth Hogan photographed a washed out plover egg that appeared to be eaten by a Crow. Crows are abundant in the Nauset area and should be considered as a highly probable threat to beach nesting birds. Typically, Piping Plovers nest in the presence of Least Terns, an aggressive colonial species that can easily drive off an intruding crow. There are few Least Terns nesting in the area, making the plover eggs more vulnerable to avian predation.

While crows, as predators of eggs and young of beach nesting birds is often limited to a relatively low number of "specialized" individuals, the total number of crows in the area is unknown.

Herring Gull is a constant presence in both areas. These large opportunistic scavengers are also subject to harassment by nesting Least Terns, often being mobbed and driven away by the aggressive terns, a benefit to nesting plovers. At this writing, few terns are present in either area so the Herring Gulls are not easily discouraged. In an email dated May 19, 2008, Elizabeth Hogan sent me a photograph of a single egg nest that had probably been eaten by a Herring Gull. Tracks surrounded the empty plover nest scrape where the egg had been. Like the American Crow, the Herring Gull as a predator of beach nesting birds is considered to be a "specialized" individual, but this predator/scavenger is highly opportunistic. **The number of "specialized" egg eating Herring Gulls is unknown, but this species numbers in the many hundreds along our shores.**

Results:

Based on my tracking observations in the Nauset Heights section, and the south wash over section of Nauset Beach over the period of May 13 to May 26 2008, I would conclude that American Crows and Herring Gulls, in the absence of nesting Least Terns to drive them away, are the most potential threats to Piping Plover eggs and chicks in the 2008 season. The apparent absence of Red Foxes in the area and the widespread occurrence of Eastern Coyote and Striped Skunk in the areas suggest that either of these mammals, based on the feeding strategies of each as wide ranging, foraging omnivores, may become a threat to eggs and chicks. The plover monitoring crew are working hard to assess and protect the nesting birds within the Nauset system and this continued diligence and the understanding that successful tern and plover management is based on reaching a balance between successful nesting of the birds and understanding the rights of people to use the public areas. Reaching this balance is the most challenging aspect of plover and tern management.

John Kelly

From: Paul Fulcher
Sent: Tuesday, April 01, 2008 1:15 PM
To: Scott.melvin@state.ma.us
Cc: Susi_vonOettingen@fws.gov; Ann; John Kelly; mdfesq1@verizon.net
Attachments: Section 10.xls

Scott,

I have attached a spread sheet on the information you wanted on Broods and Chicks for Nauset Beach in Orleans for the years 2003-2007.
Below I will try to answer some of your questions from your March 18, 2008 Email.

1. Spread sheet attached with info requested. On the USFWS side they feel July 15 and three broods would be okay under a Section 10.

2. When I met with you, Susi and Ann on Feb.7 2007 I thought we had left that meeting agreeing on a July 15 opening,3 broods and 1 monitor per brood along with 2 monitors for escorts.
Escorts for Tern Chicks would be handled in the same manner using the same routes that were approved in the past to bypass the colony.
I am not sure of an exact number of vehicles that would be in each caravan/escort, but I have completed a time study that shows 50 vehicles driving at five miles per hour can pass the habitat in question in Eight and half Minutes.

3.USFWS has agreed with a limited amount of earthen berms (3) as long as they are not in a high velocity zone.

4.Trying anything to increase productivity, which I believe this would.

5.In trying to increase productivity I feel we have to try many devices as predators are smart.

6.We will not know the effectiveness unless we try it.

7.Are you saying the Town needs to submit a preliminary field assessment with our conservation plan.
In removing all Coyotes, Foxes, and Skunks in the Months of March, April and May in each year of the three year permit seems like the scorch and burn theory. I thought we were going to try to target nuisance predators. Predator removal on the new island in Chatham is out of the question.

8.The way we currently install our symbolic fencing on April 1 of each year and move as needed for nesting shorebirds meets the criteria of our Order of Conditions, the Federal and State Endangered Species Acts.

9.We have not submitted a formal proposal yet as you told me not to submit one as we need to negotiate back and forth on items to be included in the plan.

I am not sure how you would like to proceed. The USFWS seems to be in agreement in theory with what the Town is proposing. Maybe it would be best if you draw the outline of what would be Required of the Town Of Orleans to obtain a State Conservation Permit to pass unfledged Piping Plovers and Least Tern chicks in the Pochet Washover area of Nauset Beach so I can submit it to my Board of Selectmen to see if they want to

proceed. I will gladly have a telephone conference call or meet with you and the USFWS at Ann's office if you think it would be helpful. I will follow this up with a telephone call. I can be reached 24/7 at 508-962-0882. Thanks for your continued assistance.

Paul

-----Original Message-----
From: Paul Fulcher [mailto:paul.fulcher1@verizon.net]
Sent: Sunday, March 30, 2008 7:21 PM
To: Paul Fulcher
Subject: Section 10.xls

YEAR	LOCATION	BROODS	# OF CHICKS	# OF DAYS OLD ON JULY 15
2003				
	N/S	1	3	19
	N/S	1	4	8
	ONB	1	2	14
	ONB	1	2	16
2004				
	N/S	1	1	11
	N/S	1	3	11
	ONB	1	2	3
2005				
	N/S	1	3	10
	N/S	1	3	10
	N/S	1	3	11
	N/S	1	1	6
	N/S	1	4	13
	N/S	1	3	15
	N/S	1	2	11
	N/S	1	1	14
	N/S	1	2	6
	ONB	0		
2006				
	N/S	1	2	22
	ONB	1	2	23
	ONB	1	3	15
2007				
	N/S	1	3	18
	N/S	1	3	19
	N/S	1	4	9
	N/S	1	2	9
	N/S	1	2	15
	ONB	1	3	23
	ONB	1	3	10
	TOTAL	26		341

ONB = ORLEANS NORTH BEACH

AVERAGE AGE OF CHICKS ON JULY 15= 13.11 DAYS

N/S = NAUSET SPIT

John Kelly

From: Paul Fulcher
Sent: Friday, May 23, 2008 10:46 AM
To: John Kelly
Cc: John Hinckley; Beverly & Jon R. Fuller; mecarron; Margie Fulcher; 'Dave Dunford'; mdfesq1 @verizon.net
Subject: FW: conservation permit - Nauset Beach-Orleans

From: Melvin, Scott (FWE) [mailto:Scott.Melvin@state.ma.us]
Sent: Friday, May 23, 2008 10:27 AM
To: Paul Fulcher
Cc: Susi_vonOettingen@fws.gov; Anne_Hecht@fws.gov
Subject: conservation permit - Nauset Beach-Orleans

Paul: Thanks for the additional information provided in your April 1 e-mail regarding management options for off-road vehicles, Piping Plovers, and Least Terns at Nauset Beach that the Town of Orleans may wish to be permitted to carry out pursuant to a Conservation and Management Permit that might be issued by MassWildlife. We believe that your proposal to be permitted for a period of 3 years to escort recreational vehicles past up to 3 unfledged broods of Piping Plover chicks in the Pochet area of Nauset Beach, beginning July 15 each year, could be permitted under a Conservation and Management Permit issued by this agency, provided that: 1) adequate mitigation is provided, in order to meet the performance standard of "net benefit" to the local population, 2) requirements for escorting and managing off-road vehicles that would be conditions of the permit are strictly adhered to, and 3) monitoring and reporting requirements that would be conditions of the permit are strictly adhered to. We would also need to negotiate the details of escorting camp owners, ie. "essential vehicles".

We presume that the town also wishes to be permitted to escort vehicles past unfledged Least Tern chicks in the Pochet area after July 15? With adequate mitigation (see below), we believe this could also be permitted, but limits would need to be set on the number of unfledged tern chicks past which escorted vehicles could pass.

Based on our discussions to date, we believe that the following actions would provide the necessary mitigation for the management actions described above:

1) Contract with staff of U.S. Department of Agriculture – Wildlife Services to remove potential mammalian predators of plover and tern eggs and chicks during the approximate period February 1 – April 30 in each year of the permit. Removal would focus on coyotes, foxes, and skunks, but would also target raccoons and opossums that were encountered. Removal of skunks, raccoons, and opossums could continue later than April 30. Predator removal could occur anywhere along Nauset Beach and Nauset Spit within the Town of Orleans, but would focus primarily on increasing reproductive success of Piping Plovers and Least Terns in the Pochet area and on Nauset Spit.

2) Construct and maintain sand berms to protect up to 3 Piping Plovers nests per year from storm/high tide overwash. Details of design specifications, construction protocols, and monitoring/reporting requirements would still need to be negotiated.

We would expect the permit to contain a condition that prohibits any dune building or beach nourishment activities, including but not limited to installation of sand fencing or plantings, or deposition of sand or other fill on the beach or in overwash areas, unless and until the Town has: 1) submitted to the Massachusetts Division of Fisheries and Wildlife, the Massachusetts Department of Environmental Protection, and the Orleans Conservation Commission written plans for the proposed work, including a detailed description of the design and timing of the proposed work and a map showing the exact location, and 2) received a written opinion from the Division stating that the proposed activity will not have any short or long-term adverse effect on the habitat of state-listed rare species.

We recommend you review this information with the U.S. Fish and Wildlife Service to insure consistency with conditions that they may require in order for the Town of Orleans to be granted a federal "incidental take" permit pursuant to Section 10 of the U.S. Endangered Species Act.

Please contact us if you need additional information or clarification on any of the above points.

Scott Melvin

Scott M. Melvin, Ph.D
Senior Zoologist
Natural Heritage and Endangered Species Program
Massachusetts Division of Fisheries and Wildlife
Rte. 135, Westborough, MA 01581
508-389-6345
508-389-7891 (fax)
scott.melvin@state.ma.us