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# United States Department of the Interior



## FISH & WILDLIFE SERVICE

### Boqueron Field Office

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August 4, 2004

Mr. Paul Rakowski, P.E.  
Head, Environmental Programs Branch  
Department of the Navy  
Naval Facilities Engineering Command, Atlantic  
6506 Hampton Blvd  
Norfolk VA 23508-1278

Re: Draft Work Plan for Expanded Range  
Assessment/Phase I Site Inspection  
(ERA/SI) for the former Vieques Naval  
Training Range (VNTR)

Dear Mr. Rakowski:

This is in response to your request for an expedited review of the Draft Work Plan as specified above. The Service participated in the sub-committee preliminary reviews of this document as well. We reviewed the information provided and have the comments provided below.

### **Section 7 of the Endangered Species Act**

The following information is provided as technical assistance on the possible presence of threatened and endangered species within the proposed site, the information available on the species status and biology, the possible effects of the proposed activities, and measures to minimize possible adverse effects. This information is provided to assist the Navy and its consultants in making determination of effects and in satisfying requirements under section 7 of the Endangered Species Act (Act).

The following information, analysis and recommendations are provided to assist you in finalizing your work plan.

Eastern Vieques provides habitat for the following threatened and endangered species:

*Dermochelys coriacea* - leatherback sea turtle (E)

*Eretmochelys imbricata* - hawksbill sea turtle (E)

*Chelonia mydas* - green sea turtle (T)

*Trichechus manatus manatus* - Antillean manatee (E)  
*Pelecanus occidentalis* - brown pelican (E)  
*Sterna dougallii dougallii* - roseate tern (E)

According to the information provided, no activities are proposed in the marine environment. Therefore, we are not providing additional comments on the Antillean manatee and the brown pelican. Both species use marine ecosystems for feeding, resting (roosting) and breeding.

Also, the threatened roseate tern is a migratory species that was identified nesting in eastern Vieques during formal consultation with the Navy in 2000 and 2001. This species use the exposed limestone rock found at the end of Punta Este for nesting. The proposed actions should not adversely affect this species.

Comments on sea turtles in the water should be coordinated with the National Marine Fisheries Service.

### **Sea Turtle General Information**

Of the six sea turtle species that are found in the U.S. waters or that nest on U.S. beaches, only the leatherback sea turtle, hawksbill sea turtle, and green sea turtle nest regularly on Vieques. The loggerhead sea turtle occurs in waters near Vieques, but no nests have been documented. Except for the leatherback sea turtle, which is a pelagic species, most sea turtles live in warm tropical and subtropical waters. Sea turtles come ashore to lay their eggs. The Service jurisdiction over sea turtles only includes this land-base behavior. Sea turtles nest in different locations and on different types of beaches. Each species has a particular nesting season, inter-nesting intervals and nesting intervals that may be useful in designing species specific conservation measures.

The leatherback sea turtle requires a sandy beach backed with vegetation and sloped sufficiently so that the crawl to dry sand is near. The preferred beach has proximity to deep water and generally rough or high energy seas. The leatherback turtle is the largest, most migratory and wide ranging species. The leatherback nests from February to August in Puerto Rico with peak nesting season from April until July. This varies among beaches and years. Female leatherbacks nest every nine to ten days an average of five to seven times within a nesting season, with an observed maximum of 11 times. Clutches average about 70-80 eggs, and typical incubation takes from 55 to 75 days. Most leatherbacks return to their nesting beaches at two to three year intervals.

Hawksbill sea turtles nests occur on almost any sand or mixed sand/gravel vegetated beach. The turtles crawls a maximum of 164 to 230 feet landward to nest under or near the vegetation. They prefer shallow low energy beaches and pocket beaches. Hawksbill sea turtles are small to medium in size, they nest in low densities on scattered small beaches and nesting season varies with locality. In most locations nesting occurs sometime between April and November. On Vieques the peak season for hawksbills is from June to December. Hawksbills nest on average 4.5 times per season at intervals of

about 14 days. Clutch size is about 140 eggs with an average incubation period of 60 days. Return intervals of two to three years predominate.

The green sea turtle shares nesting habitat with leatherback and hawksbill sea turtles, on Vieques, the green sea turtle utilizes high energy beaches. Green sea turtles grow to a maximum size of about four feet and a weight of 440 pounds. The nesting season varies with the locality. In Vieques, the species nest from June to October. A female may lay as many as nine clutches within a nesting season at about 13-day intervals. Clutch size varies from 75 to 200 eggs. Incubation ranges from 45 to 75 days, depending on incubation temperatures. Return intervals vary from two, three, or four-years.

### **Sea Turtle Concerns**

Using data developed by the Puerto Rico Department of Natural and Environmental Resources from 1991 to 2000, and summarized in final reports for the Navy under a Cooperative Agreement, we have identified eighteen (18) nesting beaches in eastern Vieques (Table 1). Data was compiled from Belardo *et al.*, 1992; Belardo *et al.*, 1993; Belardo *et al.*, 1994; Belardo *et al.*, 1995; Belardo *et al.*, 1996; Belardo *et al.*, 1997; Belardo *et al.*, 1998; Belardo *et al.*, 1999; Belardo *et al.*, 2000; Belardo *et al.*, 2001. Based on the aerial photos included in the draft plan, additional suitable nesting beaches might be present in the area.

The total number of nesting records varies from high at Yellow-Jalova Beach, Playa Brava, Fanduca, Jalovita Tamarindo Sur, and Playa de Barco, to moderate numbers at Blue Beach, Playa Blanca, Punta Brigadier-Purple Beach, and Red Beach. Relatively low numbers of nesting records are available for the rest of the beaches.

Nesting activity varies among years, sea turtle species and beaches (see Figure 1, Figure 2, and Figure 3). Nesting activities per year ranged from a minimum of 28 nesting activities in 1995 to a maximum of 142 in 1994. Peak nesting activities have been documented every three to four years.

The data summarized in Table 2 shows that leatherback nesting activities occur, principally, at Yellow-Jalova Beach, Playa Brava, Playa Brigadier-Purple Beach, Blue Beach, Puerto Diablo, Punta Este, and Playa de Barco. The rest of the beaches have a low number (less than five) of leatherback nesting activities.

Hawksbill turtles nest, principally at Yellow-Jalova Beach, Fanduca, Jalovita, Tamarindo Sur, Playa Brava, Blue Beach, and Fossil. The rest of the beaches have less than five nests.

Green sea turtles nest principally at Playa Brava, Playa de Barco, Playa Blanca, Yellow - Jalova beach and Punta Este. It is important to emphasize that these beaches in Vieques, represent the majority of the green sea turtle nests in Puerto Rico.

During the preliminary review of this document the Service expressed concerns with possible impacts of the beach assessment phase to nesting sea turtles and other federally listed threatened or endangered species. Section 2.5 of the document provides a description of the natural resources in the area. However, this section does not appropriately address sea turtles and possible impacts to nests and nesting habitat. Although the document mentions the presence of nesting beaches in the area, Figure 2-2 of the plan only shows five (5) sea turtle nesting beaches: Purple Beach; Playa de Barco, Brava and Blanca in eastern point; and Yellow Beach in the south.

Section 3.1.1 (MRA-Beach Areas) of the assessment, the Service previously provided a list and map showing the beaches that are currently used by the public but have never been surveyed for Munitions and Explosives of Concern (MEC). Figure 3.1, Beach Investigation Areas, is missing the small pocket beach just west of SWMU-2. We are enclosing a map of the current beaches that are accessible to the public but lack any surveys. These areas should be a priority for inspection. We are also providing a map showing the Live Impact Area (LIA) beaches most frequented by boaters. Non invasive methodologies to assess possible presence of MEC on the beaches may not result in adverse effects to the species. However, the possible need to blow-in place (BIP) any MEC item considered an immediate hazard, during nesting seasons may result in direct adverse effects and possible incidental take.

The above information should be carefully evaluated to identify measures to avoid or minimize possible adverse effects during the assessment activities. Some of these measures may include: identify a window of time when nesting activities are not anticipated, or anticipated in low numbers, and work that beach during that window of time; establish monitoring efforts before and during the activities in beaches where very low numbers of nests are anticipated; and/or establish protocols to search and relocate nests during the activities. Methodology and personnel qualifications for monitoring activities should be consistent with those conducted by the Department of Natural and Environmental Resources from 1991 to 2000.

We would like to further discuss other possible conservation measures and procedures for the implementation of these necessary activities.

### **Other Comments**

#### Section 3.2, Lines of Communication

This Section describes how the contractor and the Navy will communicate, however it should have a section on communication with Service personnel. Communication with the Vieques National Wildlife Refuge staff is critical since refuge staff will probably be working with the on site contractors on a daily basis.

### Section 3.2.2 Blow in Place Decision Matrix

As stated above, a BIP can cause adverse effects and possible incidental take of a sea turtle nest. However, the procedure outlined in this section is not practicable. Without prior monitoring of the nesting beaches it is impossible to determine if there are active nests in the immediate area of an MEC to be blown-in-place. This is why a protocol for all beach investigations and clearance should be developed.

### Section 3.3.2, Vegetation Clearance

As previously requested, this section now includes a Service biologist to survey for fauna and flora. It is not clear in this section exactly when Service personnel will access the transect sites. The Service should be included during or immediately after the initial sweep, but prior to grass and brush clearance and tree trimming/removal. Many of the transects will take several days to clear and survey, this needs to be coordinated and scheduled with the Refuge staff ahead of time for a Service wildlife biologist to be available.

If you have any questions, please call Felix Lopez at 787-851-7297, extension 226.

Sincerely,



Edwin E. Muñiz  
Field Supervisor

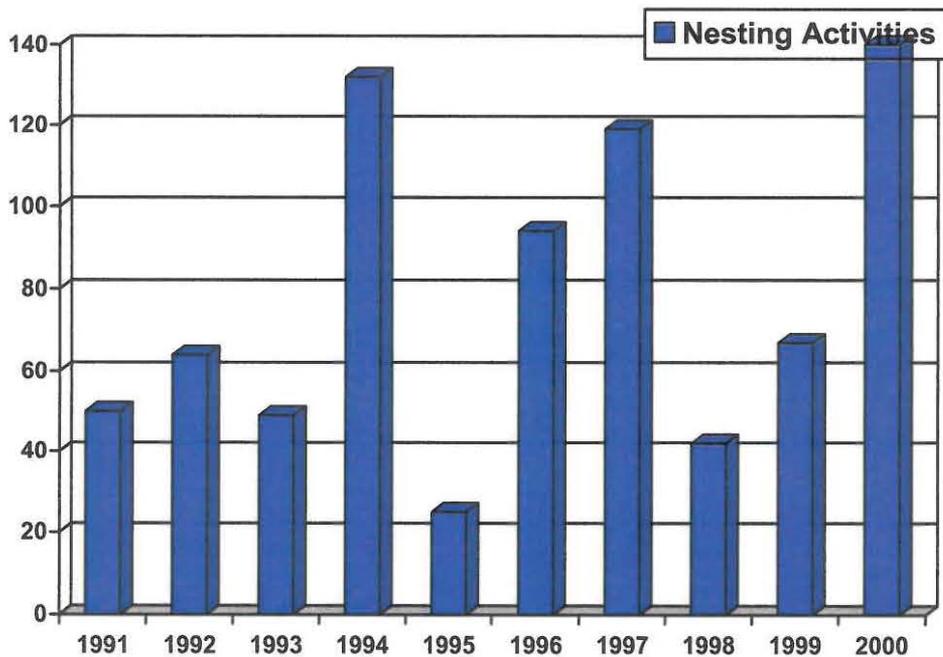
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Enclosures

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Table 1. Beaches in eastern Vieques with sea turtle nesting records from 1991 to 2000.

<i>Beach</i>	<i>Nesting Activities</i>	<i>Minimum</i>	<i>Maximum</i>
Yellow -Jalova Beach	302	1	46
Playa Brava	157	1	38
Fanduca	59	1	14
Jalovita	51	1	12
Tamarindo Sur	48	1	12
Playa de Barco	36	2	22
Blue Beach	28	1	6
Playa Blanca	26	3	7
Punta Brigadier- Purple Beach	29	1	14
Red Beach	11	1	3
Punta Este	9	4	5
Puerto Diablo	8	1	6
Fossil	7	1	4
Salinas del Sur	4	1	3
Yayis Beach	3	1	1
Santa Maria	2	1	1
Cayo Berdiales	1	1	1
Barracuda	1	1	1
<b>Total</b>	<b>782</b>	<b>1</b>	<b>46</b>

Figure 1. Nesting activities in eastern Vieques from 1991 to 2000.



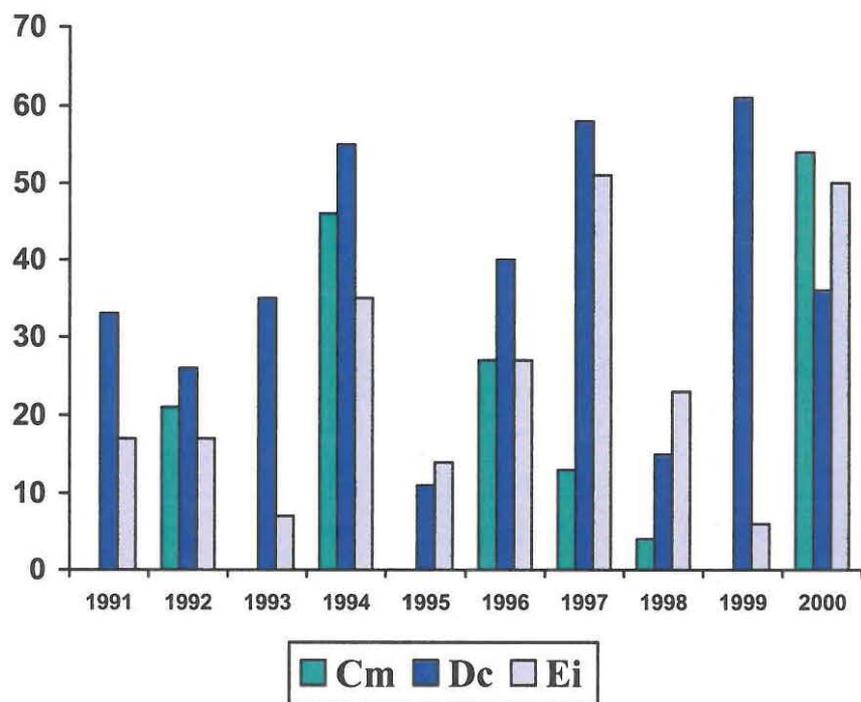
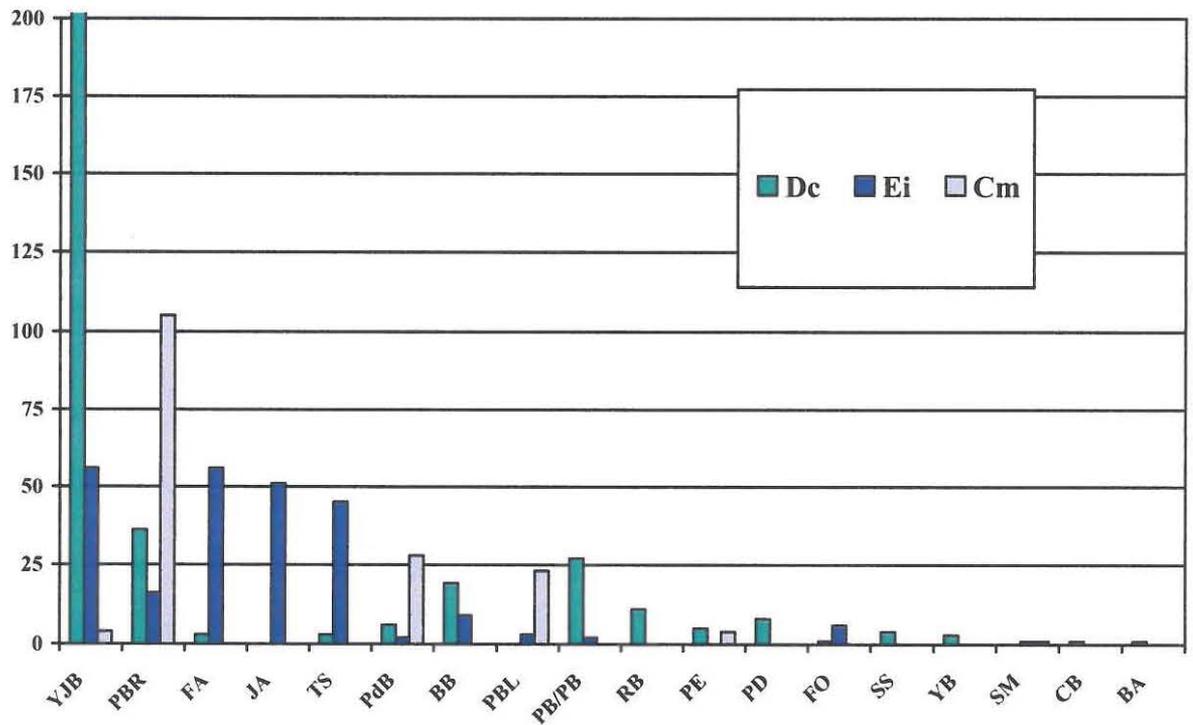


Figure 2. Nesting activities per species from 1991 - 2000 in eastern Vieques. Cm is the Green Sea Turtle, Dc is the leatherback sea turtle and Ei is the Hawksbill Sea Turtle.

<i>Beach</i>	<i>Nesting Activities Leatherback Number /range</i>		<i>Nesting Activities Hawksbills Number (range)</i>		<i>Nesting Activities Greens Number (range)</i>	
Yellow -Jalova Beach	242	3-46	56	1-9	4	4
Playa Brava	36	1-15	16	2-6	105	4-38
Fanduca	3	1-2	56	1-14	-	-
Jalovita	-	-	51	1-12	-	-
Tamarindo Sur	3	1-2	45	2-12	-	-
Playa de Barco	6	6	2	2	28	2-22
Blue Beach	19	1-5	9	1-6	-	-
Playa Blanca	-	-	3	3	23	4-7
Punta Brigadier- Purple Beach	27	1-14	2	2	-	-
Red Beach	11	1-3	-	-	-	-
Punta Este	5	5	-	-	4	4
Puerto Diablo	8	1-6	-	-	-	-
Fossil	1	1	6	2-4	-	-
Salinas del Sur	4	1-3	-	-	-	-
Yayis Beach	3	1	-	-	-	-
Santa Maria	-	-	1	1	1	1
Cayo Berdiales	1	1	-	-	-	-
Barracuda	1	1	-	-	-	-
<b>Total</b>	<b>370</b>	<b>1-46</b>	<b>247</b>	<b>1-14</b>	<b>165</b>	<b>2-38</b>

Table 2. Total number of nesting activities and range (minimum-maximum) per species per beach in eastern Vieques.



**Key:**

YJB - Yellow-Jalova Beach  
 PBR- Playa Brava  
 FA- Fanduca  
 JA - Jalovita  
 TS - Tamarindo Sur  
 PdB - Playa de Barco  
 BB - Blue Beach  
 PBL - Playa Blanca  
 Punta Brigadier-Purple Beach

RB - Red Beach  
 PE - Punta Este  
 PD - Puerto Diablo  
 FO- Fossil  
 SS - Salinas del Sur  
 YB - Yaxis Beach  
 SM - Santa Maria  
 CB - Cayo Berdiales  
 BA - Barracuda

Figure 3. Nesting activities per species per beach from 1991-2000. Dc is the Leatherback Sea Turtle, Ei is the Hawksbill Sea Turtle and Cm is the Green Sea Turtle.

**EXISTING CONDITIONS**

Navy Lands on Vieques

