June 26, 1997

Rachel Marino
Environmental Branch Chief
United States Coast Guard
Civil Engineering Unit Providence
300 Metro Center Blvd.
Warwick, RI 02886

Dear Ms. Marino:

The U.S. Fish and Wildlife Service has reviewed the Town of Stratford's application for a U.S. Coast Guard marine event permit to hold fireworks in Stratford, Connecticut on July 3, 1997 with a rain date of July 5th, 1997. This document represents the Service's Biological Opinion on the effects of the action on the federally-threatened piping plover (*Charadrius melodus*) in accordance with Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

This Biological Opinion is based on information provided in your May 30, 1997 letter describing the proposed project and requesting initiation of formal consultation. It is also based on discussions among your agency, my staff and Ms. Patusky, Superintendent of Recreation for the Town of Stratford, as well as documentation provided by the Town of Stratford.

I. CONSULTATION HISTORY

March 28, 1997 — Letter from the Service to the Town of Stratford discussing the potential need for consulting on fireworks events located within 3/4 mile of federally-listed species. Letter also included recently-developed Service guidelines for managing fireworks in the vicinity of piping plovers.

May 20, 1997 — Memorandum from Recreation Department, Town of Stratford to Service providing information and maps on proposed July 3, 1997 fireworks events and USCG application for Marine Event Permit.

May 27, 1997 Letter from Town of Stratford Recreation Department to USCG requesting that USCG initiate formal consultation with Service for marine event permit.

June 2, 1997 Service received request from USCG to initiate formal consultation.

June 12 ,1997 Service letter to USCG acknowledging receipt of letter to initiate formal consultation and stating that the Biological Opinion for this project would be issued no later than June 27, 1997.

June 12, 1997 Memorandum (facsimile) from the Service to Stratford Department of Recreation requesting additional information.

June 24, 1997 Memorandum (facsimile) from Stratford Department of Recreation providing additional information on propose fireworks event.

II. BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Fireworks event

The proposed action is the discharge of fireworks at Short Beach Park in Stratford, Connecticut on July 3, 1997 or July 5, 1997 (rain date). Approximately 2,050 shells ranging from 3" to 8" will be detonated. The Town of Stratford has contracted with Telstar Display Fireworks to reduce the noise level to half that of past events (P. Patusky, *in litt*., June 24, 1997).

Spectator management

An estimated 8,000 to 10,000 spectators are expected to attend the fireworks at Short Beach Park, with additional spectators viewing from boats anchored in Long Island Sound.

The Town of Stratford (sponsor of the fireworks event) will undertake the following actions to prevent spectators observing the fireworks from disturbing piping plovers (P. Patusky, pers. comm., June 12, 1997):

1. Spectator access to the beach will be restricted to an area south of the eastern end of Dorne Drive and extending east to the water (Long Island Sound) if plovers are located at the northern end of the beach.

2. Parking lots south of the tennis courts at Short Beach Park will be closed.

3. Volunteers will be stationed at the limits of the restricted area to prevent spectators from entering.

RANGEWIDE STATUS OF THE SPECIES

Species description

The Atlantic Coast population of piping plovers breeds on coastal beaches from Newfoundland to North Carolina (and occasionally in South Carolina) and winters along the Atlantic Coast from North Carolina south, along the Gulf Coast, and in the Caribbean. Since being listed as threatened in 1986, the population has increased from approximately 800 pairs to almost 1,350 pairs in 1996. However, most of the apparent increase between 1986 and 1989 is attributable to increased survey effort in two states, while the population increase between 1989 and 1996 has been very unevenly distributed. Since 1989, the New England subpopulation has increased by 384 pairs, while the New York-New Jersey subpopulation gained 64 pairs, and the Southern (DE-MD-VA-NC) and Atlantic Canada subpopulations declined by 11 and 47 pairs, respectively (A. Hecht, USFWS, pers. comm., 1997). Substantially higher productivity rates have also been observed in New England than elsewhere in the population's range. Recovery of the Atlantic Coast piping plover population is occurring in the context of an extremely intensive protection effort, since pressure on Atlantic Coast beach habitat from development and human disturbance is pervasive and unrelenting.

Piping plovers nest above the high tide line on coastal beaches, sandflats at the ends of sandspits and barrier islands, gently sloping foredunes, blowout areas behind primary dunes, sparsely vegetated dunes, and washover areas cut into or between dunes. Feeding areas include intertidal portions of ocean beaches, washover areas, mudflats, sandflats, wrack lines, and shorelines of coastal ponds, lagoons or salt marshes (USFWS, 1996).

In Connecticut, piping plovers return to nesting beaches from mid-March through May and nesting may occur from mid-April through late July. Clutch size is usually four eggs, and eggs are usually incubated for 27-28 days before hatching. Piping plovers generally fledge only a single brood per season, but may renest several times if previous nests are lost.

Piping plover chicks are precocial and may move hundreds of yards from the nest site during their first week of life. Chicks remain together with one or both parents until they fledge at 25 to 35 days of age. Depending on the date of hatching, unfledged chicks may be present on Connecticut beaches from late May through mid-August, although most have fledged by late July or early August.

Loss and degradation of habitat due to development and shoreline stabilization have been major contributors to the species' decline. Disturbance by humans and pets often reduces the functional suitability of habitat and causes direct and indirect mortality of eggs and chicks. Predation has also been identified as a major factor limiting piping plover reproductive success at many Atlantic Coast sites, and

substantial evidence shows that human activities are affecting types, numbers, and activity patterns of predators, thereby exacerbating natural predation (USFWS, 1996).

The revised recovery plan for the Atlantic Coast piping plover (USFWS, 1996) identifies a recovery objective, and five criteria for meeting the objective. The objective is to ensure the long-term viability of the Atlantic Coast plover population in the wild, thereby allowing for the delisting of this species. Delisting of the Atlantic Coast piping plover population may be considered when the following criteria have been met:

- Increase the population to 2,000 breeding pairs, distributed among four recovery units, and maintain that level for five years.

- Verify the adequacy of a 2,000-pair population of piping plovers to maintain heterozygosity and allelic diversity over the long term.

- Achieve a 5-year average productivity of 1.5 fledged chicks per pair in each of the recovery units.

- Institute long-term agreements to assure protection and management sufficient to maintain the population targets and average productivity in each recovery unit.

- Ensure long-term maintenance of wintering habitat, sufficient in quantity, quality, and distribution to maintain survival rates for a 2,000-pair population.

In order to facilitate an even distribution of plovers throughout the Atlantic Coast range, the population was divided into four recovery units: Atlantic Canada, New England, New York/New Jersey, and Southern. Each unit was assigned a portion of the population target. The New England unit recovery target is a minimum of 625 pairs. As of 1996, there were 590 pairs of piping plovers in New England with an average productivity of 1.4 chicks per pair.

ENVIRONMENTAL BASELINE

Status of the piping plover at Short Beach Park and Milford Point

Short Beach Park is owned and managed by the Town of Stratford and is used as a pedestrian recreational area. Piping plovers have been documented at this site since 1986 with 0 to 3 pairs using the beach annually. Productivity has been variable: 1996 - one pair fledged 1 chick; 1995 - 1 pair fledged 4 chicks; 1994 - 1 pair fledged 0 chicks; 1993 - 1 pair fledged 0 chicks; 1992 - 2 pairs fledged 3 chicks; 1991 - 1 pair fledged 4 chicks; 1990 - 2 pairs fledged 7 chicks; 1989 - 3 pairs fledged 6 chicks. As of June 12, 1997 one pair of piping plovers hatched one chick at Short Beach Park; the remaining three eggs did not hatch. Annual reproductive success at Short Beach ranges from

0 chicks per pair to 4 chicks per pair. Because plovers at Short Beach are not intensively managed, the cause of egg or chick loss is frequently unknown.

Piping plovers at Short Beach Park have been monitored primarily by the Connecticut Department of Environmental Protection; however, for the 1997 season, monitoring of plovers is being done in collaboration with the Coastal Center and the U.S. Fish and Wildlife Service. Nesting areas on the north end of Short Beach Park are symbolically fenced and posted, nests are exclosed, and plover nests and broods are checked every 2 to 5 days by monitors provided by CT DEP. Pedestrians are allowed to pass in front of the posted area. Primary recreational activities include sunbathing, swimming, kite flying and picnicking. Pets are not allowed in the park at any time.

The Town of Stratford has held annual fireworks events at Short Beach Park for over 11 years. There has been no monitoring of piping plovers before, during or after the events. Prior to 1996, fireworks were detonated within 600 feet of plover broods or nests and spectators were excluded from the northern end of Short Beach (including the plover nesting area).

Milford Point is under multiple ownership. Approximately 11 acres (Smith Point) are owned by the U.S. Fish and Wildlife Service and managed as a national wildlife refuge (Stewart B. McKinney NWR). The State of Connecticut owns approximately eight acres and leases this land to the Connecticut Audubon Coastal Center at Milford Point. The remaining ± 8 acres of Milford Point are privately owned. Generally, two to five pairs of piping plovers nest on Milford Point with variable productivity: 1996 - 2 pairs fledged 3 chicks; 1995 - 3 pairs fledged 2 chicks; 1994 - 4 pairs fledged 3 chicks; 1993 - 3 pairs fledged 2 chicks; 1992 - 5 pairs fledged 2 chicks; 1991 - 4 pairs fledged 2 chicks; 1990 - 8 pairs fledged 9 chicks; 1989 - 4 pairs fledged 8 chicks. As of June 24, 1997, there were five pairs of piping plovers at Milford Point; two pairs have eggs, and three pairs have 11 chicks.

Management of piping plovers at Milford Point is a collaborative effort among the DEP, the Coastal Center and the Refuge. Nesting areas are symbolically fenced and posted, nests are exclosed, and plover nests and broods are monitored every two to five days. Pedestrian recreational activities such as swimming, sunbathing, and birdwatching are restricted to portions of the beach privately owned or owned by the State. The sandbar situated west of the Point is accessed by boat and is subject to use by pedestrians and occasional dogs. Plovers nesting on this sandbar have been jointly managed by the CT DEP and Refuge staff.

Action Area

The action area, considered to be the area of direct and indirect impact, includes the entire length of Short Beach Park and Milford Point in Milford, Connecticut.

Effects of the Action

In evaluating the effects of the federal action under consideration in this consultation, 50 CFR 402.2 and 402.14(g)(3) requires the Service to evaluate the direct and indirect effects of the action on the species.

Direct adverse effects from fireworks result from the associated noise, lights, and rarely, accidental wildfires. Fireworks early in the breeding season may cause plovers conducting courtship activities to abandon their territories. Direct injury can be caused by the explosions or debris fallout. Moreover, piping plovers and terns (which frequently nest adjacent to or near plovers) will often abandon their nests and broods during fireworks displays, exposing eggs and chicks to weather and predators. If a flightless chick were to become permanently separated from its parents during the confusion, mortality would be almost certain. The Service has concluded that plovers may be directly affected by fireworks located less than 3/4 mile from the nearest plover nesting and/or foraging area (USFWS, 1997). The Town of Stratford fireworks event will be located a maximum of 3/5 mile from piping plovers at Milford Point and approximately 1,000 feet from a pair of plovers and their chick at Short Beach Park. The most serious impacts, including debris fallout, are not anticipated at either Milford Point or Short Beach Park due to the relatively small size of the shells and the projected fallout distance. However, loud reports may disturb plovers especially during the final salute, preventing them from foraging or resting. The reports may even cause temporary or permanent abandonment of nests at Milford Point (if plover eggs have not hatched) or separate adults from their young (at either Short Beach or Milford Point).

Commercial fireworks displays often draw large crowds that may pose threats to nearby plovers. These crowds may be situated at some distance from the actual launch site; for example, across an inlet. A large number of spectators (8,000 to 10,000 people) at Short Beach Park and associated crowd control activities may indirectly affect piping plovers. These indirect effects may result from spectators walking through and/or throwing objects (including illegal pyrotechnics) into plover nesting and brood-rearing areas and/or from the accumulation of additional trash (which attracts predators).

Cumulative Effects

Cumulative effects include the effects of future state, local or private actions that are reasonably certain to occur in the action area considered in this Biological Opinion. Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to Section 7 of the ESA.

Increased pedestrian recreation can be expected to occur on Short Beach Park. Currently, use of the beach is primarily for sunbathing and swimming. Impacts from the activities have been somewhat minimized through symbolic fencing of a small portion of the beach and the use of exclosures. However, increased recreational use may result in increased disturbance to nesting plovers if not appropriately managed.

CONCLUSION

After reviewing the current status of the Atlantic Coast piping plover in the New England recovery unit as well as throughout the rest of its range, the environmental baseline for the action area, the effects of the proposed fireworks event and the cumulative effects, it is the Service's Biological Opinion that the July 4, 1997 fireworks event as proposed is not likely to jeopardize the continued existence of the Atlantic Coast piping plover population or the New England recovery unit. The Service has based this determination on the relatively few numbers of plovers (10 adults, 12 chicks, 8 eggs) expected to be adversely affected by the fireworks with respect to the large number of pairs found in the Recovery Unit (an estimated 550 to 600 pairs for 1997) in conjunction with the very low possibility of mortality. The low possibility of mortality is based on the distance of the chicks and adults at Milford Point from the fireworks, and the anticipated age and relative independence of the Short Beach chick at the time of the event. Effects are primarily in the form of disturbance to natural feeding and breeding behavior and are not expected to have long-term impacts. No critical habitat has been designated for this species; therefore, none will be affected.

III. INCIDENTAL TAKE STATEMENT

Sections 4(d) and 9 of the Endangered Species Act, as amended, prohibit the taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture of collect, or attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns such as breeding, feeding or sheltering. Harass is defined as actions that create the likelihood of injury to listed wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns, which include, but are not limited to breeding, feeding or sheltering. Under the terms of Section 7(4)(b) and Section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking, provided that such taking is in compliance with the terms and conditions of this incidental take statement.

Pursuant to 50 CFR 402.14 (g)(7), the Service is to formulate a statement concerning the incidental take of a listed species. This statement must include the level of take that is anticipated to occur due to the federal action. The Service is to develop, and the federal agency implement, reasonable and prudent measures that will minimize the impacts of the action on the species. In addition, the Service must set the terms and conditions with which the federal agency must comply. If the level of incidental take is exceeded, formal consultation under Section 7 must be reinitiated.

The Coast Guard Marine Event Permit is issued based upon the information about the proposed activity provided by the sponsor in its "Application for Approval of Marine Event". We understand that the reasonable and prudent measures (and accompanying terms and conditions) described below will be incorporated into an amended application to the Coast Guard. It is anticipated that implementation of

these measures during the proposed activity will result in avoidance of significant environmental impacts. Once approval is granted, the applicant is required to conduct the event in the manner described in the application. If the applicant fails to conduct the activity as described in their approved application, including compliance with the terms and conditions of the incidental take statement issued by the Service, the Marine Event Permit may be revoked and the protective coverage of Section 7(o)(2) may lapse.

AMOUNT AND EXTENT OF TAKE

The Service anticipates that incidental take of the federally-threatened piping plover is likely to occur during the fireworks event primarily in the form of harassment. The distance between the fireworks event and breeding piping plovers at Milford Point is approximately 3/5 mile or less depending upon the plover brood movements. The event at Short Beach Park is approximately 1,000 feet from a pair of plovers and their chick. The disruption of normal behavior including feeding, resting and/or brooding may result from increased human presence and activity at Short Beach Park. Plovers may also exhibit more alarm behavior and have less opportunity to feed throughout the evening because of loud reports associated with the fireworks. If chicks are very young at the time of the event (for example, one nest may possibly hatch on or before July 4 at Milford Point), chick growth rates and/or the number of days to fledging could be adversely affected as a result of the disturbance. If plovers are incubating eggs during the event, the explosions may cause adults to leave the nest for a short time. The risk of temporary or permanent nest abandonment at Milford Point or chick loss at either site is low. The chick at Short Beach will be at least 20 days old and nearing fledging, reducing the risk of mortality. The majority of chicks at Milford Point will also be relatively old (± 20 days) and nearing fledging; furthermore, these chicks are approximately 3/5 mile from the fireworks event and are expected to be less disturbed by the reports. Nonetheless, the possibility of chick (especially at Short Beach Park) or egg mortality remains.

EFFECT OF THE TAKE

In the preceding Biological Opinion, the Service determined that the anticipated take, either by harassment of adults and chicks or mortality of chicks and eggs is not likely to result in jeopardy to the Atlantic Coast population or to the New England recovery unit.

REASONABLE AND PRUDENT MEASURES TO MINIMIZE TAKE

The incidental take statement provides measures that are necessary or appropriate to minimize take of listed species. Such measures should decrease the level of take to the maximum extent possible, or describe methods that replace the capability of the population or habitat to support preactivity levels. These measures are to be reasonable and prudent, which means that the nature of the corrective action required is commensurate with the impact on the species/habitat. Such measures are to be within the authority or capability of the agency or applicant to perform, and should not alter the basic purpose, location, scope or duration of the federally-funded or permitted action.

Pursuant to Section 7(b)(4) of the Endangered Species Act, the Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take:

1. Human activity in the vicinity of plovers at Short Beach Park and Milford Point must be minimized to reduce adverse effects.

2. Piping plovers must be monitored before, during and after the fireworks event at Short Beach Park and Milford Point to determine the degree of disturbance. Observational data will be used to review management for future fireworks near Short Beach Park.

TERMS AND CONDITIONS

In order to be exempt from prohibitions of Section 9 of the Endangered Species Act, the Town of Stratford shall be made responsible for compliance with the following terms and conditions that implement the reasonable and prudent measures described above. These terms and conditions must be incorporated as binding conditions of any permit issued by the USCG.

1. Plover habitats in the vicinity of areas where spectators may congregate should be intensively surveyed by qualified biologists[1] for at least four days prior to the event to locate nests, adult plovers, chicks, and/or post-fledged juveniles.

2. Plover habitats should be symbolically fenced in accordance with the Service's *Guidelines for Managing Recreational Activities in Piping Plover Breeding Habitat on the U.S. Atlantic Coast to Avoid Take Under Section 9 of the Endangered Species Act* (USFWS, 1994).

3. Parking lots and beach access points in the vicinity of piping plovers at Short Beach must be closed (Item #4, page 3).

4. To increase the visibility of the fenced area, symbolic fencing should be either reflectorized tape or temporary snowfencing (would be removed after the event).

[1] State wildlife agencies and private environmental groups often conduct plover monitoring activities and can be consulted for available information about plover breeding locations. However, intensity of surveys needed to avoid adverse effects from fireworks events will often exceed those routinely conducted by these wildlife agencies/organizations. Arrangements and commitments for added surveys for these events are the responsibility of the permitting agencies and/or event sponsors. It is recommended that these arrangements be made well in advance of the potential event, due to limited availability of qualified personnel.

5. Foraging territories of unfledged chicks must be fenced and posted, as delineated by a qualified biologist, especially in areas where large crowds are anticipated and/or if the day of the event is unusually hot (since heat often deters chick foraging during the daytime, increasing the birds' reliance on evening feeding). A fence running east from the eastern end of Dorne Road to the water's edge should provide a sufficient buffer between the spectators and plovers at Short Beach. If the plovers move south of this line prior to the event, the buffer must be moved to protect them.

6. Adequate numbers (consistent with anticipated numbers of spectators) of monitors and law enforcement personnel in the vicinity of plover breeding area on Short Beach Park must be provided to patrol fenced areas from the time when spectators begin congregating on the beach until the crowd disperses after the event. Adequate numbers of monitors and law enforcement personnel must also be present at Milford Point to enforce Refuge closures. Monitors and enforcement personnel must receive accurate current information about the locations of threatened birds so that they can minimize any disruptions from their own activities.

7. Pets must be prohibited from Short Beach and Milford Point.

8. Trash or litter must be removed from the beach immediately following the event. However, any trash located within fenced areas should be left until daylight and then removed by or under the supervision of plover monitors. Further, vehicles should not be used at night to remove trash within 100 meters of unfledged plover chicks.

9. Except when responding to an actual emergency situation, all law enforcement, fire department, public works, fireworks deployment, and other vehicles in the vicinity of breeding plovers should only be operated in conformance with the Service's *Guidelines for Managing Recreational Activities in Piping Plover Breeding Habitat on the U.S. Atlantic Coast to Avoid Take Under Section 9 of the Endangered Species Act* (USFWS, 1994).

REPORTING AND MONITORING REQUIREMENTS

The Town of Stratford must provide the Service with a report (based on forms to be forwarded under separate cover) of the piping plovers monitoring activities before, during and after the fireworks event. The contact for these reporting requirements is as follows:

Michael J. Bartlett, Supervisor
New England Field Office
U.S. Fish and Wildlife Service
22 Bridge St., Unit #1
Concord, NH 03301-4986

(603) 225-1411

In order to gauge the effectiveness of the terms and conditions, the following data should be collected in addition to completion of the above mentioned forms:

1. Location and status of all adult plovers, nests, and chicks within ¼ mile of spectator viewing areas should be determined by a qualified biologist on the day of the event and again on the following day.

2. Counts should be made of human and dog tracks that intersect the perimeter of symbolically fenced areas before and after the event.

3. Counts should be made of any persons actually observed inside symbolically-fenced areas during the event.

4. Counts should be made of any instances of illegal pyrotechnics used on the beach during the event.

5. Counts should be made of trash/litter items inside symbolically-fenced areas before and after the event. For very large areas or areas that have substantial amounts of trash before the event, trash counts may be conducted in sample plots.

6. Count should be made of breaks in symbolic fences.

If incubating adults or chicks younger than one week are present on Milford Point at the time of the fireworks event, data regarding the effects of various noise levels should be recorded. Data regarding the effects of various noise levels also should be recorded at Short Beach Park due to the relatively short distance between piping plovers and the fireworks detonation site. Data on shell size and associated decibel levels should be collected with the reactions of young chicks (if such observations can be made without undue disturbance) and/or incubating adults. The duration of time off of nest and reactions such as distress calling behavior should be noted.

CONSERVATION RECOMMENDATIONS

The Service may provide, in conjunction with the Biological Opinion, a statement containing discretionary conservation recommendations. Conservation recommendations are advisory, and are not intended to carry any binding legal force. These recommendations are discretionary agency activities taken to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

The primary objective of the recovery program for the Atlantic Coast piping plover is to remove the population from the List of Endangered and Threatened Wildlife and Plants. This goal will be achieved through 1) a well-distributed increase in numbers and productivity of breeding pairs and 2) long-term protection of breeding and wintering plovers and their habitat.

In order to assist in the implementation of the recovery program, the Service recommends that plovers at Short Beach Park be managed consistent with Service guidelines for managing piping plovers on recreational beaches (USFWS, 1994).

REINITIATION OF FORMAL CONSULTATION

This concludes formal consultation on the federal action outlined in the May 16, 1997 request. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this Opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this Opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the extent of incidental take is exceeded, all activities that are causing such take must cease until such time as any necessary consultation is completed in order to avoid violation of Section 9 of the Endangered Species Act.

The Service appreciates the opportunity to work with the U.S. Coast Guard in fulfilling our mutual responsibilities under the Endangered Species Act. Please contact Susi von Oettingen of this office at (603) 225-1411 if you have any questions or require additional information.

Sincerely yours,

Michael J. Bartlett
Supervisor
New England Field Office

cc: Pat Patusky, Stratford Dept. of Parks and Recreation
Mike Barnhart, Town Manager, Stratford
Luke Dhlopolosky
Sen. Lieberman's Office
Sen. Dodd's Office
Rep. Rosa DeLauro
Anne Hecht
Bill Kolodnicki, SMNWR
Julie Victoria, CTDEP
Reading File

ES: SvonOettingen:6-26-97:603-225-1411

LITERATURE CITED

U.S. Fish and Wildlife Service. 1994. Guidelines for managing recreational activities in piping plover breeding habitat on the U.S. Atlantic Coast to avoid take under Section 9 of the Endangered Species Act. Hadley, Massachusetts.

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U.S. Fish and Wildlife Service. 1997. Guidelines for managing fireworks in the vicinity of piping plovers and seabeach amaranth on the U.S. Atlantic coast. Hadley, Massachusetts.