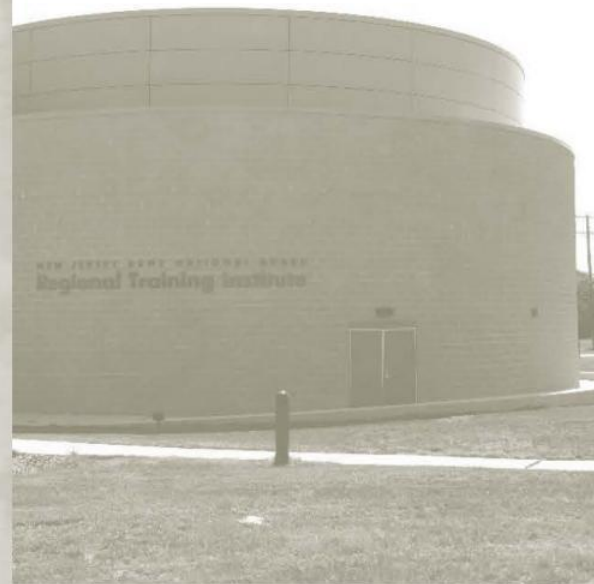


*FINAL*  
**INTEGRATED NATURAL  
RESOURCES MANAGEMENT PLAN**  
*(2018 - 2022)*

**NEW JERSEY ARMY NATIONAL GUARD  
SEA GIRT NATIONAL GUARD TRAINING CENTER**



AIR VIEW, CAMP MOORE, NEW JERSEY



**NEW JERSEY DEPARTMENT OF MILITARY  
AND VETERANS AFFAIRS  
NEW JERSEY ARMY NATIONAL GUARD  
ENVIRONMENTAL MANAGEMENT BUREAU  
LAWRENCEVILLE, NEW JERSEY**



*Piping Plover,  
Seabeach Amaranth  
(USFWS Images),  
and Least Tern*



**SEPTEMBER 2018**

**FINAL V1**  
**INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN (2018–2022)**  
**NEW JERSEY ARMY NATIONAL GUARD**  
**SEA GIRT NATIONAL GUARD TRAINING CENTER**  
**SEPTEMBER 2018**

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**FINAL**  
**INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN (2018–2022)**  
**NEW JERSEY ARMY NATIONAL GUARD**  
**SEA GIRT NATIONAL GUARD TRAINING CENTER**  
**SEPTEMBER 2018**

The U.S. Fish and Wildlife Service and New Jersey Army National Guard are in mutual agreement with regard to the contents of this Integrated Natural Resources Management Plan:

2/26/19  
Date

  
Eric Schradling  
Field Supervisor  
U.S. Fish and Wildlife Service  
New Jersey Field Office

---

FINAL V1  
INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN (2018–2022)  
NEW JERSEY ARMY NATIONAL GUARD  
SEA GIRT NATIONAL GUARD TRAINING CENTER  
SEPTEMBER 2018

The New Jersey Department of Environmental Protection, Division of Fish and Wildlife and New Jersey Army National Guard are in mutual agreement with regard to the contents of this Integrated Natural Resources Management Plan:

2/25/19

Date



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Ray Bukowski  
Assistant Commissioner  
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## EXECUTIVE SUMMARY

This Integrated Natural Resources Management Plan (INRMP) for Sea Girt National Guard Training Center (NGTC) has been prepared by the New Jersey Army National Guard (NJARNG) and the New Jersey Department of Military and Veterans Affairs (NJDMAVA) in accordance with Department of Defense, Department of the Army, and Army National Guard Bureau policy and guidance. The purpose of this INRMP is to document the policies, practices, and desired future direction of the NJARNG's natural resource programs that are consistent with military training and use at Sea Girt NGTC. The INRMP was first developed and implemented in 2006 (NJDMAVA 2006a), updated in 2013, and has been updated to cover the next five years (2018–2022). This plan and subsequent revisions have been developed in cooperation with the U.S. Fish and Wildlife Service and New Jersey Department of Environmental Protection, Division of Fish and Wildlife, Endangered and Nongame Species Program. This INRMP reflects a mutual agreement among the parties concerning conservation, protection, and management of fish and wildlife resources at the installation.

Sea Girt NGTC is located at the south end of the Borough of Sea Girt along the Atlantic Ocean in southern Monmouth County, New Jersey. The installation encompasses 171 acres of land owned by the NJDMAVA that is surrounded by residential communities on its north, south, and west sides. Stockton Lake, a tributary of the Manasquan River, is located adjacent to the southern boundary, and the Atlantic Ocean is located adjacent to the eastern boundary. The NJARNG mission is to provide trained and ready forces for federal military requirements and for state contingencies as determined by the governor. The mission of Sea Girt NGTC is to provide facilities to support the stationing, training, and support of regional National Guard units, and facilities to support the academic training of Soldiers, Airmen, Sailors, and federal, state, and local law enforcement agencies in the region. The installation has been used for military training since 1885.

Five natural resources management program areas (land and watershed management, fish and wildlife management, rare species management, outdoor recreation, and information management) have been established to address relevant issues at Sea Girt NGTC. This INRMP identifies management issues and establishes management goals, responsibilities, implementation schedules, and funding requirements for each of these program areas. Despite its location in a highly developed coastal community, Sea Girt NGTC provides important habitat for five rare species, including a federally listed bird (piping plover), a federally listed plant (seabeach amaranth), two state-listed birds (least tern and osprey), and a state-listed plant (seabeach knotweed). Management of these species is addressed in an Endangered Species Management Plan contained in Section 6.0 .

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**FINAL  
INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN  
SEA GIRT NATIONAL GUARD TRAINING CENTER**

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## LIST OF ACRONYMS

AAG	Assistant Adjutant General
ADT	Active Duty Training
AMSL	above mean sea level
AOC	Atlantic Ocean coast
AR	Army Regulation
ARNG I&E	Army National Guard Directorate, Installations & Environment
ASGECI	Amy S. Greene Environmental Consultants, Inc.
BECP	Beach Erosion Control Project
BMPs	best management practices
BR	Breeding Population
CAFRA	Coastal Area Facility Review Act
CFMO	Construction Facilities Management Office
CFMO-EMB	CFMO – Environmental Management Bureau
DA	Department of the Army
DAG	Deputy Adjutant General
DAR	daily accumulation rate
DCA	Department of Community Affairs
DDT	dichloro-diphenyl-trichloroethane
DOD	Department of Defense
DLUR	Division of Land Use Regulation
EA	Environmental Assessment
EFH	Essential Fish Habitat
ENSP	Endangered and Nongame Species Program
EO	Executive Order
EQCC	Environmental Quality Control Committee
ESA	Endangered Species Act
ESMP	Endangered Species Management Plan
°F	degrees Fahrenheit
FAC	facultative species
FACU	facultative upland species
FACW	facultative wetland species
FEMA	Federal Emergency Management Agency
FGS	Final Governing Standards
FNSI	Finding of No Significant Impact
GIS	geographic information system
GPS	Global Positioning System
HUC	hydrologic unit code
ICRMP	Integrated Cultural Resources Management Plan
IDT	inactive duty training
INRMP	Integrated Natural Resources Management Plan
IPM	Integrated Pest Management
LCC	Land Component Commander

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LID	low impact development
LOI	Letter of Interpretation
NEPA	National Environmental Policy Act
NGB	National Guard Bureau
NGJTC	National Guard Joint Training Center
NGTC	National Guard Training Center
NISC	National Invasive Species Council
N.J.A.C.	New Jersey Administrative Code
NJARNG	New Jersey Army National Guard
NJDEP	New Jersey Department of Environmental Protection
NJDEP-ENSP	NJDEP-Endangered and Nongame Species Program
NJDMAVA	New Jersey Department of Military and Veterans Affairs
NJPDES	New Jersey Pollutant Discharge Elimination System
N.J.S.A.	New Jersey Statutes Annotated
NL	not listed species
NOAA	National Oceanic and Atmospheric Administration
NPA	northern protection area
NRHP	National Register of Historic Places
OBL	obligate wetland species
OEBGD	Overseas Environmental Baseline Guidance Document
ONLM	Office of Natural Lands Management
POC	point of contact
RTI	Regional Training Institute
SGCN	species of greatest conservation need
SHPO	State Historic Preservation Office
SPA	southern protection area
SSURGO	Soil Survey Geographic
STEP	Status Tool for the Environmental Program
SWAP	State Wildlife Action Plan
SWG	State Wildlife Grants
TAG	The Adjutant General
UPL	upland species
USACE	U.S. Army Corps of Engineers
U.S.C.	U.S. Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
WPWA	Wreck Pond Watershed Association

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## SECTION 1 INTRODUCTION

### 1.1 AUTHORITY

This Integrated Natural Resources Management Plan (INRMP) for Sea Girt National Guard Training Center (NGTC) has been prepared by the New Jersey Army National Guard (NJARNG) and the New Jersey Department of Military and Veterans Affairs (NJDMAVA) in accordance with requirements specified by the following: Department of Defense (DOD) guidance set forth in the 10 October 2002 memorandum titled *Implementation of the Sikes Act Improvement Act: Updated Guidance*; DOD 1 November 2004 memorandum titled *Implementation of Sikes Act Improvement Act, Supplemental Guidance Regarding INRMP Reviews*; DOD 18 August 2017 memorandum entitled *Guidance for Addressing Migratory Bird Management in INRMPs*; Department of the Army (DA) policy set forth in the 25 May 2006 memorandum titled *Guidance for Implementation of the Sikes Act Improvement Act*; Army National Guard Bureau (NGB) policy set forth in the 9 April 2012 memorandum titled *Guidance for the Creation, Implementation, Review, and Revision and Update of INRMPs*; DOD Instruction 4715.03, *Natural Resources Conservation Program*; DOD Manual 4715.03, *(INRMP) Implementation Manual*; and Army Regulation (AR) 200-1, *Environmental Protection and Enhancement*. This document has also been prepared to be consistent with INRMP criteria specified by the Sikes Act Improvement Act of 1997 (Sikes Act, 16 U.S. Code [U.S.C.] 670a et. seq.), which requires preparation of INRMPs for military installations where there is a federal property interest. No federal property interest exists at Sea Girt NGTC because the NJDMAVA owns the property. However, many of the buildings are managed using federal funds, and the facility supports the federal mission of the NJARNG. NGB policy specifies that all INRMPs will be consistent with Sikes Act criteria.

### 1.2 MANAGEMENT PHILOSOPHY

This INRMP was developed under the following five concepts:

- no net loss to training capacity
- sustained use of lands for military training
- natural resources stewardship
- biodiversity protection
- ecosystem management

In order to fully support and sustain its military mission at Sea Girt NGTC, the NJARNG must manage, protect, and enhance the biological integrity of its lands. The NJARNG mission includes both federal and state components. The primary federal mission of the NJARNG is to train and equip units that are capable of immediate expansion to war strength. These units must be available for service in time of war or national emergency, or when appropriated to augment the active Army. The primary state mission is to support and train civil authorities in the protection of life and property. In order to accomplish these missions, the NJARNG requires sufficient training lands. Therefore, the training lands at Sea Girt NGTC are some of the most valuable assets of the

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NJARNG. Sustainable use of these lands can be achieved by integrating sound natural resources management programs into installation mission activities.

Natural resources stewardship is the management of natural resources with the goal of maintaining or increasing the resource's value indefinitely into the future. The stewardship goal of the NJARNG is to sustain multiple uses of natural resources over the long term, while promoting the health of the ecosystems in which these activities occur. Although NJARNG training lands are primarily used for mission activities, other uses include outdoor recreation, aesthetics, and ecosystem preservation.

Biodiversity is defined as the variety of life and its processes, including living organisms, the differences among them, and the communities and ecosystems in which they occur. Protecting and enhancing biodiversity is an overall goal of the NJARNG. Biodiversity consists of many elements of the natural environment including indigenous ecological communities, native species, and their associations, as well as ecosystem functions such as predation, grazing, nutrient cycling, and fire. Biodiversity is best measured or defined in terms of the variety of natural communities or ecosystems and the various natural functions that occur within, and among, these communities or ecosystems, rather than simply by the numbers of species present. Management for biodiversity helps to ensure ecosystem health, which in turn ensures sustainable use of lands to accomplish military missions.

Ecosystem management is a tool for the NJARNG to use not only in its efforts to protect and enhance biodiversity, but also to sustain the use of its military lands. This tool encourages management decisions to focus on natural resources at a community or ecosystem level rather than at a single species level. By maintaining or improving the quality, integrity, and connectivity of the ecosystem, individual species should prosper. However, individual rare species are not neglected by this management approach. Consideration must be given to rare species during land use and construction project planning because these species contribute to ecosystem health and to biodiversity, and, in many instances, are provided legal protection.

The INRMP is a tool that can be used for future land use and project planning. In accordance with the DA and NGB policy, the major components of the INRMP include managing natural resources to support the military mission and to provide for sustainable use of training lands; identifying natural resources inventory and monitoring needs; protecting, enhancing, and restoring fish and wildlife habitat, including wetlands; and enforcing natural resources laws and regulations. Each of these components is essential to the success of an INRMP that aims to achieve sustainable military use and promote biodiversity.



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### **1.3 PURPOSE OF PLAN**

The purpose of this INRMP is to document the policies, practices, and desired future direction of the NJARNG's natural resource programs that are consistent with military training and use at Sea Girt NGTC. The plan should

- provide a comprehensive planning document that allows the NJARNG to carry out its mission, promote ecosystem health, and maximize biodiversity at its installations and in the surrounding region;
- ensure no net loss of training capacity;
- establish the framework for the implementation of natural resources programs and ecosystem management;
- provide a centralized source of information on the status of natural resources programs;
- identify mission-related impacts and options for conflict resolution of competing interests;
- serve as a source of information for National Environmental Policy Act (NEPA) documents;
- provide a source of guidance for compliance with environmental regulations; and
- identify, prioritize, and schedule long-term budget requirements.

### **1.4 ORGANIZATION OF PLAN**

This plan is divided into ten sections. Sections 1.0 through 3.0 provide introductory information, a description of the military mission and environmental setting, and an explanation of the natural resources planning structure. Sections 4.0 through 8.0 describe resource-specific management programs at the installation, including management issues and goals. Section 9.0 includes an implementation plan for each program, and Section 10.0 contains references.

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## SECTION 2

### MILITARY MISSION AND ENVIRONMENTAL SETTING

#### 2.1 GEOGRAPHIC LOCATION AND SIZE

Sea Girt NGTC is located along the Atlantic coastline of New Jersey at the south end of the Borough of Sea Girt in southern Monmouth County, New Jersey (Figure 2-1). The installation encompasses 171 acres of land surrounded by residential communities on its north, south, and west sides. To the south, the installation is bounded by Stockton Lake, a tributary of the Manasquan River, and the Borough of Manasquan. The Atlantic Ocean is adjacent to the eastern boundary, and railroad tracks run along the western boundary of the installation.

#### 2.2 MILITARY MISSION

##### 2.2.1 Statement of Mission

The NJARNG mission is to provide trained and ready forces for federal military requirements and for state contingencies as determined by the governor. The mission of the NGTC located at Sea Girt, New Jersey, is to provide facilities to support the stationing, training, and support of regional National Guard units, and facilities to support the academic and physical training of Soldiers, Airmen, and Sailors in the region. The installation facilities and grounds, including beachfront, have been used for military training since 1885. The vision for the NGTC is to continue its stationing, training, and support mission for the National Guard, while preserving its surrounding community and environmental integrity. Land and facility resource collaboration with common-interest "partners in education," such as the New Jersey State Police, Department of Corrections, Juvenile Justice Commission, and Department of Criminal Justice, supports this vision (Dreher, personal communication, 30 August 2017).

##### 2.2.2 Facility Uses and Users

The New Jersey NGTC supports a variety of military and nonmilitary users. The installation serves as the home station for the 254th Regiment Regional Training Institute (RTI). The RTI's mission is to provide Combat Arms training under the RTI concept to active Army, Army National Guard, Army Reserve, and DA civilian personnel. The NGTC is also the home station for the Recruiting and Retention Battalion, the 63rd Army Band, and the State Medical Command. In addition, Facilities Maintenance Shop #2 and the New Jersey National Guard Militia Museum are located at the NGTC. Additional active duty and reserve units from the region use the facilities at the NGTC for inactive duty training (IDT), annual training, and various classes/schools (Dreher, personal communication, 30 August 2017).

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Tenant organizations that have a permanent presence at Sea Girt NGTC include the following:

- New Jersey State Police Academy and Regional Laboratory
- New Jersey Department of Corrections Academy
- Division of Criminal Justice Academy
- Juvenile Justice Commission Academy
- Verizon
- Allied Universal
- New Jersey National Guard Militia Museum
- various NJARNG Units

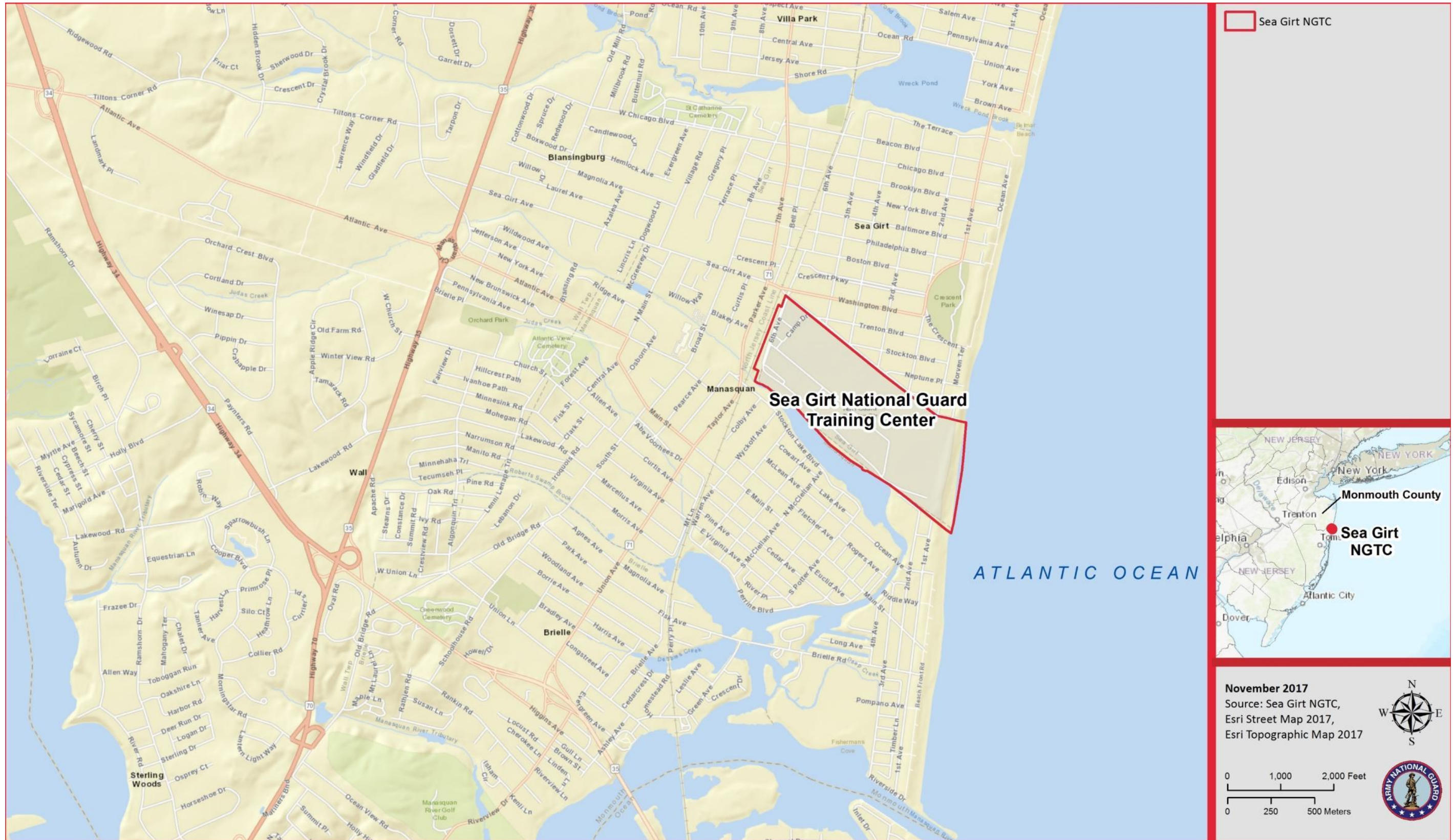
Approximately 168 full-time personnel, including tenants, are located at the NGTC. Additional military personnel and tenant students use the installation's facilities year round. The student housing capacity is 894. Authorized individuals use outdoor recreation areas (e.g., beach and campground) seasonally (see Section 7.0 – Outdoor Recreation). In addition, local schools, communities, and sports leagues frequently use the parade grounds for organized sports (e.g., soccer, lacrosse, and croquet) under lease agreements. The NJDMAVA sponsors a National Guard Youth Camp one week each summer for approximately 120 children. The New Jersey State Police conduct a Trooper Youth program three to four times per summer; each one-week program includes approximately 80 pending high school seniors. The NGTC hosts a Boy Scouts of America camporee, with an attendance of approximately 10,000 Boy Scouts. The camporee lasts two days, with two additional days for set up prior to scout arrival and features camping on the parade grounds, demonstrations by the New Jersey State Police and NJARNG, and classes and activities for the scouts so they can earn their merit badges (Dreher, personal communication, 30 August 2017). Conserve Wildlife Foundation also conducts summer youth camps at NGTC.

### **2.2.3 Planned Improvements**

The NJARNG is planning upgrades to the NGTC in order to better support National Guard troops during training and execution of federal and state missions. A Master Plan, which was updated in 2014 (Jacobs Global Building 2014), and subsequently a Site Development Plan dated 29 February 2016 (Jacobs Global Building 2016), were developed to provide a 25-year development strategy for the NGTC. Implementation of these plans will enable the NJARNG to maintain its troops and equipment at the necessary level of readiness in order to complete assigned missions.

The Master Plan and Site Development Plan identified a number of activities, including the demolition of several preexisting buildings and future demolition of other structures as new facilities are built. A new RTI complex, consisting of classrooms, auditorium, offices, and billets, was completed in 2017. A new medical clinic, general education building, and field maintenance shop are under construction. Further, the existing utility infrastructures are under design for future improvements. The dining facility renovation has been designed and planned for construction in 2018. The Master Plan and Site Development Plan will be implemented over multiple phases (Dreher, personal communication, 30 August 2017).

**FIGURE 2-1 SEA GIRT NGTC LOCATION**



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## 2.3 TRAINING FACILITIES AND ACTIVITIES

The NGTC supports academic training in classrooms and field training. The installation has 47 buildings with over 310,000 square feet, which include administration, classroom, food service, barracks, armory, military vehicle maintenance, storage, and other support facilities. The installation has 30 classrooms with seating capacity for 1,243 students and can house 894 students in its billeting facilities. The RTI course schedule for the 2017 training year includes 17 different courses (see Table 2-1). Typically, an individual course may occur over several weekends for IDT, up to a nine-week-long duration for active duty training (ADT). Maximum scheduled class sizes are 32 students, averaging 30 students per class. All IDT courses will be taught in ADT status once the new RTI Educational Complex is completed. Similar training to that identified in Table 2-1 is expected throughout the implementation period for this INRMP (Dreher, personal communication, 30 August 2017).

**TABLE 2-1 TYPICAL COURSE SCHEDULE FOR SEA GIRL NGTC RTI**

<b>Course</b>	<b>Maximum Capacity</b>	<b>IDT/ ADT</b>
OFFICER CANDIDATE SCHOOL #61	30	IDT
081-68W10 HEALTHCARE SPECIALIST (MOS-T) #001	18	ADT
5K-SI5K/012-SQI8 FOUNDATION INSTRUCTOR FACILITATOR COURSE #101	16	IDT
081-68W10 HEALTHCARE SPECIALIST (MOS-T) #001	18	ADT
081-68W10 HEALTHCARE SPECIALIST (MOS-T) #001	18	ADT
071-5K-F30/570-F17 TACTICAL CERTIFICATION COURSE #301	18	ADT
CLC-06 COMBAT LIFESAVER COURSE 301	40	ADT
131-F13, SGITC #001	16	IDT
964-68W10 (S) SUSTAINMENT #001	50	ADT
PRE-OCS	30	IDT
MTC-005, SQUAD DESIGNATED MARKSMAN #301	36	ADT
5K-SI5K/012-SQI8 FOUNDATION INSTRUCTOR FACILITATOR COURSE #102	16	IDT
071-11B30-C45 INFANTRYMAN ADVANCED LDR #001	32	ADT
MTC-005, SQUAD DESIGNATED MARKSMAN #302	36	ADT
071-11B30-C45 INFANTRYMAN ADVANCED LDR #002	32	ADT
MTC-003, SMALL ARMS MASTER GUNNER #302	36	ADT
OCS #62	30	IDT
MTC-005, SQUAD DESIGNATED MARKSMAN #303	12	ADT

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Field training areas include open parade grounds (approximately 91 acres), a bivouac area, a driver/motorcycle training area, small arms ranges, and the beach area (Figure 2-2). Military units and law enforcement tenant agencies use these training areas. A majority of the military field training occurs during IDT on the weekends (typically three weekends per month). Law enforcement training occurs throughout the week. Field training activities conducted at the NGTC include the following:

- The parade grounds are primarily used for unit assemblies, Governor Reviews, Boy Scout Camporees, ceremonies, and physical training; as well as soccer, field hockey, and football for local schools and private organizations.
- Areas east of the parade grounds and west of the dunes are used for bivouac and signal training.
- The small arms ranges are used for weapons qualification training by military units and law enforcement tenant agencies. The NGTC has five outdoor ranges. The outdoor ranges are located in the eastern portion of the installation, immediately west of the dunes (Figure 2-2). Ranges 1, 2, and 5 are currently inactive. Range 1 is a practice hand grenade range, and Ranges 2 and 5 are small arms ranges. Ranges 3 and 4 are active, 25-meter baffle ranges. Range 5 is being developed into a military operations in urban terrain site.
- A driver/motorcycle training area is located southeast of the parade grounds and consists of a 0.3-acre asphalt pad. Military units and law enforcement tenant agencies occasionally use the area for driver training. Driver training is also conducted on existing roadways throughout the post by law enforcement agencies. No off-road vehicle maneuver training or tracked vehicle training occurs at the installation.
- The NGTC beach is used for physical training and water rescue/ocean survival training. Training is limited to areas outside the rare species protection areas described in Section 6.0 . Water rescue training includes limited vehicle use on the beach to launch small watercraft.
- The military conducts combat medical training activities on weekends in between the dunes and range areas.
- Law enforcement tenant agencies conduct crime scene investigation training throughout the installation.

As noted above, no off-road vehicle maneuver training or tracked vehicle training is conducted at the installation. Consequently, training activities at the installation result in minimal disturbance to the land (Dreher, personal communication, 30 August 2017).



FIGURE 2-2 SEA GIRT NGTC FACILITY



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## **2.4 LAND USE**

### **2.4.1 Historic Land Use**

The property on which Sea Girt NGTC is located has been used for military training since 1885. Prior to that time, the property consisted of farmland and residences. A more comprehensive history of Sea Girt NGTC is contained in the 2014 Final Phase I Archaeological Survey done at the installation (HDR 2014) and the *Sea Girt NGJTC Master Plan* (Jacobs Global Building 2014).

### **2.4.2 Current Land Use**

Sea Girt NGTC consists of approximately 86 percent improved grounds, 13 percent unimproved grounds, and 1 percent semi-improved grounds. Lands uses can be generally characterized as administrative/academic training, equipment/vehicle maintenance/storage, field training, live fire training (small arms), recreation, and open space. Approximately 65 percent of the installation is open space, including the parade grounds and athletic fields. Sea Girt NGTC is zoned as a recreational, open space (NJDMAVA 2013b).

### **2.4.3 Surrounding Land Use/Encroachment**

The aerial photograph in Figure 2-2 depicts surrounding land use. Virtually all developable lands surrounding Sea Girt NGTC are currently developed. The installation is bordered by the Atlantic Ocean to the east and Stockton Lake to the south, both of which are used for water-dependent recreation. Baseball fields and residences/vacation homes are located along the southeastern boundary. Dense residential development is also located south of Stockton Lake and along the northern installation boundary. Dense commercial and residential development, as well as a commuter and freight rail line, are located west of the installation.

## **2.5 CLIMATE**

Located in the Outer Coastal Plain of New Jersey, the climate at Sea Girt is influenced by its proximity to the Atlantic Ocean. This maritime influence tends to have a moderating effect on coastal temperatures, causing them to be slightly cooler than inland temperatures in the summer and slightly warmer than inland temperatures in the winter. The Office of the New Jersey State Climatologist reports temperature and precipitation monthly averages from 1895 to 2017, and 30-year averages “normals” recorded at several stations throughout coastal NJ (Office of the New Jersey State Climatologist n.d.). See Table 2-2 below.

**TABLE 2-2 CLIMATOLOGICAL DATA SUMMARY FOR SEA GIRT NGTC**

Month	Temperature (°F)			Precipitation (inches)		
	Mean (1895–2017)	Normal (1971–2000)	Preliminary New Normal (1981–2010)	Mean (1895–2017)	Normal (1971–2000)	Preliminary New Normal (1981–2010)
January	33.6	33	33.8	3.56	3.9	3.77
February	34.4	34.6	35.8	3.2	3.17	2.93
March	41.4	41.8	42.2	3.94	4.17	4.21
April	50.5	50.5	51.2	3.64	3.74	3.96
May	60.1	60	60.4	3.59	4.06	3.79
June	69.3	69.3	70	3.42	3.13	3.43
July	74.6	74.8	75.3	3.99	3.93	4.24
August	73.6	73.5	74.2	4.55	4.41	4.32
September	67.9	67.3	68.1	3.47	3.66	3.45
October	57.4	56.4	57.3	3.56	3.60	4.06
November	47.3	47.2	48.1	3.48	3.54	3.45
December	37.7	38.1	38.6	3.72	3.72	3.68
<b>Total</b>	-	-	-	44.12	45.01	45.29

Source: Office of the New Jersey State Climatologist. Available at <http://climate.rutgers.edu/stateclim/>. Accessed on September 18, 2017. Values are calculated from an average of monthly temperature and precipitation totals recorded at several stations throughout coastal NJ and represent inches of liquid equivalent precipitation.

## 2.6 GEOLOGICAL RESOURCES

### 2.6.1 Geology

Sea Girt is in the Coastal Plain physiographic province, and bedrock geology is mapped as part of the Lower Member Kirkwood Formation. Soils at the installation are formed from the unconsolidated sediments of Mesozoic and Cenozoic age. Of marine and continental origin, these sediments consist mainly of sand, clay, greensand (glauconite), and interspaced gravel beds. Sand, clay, and gravel deposits from the Quaternary age, deposited by outwash or melt water from a glacier that once covered northern New Jersey, form a thin layer over the Coastal Plain sediments.

### 2.6.2 Soils

The following four types of soils are found at Sea Girt NGTC (Figure 2-3):

- Downer sandy loam-Urban land complex, 0 to 5 percent slopes. This map unit covers approximately 70 percent (120 acres) of the installation and consists of nearly level and gently sloping, well-drained Downer sandy loam and Urban land. The areas of each are in such an intricate pattern that it is not practical to map them separately.

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- Udorthents-Urban land complex, 0 to 8 percent slopes. This map unit covers approximately 19 percent (33 acres) of the installation and consists of nearly level and gently sloping soils that have been altered by excavation and filling.
  - Hooksan sand, 0 to 5 percent slopes. This map unit covers approximately 7 percent (13 acres) of the installation and consists of nearly level to gently sloping, excessively drained soil on dunes adjacent to coastal beaches.
  - Humaquepts, frequently flooded. This map unit covers less than 1 percent (0.1 acre) of the installation and consists of nearly level, somewhat poorly drained to very poorly drained soils. These soils occur on floodplains along perennial and intermittent streams (USDA NRCS 2017).

### **2.6.3 Topography**

The topography at Sea Girt NGTC is relatively flat, and averages less than 10 feet above mean sea level (AMSL) in elevation (Figure 2-4). The maximum elevation reaches 20 to 25 feet AMSL in the dunes where sand has accumulated against the sea wall and other structures in the eastern part of the installation. See Section 6.3.2.1 for additional data collected on beach topography.

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FIGURE 2-3 SEA GIRT NGTC SSURGO SOILS

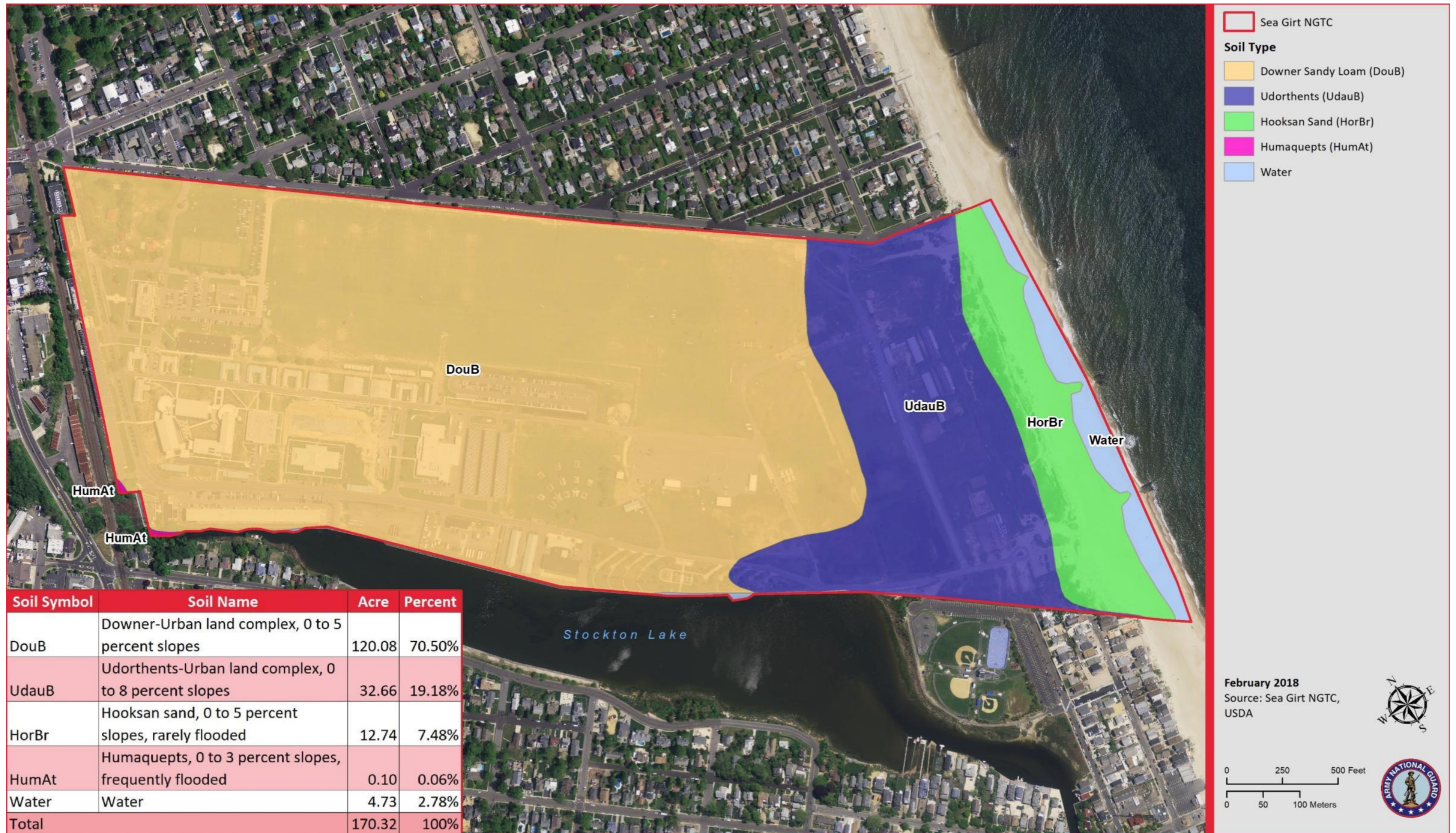


FIGURE 2-4 SEA GIRT NGTC USGS TOPOGRAPHIC





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## **2.7 WATER RESOURCES**

### **2.7.1 Watershed and Surface Water**

Sea Girt NGTC is in the Atlantic Coast water region, Monmouth watershed management area, Manasquan River watershed (hydrologic unit code [HUC11] 02030104100), and Manasquan River (below Route 70 bridge) sub-watershed (HUC14 02030104100100). No state open waters are located within the installation boundaries. However, the Atlantic Ocean is adjacent to the eastern boundary, Judas Creek to the northwest, and Watson Creek and Stockton Lake are adjacent to the southern boundary (Figure 2-5).

Judas Creek is a nontidal freshwater stream in its upper reaches and becomes tidally influenced and saline as it flows into Stockton Lake near the southwestern boundary of Sea Girt NGTC. Judas Creek and Stockton Lake are tributaries to Watson Creek, which is a tributary to the Manasquan River. Both Judas and Watson Creek are classified as FW2-NT/SE1 (freshwater, non-trout waters/saline waters of estuaries) by the New Jersey Water Quality Standards. Watson Creek, Stockton Lake, and Judas Creek are not classified as Category 1 waters (Debra Hammonds, New Jersey Department of Environmental Protection, personal communication, 5 August 2004). A steel bulkhead runs along a majority boundary between the installation and Stockton Lake.

No permanent surface waters are present on Sea Girt NGTC; however, there are two stormwater areas that collect and retain wet conditions for extended periods. These areas are on the southside of the parking lot located in the center of Sea Girt and adjacent to the parade grounds (see Figure 4-1 in Section 4.2).

### **2.7.2 Groundwater**

Groundwater at Sea Girt NGTC is associated with the Kirkwood–Cohansey aquifer system. No potable groundwater wells are located on the installation. However, irrigation wells for the croquet field, several monitoring wells for the regional groundwater contamination studies, and one U.S. Geological Survey (USGS) monitoring well exist on-site. Temporary monitoring wells developed in 2002 encountered groundwater at a depth of six feet.

### **2.7.3 Floodplains**

Figure 2-6 depicts floodplain data based on the Flood Insurance Rate Map for the Borough of Sea Girt, created by the Federal Emergency Management Agency (FEMA). This Flood Insurance Rate Map indicates that approximately 97 and 20 acres of the installation are within the 100- and 500-year floodplains, respectively.

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FIGURE 2-5 SURFACE WATER NEAR SEA GIRT NGTC

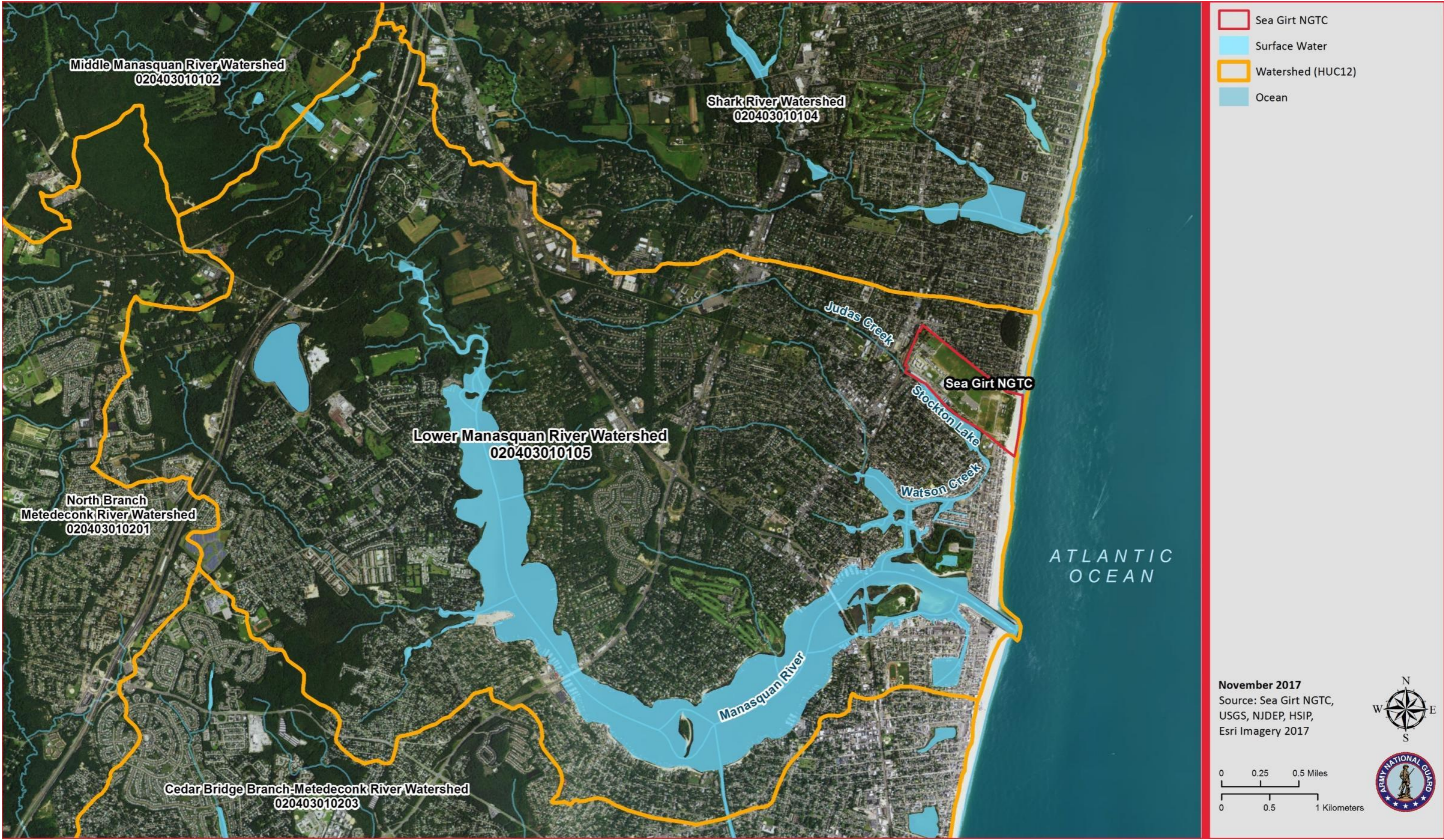
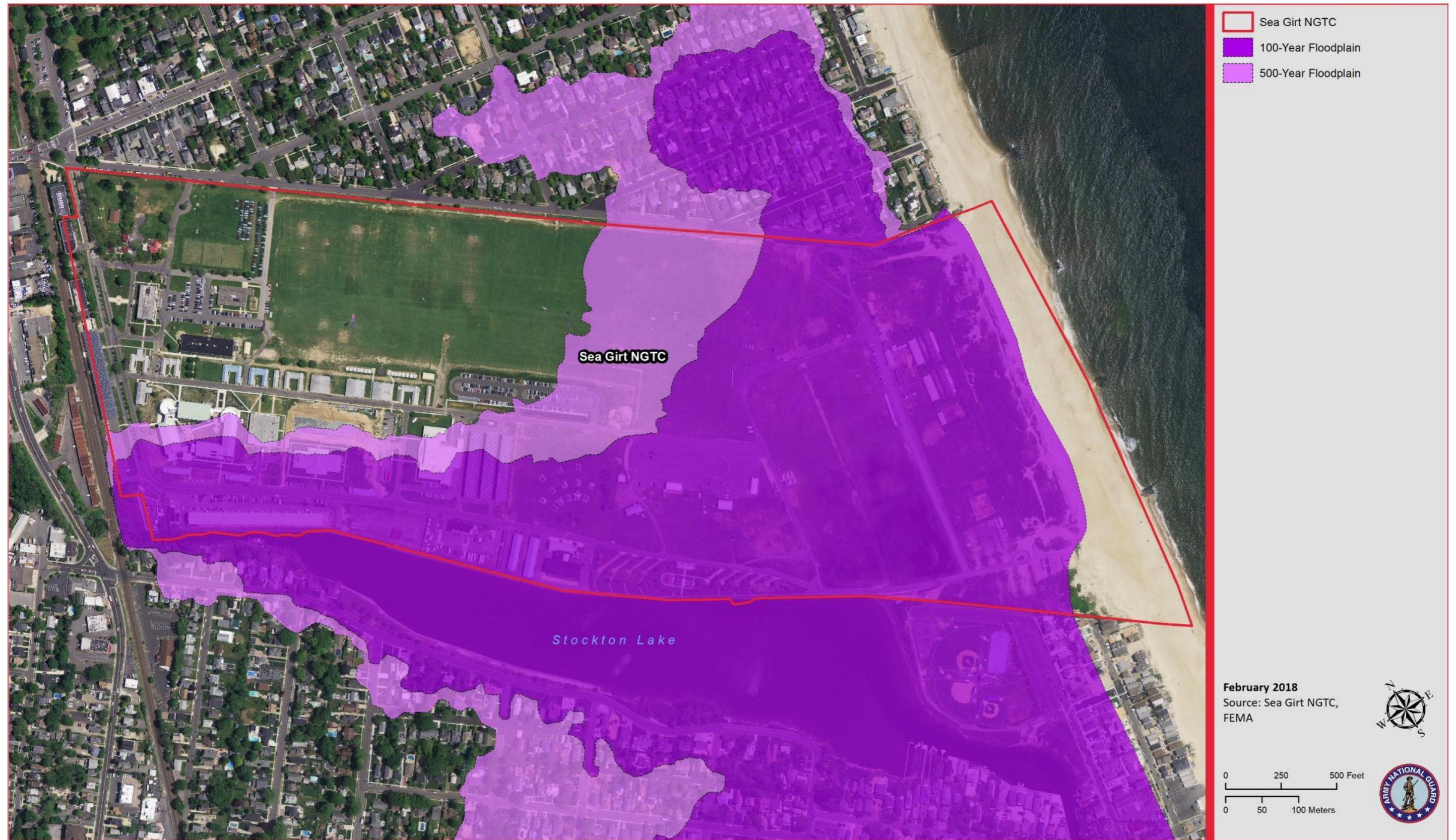


FIGURE 2-6 SEA GIRT NGTC FEMA FLOODPLAINS



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## 2.8 BIOLOGICAL RESOURCES

### 2.8.1 Historic Natural Vegetation

Significant changes to the vegetation of Sea Girt NGTC were made prior to, and during, the military use of this property. Historically, the property consisted of farmland with a few residences, prior to becoming a military installation in 1885 (Siegel et al. 2004). No records of the vegetation that existed prior to development are available; however, it is likely that vegetative communities would have resembled the coastal vegetation complex found on Sandy Hook to the north, or Island Beach to the south. The primary dune would have been dominated by American beachgrass (*Ammophila breviligulata*), and the secondary dune would have supported northern bayberry (*Morrela pennsylvanica*), eastern red cedar (*Juniperus virginiana*), black cherry (*Prunus serotina*), and beach plum (*Prunus maritima*). The transitional area between the dunes may have supported a community of beach heather (*Hudsonia tomentosa*) like that found at nearby Island Beach State Park. The pine/oak forests typical of the New Jersey coastal plain likely would also have occurred on-site. This forest canopy typically includes white oak, (*Quercus alba*), red oak (*Quercus rubra*) and pitch pine (*Pinus rigida*). Prior to the construction of the bulkhead wall along the installation's southern boundary, a natural salt marsh community most likely thrived at the edge of Stockton Lake. Saltmarsh cordgrass (*Spartina alterniflora*) and saltmeadow cordgrass (*Spartina patens*) would have been the dominant species in the salt marsh. Other species such as hightide bush (*Iva frutescens*) and groundsel tree (*Baccharis halimifolia*) may have occurred on the landward edges of this community.

### 2.8.2 Existing Vegetation/Ecological Communities

#### 2.8.2.1 Overview

Ecological community and flora surveys were conducted at Sea Girt NGTC in 1998 and 1999 (Parsons 1999). Additional plants have been added to the list based on multiple field investigations conducted by Amy S Greene Environmental Consultants, Inc. (ASGECI) between 2007 and 2011 (ASGECI 2011). During the fall of 1998 and the spring of 1999, 105 vascular plants were identified at Sea Girt NGTC. An additional 49 vascular plants have been identified by ASGECI between 2007 and 2011. The complete list of plants identified on-site between 1998 and 2011 and the ecological community affiliation of each is included in Appendix A.

The following section provides six general habitat categories (dunes, non-dune successional, built environments, palustrine, estuarine, and marine systems) divided into 15 ecological/vegetation communities and other cover types at the Sea Girt NGTC (Table 2-3 and Figure 2-7). These communities could be further categorized based on composition and species dominance; however, these basic divisions are effective at describing and prioritizing on-site vegetation characteristics.

**TABLE 2-3 ECOLOGICAL COMMUNITIES AT SEA GIRT NGTC**

<b>Ecological Community</b>	<b>Acres</b>	<b>Percent of Installation</b>
<b><u>Dunes</u></b>		
Coastal Dunegrass	7.78	4.53
Coastal Dune Shrubland	3.45	2.01
Successional Dune	2.36	1.37
Disturbed Successional Dune	3.29	1.92
<b>Total Dunes =</b>	<b>16.88</b>	<b>9.83</b>
<b><u>Non-Dune Successional Communities</u></b>		
Disturbed Successional Communities	3.08	1.79
Secondary Successional Forest	0.22	0.12
<b>Total Non-Dune Successional =</b>	<b>3.30</b>	<b>1.91</b>
<b><u>Built Environments</u></b>		
Hedgerow/Planted Trees	3.76	1.90
Maintained Lawn/Landscaping	95.37	55.52
Bare Ground	8.24	4.8
Buildings	8.24	4.8
Pavement	26.0	15.13
<b>Total Built Environments =</b>	<b>141.61</b>	<b>82.15</b>
<b><u>Palustrine</u></b>		
Herbaceous and Deciduous Scrub-Shrub Wetland	2.69	1.56
Modified Herbaceous Wetland	2.08	1.20
<b>Total Palustrine =</b>	<b>4.77</b>	<b>2.76</b>
<b><u>Estuarine</u></b>		
Salt marsh	<0.01	<0.01
<b>Total Estuarine =</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>
<b><u>Marine</u></b>		
Unconsolidated Shore/Intertidal	4.92	2.86
<b>Total Marine =</b>	<b>4.92</b>	<b>2.86</b>

**FIGURE 2-7 SEA GIRT NGTC ECOLOGICAL AND VEGETATION COMMUNITIES**



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### 2.8.2.2 Dunes

Sand dunes occupy over 16 acres of the eastern part of the installation, primarily between the small arms ranges and the beach. The dunes reach a maximum elevation of approximately 20 feet. The seaward side of the dunes has been reinforced with a concrete seawall. Other structures including jetties and wooden bulkheads are found in portions of the dunegrass community adjacent to the coastal dune shrub community. Portions of the seawall and other structures are exposed or partially covered with sand. The small arms range backstops are located adjacent to the landward side of the dunes.



*Sea Girt NGTC Beach and Dunes*

The dunegrass community on the seaward side of the seawall and adjacent American beachgrass dominant areas, and portions of the unconsolidated shore/intertidal area is referred to as the “primary dune” (see Figure 6-1). This portion of the dune is most heavily influenced by salt spray, wind, erosion, sand accretion, and tide influences and, as a result, has minor yet distinctive differences in vegetation from more sheltered

portions of the dunegrass community. The marine influences on the primary dune result in the most ideal conditions for the piping plover (*Charadrius melodus*), seabeach amaranth (*Amaranthus pumilus*) and other rare species that utilize littoral zones.

The sand dunes on the landward side of the seawall and jetties contain the coastal shrub community, dune successional areas and sheltered coastal dunegrass areas. These communities are collectively referred to as “secondary dune” in annual reports at NGTC. The secondary dune is generally dominated by various woody shrubs and vines and is partially sheltered from salt spray, wind, erosion, and other marine influences. Successional dune and the disturbed successional dune communities both retain some coastal dune vegetation, but have greater proportions of invasive species such as Oriental bittersweet (*Celastrus orbiculatus*), Japanese knotweed (*Polygonum cuspidatum*) and Japanese honeysuckle (*Lonicera japonica*), respectively.

The dune communities provide several important ecological and protective functions including range safety, flood protection, land stabilization, wildlife habitat, and visual/noise buffering. In addition to being important habitat for the piping plover and seabeach amaranth, the Sea Girt NGTC primary dune has previously provided nesting habitat for the state-endangered least tern (*Sterna antillarum*). Numerous additional shorebirds including the American oystercatcher (*Haematopus palliatus*), semipalmated sandpiper (*Calidris pusilla*), and sanderling (*Calidris alba*) use the edge of this community and the adjacent unconsolidated shore habitats for foraging and resting. State-listed threatened, endangered, or Special Concern raptors including peregrine falcon (*Falco peregrinus*), Cooper’s hawk (*Accipiter cooperii*), northern harrier (*Circus*

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*cyaneus*), and short-eared owl (*Asio flammeus*) have all been observed utilizing primary dune areas on-site for foraging or resting.

In addition, the secondary dune provides wildlife habitat for a variety of nesting and migrant passerines and other birds. Key species potentially nesting within these communities include yellow warbler (*Setophaga petechia*), willow flycatcher (*Empidonax traillii*), brown thrasher (*Toxostoma rufum*), gray catbird (*Dumetella carolinensis*), Northern mockingbird (*Mimus polyglottos*), song sparrow (*Melospiza melodia*), and eastern towhee (*Pipilo erythrophthalmus*). Migratory birds, particularly yellow-rumped warbler (*Setophaga coronata*) and tree swallow (*Tachycineta bicolor*), rely heavily on fruiting poison ivy (*Toxicodendron radicans*) and northern bayberry bushes for foraging. Additional information on the wildlife at the Sea Girt NGTC may be found in Wildlife portion of the INRMP in Section 2.8.4. From an ecological perspective, the Sea Girt NGTC dunes are an important component of the regional landscape. The dunes at the installation represent the only remaining habitat of this type in the immediate vicinity of the facility. The historic dune zone near Sea Girt NGTC has been completely developed with residences or vacation homes. The closest dune habitat of similar quality is located at Wreck Pond, which is approximately one mile north of the Sea Girt NGTC Facility. Dune habitat can be further classified into four ecological community types: coastal dune grass, coastal dune shrubland, successional dune, and disturbed successional dune.

**Coastal Dune Grass Community:** After Hurricane Sandy in 2012, the composition of the coastal dunegrass community changed quite drastically. Prior to Sandy, coastal dune grass communities were found along the eastern portion of the property and were dominated by American beachgrass, which typically comprises approximately 80 percent of the vegetation composition of this community, and typically more than 50 percent cover (ASGECI 2010b). After the hurricane, vegetation cover levels were closer to zero due to the heavy erosion. Since that time, and because of restoration projects, the American beachgrass has recolonized and now covers approximately 5 to 20 percent within the protected areas (ASGECI 2017). Other commonly occurring species include coastal panicgrass (*Panicum amarum*), seaside goldenrod (*Solidago sempervirens*), purple sandgrass (*Triplasis purpurea*), sea rocket (*Cakile edentula*), seaside spurge (*Chamaeyce polygonifolia*), rough cocklebur (*Xanthium strumarium*), beach pea (*Lathyrus maritimus*), spoonleaf yucca (*Yucca filamentosa*), horseweed (*Conyza canadensis*), and saltmeadow cordgrass (ASGECI 2017). Asiatic sand sedge (*Carex kobomugi*) is an exotic invasive of concern identified from a single location in this community since 2017, but due to the disturbance caused by Hurricane Sandy, it became more widely scattered (ASGECI 2017). As discussed in Section 6.0 of the INRMP, this community and its associated intertidal, unconsolidated shore habitats, described below, are of ecological significance to, and a priority habitat at, NGTC due to the documented presence of the federally listed piping plover and the seabeach amaranth. Previously, the state-listed least tern (*Sterna antillarum*) also has occurred on the site, nesting or attempting to nest (ASGECI 2017).

**Coastal Dune Shrubland:** This 3.45-acre area is buffered by dune mounds and receives less exposure to salt spray and other conditions associated with the primary dune portions of the coastal dunegrass community. The three major woody components of this community are poison

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ivy shrubs and vines, northern bayberry, and rugosa rose (*Rosa rugosa*), which grow in a patchwork. It generally contains less exotic invasive species than other successional communities within the secondary dune. American beachgrass and seaside goldenrod both grow along the edges of this community or are interspersed within less dense patches of shrubs.

Additional species within this community include winged sumac (*Rhus copallinum*), eastern red cedar, black cherry, Virginia creeper (*Parthenocissus quinquefolia*), *Rubus* sp. blackberries and coastal panic grass. This community, in conjunction with other dune habitats, provides coastal nesting and/or foraging habitat for a variety of bird species.

**Successional Dune:** This community occupies approximately 2.36 acres in the eastern part of the installation on a generally lower and flatter trough of the secondary dune (see Figure 2-7). It is like portions of the dune shrubland community and contains northern bayberry, winged sumac and poison ivy (vines and shrubs). It differs primarily from the dune shrub community by the greater variety of generalist successional and exotic species present, some of which are associated with past disturbance. Additional dominant native species include blackberry, Virginia creeper, winged sumac, Eastern red cedar, and black cherry. Dominant exotic invasive species include Japanese knotweed, spotted knapweed (*Centurea stoebe*), common reed (*Phragmites australis*), and Japanese honeysuckle. Oriental bittersweet is among the most aggressive invasive species within this community. This species tends to colonize rock and debris piles from historic disturbance, and smothers adjacent bayberry and poison ivy shrubs. Herbaceous dominant portions of this community contain a mix of grasses and forbs such as goldenrods (*Solidago* spp.), poorjoe (*Diodia teres*), sanddune sandbur (*Cenchrus tribuloides*), saltmeadow cordgrass, beach pea, trailing wild bean (*Strophostyles helvola*), crabgrass (*Digitaria* spp), horseweed, and rough cocklebur. A variety of bird species use these communities for nesting and/or foraging, including yellow warbler (*Setophaga petechia*), willow flycatcher (*Empidonax traillii*), brown thrasher (*Toxostoma rufum*), and others. Migratory birds such as the yellow-rumped warbler (*Dendroica coronate*) and tree swallow (*Tachycineta bicolor*) also forage for fruiting poison ivy and Northern bayberry bushes (ASGECI 2017).

**Disturbed Successional Dune:** This community occupies approximately 3.29 acres of the NGTC facility, primarily along the elevated edge of the secondary dune community within the vicinity of the small arms firing range (see Figure 2-7 – Ecological and Vegetation Communities Map). This highly disturbed community is like the successional dune and retains minor remnants of native dune community vegetation; however, it is defined by a greater proportion (>50 percent) of generalist exotic invasive species monoculture patches (see Figure 4-2 – Invasive Plants Map). Dominant species within this community include Japanese knotweed, common reed, poison ivy, mugwort (*Artemisia vulgaris*), spotted knapweed, and Japanese honeysuckle. Porcelainberry (*Ampelopsis brevipedunculata*), privet (*Ligustrum* sp.) and autumn olive (*Elaeagnus umbellata*) have also been identified within this community. In addition to poison ivy, native species identified within this community include hightide bush, winged sumac and native rose species (*Rosa* spp). Many passerines utilize this community due to its proximity to other dune habitats. The most common species include red-winged blackbird (*Agelaius phoeniceus*), American robin (*Turdus migratorius*) and Northern mockingbird.

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### 2.8.2.3 Non-Dune Successional

Two non-dune successional communities exist at the Sea Girt NGTC: disturbed successional community and secondary successional forest.

**Disturbed Successional Community:** These non-dune successional communities vary within the NGTC facility and generally contain mixes of herbaceous and shrub vegetation. Disturbed successional communities are scattered throughout the NGTC property, particularly along the edges of buildings or around historic structures, parking lots, supply piles, camp sites, or active work areas.

These disturbed areas are infrequently maintained and vary greatly in composition and stages of succession. These areas generally have a high density of opportunistic and invasive species. Some of the species that are dominant in portions of this community at NGTC include mugwort, Oriental bittersweet, Japanese honeysuckle, autumn olive, poison ivy vines, common reed, English ivy (*Hedera helix*), multiflora rose (*Rosa multiflora*), Japanese knotweed, immature black locust (*Robina pseudoacacia*), black cherry, goldenrods, and Virginia creeper.

This community shares many of the exotic species identified in the present and historic dune areas, but lacks the soils, topography, and remnant vegetation of a dune community. This community often occurs as monocultures of invasive species and is frequently encountered along fences, debris piles, work areas, building and land use edges, and other infrequently maintained upland vegetated areas throughout the facility. It also occurs as a component of secondary successional forest and as an understory or intermittent canopy within hedgerow areas, particularly along the eastern end of the facility's northern fence.

**Secondary Successional Forest:** A very small (approximately 0.22 acre) area in the southwest portion of the facility contains a disturbed successional forest with mature trees more than 40 feet tall (see Figure 2-7). The forest contains a mix of exotic and native trees. Norway maple (*Acer platanoides*), white mulberry (*Morus alba*), silver maple (*Acer saccharinum*), and hackberry (*Celtis occidentalis*) occur within the canopy of this forest. This forest is adjacent to the common reed dominant wetlands described in this section. The understory of the secondary forest is dominated by exotic invasive and opportunistic species typical of the on-site disturbed successional areas. Dominant species include Oriental bittersweet, poison ivy, box elder (*Acer negundo*), Virginia creeper, and Japanese knotweed. Multiflora rose is also present in this understory.

### 2.8.2.4 Built Environments

Five groups have been classified within built environments: hedgerows and planted trees, maintained lawn, bare ground, pavement, and buildings.

**Hedgerows and Planted Trees:** This community primarily contains areas of planted conifer or deciduous trees in canopies in excess of 60 percent cover. Much of this community is maintained as linear hedgerows. Common trees in this community include Japanese black pine (*Pinus thumbergii*), Norway maple, black cherry, Norway spruce (*Picea abies*), and London plane

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tree (*Platanus acerifolia*). Many of the hedgerows have components of disturbed successional edge habitats (see previous section) as part of the canopy or as an understory component. Although heavily disturbed and considered low-priority habitats at NGTC, hedgerows and planted tree areas and associated disturbed successional areas support a number of common wildlife species, including red-tailed hawk (*Buteo jamaicensis*), Northern cardinal (*Cardinalis cardinalis*), Carolina chickadee (*Poecile carolinensis*), and Carolina wren (*Thryothorus ludovicianus*).

**Maintained Lawn/Landscaping:** Occupying approximately 95 acres, maintained lawn is the dominant vegetation community at the NGTC. Maintained lawn includes fields and landscaped areas that are regularly mowed, lack dense tree cover, and are dominated by various grass species and a variety of exotic and disturbance tolerant forbs. Maintained lawn may be found throughout the property and are used as parade grounds, sports fields, and other recreational activities. Common grasses include fescues (*Festuca* spp.) The most common dominant forbs include English plantain (*Plantago lanceolata*) and black knapweed (*Centaurea nigra*). Other common species include common plantain (*Plantago major*), crabgrass, bracted plantain (*Plantago aristata*), sheep sorrel (*Rumex acetosella*), blue toadflax (*Linaria canadensis*), yarrow (*Achillea millefolium*), wild strawberry (*Fragaria virginiana*), wild carrot (*Daucus carota*), mouse ear (*Hieracium pilosella*), chicory (*Cichorium intybus*), field hawkweed (*Hieracium pratense*), common dandelion (*Taraxacum officinale*), dwarf cinquefoil (*Potentilla canadensis*), and mugwort. Landscaped trees sparsely occur within this community, particularly around buildings, which includes London plane tree, Norway spruce, eastern white pine (*Pinus strobus*), Japanese black pine, Norway maple, silver maple, and pin oak (*Quercus palustris*). Additional exotic plantings, including Chinese silvergrass (*Miscanthus sinensis*), yew (*Taxus* sp.), and winged euonymus (*Euonymus alatus*), are found within the western portions of the facility.

The maintained lawn, with an open landscape of more than 50 acres and proximity to the ocean, is uncommon within the regional landscape. The central and eastern portions provide open habitat to migratory and wintering bird species despite the disturbed vegetation conditions. Bird species periodically identified in the fields include black-bellied plover (*Pluvialis squatarola*), Atlantic brant (*Branta bernicla*), horned lark (*Eremophila alpestris*) and nesting killdeer (*Charadrius volciferus*). Many other species, including Eastern meadowlark (*Sturnella magna*) and savannah sparrow (*Passerculus sandwichensis*), have been occasionally observed utilizing the open fields and adjacent freshwater wetlands at the NGTC. The fields are sometimes utilized by foraging state-listed raptors, including the American kestrel (*Falco sparverius*) and peregrine falcon. Resident and large concentrations of migratory Canada geese (*Branta canadensis*) utilize the maintained lawns during varying times of the year, creating an accumulation of fecal matter (ASGECI 2017).

Since these maintained lawns function as the parade grounds and support recreational activities, it is expected that these 95 acres will remain in a lawn state for the foreseeable future. However, if a change in the installation mission in the future results in not needing this current vegetative state, alternatives may be considered such as converting some of the lawns to native warm season grasses that would discourage the large concentrations of Canada geese, which is considered a nuisance species on the NGTC (see Section 5.2.2). All pesticides used in maintaining

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the lawns on the NGTC are applied by licensed applications in accordance with the manufacturer's recommendation in an attempt to reduce non-point sources of pollution to nearby water bodies.

**Bare Ground:** This cover type comprises approximately 8.24 acres of the NGTC facility. This classification includes unpaved roads and paths, gravel or sandy parking areas, and other large areas of unconsolidated and exposed soils and sparse vegetation (under 25 percent cover). Vegetation within these areas is generally herbaceous forbs and grasses like those found in the maintained lawn. This category does not include the unconsolidated shore and intertidal areas seaward of the coastal dunegrass community. Many smaller patches of bare ground are interspersed within the maintained lawn and dune communities. Some of these bare ground areas, particularly those adjacent to maintained lawn, serve as foraging habitat for bird species such as killdeer and horned lark.

**Pavement:** Although this category is not an ecological community, the approximate 26 acres of paved area represent a substantial portion of the cover at the Sea Girt NGTC. This category includes asphalt roads, paved lots, and some smaller interspersed areas of compacted material that may function as partially or fully impervious surfaces. These paved roads and lots collectively occupy a significant portion of the installation and link the buildings and other facilities on-site. Most of the paved roads and lots are concentrated on the western and southern portion of the installation.

**Buildings:** This category includes most large structures at the facility and represents approximately 8.24 acres of the land cover at NGTC (see Figure 2-7). Most large structures are in the western portion of the facility. The buildings and adjacent maintained areas and successional edges are of low ecological value and provide nesting and foraging habitat for disturbance tolerant generalist species such as house sparrow (*Passer domesticus*), house finch (*Carpodacus mexicanus*), starling (*Sturnus vulgaris*), rock dove (*Columba livia*), and eastern gray squirrel (*Sciurus carolinensis*).

### 2.8.2.5 Palustrine System

The palustrine system consists of nontidal wetlands, swamps, peatlands, and marshes. Emergent vegetation, shrubs, or trees characterize palustrine habitats. Two palustrine communities occur at the installation: herbaceous and deciduous scrub/shrub wetland and modified herbaceous wetland.

**Herbaceous and Deciduous Scrub-Shrub Wetlands:** Approximately 2.69 acres of freshwater wetlands containing a mix of herbaceous and scrub-shrub components occur at NGTC. This wetland type is primarily represented by a large complex of herbaceous and shrub wetlands near the eastern end of the facility near the beach area parking (see Figure 2-7). Portions of this complex have been identified as managed wetlands (NJDMAVA 2006a) and are maintained as wildlife habitat. Most of the shrub portions of this wetland are fenced and educational signage explaining the wetland's ecological significance is posted for public viewing. The herbaceous portion variety of less disturbed hydrophytic vegetation than the on-site modified herbaceous wetlands.

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Species within this wetland complex include Canada rush (*Juncus canadensis*), curly dock (*Rumex crispus*), yellow-fruited sedge (*Carex annectens*), soft rush (*Juncus effusus*), chickweed (*Stellaria sp.*), forget-me-not (*Myosotis sp.*), showy goldenrod (*Solidago speciosa*), path rush (*Juncus tenuis*), and three square (*Scirpus americanus*). Non-maintained portions of the wetland are primarily dominated by poison ivy, purple loosestrife (*Lythrum salicaria*), spike rush (*Eleocharis sp.*), path rush, Canada rush, rough cocklebur, panic grass (*Panicum vergatum*), hightide bush, black willow (*Salix nigra*), red maple (*Acer rubrum*), northern bayberry and groundsel tree.

A relatively large patch of nearly 100 percent cover of common reed exists within the fenced portion of this wetland (see Figure 4-2 – Invasive Species). It is a key dominant invasive in all areas characterized as shrub and herbaceous wetlands on-site.

The large scrub-shrub and herbaceous wetland periodically floods and contains standing water or exposed mud habitats for several weeks during a year. This wetland, in conjunction with adjacent modified wetlands, provides very important foraging habitat for numerous species of resident and migratory shorebirds. Least sandpiper (*Calidris minutilla*), greater (*Tringa melanoleuca*) and lesser yellowlegs (*Tringa flavipes*), semipalmated sandpiper, black-bellied plover, semipalmated plover, killdeer, Wilson’s snipe (*Gallinago delicata*), short-billed dowitcher (*Limnodromus griseus*) and glossy ibis (*Plegadis falcinellus*) are among the shore and wading birds that periodically forage in these wetlands. Raptors including peregrine falcon and northern harrier have also regularly been identified utilizing this area or adjacent areas for foraging.

Remaining patches of herbaceous and deciduous scrub-shrub wetlands exist at the southwest corner of the installation and interface with the estuarine conditions of Stockton Lake. Common reed is the dominant species within this wetland. Smaller proportions of shrub or tree species include box elder, red maple, black gum (*Nyssa sylvatica*), black cherry, tree-of-heaven (*Ailanthus altissima*) and northern arrowwood (*Viburnum recognitum*). These wetlands, while providing some ecological function, are heavily degraded and lack the diversity of the other shrub wetlands on-site.

**Modified Herbaceous Wetlands:** Embedded within the maintained lawn areas and along roadsides at NGTC are approximately 2.08 acres of modified herbaceous wetland. Most of these areas have been historically disturbed. These wetlands typically appear as subtle depressions within the landscape. These areas may retain several inches of water or contain patches of mud during the wetter parts of the year. At drier times of the year, these wetlands are most easily identified by their hydric soils and varying amounts of hydrophytic vegetation. In addition to cool season grasses; field paspalum (*Paspalum laeve*), yellow nutsedge (*Cyperus esculentus*), lady’s thumb (*Polygonum persicaria*), pasture spikeseed (*Kyllinga gracillima*), water pepper (*Polygonum hydropiper*), path rush and ricefield flatsedge (*Cyperus iria*) occur within these wetlands. Some migratory shorebirds such as least sandpipers, and waterfowl such as mallard ducks (*Anas platyrhynchos*) and Canada geese, occasionally occur in the larger modified herbaceous wetlands when inundated.

#### 2.8.2.6 Marine System

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The marine system consists of the open ocean overlying the continental shelf and its associated high-energy coastline. Marine habitats are exposed to the waves and currents of the open ocean and have salinities exceeding 30 parts per thousand, with minimal or no freshwater dilution. One ecological community in the marine system is present at Sea Girt and is described below. The Atlantic Ocean is also located along the eastern property boundary.

**Intertidal Unconsolidated Shore:** This community occupied about 4.92 acres of Sea Girt NGTC prior to Hurricane Sandy (29 October 2012), along the facility's eastern boundary. The intertidal consolidated shore includes the sand and the lower edge of the vegetative communities forming on the sandy beach area from mean low water to the extreme high water of spring tides. The vegetation is sparse due to heavy wave action and wind erosion. Vegetation within this area includes sea-rocket, seaside spurge, American beachgrass in the lower densities, and common saltwort.

The unconsolidated shore is adjacent to the easternmost portions of the coastal dunegrass community, which generally contains higher densities of American beachgrass. This intertidal unconsolidated shore is a dynamic community that can fluctuate in extent, particularly due to extreme storms and beach replenishment activities. For example, erosion processes (and the expansion of the coastal dunegrass community) reduced the extent of the unconsolidated sand and intertidal zone during the time between the 2006 INRMP and the 2013 INRMP. However, beach replenishment projects after Hurricane Sandy increased the extent again.

Since 2001, individual seabeach amaranth plants, which are federally listed as threatened, have been periodically documented in these areas, and on the edges of the adjacent coastal dunegrass community. This community type is also used infrequently by foraging and/or nesting piping plover, which are infrequently observed at the Sea Girt NGTC.

### 2.8.2.7 Estuarine System

The estuarine system consists of deepwater tidal habitats and adjacent tidal wetlands. Typically, these tidal wetlands are partially enclosed by land, so that they have regular or sporadic access to ocean water. Freshwater runoff from the land dilutes the ocean water at least occasionally. This system extends from upstream habitats where salinity measures less than 0.5 parts per thousand to the invisible boundary at the mouth of a river, bay, or sound, including wetland emergents in seaward areas (Breden 1989). No estuarine communities are located within the installation boundaries. However, a salt marsh community is found adjacent to the Sea Girt NGTC property, to the south extending from the outer portions of Wetlands K and J (see Figure 4-1).

**Salt Marsh:** A small salt marsh community has occurred along the fringes of Stockton Lake south of the installation. It is feasible that this community may not exist anymore, or may have been reduced in acreage, due to the installation of a bulkhead in this area (ASGECI 2017). Although it is not mapped within the boundaries of NGTC, it is in extremely close proximity to the facility and is regularly utilized by wildlife moving to and from on-site communities. This community is predominantly vegetated by salt marsh cordgrass (*Spartina patens* and *S. alterniflora*) and Phragmites (Department of the Army 2015). The salt marsh and its associated



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exposed tidal mud flats and open waters provide habitat for various shore birds including semipalmated plover, semipalmated sandpiper, willet (*Tringa semipalmata*), greater and lesser yellowlegs, and short-billed dowitcher. Key wading birds and allies observed within this community include black-crowned night heron (*Nycticorax nycticorax*) yellow-crowned night heron (*Nyctanassa violacea*), great egret (*Ardea alba*) snowy egret (*Egretta thula*), great blue heron (*Ardea herodias*), and clapper rail (*Rallus crepitans*). Least terns, Forster's tern (*Sterna forsteri*), and common tern (*Sterna hirundo*) all utilize the edges of this habitat for resting and foraging. Wintering waterfowl, particularly gadwall (*Mareca strepera*), Atlantic brant, American wigeon (*Mareca americana*), and hooded merganser (*Lophodytes cucullatus*), utilize the edges of the salt marsh and adjacent open water.

### **2.8.3 Wetland Characteristics**

#### **2.8.3.1 Overview**

A detailed wetland delineation that identified 12 individual wetlands (see Figure 4-1 for wetland locations) was conducted by ASGECI in 2011 for the entire facility. Approximately 4.77 acres of wetlands and 3.73 acres of upland transitional areas are located within the installation boundary. The boundaries of these wetlands were verified in a New Jersey Department of Environmental Protection (NJDEP) Wetlands Letter of Interpretation (LOI) – Regulatory Line Verification, issued on August 3, 2012. The NJDEP issued an LOI extension (1300-11-0004.1 FWW 170001) on 13 November 2017 with a new expiration date of 2 August 2022 (see Appendix D). This section describes wetland characteristics identified during the field investigation. See Section 4.2.4 for regulated boundary information.

As discussed above, there are four general wetland community types that occur within, or adjacent to, the Sea Girt NGTC facility boundaries: palustrine herbaceous wetlands, palustrine deciduous scrub-shrub wetlands, modified herbaceous wetlands, and estuarine salt marsh wetlands. In addition to these wetlands, the Sea Girt NGTC facility borders open waters of the Atlantic Ocean, Stockton Lake, and Judas Creek.

The largest on-site wetlands are complexes of palustrine herbaceous and deciduous scrub-shrub wetlands. Though much of the herbaceous scrub/shrub complex are monocultures of common reed, portions of the large managed wetlands on the eastern end of the facility contain a good diversity of herbaceous and shrub wetland plants.

Embedded within the maintained lawn areas on the eastern half of the Sea Girt NGTC are palustrine modified herbaceous wetlands. These wetlands retain some of the emergent vegetation associated with the herbaceous scrub-shrub complexes; however, these wetlands historically have been mowed during the growing season and show much greater signs of vegetation disturbance. These modified wetlands typically contain greater amounts of cool season grasses and other disturbance tolerant or exotic species.

Small off-site portions of wetlands adjacent to the tidal Stockton Lake on the western end of the facility contain distinct estuarine characteristics most evident by the presence of saltmarsh

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cordgrass. Off-site estuarine marshes and adjacent tidal mudflats containing common reed and cordgrass are also found on the eastern end of Stockton Lake.

### **2.8.3.2 Wetland Soils**

The wetland soils at Sea Girt tend to be fairly sandy, highly disturbed soils on slopes of less than 5 percent. The two mapped Soil Survey Geographic (SSURGO) soils that are considered hydric, or that have hydric components, are Hooksan sand, 0 to 5 percent slopes, rarely flooded (HorBr) and Humaquepts, frequently flooded (HumAt). The two additional mapped NGTC soils, Downer-urban land and Udorthent-urban land complexes, are disturbed non-hydric soils. Wetland soil borings of 1 to 24 inches taken on-site occasionally show historic disturbance and typically contain portions with very strong hydric characteristics. These soils retain strong oxidation and reduction characteristics including low chroma matrix and mottling of 10 percent or more.

### **2.8.3.3 Wetland Hydrology**

Evidence of wetland hydrology varies in many of the wetlands during the year at NGTC. During the wetter parts of the season, the large, on-site, managed wetland and many of the adjacent modified wetland depressions contain ponded water and exposed mud. These wetlands clearly receive surface water sheet flow and some groundwater influence during parts of the season. Wetlands in the southwest corner of the facility receive consistent and direct hydrological influence from the nontidal portions of Judas Creek, which feeds Stockton Lake from its western end. The head of tide has been identified with the vicinity of these wetlands, and off-site portions of these wetlands receive heavier estuarine influence from the tidal portions of Stockton Lake. All palustrine wetlands on the southern half of the NGTC are occasionally exposed to flooding during rare extreme high tide events, primarily when they are coupled with coastal storms.

### **2.8.3.4 Wetland Vegetation**

The vegetation characteristics of the wetlands identified at the NGTC facility are described below, and wetland locations are presented in Figure 4-1. The vegetation descriptions below include the predominant species and the Atlantic and Gulf Coastal Plain Wetland Indicator Status for each species. Each status was determined by the 2012 National Wetland Plant List, which replaced the 1988 U.S Fish and Wildlife Service's (USFWS) *National List of Plant Species That Occur in Wetlands* (USFWS Biological Report 88 (24)) for all wetland determinations and delineations performed for Section 404 of the Clean Water Act and the National Wetland Inventory. More specifically, statuses were determined by the National Wetland Plant List's supplemental State of New Jersey 2016 Wetland Plant List (Lichvar et al. 2016). The categories are assigned based on the species' frequency within wetlands, and are described further in Table 2-4.

The wetlands listed below and their resource values have been verified by NJDEP in an LOI – Line Verification, issued to the NGTC on August 3, 2012. The NJDEP issued an LOI extension (1300-11-0004.1 FWW 170001) on 13 November 2017 with a new expiration date of 2 August 2022. All intermediate resource value wetlands are subject to a 50-foot transition area (buffer). The remaining wetlands on-site are ordinary resource value wetlands and are not subject

to transition areas. Additional information of wetlands management and transition areas may be found in Section 4.2.4.

**TABLE 2-4 WETLAND INDICATOR CATEGORIES**

<b>Indicator Code</b>	<b>Indicator Status</b>	<b>Designation</b>	<b>Comment</b>
OBL	Obligate wetland	Hydrophyte	Almost always occur in wetlands
FACW	Facultative wetland	Hydrophyte	Usually occur in wetlands, but may occur in non-wetlands
FAC	Facultative	Hydrophyte	Occur in wetlands and non-wetlands
FACU	Facultative upland	Nonhydrophyte	Usually occur in non-wetlands, but may occur in wetlands
UPL	Obligate upland	Nonhydrophyte	Almost never occur in wetlands
NL	Not listed		Not listed on Wetland Indicator List

Source: USACE 2016.

### **Wetland Area A**

Wetland A is partially modified, emergent, and scrub-shrub wetlands dominated by common switchgrass (FAC) and seaside goldenrod (FACW). A scrub-shrub wetland component contains groundsel tree (FAC), rugosa rose (FACU), and northern bayberry (FAC). This wetland is of intermediate resource value.

### **Wetland Area B**

Wetland B is a shrub and herbaceous drainage feature dominated by common reed (FACW) with smaller amounts of poison ivy (FAC) and Oriental bittersweet (FACU). Off-site wetlands adjacent to this wetland are estuarine emergent marsh associated with Stockton Lake. This wetland is of ordinary resource value.

### **Wetland Area C**

Wetland C is a partially managed wetland with scrub-shrub, emergent, and modified components. Modified herbaceous portions are dominated by Canada rush (OBL), curly dock (FAC), yellow-fruited sedge (FACW), soft rush (OBL), chickweed spp. (FACU), forget-me-not spp., showy goldenrod (NL), and path rush (FAC).

Two invasive species are common within Wetland C. A monoculture of common reed was identified within this community and estimated to cover 0.3 acres in 2013. The patch had expanded

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to approximately 0.75 acres in 2016, dominating the unmowed portion of the wetland complex (ASGECI 2017). Purple loosestrife also occurs in moderately dense patches on the eastern portion of this large freshwater wetland, interspersed with a variety of grasses and rushes.

Non-maintained portions of Wetland C are fenced and allowed to succeed for wildlife purposes. These areas are primarily dominated by common reed (FACW), poison ivy (FAC), purple loosestrife (OBL), spike rush (OBL), path rush (FAC), Canada rush (OBL), rough cocklebur (FAC), panic grass (*Panicum* spp.), hightide bush (FACW), groundsel tree (FAC), black willow (OBL), red maple (FAC), and northern bayberry (FAC). This wetland is of intermediate resource value.

### **Wetland Areas D, E, and F**

Wetlands D, E, and F are small, isolated, modified/emergent wetland depressions within maintained upland fields. These areas are dominated by Canada rush (OBL), path rush (FAC), slender-leaved goldenrod (*Solidago tenuifolia*, FAC), panic grass (*Panicum* spp.), curly dock (FAC), yellow-fruited sedge (FACW), English plantain (FACU), soft rush with lesser amounts of sheep sorrel (FACU), and field hawkweed (NL). These wetlands are of ordinary resource value.

### **Wetland G**

Wetland G is a modified herbaceous wetland dominated by red sandspurry (*Spergularia rubra*, UPL), path rush (FAC), Pennsylvania smartweed (FACW), spike rush (OBL), water pepper (OBL), yellow nutsedge (FAC), crabgrass spp., and poorjoe (FACU), ricefield flatsedge (FACW), and lady's thumb (FACW). This wetland is of ordinary resource value.

### **Wetland I and Q**

These modified herbaceous wetlands are linear roadside features dominated by path rush (FAC), Pennsylvania sedge (*Carex pensylvanica*, NL), water pepper (OBL), yellow nutsedge (FAC), and a species of spike rush (OBL). This wetland is of ordinary resource value.

### **Wetland J**

Wetland J is an emergent wetland with a shrub component that contains some estuarine influences and extends off-site onto Stockton Lake. It is dominated by hightide bush (FACW), common reed (FACW), and saltmarsh cordgrass (OBL). This wetland is of ordinary resource value.

### **Wetland K**

Wetland K is an emergent wetland bordering Stockton Lake and Judas Creek that contains both palustrine and estuarine influences. Portions within the NGTC complex are dominated by common reed (FACW). Some off-site portions adjacent to Stockton Lake contain some saltmarsh cordgrass (OBL). Landward edges of this wetland contain disturbance tolerant shrubs such as poison ivy (FAC) and Oriental bittersweet (FACW). This wetland is of intermediate resource value.

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value. The eastern portion of this wetland (points K8 to K14) transitions into a State Open Water and does not contain a transition area.

### **Wetland L**

Wetland L is a palustrine herbaceous and scrub-shrub wetland near Judas Creek that is primarily dominated by common reed (FACW). Other species within this wetland include skunk cabbage (*Symplocarpus foetidus*, OBL) and poison ivy (FAC). A fringe of hackberry (FACU), silver maple (FAC), box elder (FAC), and Japanese knotweed (UPL) occurs on its upland edge. This wetland is of intermediate resource value.

#### **2.8.4 Wildlife**

The Sea Girt NGTC provides resources to a diverse wildlife community because of several terrestrial and aquatic ecological communities on-site (further described in Section 2.8.2 above). The installation is also located within the coastal portion of the Atlantic Flyway. The Atlantic Flyway is the migratory path of waterfowl, shorebirds, pelagic birds, songbirds, and other migratory birds of the North American East Coast. The fauna observed at Sea Girt NGTC is generally consistent with species typical of coastal and suburban areas. Appendix B provides a complete list of wildlife observed at the installation from surveys conducted at the installation as early as 1993 through 2013. See Section 2.8.2 for discussion on species associations within the ecological communities present at the Sea Girt NGTC.

An extensive avian and bat study was conducted in 2009 and 2010 because of a feasibility study for a 1.5-megawatt wind turbine that was proposed as part of the 2010 Master Plan at Sea Girt NGTC (WEST, Inc. 2011). The turbine was deemed not feasible following completion of preconstruction avian and bat surveys. Survey techniques included an avian behavioral study, area search and breeding bird point count surveys, and acoustic and radar monitoring. Inventory information is presented from data collected as part of the one-year study. A total of 175 avian species were identified at the Sea Girt NGTC and the adjacent area around Stockton Lake, 97 of which were recorded as a part of the studies conducted for the turbine project (See Appendix B).

For several years, piping plovers (federally listed as threatened) and least terns (state listed as endangered) have attempted to nest on the beach. Most attempts have been unsuccessful. (Note: For the purpose of this discussion, a nest is the production of one or more eggs.) The biggest threats to piping plovers and least terns are foxes, cats, and unleashed dogs in the vicinity of nesting areas. Additional information can be found in Section 6.2.2 (Piping Plover), Section 6.2.4 (Least Tern), and Section 6.3.11 (Predator Control). Piping plovers nested in 2002 and 2007, but no piping plover chicks were successfully fledged from these nests. No piping plover nests have been observed on NGTC since 2007. Least terns produced nests in 2000, 2001, 2002, 2003, 2005, 2012, 2015, 2016, and 2017, and chicks were fledged in 2000, 2001, and 2002. In addition, since 2004, a pair of ospreys (state listed threatened) has nested on a cellular phone tower at the installation. See Section 2.8.5 and Section 6.0 for more information on rare species.

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Mammals observed during surveys conducted by ASGECI between 2007 and 2013 included bottlenose dolphin (*Tursiops truncatus*), harbor seal (*Phoca vitulina*), red fox (*Vulpes vulpes*), eastern coyote (*Canis latrans*), eastern cottontail (*Sylvilagus floridanus*), feral cat (*Felis catus*), groundhog (*Marmota monax*), muskrat (*Ondatra zibethicus*), striped skunk (*Mephitis mephitis*), white-tailed deer (*Odocoileus virginianus*), rat (*Rattus* sp.), and eastern gray squirrel (ASGECI 2011; ASGECI 2014a). Surveys in previous years also documented opossum (*Didelphis virginiana*), white-footed mouse (*Peromyscus leucopus easti*), star-nosed mole (*Condylura cristata*), raccoon (*Procyon lotor*), and little brown bat (*Myotis lucifugus*) (Humanetrics, Inc. 1993). Also, because of the acoustic survey component of the turbine project, two additional species of bats were positively identified: eastern red bat (*Lasiurus borealis*) and hoary bat (*Lasiurus cinereus*) (WEST, Inc. 2011). Other bat species are expected to occur on-site; however, acoustic survey results could not distinguish beyond a categorized frequency group. In addition, the red fox population was reduced by six and cat population by one because of predator control efforts in 2010 to accommodate the security of endangered nesting bird species. The U.S. Department of Agriculture (USDA), in cooperation with the USFWS, also conducted predator work in 2017, resulting in the capture of two red foxes, six raccoons, and one opossum. See Section 6.3.11 for additional information.

Amphibians, reptiles, and commonly observed invertebrates including Fowler's toad (*Anaxyrus* [formerly *Bufo*] *fowleri*), eastern box turtle (*Terrapene carolina*), scuds (*Amphipoda* spp.), sand wasp (*Bembix* sp.), European caterpillar hunter (*Calosoma scrutator*), nine-spotted ladybeetle (*Coccinella novemnotata*), cow killer (*Dasymitilla occidentalis*), mole crab (*Emerita talpoida*), Atlantic ghost crab (*Ocypode quadrata*), mud dauber wasps (*Sphécidea*), Chinese mantis (*Tenodera aridifolia*), and seaside grasshopper (*Trimerotropis maritime*) were also documented during surveys conducted from 2007 through 2013 (ASGECI 2014a).

### **2.8.5 Rare Species**

As summarized in Table 2-5, the Sea Girt NGTC provides important habitat for five rare species, including a federally listed bird (piping plover), a federally listed plant (seabeach amaranth), two state-listed birds (least tern and osprey [*Pandion haliaetus*]), and a state-listed plant (seabeach knotweed [*Polygonum glaucum*]). Saltmarsh sharp-tailed sparrow (*Ammodramus caudacutus*) has also been documented at Sea Girt NGTC; the USFWS will make a listing determination on the species in 2019.

An additional 14 state-listed threatened or endangered avian species and one federally listed endangered avian species (roseate tern [*Sterna dougallii*]) have been documented throughout the course of several surveys. These state-listed threatened or endangered species include Henslow's sparrow (*Ammodramus henslowii*), grasshopper sparrow (*Ammodramus savannarum*), short-eared owl, cattle egret (*Bubulcus ibis*), northern harrier, horned lark (*Eremophila alpestris*), peregrine falcon, American kestrel, bald eagle (*Haliaeetus leucocephalus*), yellow-crowned night heron, black-crowned night heron, savannah sparrow, vesper sparrow (*Pooecetes gramineus*), and black skimmer (*Rynchops niger*). These species have not nested on-site but have been observed soaring over the site, foraging or roosting on-site (or in/adjacent to Stockton Lake) or documented passing through during seasonal migration periods. More detailed information about rare species

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found or potentially found on Sea Girt NGTC, and the management of these species, can be found in Section 6.0 , Rare Species Management.

The federally listed threatened and state-listed endangered red knot (*Calidris canutus rufa*) has the potential to occur at Sea Girt NGTC (USFWS 2017). Recent monitoring of rare species on the installation frequently scanned for red knot around the mudflats of Stockton Lake at the request of NJDEP and USFWS; however, the species has not been observed at, or adjacent to, Sea Girt NGTC to date (ASGECI 2014a).

A transient roseate tern was observed foraging offshore of the NGTC in 2007 (ASGECI 2008). A short-eared owl was documented in 2010 as it rested in the primary dunes (ASGECI 2011). Northern harrier and peregrine falcon are often observed flying within Sea Girt NGTC fields, wetlands, and beaches, particularly in the fall (ASGECI 2014a). Northern harrier are typically observed flying low over the dunes or marsh habitat at the site, and peregrine falcons are typically seen migrating and foraging over Stockton Lake and the eastern end of Sea Girt NGTC field areas during fall migratory and wintering periods (ASGECI 2014a). Bald eagles have been observed on a few occasions primarily soaring over the site and adjacent communities (ASGECI 2010–2011; WEST, Inc. 2011). Bald eagles have been observed in the spring from 2015 through 2017 on the Sea Girt NGTC cell tower. No eagle nesting has occurred, but eagles do nest nearby and likely use Sea Girt NGTC as a foraging area. The eagles are monitored with game cameras (Bill McBride INRMP Agency Coordination Site Visit, November 8, 2017). American kestrels were seen on several occasions foraging primarily over the eastern half of the site (ASGECI 2011; WEST, Inc. 2011; ASGECI 2014a). Savannah sparrow was documented on three occasions (two individuals and one pair) in the maintained lawn, herbaceous/deciduous scrub-shrub wetland, and primary dune during spring surveys conducted in 2010 (WEST, Inc. 2011). A flock of as many as 26 horned larks were documented roosting on the eastern half of the maintained lawn between December 2009 and March 2010, and a pair were observed resting and foraging in the NGTC fields in 2013 (WEST, Inc. 2011; ASGECI 2014a). Yellow and black-crowned night herons occasionally foraging at Stockton Lake are seen passing over the installation (WEST, Inc. 2011). Black skimmers, which are not commonly observed at Sea Girt NGTC, were documented once in 2007 as a single transient foraging near shore, and twice in 2010 as a pair foraging near shore and an individual flying toward Stockton Lake (ASGECI 2008; WEST, Inc. 2011; ASGECI 2014a). In addition, cattle egret, Henslow’s sparrow, grasshopper sparrow, and vesper sparrow were each captured during nocturnal acoustic bird surveys conducted during migration periods in the spring and fall of 2009 and 2010 (WEST, Inc. 2011).



Bald eagles at Sea Girt NGTC cell tower.  
Source: NJDMVA

**TABLE 2-5 FEDERALLY OR STATE-LISTED THREATENED OR ENDANGERED SPECIES DOCUMENTED AT SEA GIRT NGTC**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Current or Historically Known Reproductive Habitat On-Site</b>
<i>Amaranthus pumilus</i>	Seabeach amaranth	T	E	Yes (Beach)
<i>Ammodramus henslowii</i>	Henslow's sparrow	NL	E	No
<i>Ammodramus savannarum</i>	Grasshopper sparrow	NL	T (BR), SC (NB)	No
<i>Asio flammeus</i>	Short-eared owl	NL	E (BR), SC (NB)	No
<i>Bubulcus ibis</i>	Cattle egret	NL	T (BR), SC (NB)	No
<i>Charadrius melodus</i>	Piping plover	T	E	Yes (Beach)
<i>Circus cyaneus</i>	Northern harrier	NL	E (BR), SC (NB)	No
<i>Eremophila alpestris</i>	Horned lark	NL	T (BR), SC (NB)	No
<i>Falco peregrinus</i>	Peregrine falcon	NL	E (BR), SC (NB)	No
<i>Falco sparverius</i>	American kestrel	NL	T	No
<i>Haliaeetus leucocephalus</i>	Bald eagle	NL	E (BR)/T(NB)	No
<i>Nyctanassa violacea</i>	Yellow-crowned night heron	NL	T	No
<i>Nycticorax nycticorax</i>	Black-crowned night heron	NL	T (BR), SC (NB)	No
<i>Pandion haliaetus</i>	Osprey	NL	T (BR)	Yes (Adjacent to Stockton Lake)
<i>Passerculus sandwichensis</i>	Savannah sparrow	NL	T (BR)	No
<i>Polygonum glaucum</i>	Seabeach knotweed	NL	E	Yes (Beach)
<i>Poocetes gramineus</i>	Vesper sparrow		E (BR)/SC (NB)	No
<i>Rynchops niger</i>	Black skimmer	NL	E	No
<i>Sterna antillarum</i>	Least tern	NL	E	Yes (Beach)
<i>Sterna dougallii</i>	Roseate tern	E	E	No

Note: T=threatened, E=endangered, SC=Special Concern, NL=not listed, BR=breeding population, NB=non-breeding population.

In addition to federally and state-listed threatened or endangered species, 30 state Species of Special Concern have been documented during surveys conducted at the Sea Girt NGTC; a majority (17 of 30) of which were documented during the 2009/2010 wind turbine avian studies. A complete list of wildlife species observed at the Sea Girt NGTC (1993 through 2013), including all federally or state-listed species and Species of Special Concern, is presented in Appendix B.

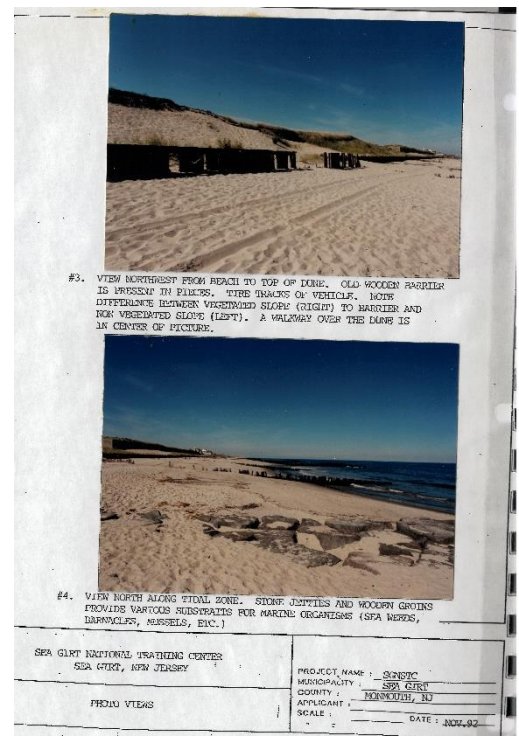
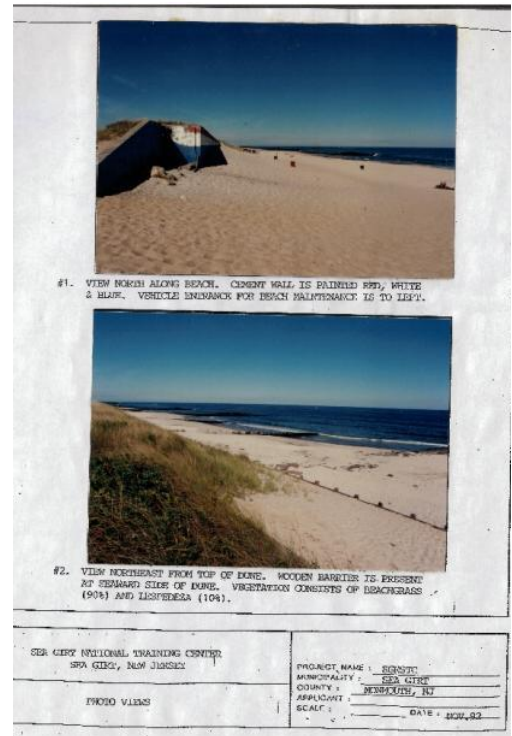
No critical habitat has been designated under the Endangered Species Act (ESA) for federally listed species at Sea Girt NGTC (USFWS 2017). Except for osprey, rare nesting birds and rare plant species have been limited to the Sea Girt NGTC beach and primary dune area. The documented occurrences of rare species at the installation are relatively recent (i.e., since 2000).



As mentioned in Section 6.2.1, the recent occurrences of rare species are suspected to have occurred due to the beach nourishment that occurred in 1999 and 2013 at the Sea Girt NGTC. Prior to the 1999 beach nourishment project, the beach was too narrow to support suitable breeding habitat (see images to the right). The beach nourishment that occurred after Hurricane Sandy was thought to possibly improve the probability of nesting attempts by beach-nesting birds in 2013; however, beach-nesting birds were not observed attempting to nest by ASGECI or the NJDEP-Endangered and Nongame Species Program (ENSP) in 2013. Historically, conditions have improved for least tern and seabeach amaranth populations following the 2013 beach renourishment (ASGECI 2014a).

Nesting least terns were first documented in 2000, followed by seabeach amaranth in 2001, nesting piping plovers in 2002, seabeach knotweed in 2003, and nesting ospreys in 2004. Although American oystercatchers (State Special Concern) have not nested on-site, in 2011 a pair initiated nest building activities on the Sea Girt NGTC beach, but did not produce a nest (ASGECI 2012a). Small groups of American oystercatchers are regularly observed flying over Sea Girt NGTC grounds during breeding and migratory seasons, and are occasionally observed on the beach adjacent to Sea Girt NGTC and on the Stockton Lake mudflats. No evidence of American oystercatcher egg laying or nesting was observed during the most recent rare species monitoring period at Sea Girt NGTC (ASGECI 2014a). The remaining state or federally listed threatened or endangered species were documented as part of surveys conducted from 2007 through 2013. Additional information on rare species is provided in Section 6.0 .

Many species that are covered by the *Migratory Bird Treaty Act* are typically found along the Atlantic Coast, and thus occur or have the potential to occur on Sea Girt NGTC (Table 2-6).



Sea Girt NGTC Beach and Sand Dunes dated November 1992

**TABLE 2-6 MIGRATORY BIRDS WITH POTENTIAL TO OCCUR AT  
SEA GIRT NGTC**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Breeding Season</b>	<b>Occurs</b>	<b>Potential to Occur</b>
American oystercatcher	<i>Haematopus palliatus</i>	Apr 15 – Aug 30	X	
Audubon's shearwater	<i>Puffinus lherminieri</i>	Breeds elsewhere		X
Bald eagle	<i>Haliaeetus leucocephalus</i>	Mar 20 – Sep 15	X	
Black-billed cuckoo	<i>Coccyzus erythrophthalmus</i>	May 15 – Oct 10		X
Black skimmer	<i>Rynchops niger</i>	May 20 – Sep 15	X	
Bobolink	<i>Dolichonyx oryzivorus</i>	May 20 – Jul 31		X
Evening grosbeak	<i>Coccothraustes vespertinus</i>	Breeds elsewhere		X
Eastern whip-poor-will	<i>Antrastomus vociferus</i>	May 1 – Aug 20		X
Gull-billed tern	<i>Gelochelidon nilotica</i>	May 1 – Jul 31	X	
Golden eagle	<i>Aquila chrysaetos</i>	Breeds elsewhere		X
Golden-winged warbler	<i>Vermivora chrysoptera</i>	May 1 – Jul 20		X
Hudsonian godwit	<i>Limosa haemastica</i>	Breeds elsewhere		X
King rail	<i>Rallus elegans</i>	May 1 – Sep 5		X
Long-eared owl	<i>Asio otus</i>	Breeds elsewhere		X
Lesser yellowlegs	<i>Tringa flavipes</i>	Breeds elsewhere	X	
Nelson's sparrow	<i>Ammodramus nelsoni</i>	May 15 – Sep 5		X
Prothonotary warbler	<i>Protonotaria citrea</i>	Apr 1 – Jul 31	X	
Purple sandpiper	<i>Calidris maritima</i>	Breeds elsewhere	X	
Red-headed woodpecker	<i>Melanerpes erythrocephalus</i>	May 10 – Sep 10		X
Red-throated loon	<i>Gavia stellata</i>	Breeds elsewhere	X	
Rusty blackbird	<i>Euphagus carolinus</i>	Breeds elsewhere		X
Saltmarsh sparrow	<i>Ammodramus caudacutus</i>	May 15 – Sep 5	X	
Short-billed dowitcher	<i>Limnodromus griseus</i>	Breeds elsewhere	X	
Semipalmated sandpiper	<i>Calidris pusilla</i>	Breeds elsewhere	X	
Seaside sparrow	<i>Ammodramus maritimus</i>	May 10 – Aug 20		X
Snowy owl	<i>Bubo scandiacus</i>	Breeds elsewhere	X	
Whimbrel	<i>Numenius phaeopus</i>	Breeds elsewhere		X
Willet	<i>Tringa semipalmata</i>	Apr 20 – Aug 5		X
Wood thrush	<i>Hylocichla mustelina</i>	May 10 – Aug 31		X

Source: USFWS 2017.

The New Jersey Landscape Project (version 3.3) also identifies potential rare species habitat at the Sea Girt NGTC (see Figure 2-8 and Table 2-7). Habitat is identified based on species occurrence records, species-specific habitat associations, and land use/land cover data. Portions of habitat (or habitat patches) are ranked 1 through 5. Rank 5 is assigned to those species-specific habitat patches containing one or more occurrences of wildlife listed as endangered and threatened pursuant to the ESA of 1973. Rank 4 is assigned to species-specific habitat patches with one or more occurrences of state endangered species. Rank 3 is assigned to species-specific patches containing one or more occurrences of state threatened species. Rank 2 is assigned to species-specific habitat patches containing one or more occurrences of species considered to be species of special concern. Rank 1 is assigned to species-specific habitat patches that meet habitat-specific suitability requirements for endangered, threatened or special concern wildlife species, but that do

not intersect with any confirmed occurrences of such species, and is used for planning purposes, such as targeting areas for future wildlife surveys (NJDEP Division of Fish and Wildlife 2012a).

Seventeen (17) species were listed (Ranks 2 through 5) among nine habitats identified in association with (on, or immediately adjacent to) Sea Girt NGTC. These include two federal, nine state threatened or endangered, and eight state Species of Special Concern (See Table 2-7).

**TABLE 2-7 NEW JERSEY LANDSCAPE PROJECT SPECIES-BASED HABITAT AT SEA GIRT NGTC**

<b>Species</b>	<b>Rank</b>	<b>ID</b>	<b>Habitat Use</b>	<b>Habitat Description</b>
Piping plover	5	34185	Nesting Area	Beach
	5	29216	Nesting Area	Dune
Least tern	4	34185	Nesting Colony	Beach
	4	34185	Foraging	Beach
	4	29216	Nesting Colony	Dune
	4	29216	Foraging	Dune
	4	26106	Foraging	Military Installations
	4	34146	Foraging	Dune
	4	34146	Nesting Colony	Dune
	4	16674	Foraging	Military Installations
	4	2994	Foraging	Military Installations
	4	2995	Foraging	Military Installations
	4	16675	Foraging	Military Installations
	4	16677	Foraging	Military Installations
	4	12555	Foraging	Deciduous Scrub/Shrub Wetlands
	4	2997	Foraging	Military Installations
Bald eagle (BR)	4	26107	Foraging	Military Installations
	4	2996	Foraging	Military Installations
	4	33498	Foraging	Tidal Rivers, Inland Bays, and Other Tidal Waters
	4	13337	Foraging	Herbaceous Wetlands
	4	22524	Foraging	Herbaceous Wetlands
	4	12555	Foraging	Deciduous Scrub/Shrub Wetlands
	4	33498	Foraging	Tidal Rivers, Inland Bays, and Other Tidal Waters
Northern harrier (BR)	4	13337	Breeding Sighting	Herbaceous Wetlands
	4	22524	Breeding Sighting	Herbaceous Wetlands
Osprey (BR)	3	34185	Nest	Beach
	3	33498	Nest	Tidal Rivers, Inland Bays, and Other Tidal Waters
	3	33498	Foraging	Tidal Rivers, Inland Bays, and Other Tidal Waters
American kestrel	3	29216	Non-breeding Sighting	Dune
	3	29216	Breeding Sighting	Dune
	3	34146	Non-breeding Sighting	Dune
	3	27365	Breeding Sighting	Recreational Land
	3	27365	Non-breeding Sighting	Recreational Land
Black-crowned night heron (BR)	3	13337	Foraging	Herbaceous Wetlands
	3	22524	Foraging	Herbaceous Wetlands
	3	12555	Foraging	Deciduous Scrub/Shrub Wetlands
	3	33498	Foraging	Tidal Rivers, Inland Bays, and Other Tidal Waters
Yellow-crowned night heron	3	13337	Foraging	Herbaceous Wetlands

<b>Species</b>	<b>Rank</b>	<b>ID</b>	<b>Habitat Use</b>	<b>Habitat Description</b>
	3	22524	Foraging	Herbaceous Wetlands
	3	12555	Foraging	Deciduous Scrub/Shrub Wetlands
	3	33498	Foraging	Tidal Rivers, Inland Bays, and Other Tidal Waters
American oystercatcher (SC)	2	34185	Nesting Area	Beach
	2	29216	Nesting Area	Dune
	2	34146	Nesting Area	Dune
	2	4254	Breeding Sighting	Urban
Brown thrasher (SC – BR)	2	17371	Breeding Sighting	Other Urban or Built-Up Land
	2	27365	Breeding Sighting	Recreational Land
	2	17372	Breeding Sighting	Other Urban or Built-Up Land
	2	34185	Foraging	Beach
Common tern (SC – BR)	2	33498	Foraging	Tidal Rivers, Inland Bays, and Other Tidal Waters
Fowler’s toad (SC)	2	29216	Occupied Habitat	Dune
Glossy ibis (SC – BR)	2	13337	Foraging	Herbaceous Wetlands
	2	12555	Foraging	Deciduous Scrub/Shrub Wetlands
	2	33498	Foraging	Tidal Rivers, Inland Bays, and Other Tidal Waters
Great blue heron (SC – BR)	2	13337	Foraging	Herbaceous Wetlands
	2	22524	Foraging	Herbaceous Wetlands
	2	12555	Foraging	Deciduous Scrub/Shrub Wetlands
	2	33498	Foraging	Tidal Rivers, Inland Bays, and Other Tidal Waters
	2	4254	Non-breeding Sighting	Urban
	2	13337	Non-breeding Sighting	Herbaceous Wetlands
Horned lark (BR)	2	22524	Non-breeding Sighting	Herbaceous Wetlands
	2	17371	Non-breeding Sighting	Other Urban or Built-Up Land
	2	27365	Non-breeding Sighting	Recreational Land
	2	17372	Non-breeding Sighting	Other Urban or Built-Up Land
	2	13337	Foraging	Herbaceous Wetlands
	2	22524	Foraging	Herbaceous Wetlands
Snowy egret (SC – BR)	2	12555	Foraging	Deciduous Scrub/Shrub Wetlands
	2	33498	Foraging	Tidal Rivers, Inland Bays, and Other Tidal Waters
	2	13337	Foraging	Herbaceous Wetlands
Tricolored heron (SC)	2	13337	Foraging	Herbaceous Wetlands
	2	22524	Foraging	Herbaceous Wetlands
	2	12555	Foraging	Tidal Rivers, Inland Bays, and Other Tidal Waters

Source: NJDEP Landscape Project, Species Based Habitat, Atlantic Coastal and Piedmont Plains Regions (Version 3.3, 20171027).

Note: SC=Special Concern; BR=breeding population

FIGURE 2-8 SEA GIRT NGTC NEW JERSEY LANDSCAPE PROJECT DATA



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### 2.8.6 Invasive Plant Species

An exotic and invasive species report was prepared for the NJDMAVA for Sea Girt NGTC in 2013, as a follow-up to a previous invasive species report conducted in 2011 (ASGECI 2014a). The 2013 invasive species report reevaluated the areas previously mapped and identified as containing invasive species to document any changes in composition or size. During the 2013 survey, a total of 32 invasive or noxious plant species were identified at Sea Girt NGTC, covering approximately 3.8 acres (not including the native poison ivy). Of these, 31 had been identified in the 2011 survey; the new species identified was Chinese bushclover (*Lespedeza cuneata*). Seventeen of the 32 plants identified are among the most invasive and widespread in New Jersey and the United States, but not all of these species were identified as current or potential threats to sensitive vegetation communities at Sea Girt NGTC (ASGECI 2014a).

Effects of Hurricane Sandy, which made landfall near Atlantic City, New Jersey, on October 29, 2012, and caused unprecedented damage along coastal Monmouth and Ocean Counties, significantly affected or altered some of the vegetative communities on Sea Girt NGTC, including eliminating or reducing some invasive species such as Japanese honeysuckle and autumn olive in a disturbed successional community within the northeastern portion of Sea Girt NGTC. However, the occurrence of Asiatic sand sedge (*Carex kobomugi*) was exacerbated by the storm;—the plant became distributed along the entire shoreline of Sea Girt NGTC. Most of the dominant invasive species (poison ivy<sup>1</sup>, Japanese knotweed, and Oriental bittersweet) have remained unchanged or have slightly increased since 2011. Common reed also has expanded out of the areas identified in 2011.

During the exotic and invasive species survey, a list of invasive plants occurring at the installation was developed, and potential control measures were reevaluated (See Section 4.2.6 for Invasive Plant Management). Table 2-8 lists the invasive species observed in 2013, their occurrence at Sea Girt NGTC (e.g., found in large monocultures, isolated monocultures, not dominant, etc.), and the communities in which they were observed. Some other noxious or invasive species were not captured in the data, such as field garlic (*Allium vineale*) or garlic mustard (*Alliaria petiolata*), which are likely to occur on Sea Girt NGTC in some locations; however, it is unlikely that any of these species are affecting sensitive habitats on-site.

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<sup>1</sup> Poison ivy is a native species but it is considered noxious due to its potential for harm to humans; thus, it is included as a species to be managed.

**TABLE 2-8 INVASIVE PLANTS OBSERVED AT SEA GIRT NGTC**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Occurrence</b>	<b>Community</b>
Purple loosestrife	<i>Lythrum salicaria</i>	C	W
Asiatic sand sedge	<i>Carex kobomugi</i>	C	PD
Japanese stiltgrass	<i>Microstegium vimineum</i>	B	W
Spotted knapweed	<i>Centaurea stoebe</i>	A	SD, DS
Oriental bittersweet	<i>Celastris orbiculatus</i>	A, MSP	SD, DS, F, UR
Common reed	<i>Phragmites australis</i>	A, MSP	SD, DS, F, W, BW
Japanese honeysuckle	<i>Lonicera japonica</i>	A, MSP	SD, DS, F, W, UR
Porcelainberry	<i>Ampelopsis</i>	C	DS
Autumn olive	<i>Elaeagnus umbellata</i>	A	DS, UR
Poison ivy*	<i>Toxicodendron radicans</i>	A, MSP	SD, DS, F, W, UR
Rugosa rose	<i>Rosa rugosa</i>	A	SD, PD
Japanese knotweed	<i>Polygonum cuspidatum</i>	A, MSP	SD, DS, F
Mugwort	<i>Artemisia vulgaris</i>	A, MSP	FE, DS, UR
Tree-of-heaven	<i>Ailanthus altissima</i>	B, MSP	DS, F, SD
Chinese privet	<i>Ligustrum sinense</i>	C	DS
Saltwort	<i>Salsola kali</i>	B	PD
English ivy	<i>Hedera helix</i>	D, MSP	UR, F
Multiflora rose	<i>Rosa multiflora</i>	MSP	F, DS
Black locust	<i>Robina psuedoacacia</i>	B	DS, UR
Norway maple	<i>Acer platanoidies</i>	B, D, MSP	F, FE, UR
Wild carrot	<i>Daucus carota</i>	B	DS, FE, UR
Chicory	<i>Cichorium intybus</i>	B	DS, FE, UR
Sheep sorrel	<i>Rumex acetosella</i>	B	SD, DS, FE
Common mullein	<i>Verbascum thapsus</i>	B	DS
English plantain	<i>Plantago lanceolata</i>	A	FE, UR
Birdsfoot trefoil	<i>Lotus corniculatus</i>	A/B	FE
Winged euonymus	<i>Euonymus alatus</i>	D	UR
Black knapweed	<i>Centaurea nigra</i>	A/B	FE, UR
White mulberry	<i>Morus alba</i>	C	F
Yarrow	<i>Achillea millefolium</i>	B	SD, DS, FE
Chinese silvergrass	<i>Miscanthus sinensis</i>	D	UR
Chinese bushclover	<i>Lespedeza cuneata</i>	C	UR

Source: ASGECI 2014a.

**Occurrences:** **A** – Large monocultures or large areas of 60 percent+ dominance present; **B** – Sporadic occurrences common within a community or the site; **C** – isolated or few monocultures or occurrences present; **D** – planted on-site; **MSP** – Species identified among a patchwork of other invasive species, none of which are individually dominant or co-dominant

**Communities:** **SD** – secondary dune; **PD** – primary dune; **W** – herbaceous/scrub-shrub wetland; **DS** – disturbed successional; **FE** – maintained lawn and modified herbaceous wetland; **F** – secondary successional forest; **BW** – brackish tidal wetlands; **UR** – landscaped/urban areas

\* Poison ivy is a native species, but is considered noxious due to its potential for harm to humans and is included here as a species to be managed.



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## 2.9 CULTURAL RESOURCES

### 2.9.1 Cultural Resources Management and Native American Consultation

The NJARNG has prepared an Integrated Cultural Resources Management Plan (ICRMP), which includes Sea Girt NGTC (NJARNG 2015), in accordance with DODI 4715.16, *Cultural Resources Management*, and Army Regulation 200-1, *Environmental Protection and Enhancement*. The ICRMP serves as the NJARNG's comprehensive plan for managing cultural resources and includes detailed information regarding applicable cultural resources management laws, regulations, and NJARNG management procedures, as well as descriptions of known and potential resources present. The ICRMP was developed in consultation with the State Historic Preservation Office (SHPO; Saunders 2015) and Indian tribal governments. Its next update will be in 2020 for the period 2021–2025.

The United States has a unique legal relationship with Indian tribal governments as set forth in the Constitution of the United States, treaties, statues, executive orders, and court decisions. Since the formation of the Union, the United States has recognized Indian tribes as domestic dependent nations under its protection. DOD instruction 4710.02, *DOD Interactions with Federally Recognized Tribes* (September 2006), implements DOD policy, assigns responsibilities, and provides procedures for DOD interactions with federally recognized tribes in accordance with DOD Directive 5134.01, DOD Directive 4715.1E, DODI 4715.16, Secretary of Defense Policy dated October 20, 1998, Executive Order (EO) 13175, and the presidential memorandum dated September 23, 1994. The NJARNG ICRMP provides procedures that permit elected officials and other representatives of Indian tribal governments to provide meaningful and timely input on actions or policies that might be of tribal interest, such as those that affect sacred or Indian cultural sites. In accordance with federal statutes and DOD policy, the NJARNG initiated consultation with federally recognized Indian tribes during preparation of the ICRMP. There are presently four federally recognized Indian tribes with known lineal descent from the aboriginal occupants of New Jersey: the Delaware Tribe in Bartlesville, Oklahoma; the Delaware Tribe of Western Oklahoma in Anadarko; the Stockbridge Munsee Community of Wisconsin; and the Shawnee Tribe in Miami, Oklahoma.

Cultural resources could present constraints to various natural resources management activities at Sea Girt NGTC. Ground disturbing activities associated with the INRMP could require National Historic Preservation Act Section 106 consultation. When necessary, the NJARNG would initiate the Section 106 process with the SHPO to ensure that impacts on cultural resources are avoided. Specific procedures for Section 106 consultation and procedures for inadvertent discovery are specified in the ICRMP, and these procedures are incorporated into this INRMP by reference. In addition, the NJARNG would consult with appropriate Indian tribal governments for any INRMP activities that may have the potential to significantly affect protected tribal resources, tribal rights, or Indian land. The ICRMP includes contact information for the tribes and consultation procedures.

There are no known sacred sites and/or traditional cultural properties on NJARNG that may be part of a larger cultural landscape (NJARNG 2015, Appendix D-5).

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## 2.9.2 Historic Architectural Resources

A total of 55 buildings and structures are located at Sea Girt NGTC, and most of them have been determined by the NJ SHPO as not eligible for the National Register of Historic Places (NRHP) due to significant alterations (NJARNG 2015, Appendix D-5). Quarters One is the only building at Sea Girt NGTC that has been identified as being eligible for listing on the NRHP as a well preserved 19<sup>th</sup> century New Jersey shore farmhouse associated with Commodore Robert Stockton's plantation, known as Sea Girt, and it also was the Quartermaster General Residence (Kiernan 1999). Quarters One is not owned by the NJARNG but is operated and maintained as one of its facilities (NJARNG 2015, Appendix D-5). A Preservation Plan was prepared for Quarters One in 2014 to provide the historic context on the building, describe its current conditions, and detail the work needed to ensure its preservation (Wright et al. 2014). Recommendations were developed based on its continued use as a part-time residence at the NGTC. Asbestos-containing materials were identified in one location of the dwelling: the linoleum covering the floor of the rear stairwell off the kitchen. Another hazardous material identified, was lead-based paint found throughout the interior and exterior of the building. All repairs



*Sea Girt NGTC Quarters One*

or rehabilitation work at Quarters One must be in accordance with current requirements for asbestos and lead-based paint removal, abatement, and monitoring (Wright et al. 2014).

The installation does not contain, nor is it part of, a NRHP-eligible historic district or historic landscape (NJARNG 2015, Appendix D-5); however, a viewshed exists from the porch of Quarters One across the parade grounds to the firing range and ocean. This viewshed from the NRHP-eligible property is significant and must be taken into consideration for future projects.

## 2.9.3 Archaeological Resources

John Milner Associates, Inc., completed a Phase I archaeological survey at Sea Girt NGTC in 2004 (Siegel et al. 2004). The survey included a pedestrian survey and limited subsurface excavation (i.e., shovel tests) in undisturbed areas of the installation (i.e., the parade grounds). Fifty-one shovel tests were excavated, resulting in 84 artifacts. Many of these were modern items, which were noted in the inventory and discarded. Artifacts were relatively evenly dispersed across the property and represent general field scatter. No prehistoric artifacts were recovered and no archeological sites were identified. Based on the results of the Phase I investigation, a more comprehensive archaeological survey was recommended.

In 2005, the NJARNG contracted John Milner Associates, Inc., to conduct a Phase IB archeological survey (Siegel and Baldwin 2005). An additional 1,217 shovel tests were excavated,

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resulting in 369 historic artifacts distributed relatively evenly across the site, and represent general field scatter, mostly dating to various periods of the installation's history, which were collected and processed. Like the previous investigation, many additional items identified were recent, and therefore were noted and discarded. Two prehistoric artifacts, both isolated finds, were recovered. No archeological resources were identified on the property. However, the Phase IB study revealed an area of archaeological sensitivity east of the croquet fields that appeared to contain evidence for an eighteenth-through-nineteenth-century historic period archaeological site. Any construction proposed for this location would require a Phase II archaeological survey. Activities proposed by the implementation of the Sea Girt Master Plan were reviewed by the SHPO and determined to require additional investigation in this location.

The Phase II survey of the area identified in 2005 (the western end of the sports field) was conducted by HDR in 2013 (Parker and Gabler 2013). The SHPO determined the identified site, 28-MO-407, Shearman-Mount-Stockton Farmstead Site, was eligible for the NRHP in a letter dated November 5, 2013 (Saunders 2013). A total of 725 STPs and seven 1-meter square test pits were excavated. Artifacts recovered from the site represent manufacture dates from the mid-eighteenth to mid-nineteenth centuries.

In 2014, a Phase I survey by HDR was conducted of an area to the east of Quarters One for a proposed museum site (Parker et al. 2014). Forty-nine STPs and one 0.5-meter by 0.5-meter excavation unit were tested. A total of 358 historic artifacts and 86 modern artifacts were recovered and designated as 28-MO-408. The site lacked integrity and, coupled with the high volume of modern artifacts, it was determined not eligible for the NRHP.

Any future project activities that require federal funding, licensing, or permitting; Freshwater Wetlands permits, Waterfront Development permits, and Upland Development permits issued by the State of New Jersey's Division of Land Use Regulation; as well as environmental assessments under EO 215, must develop prior to project implementation a means to avoid, minimize, and/or mitigate impacts on all National Register eligible properties, which include Quarters One and the Shearman-Mount-Stockton Farmstead Site (28-MO-407).

## **2.10 INSTALLATION RESTORATION PROGRAM**

Sea Girt NGTC has several current Installation Restoration Program sites at the installation, including those associated with underground storage tanks (USTs), with a contaminated groundwater plume originating off-site, and with asbestos-containing debris areas.

From 1941 to 1998, several USTs were maintained on Sea Girt NGTC, and were used to store gasoline and fuel oil. These USTs were decommissioned over time (Brockerhoff Environmental Services 2016). NJDEP required the NJARNG to perform additional investigation work to adequately remediate various gasoline, heating oil, and diesel fuel USTs at the facility. Each of these former UST sites has received a No Further Action determination. However, ground penetrating radar surveys conducted during a site investigation in 2011 revealed underground anomalies indicating that three additional USTs may be present on-site (Brockerhoff Environmental Services 2016). Excavations were conducted at the sites of the three anomalies in

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September 2012. USTs were removed from two of the anomaly sites: Tank E4, a 550-gallon leaded gasoline UST; and Tank E12, a 1,000-gallon diesel UST. UST closure activities were conducted under Closure No. N14-9573, and UST Facility Questionnaires were submitted to the NJDEP. Excavations at the site of the third anomaly did not find any tanks, tank piping, or visually affected soils, so it was determined that no UST was present at the anomaly site and no further investigation was required (Brockerhoff Environmental Services 2016).

A groundwater plume consisting of several volatile organic compounds has been found to have migrated beneath the NGTC (see Figure 2-9) from an off-site commercial property, White Swan Laundry and Cleaners, Inc., which was located approximately one mile northeast of Sea Girt NGTC; USEPA (U.S. Environmental Protection Agency) ID: NJSFN0204241 – 1322 Sea Girt Avenue, Wall Township, Monmouth County, NJ). The groundwater was contaminated with dry cleaning chemicals and/or their breakdown products, including perchloroethylene, trichloroethene, and cis-1,2-dichloroethylene (USEPA 2017). A remedial investigation and feasibility study was overseen by the USEPA to determine the nature and extent of the contamination of the site, and to evaluate remedial opportunities. In September 2013, the USEPA finalized its plan to clean up contaminated soil and groundwater at the site (USEPA 2017). Sea Girt NGTC presently installs vapor barriers on buildings to prevent the movement of chemical vapors from contaminated groundwater into buildings (Bill McBride, INRMP update kickoff meeting, July 31, 2017). Groundwater samples are collected by the USEPA from wells installed on-site in 2010 to monitor the extent of contamination; the wells continue to be monitored. Cleanup progress of this Superfund site can be monitored at: <https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0204241>.

Asbestos-containing building materials originating from on-site sewer pipe improvements have been mixed with soil stockpiles and inadvertently spread across four areas encompassing a total of 2.4 acres of the Sea Girt NGTC, the limits of which be adjacent to freshwater wetlands (see Figure 2-9). A preliminary site investigation of the asbestos debris areas was initiated in early 2012. Asbestos remediation was completed in asbestos debris areas one, two, and three in 2016 in compliance with New Jersey Administrative Code (N.J.A.C.) 7:26C (Kleinfelder 2016). At asbestos debris area four, the asbestos was covered with a stone roadway (Kleinfelder 2013). Funding has not been available for cleanup at asbestos debris area four (Bill McBride, INRMP update technical questions, October 16, 2017). This asbestos contamination area is adjacent to a wetland area, but the asbestos is contained under the current paved roadway.

During excavation at the asbestos debris areas, soil samples revealed lead in area two at concentrations ranging from 1.3 milligrams/kilograms (below all applicable remediation standards) to 127 milligrams/kilograms (slightly exceeds the NJDEP Default Impact to Groundwater Soils Screening Level). These soils were removed from the site within six months of the laboratory results' indicating lead in the soil. Post-excavation lead samples indicated levels below the site-specific impact on groundwater standard (Kleinfelder 2015). Any activities proposed in an identified freshwater wetland or transition area are regulated under the Freshwater Wetlands Protection Act (New Jersey Statutes Annotated [N.J.S.A.] 13:9B-1 et seq.) (See Section 4.2.4).

FIGURE 2-9 ASBESTOS AT SEA GIRT NGTC



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## SECTION 3

### NATURAL RESOURCES PLANNING STRUCTURE

#### 3.1 INTRODUCTION

This section presents the framework for natural resources planning and INRMP development and implementation at Sea Girt NGTC. The key steps to developing an effective INRMP include

- forming a planning team and identifying stakeholders;
- assessing current natural resources programs;
- identifying management issues and concerns;
- developing overall natural resources program goals and project-specific goals;
- identifying staffing and funding requirements;
- developing a schedule for implementation of the project-specific goals; and
- evaluating potential environmental consequences of propose management activities and providing opportunities for public review.

Section 2.0 of this INRMP includes descriptions of existing natural resources at Sea Girt NGTC. The status of existing programs, management issues, and management goals are provided in Sections 4.0 through 8.0 of this INRMP. Five natural resources management program areas (land and watershed management, fish and wildlife management, rare species management, outdoor recreation, and information management) have been established to address relevant issues at Sea Girt NGTC. The program structure has been developed to facilitate issue identification and prioritization, as well as project funding, implementation, and tracking. Because of the inherent interaction of natural resources, overlap exists among programs. Therefore, all programs are integrated with each other, as well as with the overall land use and mission planning processes. The following management program areas are included in this INRMP:

- Section 4.0 – Land and Watershed Management
- Section 5.0 – Fish and Wildlife Management
- Section 6.0 – Rare Species Management
- Section 7.0 – Outdoor Recreation Management
- Section 8.0 – Information Management

Some program areas that are typically addressed in Army INRMPs are not included in this INRMP because they are not applicable to Sea Girt NGTC. Specifically, the Integrated Training Area Management Program and Forest Management are not addressed. Sea Girt NGTC is not currently classified as an Integrated Training Area Management Program installation based on its size and the type and magnitude of military field training that occurs. The installation lacks forested areas; therefore, forest management is not applicable.

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The following subsections provide additional information about the overall natural resources planning process, including responsibilities, stakeholder involvement, NEPA integration, staffing, funding, and the INRMP review and update process.

### **3.2 RESPONSIBILITIES**

The Adjutant General (TAG) of the NJARNG has overall responsibility for the preparation and implementation of an INRMP that fulfills both stewardship and legal requirements. The Construction Facilities Management Office – Environmental Management Bureau (CFMO-EMB), within the NJDMAVA, is assigned day-to-day responsibility for development and implementation of the INRMP. The director, Sea Girt NGTC is responsible for providing input to the plan and implementing specific elements of the plan.

### **3.3 ENVIRONMENTAL QUALITY CONTROL COMMITTEE**

In accordance with AR 200-1 (Chapter 15), the NJDMAVA Environmental Quality Control Committee (EQCC) has been established to advise the TAG on all NJARNG environmental issues, priorities, policies, strategies, and programs. The EQCC is a multidisciplinary group, meeting quarterly, that represents military land use needs and subject-matter expertise. Membership includes the following:

- Construction and Facilities Management Office
- Construction and Facilities Management Installation/Contracting Office
- Construction and Facilities Management Office, Environmental Management Bureau
- Director, Sea Girt NGTC
- G1, G3, G4, G6 – T Representatives
- Joint Training and Training Development Center
- Judge Advocate General
- Medical Command
- Public Affairs Office
- Recruiting and Retention Board
- State Army Aviation Officer
- State Army Aviation Officer Safety and Occupational Health Manager
- Surface Maintenance Manager
- 254th Regiment (Combat Arms)
- 42nd Readiness Support Group
- 44th Infantry Brigade Combat Team
- 57th Troop Command

Specific EQCC responsibilities with respect to the INRMP include the following:

- identifying military training and land use needs
- identifying and evaluating management issues and concerns
- providing policy, guidance, and oversight for development of goals and objectives
- identifying staffing and funding resources for implementing the INRMP
- overseeing development, implementation, and revision of the INRMP fostering environmental awareness and good stewardship at Sea Girt NGTC



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### 3.4 STAKEHOLDERS

In addition to the NJDMAVA EQCC, internal and external stakeholders are involved in the natural resources planning process. Internal stakeholders include the military users of the installation. External stakeholders include tenants, various government agencies, and nonprofit groups. These stakeholders have a vested interest in how the natural resources at the installation are managed. External stakeholders include the following:

- Sea Girt NGTC tenants
- USFWS – New Jersey Field Office
- NJDEP-ENSP
- Conserve Wildlife Foundation
- Monmouth County
- Borough of Sea Girt
- Borough of Manasquan

### 3.5 AGENCY INVOLVEMENT

In accordance with DA and NGB policy, this updated INRMP has been prepared in cooperation with the USFWS and NJDEP-ENSP. The DOD, USFWS, and state fish and wildlife agencies have defined their cooperative relationship for INRMP preparation and implementation within the *Memorandum of Understanding between the US. Department of Defense and the US. Fish and Wildlife Service (USFWS) and the Association of Fish and Wildlife Agencies for a Cooperative INRMP on Military Installations* (Tripartite MOU, July 2013). The USFWS *Guidelines for Coordination on INRMPs* (June 2015) provides detailed information on the Service's INRMP coordination and review responsibilities.

The NJARNG formally requested that these agencies and representatives from the Conserve Wildlife Foundation participate in the INRMP preparation process, and a planning meeting was held at Sea Girt NGTC on November 8, 2017. A copy of the Draft INRMP was provided to these representatives for review and input to the Final INRMP. The Final INRMP has been submitted to regulatory agencies involved for concurrence and to establish a mutual agreement of the parties concerning conservation, protection, and management of fish and wildlife resources. Copies of agency correspondence are provided in Appendix C.

In 2000, Congress created a State Wildlife Grants (SWG) program to fund actions and programs that benefit wildlife and their habitats in order to conserve declining species before they become threatened or endangered. Priority is placed on projects that benefit species of greatest conservation need. To be eligible for funding under the SWG program, a state must develop a comprehensive wildlife conservation strategy, known as State Wildlife Action Plans (SWAP). SWAPs present an assessment of the health of wildlife and habitats within a state, identifies the problems they face, and outlines conservation actions.

In the August 2006 memorandum that provided the DOD's official INRMP template, the DOD identified the incorporation of SWAPs into INRMPs, and vice versa, as a critical element of

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the environmental management strategy and mission sustainability. During the development of the most recent SWAP update, the State of New Jersey invited multiple federal, state, and local partners. The DOD is listed as one of the contributors to the revised SWAP.

The NJDEP Division of Fish and Wildlife released the first New Jersey SWAP in 2006, revised it slightly in 2008, and a draft of a complete revision of the SWAP was published for public review in December 2017 (NJDEP Division of Fish and Wildlife 2017). The SWAP guides conservation strategies to benefit wildlife and their habitats in the state, and provides actions that can be implemented by local, county, state, and federal agencies, non-profit organizations, and private landowners. The 2017 SWAP focuses on 107 species of greatest conservation need (SGCN), and concentrates on key habitats and conservation focal areas (NJDEP Division of Fish and Wildlife 2017). Piping plover and least tern, both which are monitored on Sea Girt NGTC beaches, are considered focal SGCN within the SWAP. Actions and goals within the SWAP that are directly relevant to Sea Girt NGTC (and this INRMP supports) include the following:

- 2.8.0. Control of invasive animal and plant species to maintain native species populations and restore ecological functions
- 3.2.0. Collection and analysis of data as part of research, survey, or monitoring primarily focused on fish and wildlife populations
- 3.3.2. Ongoing monitoring of fish and wildlife habitat quality and quantity
- 6.3.0.5. Promote the protection of critical coastal habitats that provide nesting, migrating, and wintering areas for SGCN birds, fish, and other coastal SGCN through conservation area designations
- 9.3.1.2. Develop a management plan to restrict human activity (e.g., recreational, maintenance work, etc.) from sensitive habitats/areas such as avian nesting sites, reptile and amphibian breeding areas (nesting or gestation/birthing and breeding pools, respectively), and bat hibernacula, and federal buffers for marine mammals
- 9.2.1.13. Develop a management plan to ensure SGCN populations' persistence based on long-term monitoring of resident and migratory SGCN populations and their habitats
- 9.3.1.16. DOD and appropriate state agencies work together to improve DOD INRMPs to develop strategies to minimize or eliminate disturbances to all SGCN (i.e., beyond their federal requirements) during military activities and to improve SGCN habitat and presence

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### **3.6 NATIONAL ENVIRONMENTAL POLICY ACT AND PUBLIC REVIEW**

The NGB Office of General Counsel has determined that Sikes Act requirements for INRMP implementation necessitate the preparation of NEPA documentation prior to plan approval. In addition, the Sikes Act requires that INRMPs be made available to the public for review. NEPA requires federal agencies to consider the potential environmental consequences in their decision-making process. The intent of NEPA is to protect, restore, and enhance the environment through well-informed federal decisions.

An Environmental Assessment (EA) was prepared and made available for public review on August 11, 2005, for the original 2006–2010 INRMP in accordance with NEPA, 32 Code of Federal Regulation Part 651 (Environmental Analysis of Army Actions; Final Rule; March 29, 2002), and the NGB NEPA Handbook (Guidance on Preparing Environmental Documentation for Army National Guard Actions in Compliance with NEPA, March 2002) to analyze the potential environmental consequences of implementing the Sea Girt NGTC INRMP; a Finding of No Significant Impact (FNSI) was signed for the 2006–2010 INRMP on June 6, 2006. A Record of Environmental Consideration was completed for the 2013–2017 INRMP to meet the requirements of NEPA.

The environmental impacts of the actions involved in the implementation of this updated INRMP for the implementation period of 2018 through 2022 were assessed, and it was determined that a Record of Environmental Consideration (Appendix F) was sufficient review and analysis to meet the requirements of the NEPA. INRMP updates that are not expected to result in biophysical consequences materially different from those anticipated in the existing INRMP must be supported by a Record of Environmental Consideration that tiers off the original INRMP EA (FNSI must be attached to the Record of Environmental Consideration), but do not require public comment per the NGB memorandum (Guidance for the Creation, Implementation, Review, and Revision and Update of INRMPs [Section 16c], April 9, 2012).

### **3.7 STAFFING**

Primary staffing for developing and implementing the INRMP comes from the NJDMAVA CFMO-EMB in Lawrenceville. The Chief, CFMO-EMB, has overall responsibility and the Natural Resources Manager has day-to-day responsibility. The Natural Resources Manager also has responsibility for several other program areas that encompass 41 NJARNG facilities statewide. Therefore, only a small percentage (approximately 5 to 10 percent) of the Natural Resources Manager's time is allocated to natural resources management at Sea Girt NGTC. The Director, Sea Girt NGTC and the installation facilities management staff provide logistical and on-site support for implementation of the plan. The Natural Resources Manager at NGB-ARE provides technical guidance and support to implement various aspects of the INRMP. Biologists from the NJDEP-ENSP, USFWS, and Conserve Wildlife Foundation also provide substantial staffing support for rare species management at Sea Girt. Other possible staffing sources for natural resources programs at Sea Girt NGTC include various NJARNG units, temporary NJDMAVA staff (military staff-days and students/interns), and contractors. Estimated staffing requirements for implementing specific INRMP goals and programs are presented in Section 9.0 .

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### 3.8 FUNDING

Estimated funding requirements for implementing specific INRMP goals and programs are presented in Section 9.0 . The primary funding source for implementing specific management activities and projects contained in the INRMP is the ARNG I&E. The Status Tool for the Environmental Program (STEP) is the standard Army budgeting process that is used to identify programming, budgeting, and resource allocation needs to execute the Army Environmental Program. Project-specific goals contained in this INRMP will be programmed through the STEP. In addition, the Headquarters Army Environmental System will be used as the program and project management and performance reporting system, including for financial reporting.

Other potential funding sources for implementing the INRMP include Real Property; Morale, Welfare, and Recreation; Sustainment, Readiness, and Maintenance; and DOD Legacy Program funds. Fees collected for use of the beach, campground, and cottages at Sea Girt NGTC are used for maintenance of these facilities, but are not available for general natural resources management activities.

### 3.9 PRIORITIZING GOALS

Project-specific management goals and objectives have been established to address management issues, where appropriate, to provide a clear direction and concrete approach to natural resources planning. These project-specific goals are defined as project-level activities that the NJDMAVA intends to implement to fulfill the overall natural resources program goals. Project-specific goals are prioritized for implementation using the following the NGB environmental funding criteria (NGB 2016; NGB 2018):

- **Compliance/Class 0 – Recurring Natural and Cultural Resources Conservation Management Requirements.** This includes activities needed to cover the long term recurring administrative, personnel, and other costs associated with managing environmental programs that are necessary to meet applicable compliance requirements (federal, state, and local laws, regulations, EOs, and DOD policies) that are in direct support of the military mission. Class 0 also includes monitoring, data collection, compilation, evaluation, and analysis in order to quantify change as needed to prepare and update INRMPs, recurring actions (i.e., prescribed burning in long-leaf pine habitat, control of certain invasive/noxious species, etc) essential for sustaining ecosystem integrity to preserve mission capabilities or sustain rare species habitat, and long-term monitoring (>10 years) of eagles or other migratory birds and rare speceies.
- **Compliance/Class 1 – Established Deadlines.** This includes projects/activities that are currently out of compliance or that are not currently out of compliance, but shall be if projects or activities are not implemented within the program year. This class also includes non-recurring conservation/management projects/activities that were a basis for an installation avoiding critical habitat designation, control of noxious/invasive species on ARNG property if required conditions of the Federal

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Noxious Weed Act apply, a project that directly or indirectly supports military readiness activities, and implementation of such project would result in a may affect, not likely to adversely affect determination for the readiness activity, or Section 7 consultation requirements for a mission or range project.

- **Maintenance/Class 2 – Future Requirements.** This includes those projects and activities needed that are not currently out of compliance, but shall be if projects or activities are not implemented in time to meet an established deadline beyond the current program year. This class also includes actions necessary to avoid future adverse impacts on wetlands, project to control soil erosion where there's a significant threat to the functioning ecosystem, conservation recommendation within a biological opinion that supports mission flexibility/ sustainability, and/or helps avoid potential adverse impacts on the rare species or critical habitat, an action that is necessary to prevent adverse impacts on rare plants due to neglect or lack of adequate management, or a project solely for the management and conservation of a rare species or critical habitat on the installation to support mission and/or species status.
- **Stewardship/Class 3 – Best Management Practices.** This includes those projects and activities that promote proactive conservation efforts/best management practice or conservation recommendations within a biological opinion that helps support Section 7 responsibilities, but are not critical actions to support mission and/or the species/critical habitat on the installation that are not tied to potential future violations or to avoid significant impacts.

### 3.10 INRMP EVALUATION AND REVISION

This INRMP covers a five-year planning period (2018 through 2022). Section 101(b)(2) of the Sikes Act requires that INRMPs be reviewed as to operation and effect by the parties thereto on a regular basis, but not less often than every five years. The DOD requires INRMPs to be reviewed annually by the DOD installation with the cooperation of the federal and state fish and wildlife agencies.

The CFMO-EMB will continue to review the plan annually (at a minimum) in consultation with the EQCC, USFWS, and NJDEP-ENSP. The CFMO-EMB, USFWS, and NJDEP-ENSP holds annual planning meetings or conference calls in February to review the INRMP and coordinate specific implementation aspects for the coming season. The need for revisions or updates to the INRMP is discussed at these meetings/conference calls. In addition, the CFMO-EMB will continue to formally request a comprehensive review of the plan by the USFWS and NJDEP-ENSP not less often than every five years. The CFMO-EMB documents all INRMP reviews in a Memorandum for the Record and NGB plans to initiate an annual review tracking database in the future.

The INRMP will continue to be updated, as needed, based on various factors such as changes in conditions and the effectiveness of ongoing management practices. Revisions will be

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submitted to the USFWS and NJDEP-ENSP for review and concurrence. These reviews are guided by the *Memorandum of Understanding between the US. Department of Defense and the US. Fish and Wildlife Service (USFWS) and the Association of Fish and Wildlife Agencies for a Cooperative INRMP on Military Installations* (Tripartite MOU, July 2013). The mutual DOD and USFWS *Guidelines for Streamlined Review of INRMP Updates* (July 2015) clarify and describe the process for reviewing and concurring on updates to existing INRMPs.

The CFMO-EMB evaluates all proposed INRMP revisions to determine if public review and NEPA documentation are appropriate and necessary. Generally, any INRMP revisions that would result in materially different biophysical consequences than previously considered would be subject to public review and the NEPA process.

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## SECTION 4

### LAND AND WATERSHED MANAGEMENT

#### 4.1 PROGRAM DESCRIPTION AND OVERALL MANAGEMENT GOALS

The Land and Watershed Management Program provides a foundation for the conservation of all other natural resources components, and serves as a basic land use and conservation management guide. Sound land and water management practices that conserve soil and water are paramount to the overall natural resources conservation program. Soil and water resources form the basis for supporting the remaining components of the system.

This program is integrated with other mission, land use, and environmental planning processes at the installation, as well as all other natural resources management programs. Issues addressed under the Land and Watershed Management Program include the following:

- coastal zone management
- erosion and sediment control
- stormwater management
- wetlands management
- shoreline management
- invasive plant management

Overall management goals for the Land and Watershed Management Program include the following:

- Conserve, develop, manage, and maintain all land and water resources in accordance with proven scientific methods, procedures, and techniques to facilitate the military mission.
- Avoid, reduce, or eliminate any contribution of pollution due to erosion and sedimentation.
- Maintain no net loss of installation wetlands and protect the biodiversity, functions, and values of wetland communities.
- Prevent the introduction of invasive species and control populations of such species in a cost-effective and timely manner.
- Comply with all applicable federal and state laws and regulations, as well as DOD policies that mandate land and water conservation.
- Implement ecosystem management practices to achieve program goals.

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## 4.2 PROGRAM STATUS AND MANAGEMENT ISSUES

### 4.2.1 Coastal Zone Management

Sea Girt NGTC is located adjacent to the Atlantic Ocean and within New Jersey's Coastal Area Facility Review Act (CAFRA) zone. Under the Coastal Zone Management Act, a state exerts control over coastal uses and resources through enforceable state policies. New Jersey protects coastal waters and the land adjacent to them under a variety of laws, including the following:

- Coastal Area Facility Review Act (N.J.S.A. 13:19). The CAFRA law regulates almost all development activities, including construction, relocation, and enlargement of buildings or structures; and all related work, such as excavation, grading, shore protection structures, and site preparation in the coastal zone.
- Waterfront Development Law (N.J.S.A. 12:5-3). The Waterfront Development Law is a very old law, passed in 1914, that seeks to limit problems that new development could cause for existing navigation channels, marinas, moorings, other existing uses, and the environment. A Waterfront Development Permit is required for any development in a tidally flowed waterway anywhere in New Jersey. Examples of projects that need a Waterfront Development Permit include docks, piers, pilings, bulkheads, marinas, bridges, pipelines, cables, and dredging.
- Wetlands Act of 1970 (N.J.S.A. 13:9A). The Wetlands Act of 1970 requires the NJDEP to regulate development in coastal wetlands. Regulated coastal wetlands are delineated on maps prepared by the NJDEP. These maps are available for public inspection at each county clerk's office. A coastal wetlands permit is required to excavate, dredge, fill, or place a structure on any coastal wetland shown on the maps. The wetlands at Sea Girt NGTC are not regulated under the Wetlands Act of 1970. However, they are regulated under the Freshwater Wetlands Protection Act, as discussed below in Section 4.2.4.
- Tidelands Act (N.J.S.A. 12:3) – Tidelands are lands now or formerly flowed by the tide of a natural waterway, including lands that were previously flowed by the tide but have been filled and are no longer flowed by the tide. The people of the State of New Jersey own tidelands. Therefore, a tidelands license, lease, or grant must be obtained from the NJDEP, Bureau of Tidelands Management, prior to using these lands.

The NJDEP Division of Land Use Regulation (DLUR) issues permits for activities regulated under the CAFRA, Waterfront Development Act, and Wetlands Act of 1970 in accordance with the Coastal Zone Management Rules (N.J.A.C. 7:7) (note, the New Jersey Coastal Permit Program Rules were consolidated into one chapter within the Coastal Zone Management Rules in 2015 in order to align the rules governing the permitting processes of the coastal, freshwater, and flood hazard permitting programs) (New Jersey DLUR 2017). These laws and rules, as well as application forms and additional information about the permitting process, are



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available on the Land Use Regulation Program website (<http://www.state.nj.us/dep/landuse/index.html>).

All actions at Sea Girt NGTC including construction, excavation, grading, shore protection, site preparation, and other ground disturbing activities require a CAFRA permit. The CFMO-EMB is responsible for reviewing the action, determining the permitting requirements, and preparing the appropriate permit application for submission to the NJDEP.

#### **4.2.2 Erosion and Sediment Control**

Military training activities at Sea Girt NGTC result in minimal ground disturbance, and no training-related soil erosion problems currently exist. Consequently, potential erosion and sediment control issues would primarily be related to future construction activities. Soil erosion and stormwater discharges from construction activities are regulated in New Jersey as follows:

- The Soil Erosion and Sediment Control Act Chapter 251 requires certification of a soil erosion and sediment control plan for any construction project disturbing more than 5,000 square feet. The soil erosion and sediment control plan must conform to the *Standards for Soil Erosion and Sediment Control in New Jersey* and ensure that erosion will not occur once construction is completed. Disturbance activities include residential and commercial development, transportation and utility infrastructure, public facilities, and mining. The plan is submitted to the Freehold Soil Conservation District for certification. Application forms and additional information about the process are available on the Freehold Soil Conservation District website (<http://www.freeholdscd.org/>).
- The New Jersey Pollutant Discharge Elimination System (NJPDES) rules require coverage under General Permit Number NJG0088323 (Stormwater Discharge Associated with Construction Activity) for construction, grading, and excavating activities that disturb one acre or more. Coverage under the general permit is obtained by submitting a Request for Authorization and payment electronically online utilizing the NJDEP's Stormwater Construction Activity E-Permitting System, or via paper application to the NJDEP's Bureau of Permits Management. The General Permit conditions include requirements for development and implementation of a certified soil erosion and sediment control plan, as described above. The Request for Authorization Form and additional information are available on the NJDEP website (<http://www.nj.gov/dep/stormwater/>).

The proponent of the construction activity is responsible for ensuring that soil erosion and sediment control plans are developed and implemented, and that coverage is obtained under the General Permit. Generally, the design or construction firm will prepare soil erosion and sediment control plans and necessary applications. The CFMO-EMB supports the plan and application preparation process, as needed.

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### **4.2.3 Stormwater Management**

A majority of the stormwater from the installation discharges to the on-site and municipal storm sewer system through storm drains located in developed areas. Some storm drains along Governor Wilson Drive discharge to Stockton Lake. Stormwater from the southeastern portion of the installation flows into Stockton Lake via a stormwater ditch. Impervious areas are served by a system of catch basins and drain lines, the majority of which drain to Stockton Lake, apart from five catch basin lines along Governor Wilson Drive that collect drainage from Sea Girt NGTC and drain to Sea Girt Avenue. A previous assessment of the existing stormwater infrastructure system indicates that the system was first constructed prior to 1935 (Jacobs Global Building 2014). No significant issues were identified with the system; however, occasional flooding of the system, partial or total siltation of some drainage pipes, presence of undersized pipes in some areas, and reverse pitch in drainage pipes were identified as items of concern for the system.

An application for a NJDEP Freshwater Wetlands General Permit for Maintenance and Repair of an Existing Feature (GP1) was issued on October 27, 2011 (DLUR File No. 1344-03-0001.1 FWW110001), to conduct maintenance to clear the ditch to reduce ponding during heavy rains and improve drainage in this portion of the installation. Maintenance was previously conducted under a GP1 issued in 2005; however, the ditch has again become clogged with sediment, vegetation and debris. Initial clearing of vegetation, debris, and sediment under the re-issued permit was completed in 2012. Expiring in 2016, the application for the NJDEP Freshwater Wetlands General Permit for Maintenance and Repair of an Existing Feature (GP1) is in process for renewal. Additional activities required to maintain proper drainage will occur, as needed, throughout the lifetime of the permit. A stormwater management plan is not required for Sea Girt NGTC.

As briefly mentioned in Section 2.7.1, a newly constructed parking lot at the facility has caused drainage issues in two ditches adjacent to the parking lot (see Figure 4-1). Heavy periods of rain on the impervious pavement cause the stormwater areas to collect excessive amounts of water and retain wet conditions. The NGTC is considering other stormwater retrofit options, including low-impact development (LID) techniques such as rain gardens and bioswales. LID refers to systems and practices that use or mimic natural water processes and result in the infiltration, evapotranspiration, or use of stormwater to protect water quality and associated aquatic habitat. LID employs principals such as preserving and recreating natural landscape features, minimizing imperviousness, and treating stormwater as a resource rather than a waste product (USEPA 2018).

Stormwater management issues and regulatory programs related to construction activities are discussed above in Section 4.2.2. NJDEP issued Phase II NJPDES Stormwater Regulation Program Rules (N.J.A.C. 7:14A) on February 2, 2004, to address and reduce pollutants associated with existing stormwater discharges from small municipal separate storm sewers and public complexes, including large publicly owned or operated military bases. The CFMO-EMB reviewed the new rules and determined that they are not applicable to Sea NGTC, based on the number of full time personnel and installation users.

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NJDEP also issued Stormwater Management Rules (N.J.A.C. 7:8) on February 2, 2004. The rules set forth the stormwater management design and performance standards for proposed "major development," which is defined as disturbing one or more acres of land or increasing impervious surface by one-quarter acre or more. Disturbance for this rule is the placement of impervious surface or exposure and/or movement of soil or bedrock or clearing, cutting, or removing of vegetation. The rules emphasize the use of non-structural stormwater management techniques including minimizing disturbance, minimizing impervious surfaces, minimizing the use of stormwater pipes, preserving natural drainage features, etc. The rules also set forth requirements for groundwater recharge, stormwater runoff quantity control, stormwater runoff quality control, and a buffer adjacent to Category One waters and their immediate tributaries. Details of the performance standards can be found in Subchapter 5 of the Stormwater Management Rules ([https://www.nj.gov/dep/rules/rules/njac7\\_8.pdf](https://www.nj.gov/dep/rules/rules/njac7_8.pdf)). No Category One waters are located on, or adjacent to, the installation. Therefore, the buffer requirements are not applicable.

The design and performance standards specified by the Stormwater Management Rules will be incorporated during the design process for any future development at Sea Girt NGTC that would result in disturbance of one or more acres of land or increasing impervious surface by one-quarter acre or more. The proponent of the action is responsible for ensuring that the design conforms to the rules. NJDEP reviews compliance with the rules as part of the CAFRA permitting process. The CFMO-EMB supports the CAFRA permitting process, as needed.

In addition, on October 31, 2011, NJDEP issued new NJPDES rules in accordance with N.J.A.C. 7:14A authorizing a General Permit (No. NJ0178217) for pesticide application discharge to surface waters. This permit authorizes the applications of biological and chemical pesticides in water when such applications are made in, over, or near surface waters of the State and in the following pesticide use patterns: (a) Nuisance Insect Control (i.e., mosquito and fly control), (b) Aquatic Pest Control (i.e., weeds, algae), (c) Aquatic Nuisance Animal control, (d) Aerial Treatment of Forest Canopy and (e) Aquatic Agricultural Activities. Pesticide application is occasionally conducted at the Sea Girt NGTC. Any spraying that may occur in areas including ditches adjacent to surface water such as Stockton Lake requires this authorization. The Request For Authorization form can be found on the Division of Water Quality website ([http://www.nj.gov/dep/dwq/gp\\_surfacewater.htm](http://www.nj.gov/dep/dwq/gp_surfacewater.htm)).

#### **4.2.4 Wetlands Management**

The focus of wetland management at Sea Girt NGTC is to ensure compliance with federal and state regulations, EO 11990, and DA policy. This involves obtaining accurate information regarding the presence of wetlands and integrating this information into the overall planning processes at the installation to ensure that potential impacts on wetlands are avoided. The wetland data contained in the NJARNG geographic information system (GIS) is available to a variety of users to ensure that wetland issues are integrated into the mission and land-use planning processes. Actions at Sea Girt NGTC including construction, excavation, grading, shore protection, site preparation, and other ground disturbing activities are reviewed to determine the applicability of the Freshwater Wetlands Protection Act and Section 404 of the Clean Water Act. The proponent is responsible for notifying the CFMO-EMB of the action early in the planning process. The

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CFMO-EMB is responsible for reviewing the action, determining the permitting requirements, and preparing the appropriate permit application for submission to the NJDEP and/or the U.S. Army Corps of Engineers (USACE).

Activities in wetlands are regulated under Section 404 of the Clean Water Act, the Wetlands Act of 1970 (N.J.S.A. 13:9A), and the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et seq.). Activities in mapped Coastal Wetlands are regulated by the NJDEP under the Coastal Wetlands Act of 1970. As noted above in Section 4.2.1, no coastal wetlands that are regulated under the Coastal Wetlands Act of 1970 are present at Sea Girt NGTC.

The NJDEP DLUR regulates activities in and implements the permitting program for freshwater wetlands and associated transition areas (see description below). The Freshwater Wetlands Protection Act and associated rules, application forms, and additional information about the permitting process, are available on the DLUR website ([http://www.nj.gov/dep/landuse/fww/fww\\_main.html](http://www.nj.gov/dep/landuse/fww/fww_main.html)).

In addition, the USACE has permitting authority for actions that take place in non-delegable waters, which include waters that are presently used, or are susceptible to use, in their natural condition or by reasonable ordinary high-water mark. This term includes all waters that are subject to the ebb and flow of the tide, shoreward to their mean high-water mark, including wetlands that are partially or entirely located within 1,000 feet of their ordinary high-water mark or mean high tide. All the wetlands at Sea Girt NGTC are non-delegable because they are within 1,000 feet of mean high tide. Therefore, the USACE (New York District) regulates certain activities on-site. Additional information about the Corps permitting process and application forms are available on the USACE's website (<http://www.nan.usace.army.mil/Missions/Regulatory/>).

The Freshwater Wetlands Protection Act applies to all wetlands at the installation, as well as transition areas for wetlands on the installation and adjacent properties. Regulated activities within wetland transition areas include: removal, excavation, or disturbance of the soil; dumping or filling with any materials; erection of structures; placement of pavements; and destruction of plant life which would alter the existing pattern of vegetation. Wetlands are classified according to their resource value as determined by the NJ Freshwater Wetlands Protection Act Rules. A transition area is defined as an area of upland adjacent to a freshwater wetland that minimizes adverse impacts on the wetland or serves as an integral component of the wetland. The width of the regulated upland transition area or buffer around the wetland area is based on the resource value of the wetland, which is determined as follows:

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- **Exceptional resource value wetland** – (1) discharges into FW1<sup>2</sup> or FW2 trout production waters or their tributaries, (2) is a present habitat for threatened or endangered species, or (3) is a documented habitat for threatened or endangered species and remains suitable for breeding, resting, or feeding by these species. The NJDEP identifies present or documented habitat for threatened and endangered species using the Landscape Project method. The standard width of a transition area for these wetlands is 150 feet.
  - **Ordinary resource value wetland** – is a freshwater wetland that does not exhibit any of the characteristics of an exceptional resource value wetland, is isolated, is less than 5,000 square feet, and meets other criteria specified at N.J.A.C. 7:7A-2.4. Transition areas are not required for ordinary resource value wetlands or adjacent to state open waters.
  - **Intermediate resource value wetland** – is any freshwater wetland not defined as exceptional or ordinary resource value. The standard width of a transition area for these wetlands is 50 feet.

A key component of wetland management is having accurate and accessible information about the location of wetlands and associated regulated transition areas at the installation. To facilitate in wetlands and transition area protection and management, NGTC applied for a NJDEP Freshwater Wetlands LOI in December 2011. The LOI was issued from NJDEP on August 3, 2012. The NJDEP issued an LOI extension on 13 November 2017 with a new expiration date of 2 August 2022. The LOI verified the location and resource value (transition areas width) of wetlands on-site.

As part of the LOI application process, a survey and detailed wetland delineation was conducted for the entire facility in 2011, as part of a LOI issued on August 3, 2012. Figure 4-1 shows the 12 delineated wetlands and their associated transition areas. See Section 2.8.2 for detailed wetland descriptions. The on-site wetland delineation data are also included in the NJARNG GIS. Approximately 4.77 acres of wetlands and 3.73 acres of upland transition area are located within the installation boundaries.

Transition areas consist of the following vegetation communities: secondary growth forest, maintained fields, disturbed successional, and maintained lawn and landscaped areas. The secondary growth forest can be found in the southwest corner of the property. This community consists of species such as Norway maple (UPL), tree-of-heaven (FACU), hackberry (FACU),

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<sup>2</sup> "FW" means the general surface water classification applied to fresh waters in the Department's Surface Water Quality Standards, N.J.A.C. 7:9B.

"FW1 waters" means waters designated as FW1 waters in the Department's Surface Water Quality Standards, N.J.A.C. 7:9B. As of September 4, 2001, N.J.A.C. 7:9B-1.15 defines FW1 waters as those fresh waters wholly within Federal or State lands or special holdings, that are preserved for posterity, and are not subject to wastewater discharges of human origin.

"FW2 waters" means waters designated as FW2 waters in the Department's Surface Water Quality Standards, N.J.A.C. 7:9B.

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winged sumac (UPL), Japanese knotweed (NL), Oriental bittersweet (FACW), and poison ivy (FAC). Maintained fields can be found throughout the property and generally consist of various grass species, common plantain (FACU), English plantain (FACU), crabgrass, bracted plantain (NL), sheep sorrel (FACU), blue toadflax (UPL), yarrow (FACU), wild strawberry (FACU), mouse ear (FACU), and field hawkweed (NL). See Table 2-4 for Wetland Indicator Status descriptions.

Wetlands on the property drain to Judas Creek and Stockton Lake, which have NJDEP Surface Water Quality Classifications of freshwater, non-trout/saline estuarine and Category Two (FW2-NT/SE1, C2). Therefore, no wetlands on-site are classified as exceptional resource value for reason of draining to FW1 or trout-production waters. None of the NGTC wetlands contain the necessary habitat requirements required for wetland-dependent threatened and endangered species.

The 2012 NJDEP LOI correspondence confirmed that there are four wetlands (Wetlands A, C, K and L) with an intermediate resource value and an associated 50-foot buffer. The remaining eight delineated wetlands are ordinary resource value (no buffer). No exceptional resource value wetlands were identified on-site.

In alignment with the INRMP's overall management goals for the Land and Watershed Management Program, the *Freshwater Wetlands and Coastal Habitat Enhancement Plan* was prepared in July 2017 to guide proposed habitat enhancements on an eastern portion of the Sea Girt NGTC. The proposed projects involve the enhancement of existing on-site wetland and beach/dune habitats by controlling invasive species, planting desired native coastal and wetland species, improving vegetation habitat conditions for rare, threatened, and endangered wildlife on-site, conducting grading, soil excavation, and stabilization activities, and installing a walking path and observation platform (ASGECI 2017). A permit application to conduct this work under the Freshwater Wetlands Protection Act for GP No. 16 (Habitat creation and enhancement activities), 17 (Trails and boardwalks), and 1 (Maintenance and repair of existing features) was submitted to NJDEP-DLUR in May 2017, and a CAFRA GP 24 (Habitat creation, restoration, enhancement, and living shoreline activities) permit request was also submitted concurrently (NJARNG, Request for a Wetlands General Permit #1, #16 and #17, May 2017).

FIGURE 4-1 SEA GIRT NGTC DELINEATED WETLANDS



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#### **4.2.5 Shoreline Management**

The installation includes approximately 2,800 feet of shoreline along Stockton Lake and 1,980 feet of shoreline along the Atlantic Ocean. The Stockton Lake shoreline previously consisted of a deteriorating wooden bulkhead, which, in 2011, was reconstructed as a steel bulkhead. The NJDEP Bureau of Coastal Engineering provided permitting and construction for the bulkhead replacement. It is anticipated that this steel bulkhead will last for decades; however, when it becomes time to replace the current bulkhead, the installation may consider whether a living shoreline is appropriate for this location.

The Sea Girt NGTC beach has been part of the Atlantic Coast of New Jersey Sandy Hook to Barnegat Inlet Beach Erosion Control Project (BECP), which is implemented by the USACE, New York District, and the NJDEP. The project included beach nourishment along 21 miles of Atlantic Ocean shoreline in Monmouth County. Beach nourishment for the project section that includes the Sea Girt NGTC beach was completed in August 1999. Renourishment is dependent upon the severity of annual erosion of the beach, and is usually several years between cycles for a duration of approximately 50 years.

After Hurricane Sandy, the beaches in the project area lost roughly five million cubic yards of sand. The USACE has repaired and restored this area after Hurricane Sandy through the Flood Control and Coastal Emergencies Act (Public Law 84-99) and the Disaster Relief Appropriations Act of 2013 (Public Law 113-2). The work entailed replacing the sand lost during the storm, as well as restoring the beach to its original design profile. This effort, completed in the summer of 2014, involved the placement of more than eight million cubic yards of sand (USACE 2017).

If future storms or erosion processes cause excessive detrimental impacts to the beach, Sea Girt NGTC may seek future beach nourishment projects, as practicable.

#### **4.2.6 Invasive Plant Management**

EO 13751 (*Safeguarding the Nation from the Impacts of Invasive Species*) identifies invasive species as “a non-native organism whose introduction causes or is likely to cause economic or environmental harm, or harm to human, animal, or plant health.” Invasive species present a major threat to ecological and economic systems globally and within the United States. Invasive species generally lower wildlife production, reduce diversity of native species, and cause significant economic and quality of life impacts (New Jersey Invasive Species Council 2009). Quality of life and economic impacts from invasive species may include introduced human disease or associated hazards, impacts on agriculture, and damage to resource-dependent recreational activities such as boating, hunting, fishing, and wildlife viewing.

In December 2016, EO 13751, an amendment to EO 13112 (*Invasive Species*), was enacted to call upon executive departments and agencies to act to prevent the introduction and spread of invasive species, and to support efforts to eradicate and control invasive species that are established. EO 13112 established the National Invasive Species Council (NISC). The NISC is charged with providing coordination, planning and overall leadership for federal invasive species

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programs, as well as reaching out to state, tribal, local, and private partners. EO 13751 expanded the membership of the NISC to include more federal agencies and clarified the operations of the NISC. The amendment incorporates considerations of human and environmental health, climate change, technological innovation, and other emerging priorities into federal efforts to address invasive species; and strengthens coordinated, cost-efficient federal action. EO 13112 also required the Secretary of the Interior to establish the Invasive Species Advisory Committee to advise NISC on invasive species issues and called on NISC to prepare and issue the first national plan to deal with invasive species. EO 13751 requires the Secretary of the Interior to maintain the Invasive Species Advisory Committee to provide information and advice for consideration by the NISC. Finally, EO 13751 requires that federal agencies coordinate complimentary, cost-effective activities concerning invasive species including the following, subject to the availability of funds and administration budgetary limits:

- Prevent the introduction, establishment, and spread of invasive species.
- Detect and respond rapidly to eradicate or control populations of invasive species in a manner that is cost-effective and minimizes human, animal, plant, and environmental health risks.
- Monitor invasive species populations accurately and reliably.
- Provide for the restoration of native species, ecosystems, and other assets that have been affected by invasive species.
- Conduct research on invasive species and develop and apply technologies to prevent their introduction, and provide for environmentally sound methods of eradication and control of invasive species.
- Promote public education and action on invasive species, their pathways, and the ways to address them, with an emphasis on prevention, and early detection and rapid response.
- Assess and strengthen, as appropriate, policy and regulatory frameworks pertaining to the prevention, eradication, and control of invasive species and address regulatory gaps, inconsistencies, and conflicts.
- Coordinate with and complement similar efforts of States, territories, federally recognized American Indian tribes, Alaska Native corporations, Native Hawaiians, local governments, nongovernmental organizations, and the private sector.
- In consultation with the Department of State, and with other agencies, as appropriate, coordinate with foreign governments to prevent the movement and minimize the impacts of invasive species.

In addition, in June 2000, the Plant Protection Act was enacted, which consolidated all previous major statutes pertaining to plant protection and quarantine. It superseded and repealed a majority of the Federal Noxious Weed Act of 1974; however, it left intact Section 15, "Management of undesirable plants on federal lands" (7 U.S.C. 2814). Section 15 requires federal land management agencies to develop and establish a management program for control of undesirable plants that are classified under state or federal law as undesirable, noxious, harmful, injurious, or poisonous, on federal lands under the agency's jurisdiction (7 U.S.C. 2814).

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In accordance with EO 13751 and Section 15 of the Federal Noxious Weed Act, the NJARNG will control populations of invasive plants in a cost-effective and environmentally sound manner. When practicable, control efforts will be coordinated with other local or regional control programs. A variety of control measures will be employed based on species-specific and site-specific requirements. In some cases, a combination of control measures may be appropriate.

#### 4.2.6.1 Invasive Species Management Priorities

Although several invasive animals occur at Sea Girt NGTC including house sparrow, starling, and European green crab (*Carcinus maenas*), the primary invasive species management concern at Sea Girt NGTC is invasive plants. Proper invasive vegetation management is essential to maintain suitable on-site habitat for the on-site federally listed threatened species (i.e., seabeach amaranth and piping plover) and numerous state-listed endangered, threatened and Special Concern Species that utilize the facility vegetation communities.

As discussed in Section 2.8.6, an exotic and invasive species report was prepared for the NJDMAVA for Sea Girt NGTC in 2013, as a follow-up to a previous invasive species report conducted in 2011 (ASGECI 2014a). The 2013 report reevaluated the entire site and all existing invasive species monoculture polygons (identified in previous surveys) and species, and modified, added, or eliminated polygons based on findings. Figure 4-2 shows the location of the reevaluated invasive species monocultures identified in the field in 2013. Not including the native poison ivy, invasive plants occupied approximately 3.8 acres in 2013. See Section 2.8.6 and Table 2-8 for invasive species observed at Sea Girt NGTC.

As shown in Figure 4-2, the invasive plants often occur in unmaintained areas along the installation boundary, within wetlands, and on the small arms range berms and adjacent secondary dune areas. A majority of the installation is subjected to routine mowing and, as a result, the impact of invasive or noxious plants is somewhat suppressed in those disturbed areas. Other areas, including small work areas and along facility boundary fences, support fragmented and disturbed communities with a mix of native and invasive species. These areas have lesser wildlife value, and invasive control would be limited due to off-site influences.

The highest priority for control of invasive plants at Sea Girt NGTC is within those on-site native communities that provide unique and significant habitat to rare plants and wildlife. These habitats include the primary dune (dunegrass communities and adjacent intertidal areas), the secondary dune (dune shrubland and successional dune habitats), and the large on-site freshwater wetland habitats (see Figure 2-7 – Ecological and Vegetation Communities). The primary dune has been documented to support nesting birds considered state- threatened or endangered, while the secondary dune has been documented to support migratory birds considered state- threatened or endangered.

**Primary Dune:** Small amounts (under 1 percent – ASGECI 2010b) of noxious or potentially invasive species such as rugosa rose or saltwort occur in the primary dune habitats at NGTC. However, the most serious invasive species threat identified in this community is the Asiatic sand sedge. This highly invasive dune species was first

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identified on-site in 2007 and removed by hand. It has subsequently reestablished itself in the same approximately 50-square-foot location each season. (On Figure 4-2, this small occurrence can be found within the Northern Protection Area.) It has not, however, produced fruiting bodies or shown signs of aggressive expansion at the facility since first observation. Following Hurricane Sandy in 2012, Asiatic sand sedge appeared to be more widely distributed within the primary dune on-site as a result of the storm (ASGECI 2014A).

**Secondary Dune:** Within the successional portions of the secondary dune habitat, patchwork monocultures of Japanese knotweed and common reed, spotted knapweed, and Oriental bittersweet are present and quite dominant in this community. Japanese honeysuckle, though not often represented as a monoculture on-site, is also a substantial component of the successional dune community. An additional common native plant of the secondary dune, poison ivy, is extremely dominant in this area. Poison ivy can display invasive characteristics, and contains toxin that causes an irritating skin reaction on many people. Because of the potential human harm it can inflict, poison ivy is monitored as an invasive and considered for management at NGTC. Although poison ivy is a nuisance to people, it also has ecological value in the dune community. The white, waxy berries are a popular food for songbirds during fall migration and in winter, when other foods are scarce. Birds also feed on insects hiding in the tangled vines. Small mammals browse on poison ivy foliage, twigs, and berries. The dense root system of poison ivy also helps to control dune erosion at Sea Girt NGTC.

**Freshwater Wetlands:** The herbaceous and scrub-shrub freshwater wetland complex on the eastern end of the facility is primarily affected by two highly invasive wetland species: common reed and purple loosestrife. Other invasive species, including Oriental bittersweet, have also been recorded within this wetland complex. Within this wetland, common reed grows in an approximate 0.30-acre monoculture. Common reed is also found in both freshwater and estuarine wetlands along the facility's southern boundaries as well as in a variety of upland habitats. Although mapped as a monoculture in one location (see Figure 4-2 – Invasive Species Locations), purple loosestrife occurs within the herbaceous eastern boundary of the freshwater wetland complex and nowhere else on-site.

FIGURE 4-2 SEA GIRT NGTC INVASIVE SPECIES LOCATIONS



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#### **4.2.6.2 Management Options**

Various options for invasive plant control methodologies have been considered at the Sea Girt NGTC. The following section discusses these primary management options.

##### **Avoidance Measures**

Avoidance of the introduction or reintroduction of invasive species is the most cost-effective and least intrusive way to control invasive species infestation, and therefore is the preferred method of control. Prevention of invasive species reestablishment or spreading requires basic on-site measures including regular invasive species monitoring and early detection, education of staff and visitors, proper storage and disposal of plant materials, proper clothing and equipment decontamination measures, and general best management practices (BMPs) for on-site activities. BMPs include containment and limited transport of soils, and minimization of impacts in and around wetlands and other sensitive habitats.

There are currently several invasive species that have been recently or historically planted on-site, including Norway maple, winged euonymus, and English ivy. There is currently no evidence of any planted invasive species on-site affecting sensitive habitat areas at NGTC; however, planting of any exotic invasive should be avoided. Over time, existing non-native plantings should be phased out, where feasible. The avoidance of invasive species plantings will prevent infestations or reinfestations of these species and, if native substitutes are included, enhance the quality of wildlife habitat. Several guides produced by agencies, including the USFWS, have created conservation planting guides that include information on native substitutes for popular exotic plantings.

##### **Mechanical or Manual Removal**

Once an invasive species is established, mechanical removal is the preferred methodology for removal at NGTC, particularly with small infestations. For the smaller infestations in the most sensitive habitats, such as purple loosestrife in the freshwater wetland, initial manual (by hand) removal is the least intrusive and most appropriate measure. In other areas, such as shrubs along the edge habitats, cutting and/or mechanical removal with aid from machines may be feasible. Although the option of manual or mechanical control is always theoretically preferred, it could be extremely labor intensive and nearly impossible to effectively control most on-site invasive species exclusively through mechanical means. For cost, ecological, and safety reasons, limited use of herbicides (discussed below) is likely required in combination with mechanical or manual removal to contain larger on-site infestations and suppress reestablishment.

##### **Chemical Controls – Herbicide Use**

Within this document, several general systemic nonpersistent herbicides are recommended for control of invasive species, typically in conjunction with mechanical or manual removal. Due to the persistence of invasive regeneration from remaining root systems and other remnant parts (e.g., Asiatic sand sedge and Oriental bittersweet) as well as persistent annual seed banks (e.g.,

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spotted knapweed), seasonally repeated application of herbicide may be unavoidable to initially suppress an infestation. Herbicides most commonly considered for control of on-site invasives include brands of glyphosate, imazapyr, triclopyr, and dicamba. Herbicides may be used as a foliar spray or direct application to a cut stem, depending on the species and the specific site conditions.

Each of these herbicides is sold under a variety of brand names at different levels of active ingredient and for various applications (e.g., wet site, dry site, etc.). Additional research should be conducted and careful selection of the brand should be made based on its specifications for use.

At Sea Girt NGTC, herbicide use will be extremely targeted and minimized to the greatest extent practicable. Strict safety and protective protocols for pesticide use will be established, reviewed, and followed on-site. This will include rules for application, education of users, and required personal protective gear (gloves, eye protection, masks, long sleeves, etc.). Herbicides will be used sparingly and wisely, particularly in the sensitive and permeable dune and wetland habitats of the installation. Pesticide/herbicide use will be in accordance with the requirements of the NJARNG Integrated Pest Management (IPM) Plan.

NJDEP NJPDES Rules (N.J.A.C. 7:14A) contain a General Permit (No. NJ0178217) for pesticide discharges to surface waters for the purposes of nuisance species control (see Section 4.2.3). The NGTC is required to receive this authorization for any pesticide/herbicide use in and around surface waters and wetlands on-site. Additional consultation with the appropriate agencies and professionals, including the USFWS, NJDEP-ENSP, and NJ Department of Agriculture, must occur before any pesticide/herbicide is utilized on-site.

## **Other Measures**

Biological controls, or the use of one living organism to control another, are sometimes used to control invasive infestations. Local examples include use of the herbivorous loosestrife beetle to control purple loosestrife, or goat grazing to control common reed and woody invasive plants in some wetlands. Although both of these and other biological methods have been successful at sites within New Jersey, they are currently not appropriate for the scale of control at NGTC. Biological controls can be complicated by inadvertent impacts caused by the release of exotic control species.

Prescribed burning may be used to quickly and effectively suppress by removing much of the biomass before subsequent control such as herbicide application. This methodology requires highly trained personnel and burning permits. This method is not necessary, and is impractical for Sea Girt NGTC for many ecological and logistical reasons. The largest concentration of invasive species is located near rare species habitat. The timing of a controlled burn is often most effective when conducted in late spring or early fall, which is when rare beach-nesting birds or seabeach amaranth could be present on-site. Burning near rare species habitat could pose a significant risk to these non-target species. Even if conducted outside of the sensitive time period, destruction of suitable rare species habitat could occur. In addition, prescribed burning is also impractical due to the size of the treatment area and its location within a developed suburban community that is highly sensitive to public safety and other associated concerns.



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## General Management Summary

To effectively implement invasive species management on-site, a treatment, restoration, and prevention plan will be established for the Sea Girt NGTC. This plan will provide site prioritization, schedule of activities, and protocols on methods of invasive species control and prevention and native species restoration.

Project Management goals and objectives have been created to implement invasive species management on-site (see Section 4.3). Habitat management goals include the control of invasive plants in primary dunes, secondary dune areas, and freshwater wetland habitats through a combination of chemical, manual, and/or mechanical treatments. Once initial invasive species removal is complete, managed areas will be restored with native species and monitored and retreated as needed.

The most highly invasive species threatening sensitive habitats will be considered a priority for treatment. These priority species include Asiatic sand sedge, common reed, Oriental bittersweet, Japanese honeysuckle, spotted knapweed, purple loosestrife, and Japanese knotweed. Other species found in small numbers near sensitive habitat areas such as porcelainberry and privet should also be removed and closely monitored. Treatment of poison ivy will be limited to areas on and around the small arms range berms, public paths, parking lots, and other high-traffic areas where people may regularly be exposed to the plant. Poison ivy will be left uncontrolled on the upper back dunes to retain its wildlife and erosion control benefits.

Possible coastal species for dune planting include American beachgrass, coastal panicgrass, bayberry, beach plum, and other *Prunus* spp. cherries. Shrub species are most appropriate for the back dune areas. Tree planting on either side of the dunes will be prohibited because trees provide perches for avian predators that could have an impact on beach-nesting bird activity. Due to the proximity to rare species habitat, all invasive plant treatments and restoration plantings will be conducted in coordination with the USFWS and NJDEP-ENSP. The Sea Girt NGTC Invasive Species Survey Report (ASGECI 2012b) provides additional species-specific invasive plant treatment information. In addition, as part of the *Freshwater Wetlands and Coastal Habitat Enhancement Plan* (ASGECI 2017) to guide habitat enhancements on an eastern portion of the NGTC, the plan outlines projects to control invasive species within the beach/dune and wetland habitats and re-planting with desired native coastal and wetland species. Specifically, common reed and purple loosestrife within wetland and transitional habitats will be treated intensively, and all Asiatic sand sedge observed in the dune and beach areas will be hand-pulled as part of the plan implementation.

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### 4.3 PROJECT-SPECIFIC MANAGEMENT GOALS

Project-specific management goals, which include ongoing and/or planned management measures for achieving goals for the Land and Watershed Management Program, are presented below and implementation information (e.g., staffing, funding, and schedule) is provided in Section 9.0 . Land and Watershed Management Goal #1 was identified for the previous planning period, however, and was not implemented. Additional field investigations have further assisted in identifying Land and Watershed Management Goal #2, #3, and #4. Finally, stormwater management needs for the parking lots discussed in Section 4.2.3 has led to defining Goal #5.

**Land and Watershed Management Goal #1** – Protect and rehabilitate sensitive wildlife habitats that support threatened and endangered species by controlling invasive plants.

**Priority Classification: Compliance – Class 2**

1. Prepare a treatment, restoration, and prevention plan for invasive species management to implement the INRMP invasive species goals, objectives, and strategies. Specific strategies to be employed include the following:
  - 1.1. Secure appropriate permitting for pesticide use in wetlands and coastal habitats.
  - 1.2. Provide detailed protocols and information on selected and approved herbicide and other treatments.
  - 1.3. Provide required detailed information on replanting and future habitat monitoring and management.
  - 1.4. Provide information on safety measures, education, on-site infestation prevention, and other BMPs by the facility.
    - **Priority Classification: Compliance – Class 2**
2. Eliminate Asiatic sedge (0 percent observed cover) from the primary dune areas and prevent reinfestation of this species. Specific strategies to be employed are described in the *Freshwater Wetlands and Coastal Habitat Enhancement Plan* (ASGECI 2017), and include the following:
  - 2.1. Remove by hand or mechanical means.
  - 2.2. Due to rare plant species, herbicide should only be used sparingly, with appropriate approvals.
  - 2.3. Conduct regular monitoring and respond quickly, if identified.

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- **Priority Classification: Compliance – Class 2**

3. Reduce and maintain levels of common reed and purple loosestrife dominance of less than 5 percent total vegetation cover in the palustrine freshwater wetland complex (managed wetland and adjacent wetlands of Wetland C). Specific strategies to be employed are described in the *Freshwater Wetlands and Coastal Habitat Enhancement Plan* (ASGECI 2017).

- **Priority Classification: Compliance – Class 2**

4. Eliminate all highly invasive shrubs, trees, or vines that have limited occurrence (single or less than 10 trees) within the secondary dune habitats. Species include autumn olive, privet species, tree-of-heaven, and porcelainberry. Specific strategies to be employed include the following:
  - 4.1. Cut trunks or mechanically remove stumps or vines (before fruiting), as necessary, from successional and disturbed successional dune habitats.
  - 4.2. Spot treat shrubs and trees with an approved and appropriate direct stem herbicide. Treat vines with an approved and appropriate foliar or stem herbicide.
  - 4.3. Monitor on a regular seasonal basis for reoccurrence and respond quickly if reinfestation occurs.

- **Priority Classification: Compliance – Class 2**

5. Reduce and maintain established high-priority invasive shrubs, vines, and herbs in coastal dune shrubland and adjacent dune successional habitat (this may or may not include the disturbed dune successional areas) to dominance levels of less than 5 percent cover. Target species include Oriental bittersweet, Japanese honeysuckle, Japanese knotweed, and spotted knapweed. Specific strategies to be employed include the following:
  - 5.1. Same as objective 1.3 with monitored replanting of appropriate native shrubs, which may include northern bayberry, *Prunus* spp., cherries, native *Rosa* spp. Roses, or smooth sumac.

**Land and Watershed Management Goal #2** – Minimize visitor and staff exposure to poison ivy through education and management means.

**Priority Classification: Compliance – Class 2**

1. Control poison ivy vines or shrubs in high-traffic areas while maintaining current levels (80 to 100 percent) of shrubs within coastal dune shrub and interior portions of successional dune habitats. Specific strategies to be employed include the following:

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- 1.1. Eliminate poison ivy in disturbed non-dune successional areas around buildings, material piles, and maintenance areas by using an appropriate and approved foliar herbicide and/or by mechanical means.
  - 1.2. Prevent poison ivy on edges of dune successional habitats from encroaching on bare ground paths and lots by using an appropriate and approved foliar herbicide and/or by mechanical means.
  - 1.3. Maintain paths and work areas and repeat treatment as necessary for safety needs.
  2. Make most beach visitors (greater than 50 percent) and all staff aware of poison ivy habitat presence, benefits, and potential health hazards. Specific strategies to be employed include the following:
    - 2.1. Post at least four signs in and around paths and public beach areas warning individuals about the presence of poison ivy; include an illustration.
    - 2.2. Brief staff on the safe removal of poison ivy and prevention of rashes.
    - 2.3. Provide literature: Through distribution of the NGTC wildlife habitat guide, make individuals aware of the benefits and concerns of poison ivy on-site.

**Land and Watershed Management Goal #3** – Prevent introduction and spread of invasive species.

**Priority Classification: Compliance – Class 2**

1. Implement periodic inspections for early detection of invasive species.
2. Implement procedures for storage and disposal of plant materials.
3. Implement procedures for clothing and equipment decontamination.
4. Implement additional BMPs as identified in the to-be-developed invasive species treatment, restoration, and prevention plan.
5. Educate staff and visitors.

**Land and Watershed Management Goal #4** – Manage and protect on-site wetlands.

**Priority Classification: Compliance – Class 2**

1. Install and maintain a split rail fence around the perimeter of the modified herbaceous portion of Wetland C, for the purpose of avoiding unauthorized vehicle or visitor access. More details are provided in the *Freshwater Wetlands and Coastal Habitat Enhancement Plan* (ASGECI 2017).

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2. Per the *Freshwater Wetlands and Coastal Habitat Enhancement Plan* (ASGECI 2017), maintain managed wetlands (Wetland C, Wetland A/B) to assure proper ecological values and functions including wildlife habitat, filtration of nutrients, and reduction of runoff. Project activities largely will include grading, soil excavation, and stabilization. Specific details on conducting this project are outlined in the habitat enhancement plan.
  3. Per the *Freshwater Wetlands and Coastal Habitat Enhancement Plan* (ASGECI 2017), install three interpretive signs at key locations of wetland areas. More details are provided in the habitat enhancement plan.
  4. Per the *Freshwater Wetlands and Coastal Habitat Enhancement Plan* (ASGECI 2017), install a walking path of crushed clamshells in uplands between Wetland C and the Camp Drive and install a boardwalk from the pathway out into Wetland C. More details are provided in the habitat enhancement plan.

**Land and Watershed Management Goal #5** – Improve the functionality of two stormwater retention basins, indicated in Figure 4-1, to more effectively manage stormwater runoff from parking lots during high flow volumes and to decrease the duration of water ponding in these basins.

**Priority Classification: Compliance – Class 3**

1. Study the feasibility of installing low-impact development (LID) features to replace the retention basins, such as a rain garden, to manage the stormwater runoff.
2. If determined feasible, design and install the LID feature. For the rain garden, native plants are preferable.
3. Monitor the effectiveness of the LID feature, and as needed, maintain the rain garden plantings.

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**SECTION 5**  
**FISH AND WILDLIFE MANAGEMENT**

**5.1 PROGRAM DESCRIPTION AND OVERALL MANAGEMENT GOALS**

The Fish and Wildlife Management at Sea Girt NGTC addresses a variety of topics including the following:

- habitat management
- wildlife management
- nuisance wildlife management
- fisheries management
- natural resources law enforcement

In accordance with the overall natural resources management approach of the NJARNG, fish and wildlife management focuses on protecting and enhancing biodiversity through ecosystem management. Virtually all natural resources management activities at Sea Girt NGTC affect fish and wildlife resources. Accordingly, fish and wildlife management issues and concepts have been integrated into all the other management programs, and there is significant interaction among programs.

The overall goal of the program is to manage fish and wildlife resources to maintain and enhance ecosystem functions and values in a manner that supports, and is consistent with, the military mission. Additional overall program goals include the following:

- Maintain healthy fish and wildlife populations.
- Maintain and enhance biodiversity.
- Use ecosystem management practices to achieve program goals.
- Ensure that wildlife populations do not conflict with the military mission of the NJARNG.

**5.2 PROGRAM STATUS AND MANAGEMENT ISSUES**

**5.2.1 Wildlife and Habitat Management**

As described in Section 2.0 , Sea Girt NGTC is relatively developed and natural wildlife habitats are primarily limited to the beach and dune areas, small wetland areas, and areas adjacent to Stockton Lake. Nonetheless, undeveloped portions of the installation provide important habitat, including habitat for federally and state-listed species. Specific habitat management practices and protection measures are discussed in more detail in Section 6.0 – Rare Species Management, and Section 4.0 – Land and Watershed Management.

**Atlantic Brant Tracking**

The NJDEP-DFW, NY DEP, and Canadian Wildlife Service are conducting a collaborative study on the ecology and movement patterns of Atlantic brant across breeding, migratory and wintering areas. Due to how large flocks of brant use the NGTC open grounds and wetlands as migratory and wintering grounds, NJDEP-DFW will be capturing brant on NGTC during the winter of 2018 and fitting a portion of the birds with GPS geolocators (L. Clark, NJDEP-DFW, personal communication, November 20, 2017).

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Because of the developed nature and proximity to residential areas, the installation supports few game species and is not capable of supporting a recreational hunting program. Therefore, game management is not discussed further in this INRMP. Management of non-game species is addressed in Section 6.0 – Rare Species Management.

### **5.2.2 Nuisance Wildlife and Pest Management**

Sea Girt NGTC actively manages nuisance species and pests under the authority of the NJARNG’s IPM Plan (NJARNG 2013). At the NGTC, mosquitoes are periodically sampled in the freshwater wetlands for Zika virus monitoring, conducted by the Monmouth County Mosquito Commission, as part of the pest management program on the Sea Girt NGTC covered by the NJARNG’s. Although Zika virus has not been detected, West Nile virus was detected during the 2017 monitoring (C. Appleby, NJARNG, personal communication, November 8, 2017). There is no active mosquito control that occurs on the NGTC. Additional priority species for pest management are detailed in the IPM Plan (NJARNG 2013).

For nuisance wildlife management, resident Canada geese have been the target of management activities on the NGTC. Resident Canada geese are those Canada geese that nest within the lower 48 states in the months of March through June, and reside within the lower 48 states in the months of April through August. They are currently the only wildlife species that is considered a potential nuisance at Sea Girt NGTC. Resident Canada goose populations have increased significantly over the last 20 years throughout the eastern United States and New Jersey. Resident geese, as their name implies, spend most of their lives in one area, although some travel hundreds of miles to wintering areas. As shown by banding studies, resident geese are distinct from migratory populations that breed in northern Canada. Resident birds are long-lived and have



*Canada geese on Sea Girt NGTC Training Grounds*



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a relatively high reproductive capacity, especially in suburban settings, allowing flocks to grow rapidly and spread to other areas. In suburban areas throughout New Jersey, abundant suitable habitat, lack of natural predators, limited hunting, and supplemental feeding have created an explosion in the resident goose population.

Though Canada geese are a valuable natural resource enjoyed by many, the recent population increases of resident birds have caused significant problems. General problems have been well documented by various federal and state natural resources management agencies, and include overgrazing of lawns and natural vegetation; accumulations of fecal matter and feathers in public areas (a goose produces a pound of fecal matter per day); nutrient loading to surface waters; competition with, and displacement of, other birds; public health concerns; aggressive behavior by nesting birds; and safety hazards near roads and airports.

At Sea Girt NGTC, large numbers of geese sometimes congregate in and around the cantonment area, especially on the parade grounds. Flocks have increased in size and have begun nesting at the installation. Resident Canada geese are considered a potential nuisance at the installation and warrant active management based on the following reasons:

- Resident Canada geese could negatively affect mission activities and create a significant Bird/Wildlife Aircraft Strike Hazard by congregating in the immediate vicinity of the helicopter landing pad. This increases the potential for loss of life and property. The NJARNG's policy is to minimize all aviation risks.
- Geese sometimes congregate on and around the small arms ranges at the installation and create a potential distraction and safety hazard for personnel training on the ranges.
- Maintained open areas at the installation can be littered with goose fecal matter, which can degrade water quality and increase the potential for transmission of human and avian diseases. (However, no complaints about the goose fecal matter have occurred to date.)

Primary management authority for all migratory birds, including Canada geese, lies with the USFWS Division of Migratory Bird Management, with secondary involvement by the states. Many states, including New Jersey, have implemented several federal depredation orders allowed under USFWS regulations, to allow citizens increased flexibility to deal with resident Canada goose damage. Canada goose damage abatement strategies and depredation orders, as well as registration and permit requirements that can be employed, are found at <https://epermits.fws.gov/eRCGR/geSI.aspx>.

Management techniques that can be used to reduce resident Canada goose populations or deter them from using a specific area include goose removal, hunting, reproduction control, hazing, and altering habitat (e.g., shoreline vegetative buffer or barrier fencing). Hazing of Canada geese refers to simply scaring or harassing them into leaving an area. Hazing is allowed without a permit provided the birds are not actually handled by a person or attacked by a dog. Hazing techniques

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include the use of laser harassment, pyrotechnics, audible distress sounds, effigies or other visual frightening devices, habitat management, dogs and falcons, and repellents.

The Sea Girt NGTC facilities management staff has used several techniques such as decoys, vehicle flushing, reproductive controls, and hazing by trained dog or laser to discourage resident Canada geese from using portions of the installation. In addition, the feeding of Canada geese is strictly prohibited at the Sea Girt NGTC. The NJDMAVA, on behalf of the Sea Girt NGTC, has previously contracted Goose Control Technology of New Jersey and ASGECI to implement the goose control program. For example, in 2012 and 2013, dogs were used to harass Canada geese, and in 2013, nest removal/egg addling was approved (ASGECI 2014a). The NJDMAVA may continue to contract as needed to assist in the eradication of Canada geese on-site.

In 2011, the *Sea Girt NGJTC Health & Safety Goose Control Program Standard Operating Guide* was issued, outlining current management procedures (Appendix D).

Hazing, the primary means of goose control used on-site, is conducted in accordance with the following guidelines:

- Hazing by dog is conducted by trained personnel and is limited to developed portions of the installation west of the dunes. Limiting the area in which trained dogs may gain access avoids potential impacts on non-target species such as the piping plover and least tern.
- Laser harassment includes the use of a hand-held laser to scare resident geese from roosting, feeding, or drinking sites. Laser use procedures are outlined in the *Sea Girt NGJTC Health & Safety Goose Control Program Standard Operating Guide* (Appendix D). Laser hazing is only conducted by trained Sea Girt NGTC staff and is restricted from use on Stockton Lake.
- Hazing is only conducted from 1 April through 31 August, to avoid potential impacts on migratory Canada geese and other migratory birds such as the Atlantic brant.
- Hazing is not conducted during the molting period for humane reasons. During molting, which typically occurs in June, adults undergo a replacement of their feathers and are unable to fly.

Currently, management techniques that have been implemented thus far have had mixed success in reducing resident Canada goose conflicts at Sea Girt NGTC to an acceptable level. For example, in 2012, the number of geese observed onsite<sup>3</sup> was greatly lower during the dog hazing period when harassment was conducted on a near daily basis; however, in 2013, the number of geese observed onsite had moderate fluctuations for certain periods but higher numbers in August

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<sup>3</sup> The term “onsite” refers to that the number of geese observed does not include flyover observations or geese observed on Stockton Lake. Also note that data on the number of geese observed may not have been collected consistently from year to year.

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and September for unclear reasons (Figure 5-1) (ASGECI 2014b). Since observations of goose numbers can have significant variability due to factors such as weather and time of day (and inter-annual variability of population demographics), the NGTC also periodically conducts goose fecal counts and estimates the fecal daily accumulation rate (DAR) as a more ideally consistent measure of goose population trends and to assess the effectiveness of goose deterrents. For multiple survey years (2012, 2013, 2015, and 2016), the annual average DARs by month are presented in Figure 5-2, and generally depict a trend of declining DAR levels within each year.<sup>4</sup> In addition, Figure 5-3 depicts an average annual DAR. Although the same transects are sampled each year for fecal counts, the number of months as well as the sampling season has varied across the years, causing it to be difficult to detect change in goose population trends. In Appendix J, the raw field data for the fecal counts are provided.

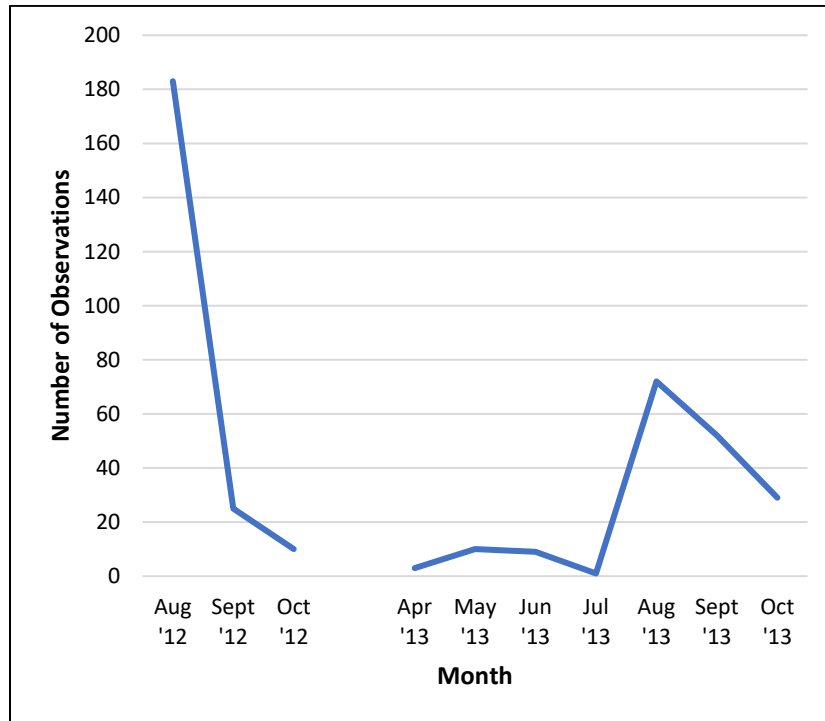
Potential conflicts with the resident goose population will continue to be monitored, and management practices discussed above will continue to be implemented, as necessary. Additional alternatives to discourage resident Canada geese from using the installation may also be considered. These may include habitat management techniques such as altering mowing regimes or planting alternative ground covers. The Sea Girt NGTC may also consider the use of eagle kite decoys to deter geese from using the site. Eagle kites can be used to simulate a natural predator as a three-dimensional eagle with a wingspan of seven feet. The kite turns in a prey-seeking circular motion that geese perceive as real and react to by flushing the area; with continual harassment, they will avoid the area all together. As with the other means of harassment noted above, the eagle kite deterrent would only be conducted from 1 April through 31 August and not during the molting period. Decoy use would be limited to the parade grounds north and west of the eastern extent of the motorcycle training area (see Figure 2-2) to avoid impact on sensitive habitat (beach, dunes, wetlands, and Stockton Lake) and to avoid interference with potential piping plover activity on the beach.

See Section 5.4, which further describes ongoing and planned Canada goose management measures to support the overall management goal of deterring resident geese from using the installation.

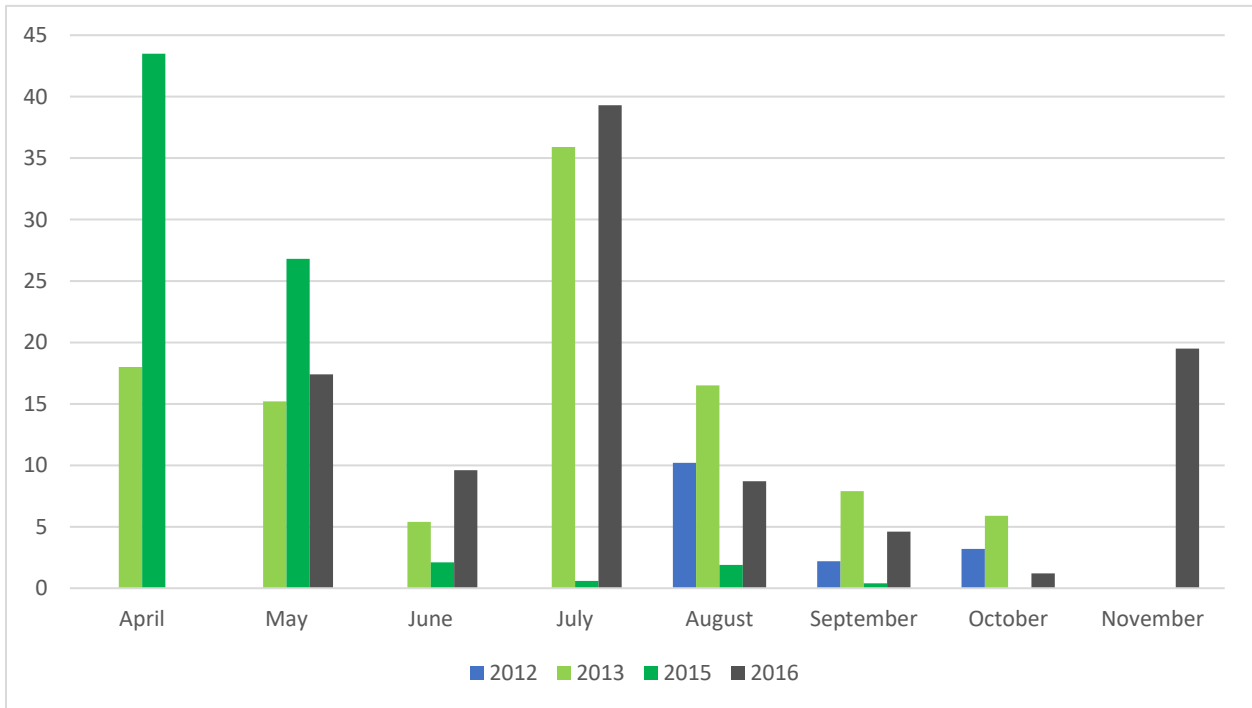
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<sup>4</sup>Although dog hazing occurred in 2012 and 2013, it was not conducted in 2015 and 2016; thus, it is difficult to confidently state whether dog hazing and other techniques have been effective.

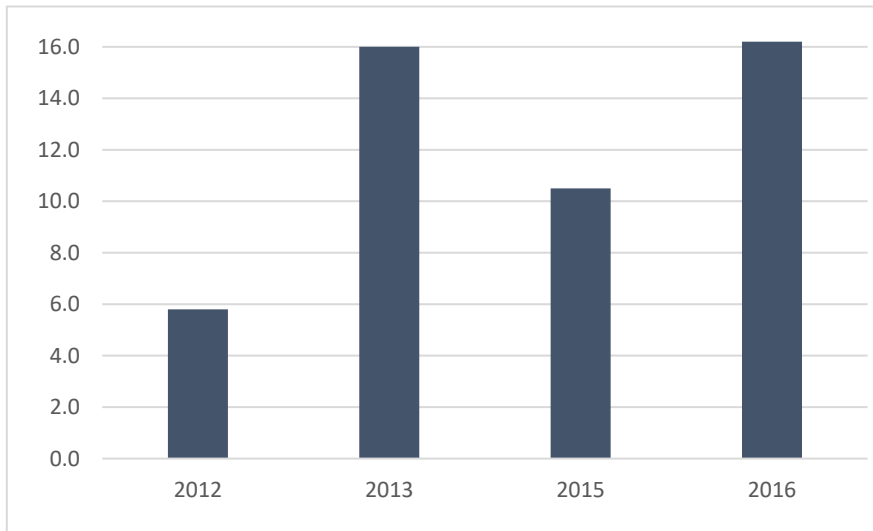
**FIGURE 5-1 AVERAGE MONTHLY NUMBER OF GOOSE OBSERVATIONS ONSITE, 2012 AND 2013**



**FIGURE 5-2 AVERAGE MONTHLY FECAL DAILY ACCUMULATION RATE<sup>5</sup>**



**FIGURE 5-3 AVERAGE ANNUAL FECAL DAILY ACCUMULATION RATE<sup>6</sup>**



<sup>5</sup> Canada goose behavioral periods: breeding/nesting (April and May), molting (June and July), and migrant geese arrival (October).

<sup>6</sup> Limited sampling of DAR occurred in 2012 (3 months), whereas sampling occurred across 6-7 months for the other years.

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### **5.2.3 Fisheries or Marine Management**

No fisheries or marine resources exist within the Sea Girt NGTC boundaries. Fisheries adjacent to the installation (Atlantic Ocean and Stockton Lake) are under the jurisdiction of the National Oceanic and Atmospheric Administration (NOAA) Fisheries Service (formerly National Marine Fisheries Service), Atlantic States Marine Fisheries Commission, and New Jersey Marine Fisheries Council.

The NOAA Fisheries Service is responsible for managing Essential Fish Habitat (EFH) identified in the Magnuson–Stevens Fishery Conservation and Management Act. EFH is defined as “. . . those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” EFHs for several species at various life stages are known to occur in Stockton Lake, directly south of the facility, as well as in coastal waters of the Atlantic Ocean (NOAA EFH Mapper n.d.). Typical species of these EFHs can be found in Table 5-1. No Habitat Areas of Particular Concern were identified at either location. In addition, no EFH Areas Protected from Fishing were identified at either location. As such, these species are not expected to be affected by activities occurring at the facility, and therefore are not specifically addressed as part of this INRMP. However, habitat protection measures implemented under Land and Watershed Management (Section 4.0 ) and Rare Species Management (Section 6.0 ) support overall fisheries management goals. In addition, Section 7.0 discusses recreational fishing, which is permitted to authorized users at designated locations at the installation in accordance with federal and state regulations.

**TABLE 5-1 SPECIES WITH ESSENTIAL FISH HABITATS NEAR SEA GIRT NGTC**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Life Stage(s) Found at Location</b>	<b>Location</b>
Atlantic Butterfish	<i>Peprilus triacanthus</i>	Adult, Juvenile	AOC
Atlantic Cod	<i>Gadus morhua</i>	Adult	AOC
Atlantic Herring	<i>Clupea harengus</i>	Adult, Juvenile	SL, AOC
Black Sea Bass	<i>Centropristis striata</i>	Juvenile, Adult	SL, AOC
Bluefin Tuna	<i>Thunnus thynnus</i>	Juvenile	AOC
Clearnose Skate	<i>Raja eglanteria</i>	Adult	SL, AOC
Common Thresher	<i>Alopias vulpinus</i>	ALL	AOC
Dusky Shark	<i>Carcharhinus obscurus</i>	Neonate	AOC
Longfin Inshore	<i>Doryteuthis pealeii</i>	Juvenile, Adult, Eggs	SL, AOC
Monkfish	<i>Lophius piscatorius</i>	Eggs, Larvae	AOC
Ocean Pout	<i>Zoarces americanus</i>	Adult, Larvae, Eggs	AOC
Red Hake	<i>Urophycis chuss</i>	Larvae, Juvenile, Eggs	AOC
Sandbar Shark	<i>Carcharhinus plumbeus</i>	Juvenile, Adult	AOC
Silver Hake	<i>Merluccius billinearies</i>	Adult	AOC
Skipjack Tuna	<i>Katsuwonus pelamis</i>	Juvenile, Adult	AOC
Smooth Dogfish	<i>Mustelus canis</i>	ALL	AOC
Spiny Dogfish	<i>Squalus acanthias</i>	Sub-Female, Adult Male	AOC
Tiger Shark	<i>Galeocerdo cuvier</i>	Juvenile, Adult	AOC
White Shark	<i>Carcharodon carcharias</i>	ALL	AOC
Window Pane Flounder	<i>Scopthalmus aquosus</i>	Larvae, Eggs, Juvenile, Adult	AOC
Winter Flounder	<i>Pseudopleuronectes americanus</i>	Larvae, Eggs, Juvenile, Adult	AOC
Yellowtail Flounder	<i>Limanda ferruginea</i>	Larvae	AOC

Note: AOC: Atlantic Ocean Coast; SL: Stockton Lake

### 5.3 NATURAL RESOURCES LAW ENFORCEMENT

The NJARNG and/or NJDMAVA do not have in-house staffing assigned to, or specifically trained for, natural resources law enforcement. The property is fenced and posted against trespass. Any trespassers or others suspected of natural resources law violations are reported to local law enforcement and/or the NJDEP.

### 5.4 PROJECT-SPECIFIC MANAGEMENT GOALS

Project-specific management goals, which include ongoing and/or planned management measures for achieving goals for Fish and Wildlife Management, are presented below, and implementation information (e.g., staffing, funding, and schedule) is provided in Section 9.0. Fish and Wildlife Goal #1 is ongoing; however, management measures developed to successfully reach this goal have been expanded for the current implementation period.

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**Fish and Wildlife Goal #1** – Deter resident Canada geese from using the installation.

**Priority Classification: Stewardship – Class 3**

1. Reduce the number of resident Canada geese to no more than 20 and eliminate nesting on-site.
  - 1.1. Develop an annual resident Canada goose hazing plan that includes population survey protocol, management techniques, and acquiring permits for direct population controls.
  - 1.2. Conduct nest/population survey.
  - 1.3. Conduct resident Canada goose hazing/population controls as described in hazing plan. Continue hazing by laser harassment (conducted by trained personnel only), or trained dog and handler. Consider implementing use of eagle kite decoys as an additional hazing technique. Hazing may only be conducted during the period of 1 April 1 through 31 August, except during the molting period (typically June).
  - 1.4. Prepare annual summary report to evaluate Canada goose control measures.



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## SECTION 6

### RARE SPECIES MANAGEMENT

#### 6.1 PROGRAM DESCRIPTION AND OVERALL MANAGEMENT GOALS

For the purposes of this INRMP, the term "rare species" is used to refer to various plants and animals that warrant special management concern and are protected by law in some cases. Rare species include the following:

- species listed or proposed as endangered or threatened, or designated as candidates for listing, by the USFWS under the ESA of 1973 (Public Law 93-205)
- wildlife species listed as endangered or threatened by the NJDEP-ENSP, under the New Jersey Endangered and Nongame Species Conservation Act of 1973 (N.J.S.A. 23:2A et seq.)
- wildlife or plant species designated as a state species of concern by the NJDEP-ENSP or the New Jersey Natural Heritage Program, respectively
- plants listed as endangered by the NJDEP Division of Parks and Forestry under the New Jersey Endangered Plant Species List Act (N.J.S.A. 13:1B-15.151 et seq.)

The overall rare species management goal for Sea Girt NGTC is to conserve listed species in accordance with the ESA, Endangered Species Recovery Plans, U.S. Army regulations and guidance, and approved site-specific management plans, including Endangered Species Management Plans (ESMPs). The ESA requires that all federal agencies conserve listed species. Conservation, as defined by the ESA, means the use of all methods and procedures necessary to bring any listed species to the point where protection pursuant to the ESA is no longer necessary. The ESA specifically requires agencies not to "take" or "jeopardize" the continued existence of any endangered or threatened species, or to destroy or adversely modify habitat critical to any endangered or threatened species, unless they undergo formal consultation under Section 7 of the ESA and receive an Incidental Take Statement. Under Section 9 of the ESA, "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or conduct any activity expected to reduce appreciably the likelihood of the survival and recovery of a listed species by reducing its reproduction, numbers, or distribution.

Army policy on listed species includes the following elements: balancing mission requirements with endangered species protection, cooperating with regulatory agencies, and conserving biological diversity within the context of the military mission. As required by AR 200-1, the Army must ensure that it carries out mission requirements in harmony with the requirements of the ESA. All Army land uses, including military training and recreation, are subject to the ESA requirements for the protection of listed species and critical habitat. In fulfilling its conservation responsibilities, the Army is required to work closely and cooperatively with the USFWS, which is the federal agency responsible for enforcing the ESA for those listed species found at the Sea Girt NGTC. Installations are encouraged to engage in informal consultation with the USFWS

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while planning projects or activities to ensure ESA compliance. In conserving biological diversity, installation commanders and Army natural resource managers are required to develop and implement policies and strategies to maintain viable populations of native plants and animals, maintain natural genetic variability within and among populations, maintain functioning representations of the full spectrum of ecosystems and biological communities, and integrate human activities with the conservation of biological diversity.

AR 200-1 requires installations to prepare and implement an Endangered Species Management Component to the INRMP to address federally listed, proposed, or critical habitat designated or proposed on the installation (AR 200-1). The Endangered Species Management Component must establish specific goals and measurable objectives for the subject species and critical habitats. In addition, an ESMP is required at Sea Girt NGTC by the USFWS' 2002 Programmatic Biological Opinion regarding the BECP and by the Coastal Area Facility Review Act permit issued by the NJDEP DLUR for beach raking. This INRMP serves as the ESMP for federally and state-listed species at Sea Girt NGTC.

In accordance with AR 200-1, the NJDMAVA will engage in informal Section 7 consultations at the earliest opportunity with the USFWS to ensure that proposed actions that may affect listed species or critical habitat are consistent with the requirements of the ESA. The CFMO-EMB is responsible for identifying actions at Sea Girt NGTC that require ESA consultation and initiating the consultation process. The informal Section 7 consultation process is typically initiated by sending a written description of the proposed action and a map showing the location of the proposed action to the USFWS New Jersey Ecological Services Field Office in Galloway. The New Jersey Field Office has developed a consultation guidance website at <https://www.fws.gov/northeast/njfieldoffice/endangered/consultation.html>. Contact information for the USFWS is provided in Appendix C, and a more detailed description of the ESA coordination/consultation process is provided in Chapter 4 of AR 200-1, which is accessible on the Internet at the U.S. Army Publishing Agency Home Page (<http://www.apd.army.mil/>).

In addition to terrestrial wildlife, aquatic species are also provided federal protection. The NOAA Fisheries Service is responsible for managing marine mammals protected under the Marine Mammal Protection Act of 1972, marine or anadromous species protected under the ESA, in addition to EFH (discussed in Section 0).

All marine mammals are protected under the Marine Mammal Protection Act of 1972; therefore, any occurring in coastal waters off the NGTC, such as bottlenose dolphin and harbor seal (previously observed in waters near the NGTC), are afforded this protection. There are also four federally listed marine species that may occur in the coastal waters of Atlantic Ocean adjacent to the NGTC: Atlantic leatherback sea turtle, fin whale, humpback whale, and northern right whale (as identified in Section 2.8.5). Though present adjacent to the NGTC, no protected marine or fisheries resources exist within the boundaries of the facility. These species are not expected to be affected by activities occurring at the facility, and therefore are not specifically addressed as part of this INRMP. However, habitat protection measures implemented under Land and Watershed Management (Section 4.0 ) and Rare Species Management (Section 6.0 ) support overall marine species and fisheries management goals. Species that are state-listed as threatened or endangered

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are not protected under the ESA. However, AR 200-1 also specifies that installations should cooperate with state authorities in efforts to conserve state-listed species as a matter of responsible stewardship, when feasible. In addition, the installation has regulatory obligations to avoid take of state-listed species under provisions of the New Jersey Endangered and Nongame Species Conservation Act and Coastal Zone Management Rules. Species protections under the ESA have been written into various land use regulations promulgated by state regulators. The New Jersey Endangered Species Conservation Act of 1973 states that no person may take, possess, transport, export, process, sell or offer for sale, or ship, and no common or contract carrier may knowingly transport or receive for shipment any species of wildlife appearing on: (1) the state list of endangered species; (2) the list of nongame species regulated by the NJDEP; and (3) the federal list of endangered species. Species designated as state Species of Special Concern are not afforded regulatory protection and would be given a relatively lower management priority, if they were to occur at Sea Girt NGTC. A summary of New Jersey agencies involved in rare species conservation is provided below:

- The NJDEP Division of Fish and Wildlife, ENSP, is responsible for actively conserving New Jersey's biological diversity by maintaining and enhancing endangered and nongame wildlife populations within healthy, functioning ecosystems. The program is responsible for the protection and management of nearly 500 wildlife species, including the 83 species currently listed as endangered or threatened under the New Jersey Endangered and Nongame Species Conservation Act of 1973 (N.J.S.A. 23:2A et seq.).
- The NJDEP Division of Parks and Forestry, Natural Heritage Program, is responsible for maintaining New Jersey's list of Endangered and Special Concern plants. The Natural Heritage Program also maintains the Natural Heritage Database, which is a continuously updated inventory of rare plants and animal species and representative ecological communities in New Jersey.
- Impacts on state-listed species that are associated with development and other activities are addressed during review and issuance of various environmental permits by the NJDEP DLUR (See Section 4.0 – Land and Watershed Management, for descriptions of environmental permitting requirements).

The CFMO-EMB will engage in informal consultations at the earliest opportunity with these state agencies to ensure that the conservation of state-listed species is addressed during the planning process for proposed actions. In addition, this INRMP serves as an ESMP for federally and state-listed species. Appendix C provides contact information and Internet addresses for these agencies.

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## 6.2 PROGRAM STATUS AND MANAGEMENT ISSUES

### 6.2.1 Overview

As summarized in Table 6-1, two federally listed species (seabeach amaranth and piping plover) and three state-listed species (osprey, seabeach knotweed, and least tern) have been documented inhabiting (breeding/reproducing at) Sea Girt NGTC. An additional 14 state-listed threatened or endangered birds and one federally listed bird (see Table 2-5) have been identified on-site because of surveys conducted between 2007 and 2011. These include roseate tern (federally endangered), Henslow's sparrow, grasshopper sparrow, short-eared owl, cattle egret, northern harrier, horned lark, peregrine falcon, American kestrel, bald eagle, yellow-crowned night heron, black-crowned night heron, savannah sparrow, vesper sparrow, and black skimmer. None of these 15 species or the 30 Species of Special Concern identified in Appendix B have been documented as breeding at the Sea Girt NGTC; however, portions of the site do provide ecologically significant resources by supplying foraging, staging, and migratory stopover sites to local or migrant species. In addition, in 2011 a pair of American oystercatchers (State Species of Special Concern) initiated early nesting activities on the Sea Girt NGTC beach within the historic piping plover nesting area. Two nest scrapes were identified, and an individual from the breeding pair was observed sitting on one of the scrapes; however, a nest was not produced and the pair eventually moved off-site (ASGECI 2012a). No evidence of egg laying or nesting behavior was observed by ASGECI/AECOM during the 2013 monitoring season (ASGECI 2014a). Habitat management and species protections established in this INRMP are expected to collectively benefit these species and the habitat they utilize on-site. Should any of these species become established at the Sea Girt NGTC, the NJDMAVA will coordinate with the USFWS and NJDEP-ENSP to determine the need for implementation of future species-specific management measures.

The NJDMAVA has been working cooperatively with the USFWS and NJDEP-ENSP to monitor and manage listed species on the Sea Girt NGTC beach since 2000. Prior to the development of the INRMP in 2006, interim management procedures and protection measures were developed and implemented through the informal consultation process with the USFWS and significant support from the NJDEP-ENSP. In 2006, the management procedures set forth in the INRMP were formally adopted. In 2007, the NJDMAVA contracted ASGECI to provide services necessary to implement the INRMP during 2007 through 2013. Activities conducted for rare species management include a combination of site monitoring and on-site protection for the federally threatened target species piping plover and seabeach amaranth; surveying or monitoring of state-listed species including least tern (state-endangered), seabeach knotweed (state-endangered), and osprey (state-threatened); maintenance and enforcement of rare species protection areas; enforcement of endangered and threatened species policies; and education and awareness briefings for stakeholders utilizing the Sea Girt NGTC.

No critical habitat has been designated under the ESA for the two federally listed species. Except for osprey, threatened or endangered nesting bird and plant species have been limited to the Sea Girt NGTC beach and foredune areas. The documented occurrences of rare species at the installation are relatively recent (i.e., since 2000). Nesting least terns were first documented in

2000, followed by seabeach amaranth in 2001, nesting piping plovers in 2002, seabeach knotweed in 2003, and nesting ospreys in 2004.

The occurrence of beach-nesting birds and beach plants at the installation generally corresponds to increases in populations of these species that have been observed along the Monmouth County shore since 1997. In 1994, the USACE initiated construction on the Atlantic Coast of New Jersey Sandy Hook to Barnegat Inlet BECP. The project included beach nourishment along 21 miles of shoreline in Monmouth County. Beach nourishment for the project section that included the Sea Girt NGTC beach was completed in August 1999. Prior to initial beach nourishment, there were no known records of piping plovers nesting on beaches between Sea Bright and Manasquan inlet, and the likelihood of plovers colonizing this area was low due to the narrow width of the beaches. In addition, seabeach amaranth had been considered extirpated from New Jersey since 1913, and from Monmouth County since 1899 (USFWS 2004).

From experience with similar beach nourishment projects in other parts of New Jersey, the USFWS began advising the USACE in 1995 that piping plovers might nest in the BECP area if beach nourishment created suitable habitat. In response, the USACE, USFWS, and NJDEP-ENSP have partnered since 1996 to conduct annual endangered species surveys in the project area (USFWS 2004). The rare beach species at Sea Girt NGTC have been documented during these surveys conducted by the USFWS and NJDEP-ENSP. The following subsections provide additional information about each of the rare nesting birds and plants that have been documented at the installation.

Hurricane Sandy made landfall on October 29, 2012, causing unprecedented damage along the coastline, including major elevation loss in the primary dune and loss of aboveground vegetation. The newly open conditions for beach-nesting birds at NGTC were thought to possibly improve the probability of nesting attempts by beach-nesting birds in 2013; however, beach-nesting birds were not observed attempting to nest by ASGECI or the NJDEP-ENSP in 2013. Historically, conditions have improved for least tern and seabeach amaranth populations following beach renourishment (ASGECI 2014a).

**TABLE 6-1 RARE NESTING BIRDS AND PLANTS AT SEA GIRT NGTC**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>General Location</b>
<i>Amaranthus pumilus</i>	Seabeach amaranth	T	E	Beach
<i>Charadrius melodus</i>	Piping plover	T	E	Beach
<i>Pandion haliaetus</i>	Osprey	NL	T (BR)	Adjacent to Stockton Lake
<i>Polygonum glaucum</i>	Seabeach knotweed	NL	E	Beach
<i>Sterna antillarum</i>	Least tern	NL	E	Beach

Source: Various unpublished USFWS, NJDEP-ENSP, and Office of Natural Lands Management reports.

T=threatened, E=endangered, NL=not listed, BR=breeding population only.

Note – Table does not include species such as transient or migrant species that are not known to breed or reproduce on-site.

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## 6.2.2 Piping Plover



*USFWS image*

Piping plovers are small, migratory, territorial shorebirds present on the New Jersey shore between March and August. This species nests above the high tide line on sandy ocean beaches and barrier islands within gently sloping foredunes, blowout areas behind primary dunes, washover areas cut into or between dunes, the ends of sandspits, and deposits of suitable dredged or pumped sand. Although piping plovers are territorial toward their own species, they often nest near least tern colonies, benefiting from the terns' aggressive predator defenses. Piping plover nests consist of a shallow scrape in the sand, frequently lined with shell fragments and often located near clumps of vegetation. Piping plovers usually lay four eggs, which hatch in approximately 27 to 30 days. After hatching, the precocial chicks are led by their parents to feed on marine invertebrates such as worms, fly larvae, beetles, and crustaceans. Feeding areas include intertidal zones of ocean beaches, ocean washover areas, mudflats, sandflats, wrack lines (organic ocean material left by high tide), and the shorelines of coastal ponds, lagoons, and salt marshes. Chicks fledge after about 25 to 35 days (USFWS 2004; USFWS 1996a).

Threats to the piping plover and primary causes of nest failure include habitat loss, human disturbance of nesting birds, predation, oil spills, and other contaminants. Habitat loss results from development, as well as beach stabilization and other physical alterations to the beach ecosystem. Development along the Atlantic shoreline for residential and commercial uses, and the subsequent stabilization of the once shifting and dynamic beach ecosystem via seawalls, breakwaters, jetties, and groins, have resulted in the destruction and alteration of natural beaches to such an extent that many beaches no longer provide suitable piping plover habitat. Human disturbance of nesting birds includes foot traffic, sunbathing, kite flying, pets, fireworks displays, beach raking, construction, and vehicle use. These disturbances can result in nest abandonment, crushing of eggs, failure of eggs to hatch, and reduced survival of chicks. Predation on piping plover chicks and eggs is intensified by development because predators such as foxes, crows, gulls, and raccoons thrive in developed areas, and are attracted to beaches by food scraps and trash. Unleashed and feral dogs and cats also prey on piping plover chicks and eggs (USFWS 2004; USFWS 1996a).

Since predation and disturbance are the principal causes of nest failure, management of piping plovers is focused on fencing and signage around nesting and chick foraging areas to reduce human disturbance in the areas where piping plovers may nest or feed. Human disturbance can affect both nesting and feeding; excessive disturbance may cause parents to desert the nest, exposing eggs or chicks to the summer sun and predators, and interruptions to feeding hatchlings may stress juvenile birds during their development (USFWS 2015). Additional predator control actions at Sea Girt NGTC are discussed in Section 6.3.11.

Data from piping plover surveys conducted at Sea Girt NGTC from 2000 through 2017 by cooperating parties, including the NJDEP-ENSP, Conserve Wildlife Foundation, ASGECI, and the WPWA, are summarized in Table 6-2. A pair of piping plovers nested on the Sea Girt NGTC

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beach in 2002. However, the pair's nest of four eggs never hatched. Individual, unpaired adults were observed in 2000, 2002, and 2003. A pair of piping plovers was observed during the week of April 19, 2004, but they did not establish a nest at Sea Girt NGTC. Unpaired adults were observed on-site during the 2005 and 2006 breeding season; however, no courtship or nesting behavior was observed. The 2007 season was the first season in which a nest was successfully hatched at the Sea Girt NGTC. One chick of the four-egg nest hatched but expired shortly after. A necropsy coordinated by the USFWS revealed that the chick died from pneumonia and its stomach was empty. Piping plovers have been documented on-site during the early spring of 2008 through 2011; however, no nests or potential breeding activity have been observed on-site since 2007.

During the 2009 breeding season, a pair of piping plovers and a single chick that had originated from the Wreck Pond beach (located approximately one mile north) migrated to the Sea Girt NGTC. The chick moved several times between Wreck Pond and the Sea Girt NGTC using the site as an alternate foraging habitat and refuge before fledging, which is estimated to have occurred on July 16, 2009.

During the breeding season in 2012, a single piping plover was observed at NGTC using the Northern Protection Area (NPA) habitat for resting and foraging. Monitors identified the bird at NGTC within an open (blown out) portion of the central NPA. Monitors confirmed that the plover was separate from individuals at Wreck Pond. On May 27 and June 8, 2012, monitors again confirmed the presence of this piping plover within the NPA, loafing and traveling between the blown-out portion of the NPA and the intertidal zone to forage.

In 2013, evidence of piping plover nest scrapes was observed in the Southern Protection Area (SPA) on April 30 and May 14. The second scrape had tracks associated with it that matched piping plover. No piping plovers were spotted in the SPA at that time. The first piping plover spotted on-site was spotted on May 30. The bird was identified in front of the NPA and harassed by a sandpiper. No other piping plovers were observed by monitors at the NGTC during the remaining 2013 season (ASGECI 2014a). There has been few piping plover observations and no nesting sites at Sea Girt NGTC in recent years.

Piping plover habitat use at NGTC may be limited, in part, by a combination of dense vegetation cover, erosion, and the presence of foxes. Seasonal vegetation data between 2008 and 2010 shows a trend toward increasingly dense American beachgrass population within much of the Study Area (See Section 6.3.2.1). Despite its compromised quality, the Sea Girt NGTC beach remains important habitat for piping plover and habitat connectivity for the species' coastal distribution in New Jersey, as illustrated in 2009.

**TABLE 6-2 SUMMARY OF PIPING PLOVER SURVEY DATA  
FOR SEA GIRT NGTC, 2000–2017**

Year	Pairs <sup>1</sup>	Unpaired Adults Observed	Nests	Eggs Laid	Chicks Hatched	Chicks Fledged
2000	0	Yes	0	0	0	0
2001	0	Yes	0	0	0	0
2002	1	Yes	1	4	0	0
2003	0	Yes	0	0	0	0
2004	1	No	0	0	0	0
2005	0	Yes	0	0	0	0
2006	0	Yes	0	0	0	0
2007	1	Yes	1	4	1	0
2008	0	Yes	0	0	0	0
2009	0	Yes	0	0	0	0 <sup>2</sup>
2010	0	Yes	0	0	0	0
2011	0	Yes	0	0	0	0
2012	0	Yes	0	0	0	0
2013	0	Yes	0	0	0	0
2014	0	Yes	0	0	0	0
2015	0	Yes	0	0	0	0
2016	0	No	0	0	0	0
2017	0	No	0	0	0	0

1. Pairs refer to a male and female that display courtship or nesting behavior.

2. On June 25, 2009, a pair piping plovers and a single chick had migrated from the Wreck Pond beach (approximately one mile north), where it had hatched, to the southern portion of the NPA at the NGTC. The chick moved several times between Wreck Pond and NGTC before fledging around July 16, 2009. The chick was considered to have fledged from the Wreck Pond beach.

### **6.2.3 Seabeach Amaranth**

Seabeach amaranth is an annual plant endemic to Atlantic Coast beaches and barrier islands, and usually grows on a pure sand substrate. The plant's primary habitats include overwash flats at accreting ends of islands, lower foredunes, and upper strands of noneroding beaches (landward of the wrack line). Seabeach amaranth occupies a terrestrial upper beach habitat, between eight inches and five feet above mean high tide. The plant is intolerant of even occasional flooding during the growing season, May through late fall. The habitat of seabeach amaranth is sparsely vegetated with annual herbs, and less commonly, perennial herbs (mostly grasses) and scattered shrubs. Vegetative associates of seabeach amaranth include sea rocket, seaside spurge, and other species of open, sandy beaches. Seabeach amaranth is a species of early successional beach habitats, and is intolerant of competition. It does not occur on well-vegetated sites, especially where perennials have become established. The species shows



*USFWS image*



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a particularly strong negative association with American beachgrass. Seabeach amaranth is often associated with beaches managed for protection of beach-nesting birds. As an annual plant that relies on seed production, dispersion, and germination to reproduce, population size and locations of individual plants within suitable habitat can vary substantially from year to year. Threats to seabeach amaranth include disease, lack of beach nourishment projects that may deposit old seed from offshore, beach stabilization (particularly the use of beach armoring, such as sea walls and riprap), intensive recreational use, and herbivory by moth caterpillars such as webworms (*Pyralidae*) (USFWS 2004; USFWS 1996b). Data from seabeach amaranth surveys conducted at Sea Girt NGTC by the NJDEP Division of Parks and Forestry, Office of Natural Lands Management (ONLM), ASGECI, and USFWS are summarized in Table 6-3.

Seabeach amaranth surveys conducted by the NJDEP revealed the presence of seabeach amaranth between 2001 through 2006 and, after two consecutive years without an observation, three plants were identified during the 2009 season. No seabeach amaranth plants were identified from 2010 through 2013. However, seabeach amaranth plants were present each year from 2014 through 2017. Notably, 50 plants were observed in 2015, much more than has been observed in previous and subsequent years.

Populations of seabeach amaranth are declining regionally since an initial explosion in population from around 2000 to 2004. New Jersey plant numbers dropped from 6,522 in 2006 to 2,185 in 2007 (ASGECI 2011). Diseases may be responsible for some population loss; however, habitat loss and lack of beach nourishment projects that may have deposited old seed from offshore onto the beaches is suspected as the primary reason for major population decline. Seabeach amaranth was expatriated from New Jersey from around 1913 until it was rediscovered in 2000. Its return roughly corresponds with the onset of beach nourishment projects conducted by the USACE, and several large storms that have occurred locally.

The USFWS recommends the following measures for protecting the seabeach amaranth on Atlantic coastal beaches within New Jersey for fall 2017 through fall 2018, all of which Sea Girt NGTC implements on site, per the USFWS technical assistance letter (Recommendations for Protection of the Federally Listed (threatened) Plant Seabeach Amaranth, October 24, 2017):

- Prohibit beach raking from the landward limit of the beach berm (i.e. dune, seawall, bulkhead, boardwalk, commercial/residential structure) to the mean high-water line from May 15 to November 30. This prohibition should be reflected in CAFRA permits from the NJDEP-DLUR. Applicants requesting a waiver from permit conditions regarding the length or width of a "no rake" zone should contact the Service to arrange a site visit, and should be prepared to propose additional areas of suitable habitat elsewhere within the same municipality that will be managed for seabeach amaranth. Detailed discussion of restrictions on beach raking at Sea Girt NGTC can be found in Section 6.3.6.
- Prohibit sand scraping (i.e., bulldozing) year round. This prohibition should be reflected in CAFRA permits from the DLUR. Detailed discussion of restrictions on sand scraping at Sea Girt NGTC can be found in Section 6.3.7.

- Restrict vehicle use to only essential (non-routine) and emergency services, and to the area below the mean high-water line. These restrictions should be implemented from 15 May to 30 November. Detailed discussion of restrictions on vehicle use at Sea Girt NGTC can be found in Section 6.3.5.
- Route people away from protective zones, in areas of high pedestrian traffic, using string-and-post symbolic fencing. The Service may be contacted for site-specific fencing recommendations. Detailed discussion of restrictions on pedestrian traffic and pets at Sea Girt NGTC can be found in Section 6.3.4.
- Limit vegetation planting and sand fencing to dune areas, allowing the upper beach to remain unstabilized and sparsely vegetated. Use only native species of vegetation for any planting in accordance with N.J.A.C. 7.78-34.4. Detailed discussion of dune and vegetation management at Sea Girt NGTC can be found in Section 6.3.12.
- Coordinate surveys and monitoring with the Service. Detailed discussion of seabeach amaranth monitoring and data sharing at Sea Girt NGTC can be found in Section 6.3.10.2.

The above measures are covered in detail, with additional measures, in Section 6.3. Intentional seed distribution was not previously a method recommended by USFWS, but Sea Girt NGTC will work with USFWS and USDA to implement a plant propagation program for seabeach amaranth.

**TABLE 6-3 SUMMARY OF SEABEACH AMARANTH SURVEY DATA FOR SEA GIRT NGTC, 2001–2017**

<b>Year</b>	<b>Plants</b>
2001	1
2002	18
2003	6
2004	9
2005	12
2006	4
2007	0
2008	0
2009	3
2010	0
2011	0
2012	0
2013	0
2014	2
2015	50
2016	11
2017	1

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#### 6.2.4 Least Tern

Present on New Jersey beaches from early May through early September, least terns nest in colonies on sandy beaches above the high tide line, and occasionally on sandy fill on bay islands. The birds lay one to three eggs in a nest scraped in the sand. Eggs hatch after about 21 days. Adult birds feed a diet of fish to the chicks, which remain in the colony for two to



*USFWS image*

three weeks, until they fledge, usually between mid-July and mid-August. All adults in the colony participate in defending eggs and chicks against predators and human disturbance. Threats to the least tern include habitat loss, human disturbance of nesting birds, predation, flooding, oil spills, and other contaminants (USFWS 2004; USFWS and ENSP n.d.).

Data from least tern surveys conducted at Sea Girt NGTC by the NJDEP-ENSP, Conserve Wildlife Foundation, USFWS, and consultants are summarized in Table 6-4. High annual variability in the number of adults and nesting success has been observed at the NGTC. In 2012, at least one tern colony with at least 34 terns attempted to nest on NGTC, first in front of the SPA and then within the NPA. Eventually one pair nested but the nest failed, possibly due to predator presence. In 2013, post Hurricane Sandy conditions on the NGTC beach included a leveling of beach topography and massive reduction in vegetation cover. Least terns did not attempt to nest on-site in 2013; however, least terns were recorded flying overhead on July 24, 2013 (ASGECI 2014a). In 2015, 19 least tern nests were observed at Sea Girt NGTC. Nests were also present in 2016 and 2017.

Specific causes of the least tern population and nesting success fluctuations observed at Sea Girt NGTC since 2000 are unknown. However, several factors could be contributing to the observed fluctuations, including changes in habitat suitability due to coastal dynamics affecting beach morphology, beach erosion, and dune plant succession; disturbance by predators; and public use of the beach. Terns tend to move colonies annually across sites (due to habitat conditions, presence of predators, and disturbance levels). Even though terns attempt to occupy NGTC annually for nesting, Sea Girt NGTC still provides important habitat within the larger mosaic of suitable nesting habitat annually.

**TABLE 6-4 SUMMARY OF LEAST TERN SURVEY DATA  
FOR SEA GIRT NGTC, 2000–2017**

<b>Year</b>	<b>Adults</b>	<b>Nests</b>	<b>Chicks Fledged</b>
2000	15	4	15
2001	197	101	14
2002	48	12	9
2003	26	4	0
2004	0	0	0
2005	2	1	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0
2011	0	0	0
2012	35	14	0
2013	1	0	0
2014	0	0	0
2015	30	19	0
2016	3	2	0
2017	4	1	0

**6.2.5 Seabeach Knotweed**

Seabeach knotweed occurs along the Atlantic Coast on sandy beaches, dunes, dune-hollows, coastal pond shores, and margins of saline marshes. Most seabeach knotweed occurrences in New Jersey are on sandy beaches where the plants generally occur above the limit of the tide. Seabeach knotweed is a pioneer species of unstable habitats created by washovers and active sand deposition. Flowering and fruiting take place from May to November. Vegetative associates include American beachgrass and seabeach spurge. The species is considered rare throughout most of its range. Threats include off-road vehicles, mechanical beach raking, and beach reclamation projects (Schuyler 1990). Seabeach knotweed was first documented at Sea Girt NGTC by the USFWS during a site visit conducted on July 23, 2003. Two plants were identified by the USFWS in 2004, one in 2005, and five in 2006. No plants were found during surveys conducted from 2007 through 2013 by both USFWS and ASGECI.

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### 6.2.6 Red Knot



USFWS image

The rufa red knot (*Calidris canutus rufa*) is a medium-sized shorebird that migrates annually between its breeding grounds in the central Canadian Arctic and several wintering regions as far south as Tierra del Fuego. During both spring and fall migrations, red knots use key staging and stopover areas to rest and feed (USFWS 2014). The red knot is a federally listed bird (threatened), state listed as endangered, and protected by the Migratory Bird Treaty Act.

The New Jersey Atlantic Coast is a critical stopover place for the species; large flocks arrive along the coast in May through June to coincide with the spawning season of the horseshoe crab (*Limulus polyphemus*) (USFWS-New Jersey Field Office to NJDEP-DLUR, n.d.). Key areas used as stopover habitat by red knots along the coast are characterized by unstabilized inlets and typically feature intertidal sand flats exposed on a falling tide, but continuous beaches have also been utilized (USFWS 2017).

The beaches of Sea Girt, including at the NGTC, are not known to be frequented by red knots during migration (M. Kolk, USFW-New Jersey Field office, personal communication, 15 November 2017); however, eBird reports citizen sightings of red knots since 2013 near Wreck Pond and Spring Lake, just north of the installation. The most recent sighting at these locations included three red knots during the fall migration period on August 21, 2017, during the solar eclipse (eBird 2017).

USFWS does not propose any specific conservation measures or management pertaining to the red knot (M. Kolk, USFWS-New Jersey Field Office and Conserve Wildlife Foundation, personal communication, 15 November 2017). However, NGTC staff should be aware of their potential short-term presence and avoid disturbance if encountered. During red knot migratory periods, if red knots are observed at the NGTC, it may be warranted to implement a beach driving restriction to avoid direct lines of travel through shorebird flocks and/or maintain a specified distance from any flocks.

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### 6.2.7 Osprey

The osprey is a large raptor with a wingspan of four and one-half to six feet. As a fish-eating species, the osprey is strictly associated with bodies of water that support adequate fish populations. Consequently, ospreys inhabit coastal rivers, marshes, bays, and inlets, as well as inland rivers, lakes, and reservoirs. Ospreys nest on live or dead trees, man-made nesting platforms, light poles, cellular phone towers, channel markers, abandoned duck blinds, or other artificial structures that are near fishing areas and offer an unobstructed view of the surrounding landscape. Territories typically contain poles, snags, or structures near the nest on which the osprey perch. Ospreys generally return to New Jersey in late March, and take up nesting in April.

Osprey populations in New Jersey experienced substantial population declines in the late 1800s and early 1900s due to habitat loss, eradication of nest trees, egg collecting, and shooting. Further declines attributable to the pesticide dichloro-diphenyl-trichloroethane (DDT) and other contaminants occurred from approximately 1946 through 1975. However, populations have been increasing in New Jersey and elsewhere due to the ban of DDT, reintroduction of healthy eggs, construction of nesting structures, and the osprey's acceptance of artificial nest sites. The New Jersey population grew from a low of 68 pairs in 1975 to 366 pairs in 2003, the majority of which were located along the Atlantic Coast (NJDEP 2004; Todd Pover, personal communication).

A pair of ospreys nested at Sea Girt NGTC for the first time during 2004 and successfully fledged two chicks. The nest was located along Stockton Lake in a temporary cellular phone tower owned and operated by a private company. The company constructed a permanent cellular phone tower on the installation and removed the temporary equipment following the 2004 nesting season. A second nest was established on the permanent tower during 2005 and in multiple seasons since.

The presence of a large nest in the cellular phone tower could lead to operational and maintenance issues. Cellular phone companies are permitted to disturb an osprey nest to conduct operation and maintenance activities when conducted outside of the nesting period of April 1 to August 31 (NJDEP Division of Fish and Wildlife 2012b). However, companies often opt for providing and encouraging the use of an alternative nest site to resolve such issues and avoid future timing restrictions. Currently, there are no deterrents on the cellular tower, and the breeding pair continues to use the cellular tower. The Sea Girt NGTC and the cellular tower owner, in consultation with the NJDEP-ENSP, are considering various deterrents that would prevent the ospreys from nesting on the tower. Actions considered include discouraging nest establishment by enclosing the structure with screens to discourage the ospreys from utilizing it. These actions have not yet been implemented. The CFMO-EMB Natural Resources Manager will continue to monitor the nesting activity and report the findings to the NJDEP-ENSP annually.

In August 2008, Sea Girt NGTC received approval from the NJDEP for a Coastal General Permit #22 for Avian Nesting Structures to erect an alternate nest platform. The pole and platform were installed adjacent to Stockton Lake on September 16, 2008. Ospreys never attempted to nest on this platform. The platform was destroyed during the winds and flooding during Hurricane Sandy on October 29, 2012 and was never replaced.

In 2013, a pair of ospreys attempted to build a nest on a power pole near Building 73. The nest was blown down during construction. In 2014, a pair of ospreys rebuilt the nest on the same pole and



*Osprey Platform with Game Cameras (July 2017)*

may have successfully fledge chicks. In an attempt to lure the pair off the power pole, in 2015 a nest platform was installed on an adjacent out of service pole along with a pair of game cameras. The pair returned to the power pole nest in 2015. At the end of the 2015 season, a high voltage electrical contractor moved the nest to the platform. In 2016, the pair laid two eggs in the platform nest, but abandoned it by July 2016. The pair returned in 2017 to lay three eggs. However, the game cameras failed by May 2017. Young were observed in July 2017.

One or two chicks are fledged almost annually from both the cell tower and platform, as documented by contractors (e.g., ASGECI 2014a report) and two game cameras installed by CFMO-EMB. Nest activities for both nests are reported to The Center for Conservation Biology Osprey Watch program (Nests 3307 and 5711) by CFMO-EMB.

### **6.2.8 Saltmarsh Sharp-Tailed Sparrow**

Saltmarsh sharp-tailed sparrow (*Ammodramus caudacutus*) occurs along the Atlantic Coast from New Jersey through mid-coast Maine. It is typically found in saltmarsh/meadow habitat—saltmarsh cordgrass, saltmeadow cordgrass, or needlerush (*Juncus gerardii*). It nests in clumps or thatches of grasses, slightly elevated above soil surface with vegetation or wrack canopying the nest. Nesting habitat is typically within infrequently flooded estuarine intertidal marsh. Saltmarsh sharp-tailed sparrows feed on insects, spiders, and small invertebrates during the breeding season, and feed on seeds of grasses and other plants in the fall and winter. The most common cause of nest failure is flooding. Predators to saltmarsh sharp-tailed sparrow include northern harrier, short-eared owl, crows, rats, red fox, raccoon, and occasionally snakes (USFWS 2001).

The saltmarsh sharp-tailed sparrow has been observed at Sea Girt NGTC, but species-specific surveys have not been conducted since the species is not currently listed as a federal

#### **Osprey Watch**

The Center for Conservation Biology operates an Osprey Watch program, providing access to annual survey data for the Sea Girt NGTC nests (# 5711 and 5085).

<http://www.osprey-watch.org/nests>

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threatened or endangered species. The USFWS is undertaking a discretionary status review of the saltmarsh sharp-tailed sparrow to determine whether the species warrants listing under the ESA. A listing determination will be made by 2019 (USFWS 2018).

### **6.2.9 Rare Species with Potential to Occur at Sea Girt NGTC**

Although the following rare nesting bird and plant species have not been documented nesting/growing at Sea Girt NGTC, they might colonize the beach in the future, based on the availability of potentially suitable habitat. These rare species with potential to nest/grow at Sea Girt NGTC are as follows:

- American oystercatcher (*Haematopus palliatus*) – beach-nesting shorebird, state Species of Special Concern
- black skimmer (*Rynchops niger*) – colonial beach-nesting sea bird, state-listed as endangered
- common tern (*Sterna hirundo*) – beach-nesting sea bird, state Species of Special Concern
- red knot (*Calidris canutus rufa*) – beach-nesting shorebird, federally listed as threatened, state-listed as endangered
- seabeach evening primrose (*Oenothera humifusa*) – beach and dune habitats, state Species of Special Concern
- sea-milkwort (*Glaux maritima*) – beach and salt marsh habitats, state Species of Special Concern
- seabeach sandwort (*Honckenya peploides*) – beach and dune habitats, state-listed as endangered
- seabeach purslane (*Sesuvium maritimum*) – beach habitats, state Species of Special Concern

Each of the rare bird species above have been documented on-site but are not known to have nested at the installation.

The habitat management and species protections established in this INRMP are expected to be sufficient to protect these species if they should become established. The NJDMAVA would work cooperatively with the USFWS, NJDEP-ENSP, and NJDEP-ONLM to manage the state-listed endangered species, if they colonize the Sea Girt NGTC beach.

## **6.3 BEACH MANAGEMENT**

### **6.3.1 Introduction**

This section discusses specific management issues and defines management practices for rare nesting bird and plant species that occur in the beach area at Sea Girt NGTC. These species include piping plover, seabeach amaranth, least tern, and seabeach knotweed. Management practices for these species are integrated because they share common habitats and management issues.



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## 6.3.2 Description of Beach

### 6.3.2.1 Physical Attributes

The Sea Girt NGTC beach consists of approximately 12.4 acres from the foredune to mean high tide. The beach is approximately 1,980 feet long by 270 feet wide, based on 2016 imagery. Three riprap groins are located along the installation's shoreline and additional groins are located to the north and south. The seaward side of the dunes has been reinforced with a concrete seawall, portions of which are exposed or partially covered with sand.

#### *Beach Topography*

ASGECI analysis of Sea Girt NGTC beach topography during each fall between 2008 and 2010 revealed seasonal intertidal decreases in elevation of three to six feet. Other portions of the beach, including much of the primary dune community, generally underwent increases or decreases in elevation of approximately one foot during the study period. Many areas accumulated one foot or more of sand as a result of fall and winter storm overwash. Generally, dune peaks remained at elevations of 15 to 17 feet AMSL. Higher elevations occurred along the westernmost portions of the primary dunes, where sand accumulated against the sea wall and other structures. Elevations in these areas reached 20 to 25 feet AMSL. Similar maximum dune elevations were identified in the 2006 INRMP.

Since 2007, ASGECI typically has observed a partial replenishment, leveling, and stabilization of beach sand along the dune toe and intertidal zone each spring. This seasonal replenishment tempers some of the storm-driven fluctuations from the previous fall/winter storm season. This leveling effect varied each spring and, in some seasons, was less apparent, and habitat appeared less suitable for nesting piping plover. Hurricane Irene, in August 2011, eroded portions of the primary dunes at levels that appear greater than storms evaluated during the topographic study period; however, elevation data were not taken after this event.

The topographic data collected in September 2013 reveal that Hurricane Sandy altered nearly all topography and elevation of the beach and dune communities at Sea Girt NGTC. A general leveling of dune peaks was particularly noticeable in the NPA and frontal portions of the SPA. Areas containing peaks that were identified as high as 14 to 16 feet AMSL in the NPA were leveled, and the majority of the NPA was level at approximately 10 feet AMSL. In many sections of the SPA, there were elevation losses from approximately 15 to 10 feet AMSL and an overall narrowing of the beach berm. Topography and elevation in the rear portions of the SPA appeared to be less altered by Hurricane Sandy, and elevations remained, generally ranging from 15 to 20 feet AMSL (ASGECI 2014a).

As part of a region-wide beach replenishment project extending into New York, the USACE replenished Sea Girt beaches with sand taken from offshore borrow areas. The sand was hosed onto the beach in January 2014. The result was a wide beach berm extending an additional 200 to 400 yards at an approximate elevation of 10 feet AMSL (NAVD 88) (ASGECI 2014a).

Due to the seasonal influence of storm intensity and frequency on the Sea Girt NGTC beach topography, periodic seasonal topographic analysis would be required in the future to determine long-term topographic trends. It would be expected that continued sea-level rise due to climate change may ultimately lead to greater loss of beach habitat in decades to come, particularly without any future artificial beach replenishment.

In 2014, Sea Girt NGTC partnered with Victoria University of Melbourne, Australia to install three Fluker posts (www.flukerpost.com) along the beach habitat to help monitor coastal and vegetation changes. These posts rely on “citizen science,” allowing citizens to take photos from a fixed point using their mobile devices and upload the photographs via a Quick Response code. Victoria University organizes the photographs chronologically and hosts them on a publically available Google Photos website. It is hoped the photographs can show historic changes to the beach landscape and add a qualitative analysis to the annual quantitative vegetative assessments at Sea Girt NGTC. Locations of the three Fluker posts at Sea Girt NGTC are shown in Figure 6-1.



*Fluker Post at Sea Girt NGTC*

### *Dune Vegetation*

The dunes include areas classified as coastal dune grass (primary dune), coast dune shrubland (secondary dune), and successional/disturbed dune. The foredune areas are also vegetated with American beachgrass. Vegetation in the foredune area decreased substantially following Hurricane Sandy in 2012, but has subsequently recovered since beach nourishment by the USACE in the following season. Areas north and south of the Sea Girt NGTC installation generally lack well-established dunes. However, roughly one mile to the north, a vegetated dune system approximately 250 meters in length exists at the Wreck Pond beach.

Between 2008 and 2010, ASGECI collected vegetation and topographic data from the coastal dune grass (primary dune) community. For this study, multiple qualitative and quantitative vegetation assessment parameters and observations of abiotic conditions were incorporated to create a profile of beach habitat conditions. The three-year dataset indicated that American beachgrass represented approximately 80 percent of all beach vegetation cover and composition at the height of the growing season (ASGECI 2010b). Mean beachgrass cover levels within the entire study area ranged from approximately 40 to 50 percent. Several other species contributed to cover and composition in significantly smaller amounts. These species included seaside goldenrod, which was typically under 10 percent; as well as sea rocket, salt meadow cordgrass, and northern bayberry, which each represented under 5 percent of total of beach vegetation species cover during the peak of the growing season. About 20 other species have represented one percent or less of cover and composition (ASGECI 2010b) during various study seasons. The primary dune contained extremely dense patches of American beachgrass (80 to 100 percent cover) interrupted by occasional bare sandy areas that generally contain greater amounts of beachgrass community associates, sea rocket, purple sandgrass, or seaside spurge.

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The post-Sandy cover data collected in 2013 indicated the near complete loss of vegetation cover and a highly uneven cover distribution. The mean American beachgrass cover percentage for the NPA in 2013 was  $0.24 \pm 0.48$ , varying from the 2008 cover percentage of  $41.91 \pm 7.58$ . The overall mean cover percentage for the Study Area was determined to be  $2.23 \pm 2.00$ , indicating an approximate 95 percent loss of beachgrass cover from the 2008 results (ASGECI 2014a).

During the subsequent season, the USACE expanded the NGTC beach as part of a shoreline restoration project that extended through Monmouth County. This expansion of the beach has currently allowed for the recolonization of American beachgrass at cover levels of 5 to 20 percent within the habitat protection areas (ASGECI 2017). The Sea Girt NGTC primary dune toe and adjacent intertidal areas, are topographically dynamic and vegetation cover fluctuates substantially from season to season depending on the frequency and severity of large storms, high tides, and high wind. American beachgrass responds positively to this dynamic environment and tends to rapidly recover disturbed areas, particularly those areas where seasonal sand accretion of around one foot has occurred.

### **6.3.2.2 Beach Management Responsibility**

The NJDMAVA owns Sea Girt NGTC. The boundary extends east to the mean high tide line. Areas between mean high tide and mean low tide are considered tidelands and are owned by the State of New Jersey. The Adjutant General has overall management responsibility for all NJDMAVA-owned property and the Director, Sea Girt NGTC, has responsibility for day-to-day management of the installation. The Borough of Sea Girt provides lifeguard services for the Sea Girt NGTC beach via agreements with the NJDMAVA. Sea Girt NGTC staff operates the NJDMAVA-owned beach rake. The Sea Girt NGTC beach has been part of the Atlantic Coast of New Jersey Sandy Hook to Barnegat Inlet BECP, which is sponsored by the USACE and NJDEP.

### **6.3.2.3 Beach Access and Use**

Authorized personnel from the installation can gain access to the beach via two sand roadways located on the northern and southern ends of the beach (Figure 6-1). The southern end serves as the primary access point for recreational use and includes a pedestrian walkway for authorized recreational users. General public access to the beach is not provided through the installation. However, the public can gain access to the area from the north and south via the beach. Military training conducted on the beach and recreational uses of the beach are described in Sections 6.3.8 and 7.2, respectively.

## **6.3.3 Restricted Areas**

Restricted areas referred to in this INRMP include the northern and southern rare species protection areas, the no rake zone, the 100-meter vehicle buffer around the northern protection area, and any additional area that may be established, as necessary, to protect any rare plant.

### **6.3.3.1 Northern and Southern Rare Species Protection Areas**

Two rare species protection areas (northern and southern) have been established at the Sea Girt NGTC beach to protect rare species habitat and minimize human disturbance. The rare species

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protection area boundaries are depicted in Figure 6-1 and are based on previously identified beach-nesting bird and seabeach amaranth locations. The boundaries have been mapped, and the data are contained in the NJARNG GIS. The NPA is approximately 870 feet long by 180 feet wide, and covers 3.3 acres. The NPA has been established in the same general location since 2001. The SPA covers approximately 1.3 acres. The SPA was established for the first time in 2005. Perimeters of the protection areas change slightly each season based on site conditions including dune vegetation expansion or beach erosion. Most piping plover and least tern nesting activity to date has occurred within the NPA; however, a least tern nest with hatched chicks did occur in the SPA in 2015. All but one documented seabeach amaranth locations to date have been within the NPA or SPA boundary established for that season. Figure 6-1 depicts the locations of those rare species where GIS locations were collected.

Symbolic fencing, which consists of posts, string, and signage, is used to delineate the rare species protection areas in the field. The signage notes that the area is closed to protect rare species and provides information about prohibited activities. The rare species protection areas are generally maintained as off-limits year-round; however, the string fencing is installed from mid-March or early April through 1 December. These dates include the period when beach-nesting birds and/or rare beach plants might be present. NJDEP-ENSP/NJDMAVA staff will install the protection area fencing each year and cooperatively maintain the fencing through 31 August. Sea Girt NGTC, CFMO-EMB, and USFWS (or its designee) staff will maintain the fencing from 1 September through 1 December, and will remove the fencing after 1 December. At the discretion of NJDEP-ENSP, protection area fencing may be removed earlier than December 1 based on rare species activity level or in anticipation of severe weather conditions. The NJDMAVA will provide fencing materials and signs for the SPA, and the NJDEP-ENSP will provide materials for the NPA. NJDMAVA materials and signs are stored at Sea Girt NGTC. Several management practices, which are described in the following subsections, are applicable to the rare species protection areas.

Future distributions of rare species on the Sea Girt NGTC beach are expected to be limited to the two established protection areas based on historic data and current habitat suitability. Nonetheless, habitat conditions are expected to change over time based on several factors, including beach erosion and planned USACE beach renourishment cycles. In addition, once piping plover chicks hatch, they become highly mobile. Therefore, rare species may occur outside the protection areas.

Accordingly, the following management practices have been established to ensure protection of species that might occur outside the established protection areas:

- Surveys and monitoring are conducted as described in Section 6.3.10 to identify rare species that might occur outside the protection areas.
- Boundaries of the existing rare species protection areas are evaluated annually and modified accordingly by the NJDMAVA, USFWS, and NJDEP-ENSP based on survey results, beach erosion, and beach renourishment.
- Any piping plover and/or least tern nests found outside the rare species protection areas will be fenced immediately by the NJDEP-ENSP and NJDMAVA,

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providing a sufficient buffer to prevent disturbance of nesting birds. In addition, protection area fencing will be extended, as needed, upon detection of territorial birds, courting birds, or highly mobile chicks moving outside the protection areas. The NJDEP-ENSP and NJDMAVA will continue to monitor nests and enforce buffers. The protection measures outlined in this section, including those for unfledged chicks, will be implemented in coordination with the USFWS and NJDEP-ENSP. The protection measures will be implemented in a manner that affords adequate protection to the species, while minimizing impacts on the military mission, including recreational use of the beach.

### **6.3.3.2 No Rake Zone**

A "no rake zone" has been established in front (seaward) of the NPA<sup>7</sup> (Figure 6-1). Beach rake operation is prohibited in the "no rake zone" from 15 March through 1 December. This habitat is an important feeding area for unfledged piping plover chicks. Beach raking removes natural substrate, which piping plovers forage upon. As with other vehicles, beach rakes also have the potential to inadvertently run over unfledged chicks foraging seaward of the NPA. Additional discussion on vehicle usage and beach-raking restrictions can be found below (Sections 6.3.3.3, 6.3.5, and 6.3.6).

### **6.3.3.3 100-meter Vehicle Buffer**

This buffer is established around the NPA when piping plover nests, unfledged piping plovers, and/or least tern chicks are present. The purpose of this protection measure is to prevent the unintentional crushing of chicks and/or eggs. Detailed discussion of implementation of vehicle restrictions can be found in Section 6.3.5.

### **6.3.3.4 Rare Plant Protection Area**

This area(s) is established if seabeach amaranth and/or seabeach knotweed are identified outside the NPA and/or SPA. The purpose of establishing this area is to prevent vehicular and/or pedestrian traffic from trampling the plant. String and post symbolic fencing shall be erected by the NJDMAVA around the limits of the plant or group of plants to include a three-meter buffer. Alternatives to this approach will be implemented in coordination with the USFWS, if such fencing restricts routine use of the beach.

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<sup>7</sup> The "no rake zone" shall extend from the eastern limit of the NPA to the western limit of the Atlantic Ocean; however, in the event of natural processes that may result in changes to the boundaries of the NPA or current dune area, the "no rake zone" shall extend westward to the base of the concrete seawall.

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FIGURE 6-1 SEA GIRT NGTC RARE SPECIES PROTECTION AREAS AND ENDANGERED AND THREATENED SPECIES LOCATIONS



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#### **6.3.4 Pedestrian Traffic and Pets**

General pedestrian beach use is prohibited in the rare species protection areas always. Entrance in the protection areas (when plovers are not present) is limited to designated rare species monitors, or by others, if required for a bona fide emergency. The Sea Girt NGTC parking lot is open to visitors from 15 March through 1 December. Residents and others gaining access to the Sea Girt NGTC beach from the Sea Girt and Manasquan Borough beaches are allowed to travel on foot through the beach area year round. Most recreational activity on the beaches occurs during the summer months and peaks during summer weekends and holidays. Crowds and pedestrian traffic during peak activity times are typically most concentrated on the Sea Girt NGTC beach south of the NPA.

Physical training activities, such as beach runs and group exercises, also occur on the Sea Girt NGTC beachfront. These activities are limited to a designated Physical Training Area whenever piping plover chicks are present on-site (see Figure 6-1). When implementation of the Physical Training Area occurs, all other portions of the Sea Girt NGTC beach will be closed to physical training activities. After chicks have fledged, activities such as running are permitted to enter through the “no rake zone” and other portions of the beach, as long as individuals remain outside the limits of the rare species protection areas. See Section 6.3.10.1 for additional pedestrian considerations and restrictions when beach-nesting birds are present.

Pets are not allowed on Sea Girt NGTC property, including the beach, year round. K-9 units may gain access to the beach when actively responding to a bona fide emergency; however, at all other times, they must be kept on a leash and kept at least 50 meters from the rare species protection areas. Trained goose control dogs may gain access to portions of the property, but at no time are they allowed on the dunes and beach, or within the rare species protection areas. Despite the pet restrictions at Sea Girt NGTC, off-leash dogs entering habitat areas remain problematic (Bill McBride, INRMP update kickoff meeting, 31 July 2017). See Section 6.3.11 – Predator Control for additional information on pet controls measures.

#### **6.3.5 Vehicle Use**

Vehicle use on the Sea Girt NGTC is limited to access for military training activities, municipal law enforcement patrols, lifeguards, and beach maintenance activities (i.e., beach raking). Beach raking (see Section 6.3.6) and lifeguard patrols comprise a majority of the vehicle use on the Sea Girt NGTC beach. The Borough of Sea Girt guards the beach daily during the season (approximately late May through early September) to provide emergency response and identify hazards so that emergencies can be avoided. Lifeguards conduct routine vehicle patrols of the entire beach several times each day to ensure that beach surveillance is accomplished in areas that cannot be viewed from the lifeguard stands. During these patrols, equipment (e.g., life rafts, wheelchairs, etc.) and personnel are transported to the lifeguard stands, and necessary coordination and supervision is provided to the lifeguards staffing the stands. The following management practices apply to vehicle use at the Sea Girt NGTC beach:

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- Privately owned vehicle use is prohibited on the entire beach year round. A parking lot for authorized recreational beach users is provided near the southern beach access.
  - Except for emergency vehicles actively responding to a bona fide emergency, vehicle use is prohibited within the rare species protection areas (Figure 6-1) from 15 March through 1 December. Emergency vehicles are defined as military vehicles, ambulances, fire apparatus, and other emergency response equipment responding to an emergency call. Emergency vehicles do not include routine lifeguard traffic, vehicular law enforcement patrols, military vehicles conducting routine training, or routine facility maintenance activities. However, routine lifeguard patrols may drive through the “no rake zone” in front of the NPA if no piping plover and/or least tern chicks are present and/or no adult piping plover/least terns are exhibiting mating behavior and/or constructing a nest scrape as identified by the USFWS and NJDEP-ENSP in consultation with the NJDMAVA.
  - In an effort to minimize overall vehicle use on the Sea Girt NGTC beach, the beach rake will always gain access to the southern portion of the beach via either the installation's main entrance and the southern beach access point, or by exiting at the northern beach access, following the alternate vehicle access route, and reentering at the southern beach access. See Section 6.3.6 for additional information on beach raking.
  - During red knot migratory periods, if red knots are observed on the NGTC beach, driving restrictions on the beach may be warranted.
  - Additional protection measures are implemented as soon as piping plover or least tern eggs or unfledged chicks are identified on the Sea Girt NGTC beach. These management practices are necessary to avoid crushing chicks or creating tire ruts, which can trap chicks moving towards the water to feed. Beginning vehicle access restrictions at the onset of egg-laying will allow natural processes to smooth out deep tire ruts and allow for additional undisturbed feeding and breeding activities of the nesting birds. The presence of nests/unfledged chicks will be determined and communicated to appropriate individuals (including Borough of Sea Girt personnel) in accordance with the monitoring/communication procedures described in Section 6.3.10. The additional protection measures continue until chicks have fledged. For the purposes of vehicle management, plover chicks are considered fledged when observed in sustained flight for at least 15 meters, irrespective of age. In most cases, piping plover chicks attain flight capability by 35 days of age, but longer pre-fledge periods may occur. The following protection measures will be implemented when piping plover nests, unfledged piping plover, and/or least tern chicks are present:

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1. All routine vehicle use will be immediately restricted within the “no rake zone” (Figure 6-1) and within the 100-meter protection area buffer (see number 2 below) when eggs or unfledged chicks are present. Routine vehicle use includes routine lifeguard traffic, vehicular law enforcement patrols, military vehicles conducting routine training, and routine facility maintenance activities. Sea Girt NGTC or CFMO-EMB staff will install detour signs at the northern and southern limits of the no rake zone. Vehicles will gain access to the southern portion of the beach, when necessary, by exiting at the northern beach access, following the alternate vehicle access route, and reentering at the southern beach access (Figure 6-1).
  2. A 100-meter vehicle-free zone will be established around the NPA (Figure 6-1). Signs installed by Sea Girt NGTC or CFMO-EMB staff will mark this zone.
  3. An agency responding to a bona fide emergency (i.e., lifeguards, police, and/or fire departments) which requires them to enter the NPA, SPA, no rake zone, and/or 100-meter vehicle-free buffer shall report each incident to the CFMO-EMB Natural Resources Manager no later than 24 hours after responding to the emergency. The report shall include each vehicle use, date, time, operator, responding agency, agency point of contact, and the purpose of the emergency response.
  4. Upon hatching or notification by the NJDEP-ENSP or USFWS of the date that is two days prior to a predicted hatch date, whichever is sooner, until notification of fledging or mortality, all non-emergency essential use of motorized vehicles **outside of the restricted areas**, including nonemergency use of lifeguard ATVs, lifeguard trucks, Sea Girt Department of Public Works motorized vehicles, beach rakes, military vehicles, and Sea Girt NGTC maintenance vehicles must adhere to the following protection measures:
    - Vehicle use on the beach will be limited to during daylight hours only. Vehicle speeds will not exceed five miles per hour.
    - Every vehicle will contain a map of nonemergency vehicle restricted areas.
    - A pedestrian escort will always precede each moving vehicle walking approximately 10 feet ahead of each vehicle.
    - The agency conducting the vehicle operation shall notify the CFMO-EMB Natural Resources Manager, Sea Girt NGTC, NJDEP-ENSP, and USFWS no later than 48 hours prior to conducting vehicle operation. The agency conducting the vehicle operation will log each vehicle use, date, time, operator, escort, and purpose for each vehicle pass and shall report each incident to the CFMO-EMB Natural Resources Manager no later than 24 hours after concluding the activity.

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- A Qualified Monitor (as identified by the NJDEP-ENSP and USFWS) will locate the plover chicks in the early morning prior to the use of the vehicle and notify the Sea Girt NGTC and CFMO-EMB Natural Resources Manager of chick location(s). A “Qualified Monitor” is a person who has the skills, knowledge, and ability to accurately observe and record data on shorebird breeding activities without causing disturbance to the birds under observation
  - A training session shall be conducted annually by the CFMO-EMB Natural Resources Manager, in coordination with the NJDEP-ENSP and USFWS, to train one primary and one backup staff member at the NGTC to become a “avian observer.” An avian observer will locate the chick(s) prior to the use of vehicle and notify the Sea Girt NGTC and CFMO-EMB Natural Resources Manager of chick locations. If the observer cannot locate the chicks, either a qualified monitor may be used or an escort in front of every vehicle on the Sea Girt NGTC beach.
  - If the vehicle operation will occur regularly during the brooding period, the agency may develop an agreement with the qualified monitor to have the monitor on-site at specified dates and times to ensure compliance with these requirements.
5. The NJDEP-ENSP, USFWS, and NJDMAVA have developed a partnership for monitoring beach-nesting birds at the Sea Girt NGTC and will coordinate efforts to monitor all broods during the chick-rearing phase of the breeding season to reliably determine brood mobility. Initially, the minimum monitoring frequency will be five days per week, but may be reduced to three days per week based on the NJDEP-ENSP biologist's professional judgment (see Section 6.3.10 for additional details on monitoring).
  6. If the brood monitoring indicates that highly mobile broods are present and chicks are moving outside the NPA, no rake zone, and 100-meter vehicle-free zone, then all vehicles will be guided by a qualified monitor who has first determined the location of all unfledged chicks. The monitor will ensure that a minimum 100-meter vehicle-free zone is maintained around the chicks. In addition, the NJDMAVA will coordinate with the USFWS and NJDEP-ENSP to determine if any additional protection measures are necessary if highly mobile broods are present. The Sea Girt NGTC beach may be closed to all non-emergency traffic, including raking, if it is deemed necessary by the NJDEP-ENSP or USFWS to protect a mobile chick.

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All additional vehicle restriction protection measures remain in place until the NJDEP-ENSP or USFWS have determined that the chick has fledged. For the purposes of vehicle management, plover chicks are considered fledged when observed in sustained flight for at least 15 meters. Only the NJDEP-ENSP or USFWS can lift vehicle restrictions.

### **6.3.6 Beach Raking**

Prior to 2016, the NJDMAVA had an agreement with the Borough of Sea Girt to rake portions of the Sea Girt NGTC beach. Starting in the 2016 beach season, the Sea Girt NGTC started to rake the beach using their own equipment. The purpose of beach raking is to remove debris to protect the health and safety of beach users. Raking generally takes place from late May to early September. The NJDEP DLUR has reissued the NJDMAVA a CAFRA General Permit authorization for beach and dune maintenance activities (DLUR File No. 1344-03-0001.2 CAF 140001). In a letter dated 22 February 2016, the NJDEP added the Sea Girt NGTC as authorized entities to rake the beach. The permit authorizes beach raking in accordance with standard permit conditions, project specific conditions, and BMPs as found in the Rules on Coastal Zone Management (N.J.A.C. 7:71-10). The permit was reissued on 26 June 2014, and is valid for a term not to exceed five years (i.e., through 26 June, 2019). A copy of the permit and the modification letter is provided in Appendix D.

The following management practices apply to beach raking at the Sea Girt NGTC beach:

- In an effort to minimize overall vehicle use on the Sea Girt NGTC beach, the beach rake will always gain access to the southern portion of the beach via the installation's main entrance and the southern beach access point or by exiting at the northern beach access, following the alternate vehicle access route, and reentering at the southern beach access.
- Beach raking is prohibited within the rare species protection areas (Figure 6-1) from 15 March through 1 December.
- A "no rake zone" has been established in front (seaward) of the NPA (Figure 6-1). Mechanical raking is prohibited in this area from 15 March through 1 December. Signs installed by CFMO-EMB staff mark the northern and southern limits of the no rake zone, which includes approximately 770 linear feet of beach. The area may be cleaned by hand during the restricted season.
- The frequency of beach raking will be minimized to the extent possible when unfledged chicks are present. The beach rake will not be permitted within the 100-meter vehicle-free zone, described in Section 6.3.5, if unfledged chicks are present. If highly mobile broods are present, beach raking may cease for short periods of time, or an avian observer shall guide the beach rake, as described in Section 6.3.5. Individuals responsible for beach maintenance will be provided with annual environmental awareness training, as specified in Section 6.3.8.
- If a significant amount of debris is deposited in the no rake zone during the restricted season, the NJDMAVA will consult with the USFWS and NJDEP for

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one-time mechanical raking events. A "significant amount of debris" includes conditions where hand removal would not be practicable and conditions where the debris represents a human health hazard. The USFWS and NJDEP will handle such consultation in an expedited manner, and will consider the situation an emergency consultation if the debris represents a human health hazard.

### **6.3.7 Sand Scraping**

Sand scraping is defined as the mechanical distribution of sand from one area of the beach to another. Sand scraping will be prohibited within the rare species protection areas and no rake zone year round, unless otherwise part of a permitted habitat enhancement project done in consultation with the USFWS and NJDEP-ENSP. Sand scraping will only be permitted on other portions of the beach as stipulated in the installation's CAFRA permit for routine beach maintenance.

### **6.3.8 Military Training**

During the summer months, various military units use the beach for ocean survival training. During the training, instructors refresh students on water survival issues, including reviewing a 20-person life raft's operational checklist, inflating the raft, and riding the raft back to shore. During these water exercises, members of the U.S. Coast Guard or other military lifesaving units are present to assist in the training or render assistance if an emergency develops. These units may use personal watercraft (i.e., jet skis) during the training exercises. The watercrafts are trailered by government vehicles to the southern beach access and are launched from the southern shoreline. The U.S. Coast Guard may use a helicopter as part of the ocean survival training and/or to render emergency assistance. Helicopter operations shall remain approximately 450 feet lateral distance east of the rare species protection areas at an altitude of 25 feet above ground level, retrieving trainees from the water, returning trainees to the water, and flying back to Atlantic City International Airport. These training events take place once or twice a year and the duration is two to three hours. The helicopters do not fly over the beach or land at Sea Girt NGTC during these training events.

The following management practices apply to military training use at the Sea Girt NGTC beach that occurs from 15 March through 1 December:

- Units using the beach for training shall comply with the general protective measures described above, including those for vehicle use and pedestrian traffic.
- Any military vehicles participating in training shall be parked near the southern beach access when not in use (Figure 6-1). Parking on the beach is strictly prohibited.
- Watercraft and rafts shall not be launched from, or landed in, the no rake zone (Figure 6-1) from 15 March through 31 August. This management practice does not apply after 1 July if no piping plover or least tern nesting activity has been observed by that date. During strong offshore currents, rip tides, or other

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emergency situations, watercraft and rafts may be landed in the no rake zone and military vehicles may gain access to the area to provide emergency response and retrieve equipment used during the emergency.

- Except for emergency situations, during training events helicopters shall remain 300 feet offshore (a minimum of 450 feet lateral distance east of the northern rare species protection areas) from 15 March through 31 August. This management practice does not apply after 1 July if no piping plover or least tern nesting activity has been observed by that date. If landings or takeoff are necessary, the guidelines specified in Section 6.3.9 will be followed.
- During the initial scheduling/advance planning of the training exercise, the unit commander shall designate a "rare species monitor," responsible for ensuring that the unit complies with the protection measures for listed species. The Sea Girt NGTC Director or CFMO-EMB staff (or designated contractor) shall conduct an environmental awareness briefing and provide a handout to the unit requesting use of the beach. The handout shall describe the protection measures with which the unit is expected to comply during training, and a map showing locations of the rare species protection areas and no rake zone.
- The CFMO-EMB staff or contractor will conduct a second briefing for the unit rare species monitor immediately prior to the training event (i.e., within one week) to review the protection measures and identify current locations of listed species. The NJDEP-ENSP and/or USFWS shall participate in these briefings, as necessary, to identify current locations of listed species.
- The unit's rare species monitor shall brief all students and instructors regarding the protection measures at the start of the training event. In addition, the monitor will attempt to minimize adverse effects to listed species during emergency entry into the no rake zone or rare species protection areas, to the extent possible without hindering emergency response. If the unit responds to an emergency within the rare species protection areas, the rare species monitor shall report the incident to the CFMO-EMB Natural Resources Manager as stated in Section 6.3.5 no later than 24 hours after the incident. The report shall include each vehicle use, date, time, operator, responding agency, agency point of contact, and the purpose of the emergency response.

Other activities, including beach runs or group exercises, are not considered military training and, as such, are not given a brief. However, as discussed in Section 6.3.4, adaptive management measures may be used, including implementing the designated Physical Training Area when highly mobile chicks are present (see Figure 6-1). When implemented, other portions of the Sea Girt NGTC beach will be closed to physical training activities.

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### **6.3.9 Other Helicopter Operations**

In addition to helicopter operations associated with water survival training exercises (Section 6.3.8), the NJARNG and New Jersey State Police occasionally operate helicopters at Sea Girt NGTC. These operations include landings and takeoffs at the landing zone near Quarters 1. Both the NJARNG and New Jersey State Police make approximately one flight per month (i.e., total of two landings and two takeoffs per month). The flight paths are shown in Figure 6-2 and are based on safety and operational constraints, which include prevailing winds, location of the small arms ranges, and location of residential areas. None of the flight paths cross over the NPA, where all beach-nesting bird activity has occurred to date. The closest flight path is approximately 475 lateral feet north of the NPA. The helicopters make a steep decent/accent out of/into the landing site, and are at an altitude of approximately 500 to 800 feet when they are closest to the NPA.

General management guidelines have been developed to avoid helicopter-related disturbance of beach-nesting birds at Sea Girt NGTC. These guidelines shall be implemented to the maximum extent possible, at the pilot's discretion, based on existing conditions during the helicopter operation (e.g., wind, visibility, weather, and other factors). The following guidelines apply from 15 March through 31 August, but are not applicable if they compromise safety:

- Helicopters shall not fly over, or within, 475 lateral feet of the NPA.
- Helicopters shall achieve a minimum altitude of approximately 500 feet when within 475 lateral feet of the NPA.



FIGURE 6-2 SEA GIRT NGTC HELICOPTER FLIGHT PATHS



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## **6.3.10 Rare Species Monitoring and Data Sharing**

### **6.3.10.1 Beach-Nesting Birds**

Monitoring and timely communication of monitoring data is an integral part of the rare species management program for Sea Girt NGTC that allows for adaptive management. The NJDEP-ENSP and the NJDMAVA have partnered in conducting beach-nesting bird monitoring at Sea Girt NGTC. The NJDEP-ENSP in coordination with the USFWS conducts monitoring as part of ongoing statewide surveys. ASGECI (contracted by the NJDMAVA) and the WPWA have supplemented agency monitoring efforts from 2007 through 2013 (See Section 6.3.10.3). Currently, it is anticipated that these statewide surveys will be performed based on funding availability for the next five-year planning period (2018–2022) covered by this INRMP.

To facilitate the process of endangered species coordination, monitoring and management, a set of procedures have been developed and carried out each active season that guides the process of identification and protection of endangered species at the Sea Girt NGTC. The procedures include the following:

- Representatives from Sea Girt NGTC, CFMO-EMB, USFWS, NJDEP-ENSP and designated biological consultants hold annual meetings or conference calls in February to review and coordinate monitoring and management activities planned for the upcoming season. At this time, issues from previous seasons are discussed and protocol and management improvements are considered.
- The NJDEP-ENSP staff conduct beach-nesting bird surveys at Sea Girt NGTC during the nesting season. Typically, the site will be monitored three to five days per week starting early April. The actual survey effort will vary based on observed nesting activity. Monitoring frequency will be highest when actual nesting activity is observed and when eggs and unfledged chicks are present. The NJDEP-ENSP will conduct monitoring at a sufficient frequency to reliably determine anticipated hatch dates and brood mobility.
- The NJDEP-ENSP will provide brief, weekly monitoring reports via fax and/or e-mail to the CFMO-EMB Natural Resources Manager and the Sea Girt NGTC Director. Reports may be transmitted more or less frequently based on the level of bird activity observed at the installation. Key information triggering special protection measures (e.g., the presence of eggs, chicks, or nesting outside the established rare species protection areas) will be transmitted as soon as possible, usually within 24 hours.
- The CFMO-EMB Natural Resources Manager or designee will be responsible for notifying other individuals of key information and special protection measures. These individuals include the Sea Girt NGTC Facility Manager, the rare species monitor for military units scheduled to conduct training on the beach, and the Borough of Sea Girt lifeguard staff, beach-raking staff, and law enforcement staff that patrol the beach.

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- The NJDEP-ENSP will provide copies of all written annual survey reports that include data for Sea Girt NGTC to the CFMO-EMB Natural Resources Manager. If available, Global Positioning System (GPS) data for individual nest locations will be provided in electronic format for incorporation into the NJARNG GIS.

### **6.3.10.2 Seabeach Amaranth and Other Plant Monitoring**

The NJDEP-ONLM conducted seabeach amaranth surveys between 2001 and 2006 from Long Branch to Cape May, including the Sea Girt NGTC beach. To support this effort and meet requirements of the INRMP, the Sea Girt NGTC contracted ASGECI to conduct rare plant surveys at the Sea Girt NGTC facility. The survey area includes the entire beach area between the high tide line and the landward limit of the beach, e.g., dune line or seawall (including protection areas). Surveys were performed in conjunction with the biweekly rare bird survey, and were conducted from 2007 through 2013 and followed agency approved protocols. NJDEP-ONLM still conducts coastwide rare beach plant surveys annually coastwide, including at Sea Girt NGTC, typically in late July or August. Targeted rare species included seabeach amaranth, seabeach knotweed and several other rare beach or dune plant species potentially occurring on Sea Girt NGTC property. During surveys, the dune community is slowly walked in a grid-like fashion by one or more surveyors. Plant surveys typically take one to three hours at each visit. Surveys are suspended in the protection area and the buffer if nesting birds are identified. Survey areas may also be limited for other circumstances such as excessive storm damage. Any seabeach amaranth identified outside the protection areas is immediately reported to the USFWS and the appropriate agency point of contacts (POCs).

In addition to the aforementioned biweekly surveys, three interagency rare plant surveys at the NGTC are coordinated with the USFWS (or its designee) and the CFMO-EMB Natural Resources Manager during the last week of June, third week of July, and between 15 August and 15 September. Typically, these interagency surveys take a maximum of two hours to complete. Coordination also occurs with NJDEP-ENSP as it relates to nesting bird activity, but NJDEP-ENSP does not participate in the annual surveys. The timing and frequency of interagency surveys typically depends on availability of staff, site conditions, and previous plant survey coverage of the beach.

The exotic invasive plant Asiatic sand sedge, and other threats to seabeach amaranth are also monitored during all surveys. A specific survey sheet for plant monitoring activity is completed and sent along with the general monitoring report after each visit.

Once rare, threatened or endangered plants are identified, all relevant data are recorded, such as plant size, condition, potential threats, and any additional protection needed. All rare plants are photographed, and GPS locations are taken. Surveyors are required to fence any plants outside of the designated protection areas with a three-meter buffer. After identification, plants are regularly monitored and documented at each regular site visit.

The NJDMAVA intends to continue conducting rare plant surveys at Sea Girt NGTC during the 2018 through 2022 implementation period. The objective is to identify the number and

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locations of rare plants on the Sea Girt NGTC beach, both inside and outside of the established rare species protection areas. Plants identified outside of the established protection areas will be fenced as specified in Section 6.3.3. Survey protocol will be submitted for USFWS review and input each year prior to 1 May. The survey procedures utilized from 2007 to 2013 are summarized in Section 6.3.10.3 below. Protocol may vary from year to year based on changing conditions and available funding.

### **6.3.10.3 Rare Species Monitoring Services**

From 2007 to 2013, the NJARNG has contracted a biological consultant to provide an array of INRMP mandated rare species protection services including supplemental monitoring services of the Sea Girt NGTC beach area for threatened and endangered plants and animals. Since 2013, the CFMO-EMB has used in house and intern staff to continue rare species monitoring services. However, if funding is available in future years, the NJDMAVA anticipates using contractors to perform these services. In any event, the NJDMAVA will continue the monitoring program in cooperation with the NJDEP-ENSP and USFWS. The contracted rare species monitoring services that occurred between 2007 and 2013 are summarized here:

- Public education and awareness including preparation of materials and completion of annual awareness, youth camp, and military training briefs; creation of a site-specific field guide and regular informal education with the visiting public. The contractor also prepares and sends out pet policy letters, as needed.
- Installation, monitoring and maintenance of protective fencing and signage as well as regular removal of trash accumulated in the protection and buffer areas
- Collection and preparation of GIS and photographic data, and preparation and maintenance of the GIS database. This includes all GPS and resource data collected on-site for various features including topography, vegetation communities and resource locations, rare plant and nest (once inactive) location data, and management areas. Photos are taken after each visit and their details are incorporated into all reports and the GIS data base.
- The annual revision of site protocols and submission to the USFWS, NJDEP-ENSP, and Natural Resources POC occurs no later than May 1 of each year. The protocol outlines the methods for biweekly surveying, procedures when beach-nesting species or plants are identified, study methods, enforcement, and other planned management actions. Protocols also include thresholds for exiting protection areas when beach-nesting birds are observed. Observations that require immediate exit from a protection areas include plovers, least terns, or other beach-nesting birds resting within, or near, dune areas, chicks or eggs, observation of plovers scraping nests, observed copulation, and observed courtship rituals or territorial behaviors (i.e., “plover marching,” chasing, plover’s circular courtship flights and calls, stone/shell tossing, or any other behavior that might indicate on-site nesting interest).
- Standard biweekly monitoring for rare birds and plants occurs between 15 March and 15 December. If required, the contractor adjusts the frequency of these surveys in

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consultation with POCs (i.e., more during nesting plover season, extra visits after storms, etc.). The surveyor(s) scans (via scope and binocular) and walks the beach at varying times of the day. Contractors note all rare species and general wildlife, take necessary photographs and GIS, and identify issues and threats such as on-site dog walkers.

- Summary monitoring reports and photographs are submitted within five days of a visit to the facility POC, NJDMAVA, USFWS, and NJDEP-ENSP. Reports include rare species and wildlife observations, threats, and other activities completed by the contractor. In addition, the contractor may submit reports to the police, animal control, or boroughs as special conditions require.
- Communication to the CFMO-EMB Natural Resources Manager and Sea Girt NGTC facility POCs within 24 hours of beach-nesting bird observations. The contractor begins enforcement of special protection measures. The contractor coordinates with the NJDEP-ENSP to allow for the most efficient and least disruptive coverage and enforcement. Contractors are always careful not to cause harm or injury, either by accident or on purpose, to any rare species present at the facility.
- Increased coverage when birds are present. Contractor coverage may be three to five days per week, based on the agency coordination and availability of resources. Coverage includes nondisruptive monitoring of adults and young and enforcement of all protection measures. The contractor carefully observes the behaviors and condition of all beach-nesting birds while present on the beach. The contractor may consult with the CFMO-EMB Natural Resources Manager, Sea Girt NGTC facility POC and agencies for additional enforcement measures as needed, such as additional fishing restrictions. Nest survey frequency remains high until the last chick is fledged, which is typically 35 days after the last egg hatches and clearance has been given by the NJDEP-ENSP and USFWS.
- Monitoring, including interagency monitoring, for rare plants occurs between the high tide line and the landward limit of the beach e.g., dune line or seawall (including protection areas) in conjunction with the biweekly bird surveys. (see Section 6.3.10.2)
- Preparation and distribution of an annual summary report to the CFMO-EMB Natural Resources Manager that includes discussions of all services and issues. NJDEP Natural Heritage Rare Species reporting forms for any rare species identified at the Sea Girt NGTC are submitted to the New Jersey Natural Heritage Program. The annual report also includes copies of additional reports and permits that have been prepared that season.
- Preparation of an annual primary dune vegetation community and topographic study (prepared in 2013). This study involved the quantitative and qualitative assessment of the primary dune community and relevant abiotic factors. Parameters measured included plant cover, density, frequency, vigor, and composition. Various methods of data collection included quadrat cover estimations and point intercept transect sampling. Transects were created in 2008 and maintained throughout the study to facilitate seasonal comparisons. The study also included analysis of soil, tides, weather, and an annual survey of beach topography conducted by a licensed surveyor. Data from the study was

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used to create a set of beach habitat management recommendations related to cover and topography (see Section 6.3.12).

### **6.3.11 Predator Control**

Beach-nesting bird eggs and chicks are highly susceptible to predators. In addition, predators can disturb birds that are attempting to nest and cause them to seek alternative nesting sites. Potential predators at Sea Girt NGTC include foxes, raccoons, crows, gulls, and feral/domestic cats and dogs. A resident fox population with a den site between the dunes and small arms ranges was first documented at Sea Girt NGTC in 1998 (Parsons 1999). Dens have also been identified in the secondary dune areas west of both the NPA and SPA on-site (ASGECI 2011).

The NJDEP-ENSP biologists have frequently noted fox and dog tracks within the rare species protection area, and predators have been suggested as a possible cause of poor piping plover and least tern nesting success. Though dogs and foxes appear to be the primary predator concerns, specific impacts from predators are unknown. However, the potential for successful nesting likely would increase in the absence of predators. Options for controlling predators include the use of nest exclosures and population reduction, as well as public awareness and policy/law enforcement, in the case of domestic predators or pets.

The NJDEP-ENSP plans to continue predator monitoring during its annual beach-nesting bird surveys. In addition, the NJDEP-ENSP will consider using predator exclosures for all piping plover nest attempts at Sea Girt NGTC. Exclosures consist of staked wire fencing that encircles a nest as a barrier to predators, while permitting passage of plover adults and chicks. Netting is normally installed on the top of the structure to prevent entry by avian predators. The NJDEP-ENSP has successfully used exclosures at other piping plover nesting sites in Monmouth County. However, exclosures are only useful after a nest has been established, and are not practical for reducing predator disturbance prior to nesting. Furthermore, exclosures do not protect chicks from predators such as foxes once the chicks hatch.

Population reduction involves physically removing predators from a site. The typical course of action involves live capture and humane euthanasia. Options such as live capture and relocation are not viable due to lack of relocation sites, the potential for creating predator problems elsewhere, and the risk of spreading diseases to wildlife or domestic stock in other areas. Population reduction is often a controversial management practice. In addition, measurable results are often difficult to achieve because predators from surrounding areas can quickly repopulate the controlled area. Nonetheless, the NJDEP-ENSP has implemented targeted predator population reductions at other beach-nesting bird sites in New Jersey, and such controls have generally resulted in improved nesting success.

Predator control methods may include baited traps or snares to capture target predators, or use of a scent-based red fox control program. Trapping will occur in accordance with BMPs that will be developed for predator management at the Sea Girt NGTC and will be implemented just prior to, or at the early stages of, the beach-nesting bird nesting season. Capturing and handling of any species will be conducted in consultation with the NJDEP wildlife control staff, USDA,

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NJDEP-ENSP, and USFWS, and in accordance with all federal and state regulations regarding animal capture and required permits.

Utilizing snare and bait traps predator control events were conducted at the Sea Girt NGTC in

- 2009 by the NJDEP-ENSP, which resulted in the capture of six foxes and one cat. However, the amount of evidence, including direct observation, tracks, foraging signs, and scat, reported in the 2010 Rare Species Summary report, indicate that foxes appear to remain abundant in the dune habitats (ASGECI 2011); and
- 2017 by the USDA in cooperation with the USFWS and resulted in the capture of 2 red foxes, 6 raccoons, and 1 opossum.

Local populations may also migrate between Sea Girt NGTC and other den sites in the vicinity.

From 2012 through 2013, AECOM conducted a Mammal Population Survey and Radio Collar Fox Study. Based on the data collected, red foxes likely pose the greatest threat to avifauna because they are abundant and traverse the entire NGTC property, including the NPA and SPA, each day. In 2013, a pair of red foxes produced a successful litter, and in the spring of 2013, the resident red fox population included two dens, six kits, and at least two transient foxes. During the late spring, summer, and fall, the red fox population on and surrounding the NGTC was reduced due to at least three foxes' suffering mortality from vehicles and at least two foxes' being afflicted with mange. By Fall 2013, it appeared that the population of foxes continuously using NGTC was at least three: one den and two other foxes. The number of foxes and other mammals observed on the NGTC property in 2012–2013 may have been significantly altered by the effects of Hurricane Sandy (AECOM 2013).

Sea Girt NGTC has a "no pet" policy for the entire installation. Authorized beach users are prohibited from bringing pets onto the installation or beach. The Boroughs of Sea Girt and Manasquan have leash laws requiring all pets to be leashed when in public areas. The Borough of Sea Girt prohibits pets on the beach from 15 March through 30 September. However, the Borough of Sea Girt, in a meeting on 8 May 2018, expressed interest in allowing leashed dogs within their "Recreational Zone" from 1 October through 15 May. This zone would begin at the northern border of Sea Girt NGTC and extend north to Beacon Boulevard. Dogs would still be prohibited from Beacon Boulevard north to the border with the Borough of Spring Lake from 15 March through 30 September, as this is their rare species protection area.

The Borough of Manasquan prohibits pets on the beach from 1 April through 31 October, except for Fisherman's Cove, where leashed pets are permitted year round. In addition, signs are posted around the rare species protection area that state "No Pets Allowed." The frequent presence of dog tracks within the rare species protection area suggests that local pet owners are not abiding by the installation's no pet policy and are allowing dogs onto the beach from the north and south. Leashed and unleashed dogs, inside and outside of the rare species protection area can disturb



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nesting birds and reduce nesting success. The NJDMAVA addresses this issue through the following management practices:

- The NJDMAVA posts no pet signs on the beach at the northern and southern property boundaries to reinforce the no pet policy.
- Letters are issued by the Sea Girt NGTC, no later than one month prior to the start of each monitoring season, to the Monmouth County Animal Control and Sea Girt and Manasquan Police Departments as a reminder of the policy currently in place at the Sea Girt NGTC. In addition, an open letter to pet owners in the Boroughs of Sea Girt and Manasquan is posted annually on the borough websites informing pet owners of Sea Girt NGTCs “no pet policy.” Also, both Boroughs are invited to attend an annual awareness brief where rare species protection methods at the NGTC are discussed.
- Sea Girt NGTC staff that observe dogs on the beach will attempt to contact the owner and explain to them the no pet policy. Persistent problems will be referred to the Borough of Sea Girt and/or Manasquan Police Department. The NJDMAVA will also request that Borough of Sea Girt lifeguards working the Sea Girt NGTC beach follow this same procedure.
- Any observation of unattended domestic or feral dogs or cats on the beach will be referred to Monmouth County Animal Control.

Sea Girt NGTC has also installed recycling trash cans with predator resistant lids at the boardwalk to the southern beach access to ensure that cans do not overflow and attract raccoons, gulls, or crows that may threaten beach-nesting birds. The Sea Girt NGTC staff continually monitors to identify the need for additional trash disposal.

### **6.3.12 Dune and Vegetation Management**

Currently, the NJDMAVA has no specific plans for dune stabilization or enlargement activities on the Sea Girt NGTC beach and does not anticipate the need for such activities over the next five years. Any required future repairs or maintenance to the existing stabilized dune and/or seawall would be designed and carried out in coordination with the USFWS, NJDEP-ENSP, DLUR, and USACE.

As discussed in Section 4.2.6, invasive plant issues have been identified on the landward side of the dune. The NJDMAVA may implement invasive plant treatments and restore infested areas with appropriate native plants. These activities would be limited to the landward side of the primary dune and would be carried out in coordination with the USFWS and NJDEP-ENSP. Planting of trees on either side of the dune is prohibited because trees provide perches for avian predators that could have an impact on beach-nesting birds.

The suitability of habitat on the Sea Girt NGTC beach for beach-nesting birds and seabeach amaranth is based in part on existing vegetative cover. Therefore, habitat suitability is expected to change over time as ecological succession, storms, beach erosion, and beach renourishment affect

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vegetative cover. American beachgrass is the dominant plant on the Sea Girt NGTC beach. American beachgrass forms a dense mat of intertwining rhizomes and roots that allows it to spread relatively rapidly. Although this species provides important sand stabilization functions, its rapid spread could limit beach-nesting bird and seabeach amaranth habitat. Seabeach amaranth shows a particularly strong negative association with American beachgrass.

Beachgrass vegetative cover requirements for piping plovers, least terns, and seabeach amaranth are not well defined, and the ideal percent vegetative cover is likely to be different for each species. A range from less than 10 percent to 13 percent vegetative cover for the back and primary dune, respectively, is a target for piping plovers, and considering the needs of seabeach amaranth and terns, a range of 20 to 70 percent vegetative cover might be appropriate when all three species are present on a beach (Maslo et al. 2011; Wendy Walsh, USFWS, personal communication). This target range is appropriate for the western portion of the NPA, with lower densities of beachgrass (5 to 10 percent) adjacent to the intertidal zone. The USFWS has suggested that thinning might be an appropriate management practice at Sea Girt NGTC if the beachgrass becomes too dense in the rare species protection areas to provide suitable habitat for listed species. The Sea Girt NGTC monitors the percent cover of beachgrass annually in three areas, the NPA, SPA, and the southern beach area, since 2008 to determine whether thinning may be warranted. Within the *Freshwater Wetlands and Coastal Habitat Enhancement Plan* (ASGECI 2017), the plan's Objective 4 states that American beachgrass vegetation cover in the NPA will be no greater than 50 percent with vegetation patches ranging from 5 to 20 percent cover in frontal portions. The average percent cover from 2008 to 2015 is presented in Table 6-5 (and its associated line graph, Figure 6-3). In recent years, beachgrass percent cover has greatly decreased within the NPA and the southern beach area (thought to be largely due to the legacy effect of Hurricane Sandy in 2012), and is thus considered at ideal cover levels for piping plover currently. It appears though that beachgrass on the SPA rebounded since Hurricane Sandy; yet in recent years, it also has had cover less than 50 percent, ideal for piping plovers. Note though that the SPA has been ruled out for vegetation management due to its proximity to private residences.

If thinning becomes warranted in the future, the objective will be to maintain American beachgrass cover in the NPA at levels no greater than 50 percent with patches ranging from 5 percent to 20 percent in the frontal portions (ASGECI 2017). As described in the *Freshwater Wetlands and Coastal Habitat Enhancement Plan* (ASGECI 2017), thinning can be conducted between December 1<sup>st</sup> and March 14<sup>th</sup> using non-mechanized (hand pulling) or mechanized (small machines such as a backhoe or beach rake) methods, depending on access and the amount of beachgrass to be removed.

Both strategies would be expected to require an NJDEP Coastal General Permit for Habitat Enhancement (CAFGP29) and possibly permitting from Corps. However, hand pulling of vegetation (as opposed to machine use) may facilitate this permitting process by more easily demonstrating minimization of unintended impacts. The USACE (1967) indicates that American beachgrass may recover fully from thinning within one season (Cohen et al. 2008). The periodic post-management collection of vegetation data likely would be required to determine the short-

term management success and longer-term vegetation and sand displacement trends, particularly those related to global sea-level rise.

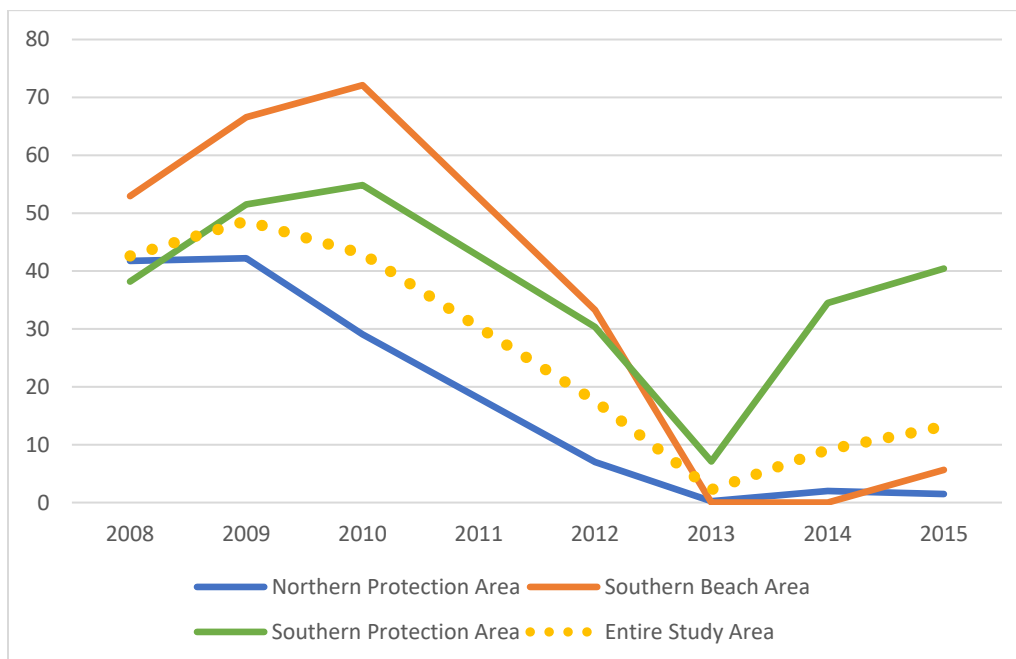
The need for beach vegetation management will continue to be evaluated in coordination with the USFWS and NJDEP-ENSP. Possible management practices beyond thinning include raking, disking, herbicide treatments, and saltwater irrigation. Any vegetation management practices will need to consider potential adverse effects to listed species, and will need to occur outside the seabeach amaranth growing and beach-nesting bird nesting seasons. If appropriate, any vegetation management would be implemented in coordination with the USFWS, NJDEP-ENSP, DLUR, and USACE.

See Section 6.3.2 – Description of Beach, for additional information on vegetation cover at Sea Girt NGTC.

**TABLE 6-5 AVERAGE PERCENT COVER OF AMERICAN BEACHGRASS**

<b>Year</b>	<b>Northern Protection Area</b>	<b>Southern Beach Area</b>	<b>Southern Protection Area</b>	<b>Entire Study Area</b>
2008	41.8	52.9	38.2	42.6
2009	42.2	66.6	51.5	48.6
2010	29.1	72.1	54.8	43.0
2011	n/a	n/a	n/a	n/a
2012	7.0	33.3	30.3	17.6
2013	0.2	0.0	7.1	2.2
2014	2.0	0.0	34.5	9.1
2015	1.5	5.7	40.4	13.2
2008-2015 Percent Cover Difference	-40.3	-47.3	2.2	-29.4
Percent Change from 2008	-96.5	-89.3	5.9	-69.1

**FIGURE 6-3 AVERAGE PERCENT COVER OF AMERICAN BEACHGRASS**



### **6.3.13 Environmental Awareness Training**

In addition to the awareness training provided to military units training on the beach, the CFMO-EMB conducts annual environmental awareness briefings to educate Sea Girt NGTC staff and users about the installation's rare species management program. The briefings are conducted in early March, following the annual meetings with the USFWS and NJDEP-ENSP in February. The briefings include the Sea Girt NGTC facilities management staff, on-site military unit representatives, the 1-150th Assault Helicopter Battalion, the NJARNG State Aviation Officer, and other tenant agency representatives. In addition, representatives from the Borough of Sea Girt are invited to attend the briefings, including beach-raking staff, lifeguard staff, and law enforcement personnel. In addition, an interpretive sign has been installed at the southern beach access to increase awareness of recreational beach users. The USFWS has expressed a willingness to aid with environmental awareness training efforts upon request and pending available staff.

A site-specific Field Guide for visitors (updated 2011) has been produced to facilitate identification of common and rare species and habitats on the Sea Girt NGTC beach. The Field Guide is also designed to make the visitors aware of the protected resources at Sea Girt NGTC and the role of the NJDMAVA in their protection. The Field Guide is available online at <https://www.nj.gov/military/construction-facilities-management/environmental-management/documents/3307-booklet-FINAL.pdf>.

### **6.3.14 Special Events**

The NJARNG and NJDMAVA occasionally host special events at Sea Girt NGTC that could result in short-term increases in beach use and disturbance to rare species. Examples of such events include the Annual Military Review of the troops, family appreciation days or other

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organized celebrations, fireworks displays, music concerts, youth camps, and Irish festivals sponsored by the Ancient Order of the Hibernians. These activities have the potential to affect rare species through increased human disturbance and other disturbances such as noise, if they occur during the beach-nesting bird season. The circumstances of each special event could vary considerably. Therefore, each event will be addressed on a case-by-case basis. Event planners will notify the CFMO-EMB early in the planning process for such events. The CFMO-EMB will evaluate potential effects of the special event on rare species, develop event-specific protection measures, and initiate informal consultation with the USFWS and NJDEP-ENSP, as appropriate. The objective is to provide input early in the process to ensure that special events take place as planned, without adversely affecting rare species.

In 2009, the NJ Department of Community Affairs (DCA), Division of Fire Safety, conducted its annual fireworks safety training at the Sea Girt NGTC, which provides a sufficiently large, open area to meet the DCA's 210-foot building set back safety standards. According to the DCA, the Sea Girt NGTC is a suitable site for this training given its wide open fields in an urbanized area where participants can experience the type of winds DCA inspectors may encounter while overseeing professional fireworks displays at the shore.

The training consists of launching fireworks to display proper handling techniques for approximately 30 fire inspectors. The USFWS issued *Guidelines for Managing Fireworks in the Vicinity of Piping Plovers and Seabeach Amaranth on the U.S. Atlantic Coast*. Fireworks are highly disturbing to beach-nesting birds and, in the early breeding season, may cause territory or nest abandonment. The USFWS recommends a ¾-mile (3,960-foot) buffer from the nearest plover nesting and/or foraging area and fireworks launch point. The Sea Girt NGTC does not provide sufficient open space to maintain the ¾-mile buffer from designated rare species protection areas and meet minimum building set back requirements. Therefore, additional protection measures are provided below.

- The launch site will be located on the western end of the parade grounds maintaining a minimum distance of 900 meters (2,953 feet) from the designated rare species protection areas while also providing for the required 210-foot building set back distance. The CFMO-EMB will provide a map to DCA identifying the approved launch site.
- Training will occur on a non-holiday week day during daylight hours to prevent drawing spectators onto the Sea Girt NGTC beach who may pose a threat to beach-nesting birds or protected habitat (NPA and SPA).
- The DCA must contact the CFMO-EMB Natural Resources Manager no later than 30 calendar days, 15 calendar days, 7 calendar days, and the day prior to the training to determine beach-nesting bird status. If chicks are present during any of the status check dates and it appears that they will not be fledged by the training date, the training will not be permitted.
- Notification via email or fax by the CFMO-EMB will be provided to the NJDEP-ENSP and USFWS at least two weeks in advance of the scheduled event.

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On September 8, 2017, Sea Girt NGTC launched fireworks during a short duration from the beach for the centennial celebration with approval from the NJDEP and USFWS (USFWS-New Jersey Field Office to William McBride at Sea Girt NGTC, 19 July 2017). The following protection measures were implemented in preparation for the event:

- survey the beach on September 7 to identify any nesting piping plovers or black skimmers and amaranth growing outside the protection areas
- consult with USFWS and NJDEP if any of the above listed birds are nesting (note that for the aforementioned September 8<sup>th</sup> event, this date is after the nesting season for the rare bird species), and
- erect additional fencing around any amaranth plants growing outside the two protection measures (Please note that if the plants are present, the fireworks can proceed.)

The fireworks proponents must continue to work with the CFMO-EMB to prepare a USFWS consultation package, and the fireworks activities will not occur until the USFWS concurs that the activity likely will not have an adverse effect on listed species.

#### **6.4 PROJECT-SPECIFIC MANAGEMENT GOALS**

Project-specific management goals, which include ongoing and/or planned management measures to achieve goals for Rare Species Management, are presented below, and implementation information (e.g., staffing, funding, and schedule) is provided in Section 9.0 . Rare Species Goals #1 through #4 and #7 are ongoing, while Rare Species Goals #5 and #6 are conducted as needed.

**Rare Species Goal #1** – Implement beach management practices and protection measures for rare beach species in accordance with the INRMP, and in cooperation with the USFWS and NJDEP-ENSP.

##### **Priority Classification: Compliance – Class 1**

1. Hold annual meetings or conference calls with the USFWS and NJDEP-ENSP.
2. Conduct annual environmental awareness briefings and annual “Qualified Monitor” training for Sea Girt NGTC staff and users.
3. Install rare species protection area fencing (NJDEP-ENSP/NJDMAVA) and no rake zone signs (NJDMAVA) by March 15. Maintain fencing and signs (March 15 through August 31 – NJDEP-ENSP/NJDMAVA, September 1 through December 1 – NJDMAVA). At the discretion of the NJDEP-ENSP, installation may occur during the first two weeks in April and may be removed prior to December 1.
  - a. For safety reasons, the NGTC agrees to close the range for up to three hours during the work week so that the ENSP can install the northern protection area fencing and signs. In February or March, the NJDMVA, NGTC, and ENSP shall determine a

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mutually agreeable date and time for the fence and sign installations so the range can be scheduled for closure.

4. Communicate with the ENSP and USFWS biologists regarding rare species monitoring results. Disseminate information to beach users and maintenance staff, as appropriate.
5. Implement special management procedures based on monitoring data (e.g., install detour signs at no rake zone and no vehicle signs when piping plover eggs and/or least tern chicks are present, predator control, and vegetation control).
6. Install interpretative signs at both the north and south ends of the NPA about the rare species management on the NGTC beach. The signs will be similar in size as existing signage at the entrance to the NGTC beach. Signs will describe the management intent of the area, life cycle and habitat requirements of target species, and the impact of human disturbance on the target species. Additional information may be included on the signage after discussion with the NJARNG COTR.

**Rare Species Goal #2** – Conduct annual beach-nesting bird surveys (NJDEP-ENSP/NJDMAVA or contractor).

**Priority Classification: Compliance – Class 1**

1. Conduct beach-nesting bird surveys from April 1 through August 31.
  - a. For safety reasons, the NGTC agrees to delay the opening of the range until 0800 hours two days during the work week between 1 April and 31 August. In February or March, the NJDMVA, NGTC, and ENSP shall determine mutually agreeable weekday dates for when the surveys will occur, so the range can be scheduled for closure.
2. Incorporate data into the NJARNG GIS.

**Rare Species Goal #3** – Conduct annual seabeach amaranth and seabeach knotweed surveys, and implement protection measures.

**Priority Classification: Compliance – Class 1**

1. Prepare an annual survey work plan in coordination with the USFWS.
2. Conduct surveys during the last week of June, third week of July, and between August 15 and September 15.
3. Install and maintain fencing and signs around plants that are found outside the existing rare species protection areas. Report findings of seabeach amaranth plants outside the protection areas to the USFWS immediately.

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4. Incorporate survey data into the NJARNG GIS, prepare annual survey report, and submit the report to the USFWS.
  5. Continue to evaluate the possibility of partnering with the USFWS to conduct long-term seabeach amaranth surveys.

**Rare Species Goal #4** – Maintain and monitor the osprey nesting platform in cooperation with the NJDEP-ENSP and phone company.

**Priority Classification: Compliance – Class 2**

1. Coordinate with the NJDEP-ENSP and phone company regarding design of nesting deterrent for cellular phone tower.
2. Coordinate removal of existing nesting materials from the cellular phone tower and installation of nesting deterrent with the phone company and the NJDEP-ENSP.
3. Monitor nesting activity and report findings to NJDEP-ENSP annually.
4. Inspect and maintain nesting platform annually prior to March 1.
5. Continue to maintain the game camera on the osprey nesting platform.
6. Work with USFWS to band any osprey chicks hatched in the nesting platform each year.

**Rare Species Goal #5** – Implement a predator control program for target species in coordination with NJDEP-ENSP, USFWS and NJDEP wildlife control staff.

**Priority Classification: Compliance – Class 1**

2. Reduce the predator population to a sustainable level as determined by the predatory population management plan, and continue annual maintenance/control, as necessary.
  - 2.1. Develop protocol for a predator population survey.
  - 2.2. Conduct an annual predator population survey targeting foxes, cats, and raccoons. The annual survey shall also include a query of the Boroughs of Sea Girt and Manasquan to ascertain the number of licensed pets (cats and dogs).
  - 2.3. Develop a predator population management plan including target species reduction rates.
  - 2.4. Conduct predator control in coordination with NJDEP-ENSP, USFWS, and NJDEP wildlife control staff. Trapping will be implemented just prior to, or at the early stages of, the beach-nesting bird nesting season.



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**Rare Species Goal #6** – Implement habitat enhancement for rare beach species in cooperation with the USFWS and ENSP. (Note: The management actions associated with the elimination/control of Asiatic sand sedge is under the Land and Watershed Goal #2 in Section 4.3).

**Priority Classification: Compliance – Class 1**

1. Implement dune habitat enhancement measures.
  - 1.1. Coordinate with the ENSP and USFWS to develop dune vegetation and grading plan to improve topography and attain required permits.
  - 1.2. Implement habitat enhancement measures by creating a half-acre area beginning at the northern extent of the NPA. All work would be conducted between December 1 and March 14 to protect potential beach-nesting bird and seabeach amaranth populations.
  - 1.3. Conduct follow-up vegetation cover and topography monitoring to evaluate enhancement measure.
  - 1.4. Work with USFWS and USDA to implement a plant propagation program for seabeach amaranth and plant protection strips.
2. Per the *Freshwater Wetlands and Coastal Habitat Enhancement Plan* (ASGECI 2017), as needed, maintain American beachgrass vegetation cover goals in NPA to levels no greater than 50% with patches ranging from 5 percent to 20 percent in frontal portions. Consult the habitat enhancement plan for specific guidance.

**Rare Species Goal #7** – Maintain the three Fluker posts on the Sea Girt NGTC beach and monitor citizen-submitted images for coastal landform and vegetation changes

**Priority Classification: Compliance – Class 3**

1. Inspect and maintain Fluker posts annually.
2. Download images annually (minimally) to assess changes in coastal topography and dune vegetation.

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## SECTION 7 OUTDOOR RECREATION

### 7.1 PROGRAM DESCRIPTION AND OVERALL MANAGEMENT GOALS

The Outdoor Recreation program addresses consumptive and nonconsumptive natural resources-based recreation at Sea Girt NGTC. The program emphasizes natural resources-based activities, and does not address outdoor sports such as golf. Recreational opportunities at the installation include fishing, camping, wildlife viewing, and general use of the beach. The overall goal of the Outdoor Recreation program is to allow maximum use of Sea Girt NGTC for natural resources-based activities in a manner that does not interfere with mission activities or affect rare species. Providing recreational opportunities provides quality of life benefits to military personnel and their families, which ultimately supports military recruiting objectives. In addition, participation in these activities tends to increase natural resources awareness and foster good stewardship of the land.

### 7.2 PROGRAM STATUS AND MANAGEMENT ISSUES

#### 7.2.1 Access for Outdoor Recreation

In accordance with the Sikes Act, public access to the installation for natural resources-based outdoor recreation is allowed to the extent that

- the use is not inconsistent with the needs of fish and wildlife resources, and
- the use is subject to requirements necessary to ensure safety and military security.

Access to Sea Girt NGTC for outdoor recreation is controlled and limited due to safety issues associated with the small arms ranges, and to ensure that recreational activities do not interfere with the military mission. The installation is generally closed to public entry. Military personnel, retired military personnel, NJDMAVA employees, and tenant employees may gain access to the installation with proper identification.

#### 7.2.2 Outdoor Recreation Areas and Uses

Designated outdoor recreation areas at the installation include the beach, campground, and fishing area. The beach area is open to beach pass holders from Memorial Day until the week after Labor Day. Military, retired military, NJDMAVA, and tenant employees can gain access to the beach year round. In a letter dated 15 May 2018, a beach pass policy memorandum was issued to provide guidance and procedures for requesting and issuing beach pass access to the Sea Girt NGTC (Appendix D). The following individuals are granted access with valid identification:

- military and military dependents including (1) New Jersey National Guard (NJNG) (current and retired) and (2) Reserve Component and Active Duty personnel living or stationed in New Jersey (current and retired)
- NJDMAVA state employees and NJNG federal DOD employees (non-dual status), current and retired

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- current and retired federal and state law enforcement officers from the New Jersey State Police, New Jersey Department of Corrections, New Jersey Juvenile Justice Commission, and New Jersey Division of Criminal Justice
  - local First Responders to include current members of the Sea Girt, Manasquan, Spring Lake, Spring Lake Heights, Brielle, and Wall Police, Fire, and Rescue Squad/Emergency Medical System

In addition, courtesy beach passes are provided to the following for distribution to extended family and friends of the following:

- New Jersey National Guard members (current and retired) – authorized to sponsor three additional beach passes
- Reserve Component and Active Duty members (current and retired) – authorized to sponsor one additional beach pass
- NJDMAVA employees and NJNG federal DOD employees (current and retired) – authorized to sponsor three additional beach passes
- federal and state law enforcement officers (current and retired) – authorized to sponsor one additional beach pass for a spouse of dependent
- local First Responders – authorized to sponsor one additional beach pass for a spouse or dependent
- TAG – reserves the right to direct access to the NGTC to supporters of the New Jersey National Guard (e.g., civic groups, Veterans’ organizations, donors)
- TAG, Deputy Adjutant General (DAG)/Assistant Adjutant General (AAG), and Land Component Commander (LCC) – provided limited number of passes for discretionary distribution to support the good of the organization

Current NJNG and NJDMAVA state employees can purchase an additional four beach passes for family members 12 years and older above the authorized amount.

Security personnel at the main entrance gate keep a daily car count of beach users during the season. An annual average of 64,184 visitors gained access to the Sea Girt NGTC beach from 2011 through 2016. Estimates decreased from 70,023 in 2011 to 59,178 in 2016. Estimates are based on each car passing through the security gate with three passengers. Beach parking fees of \$3/day, \$15/week, and \$50/season apply to those personnel identified above. All others are required to pay \$5/day, \$20/week, or \$60/season. Lifeguard and beach-raking services are provided during the season through an agreement with the Borough of Sea Girt. The rare species protection area described in Section 6.0 is off-limits to all recreational use. Routine beach maintenance, including beach raking, is conducted in accordance with the rare species protection measures specified in Section 6.0 of this INRMP and the CAFRA permit.

The following beach rules apply to visitors and those stationed at the NGTC:

- (1) Park only in authorized areas
- (2) Swimming is only permitted on the southern portion of the beach

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- (3) No boats, kayaks, rafts, surfboards or personal water craft
  - (4) No dogs or pets
  - (5) No glass containers
  - (6) No alcoholic beverages
  - (7) No tents, lean-tos, cabanas, etc.
  - (8) No vehicles on the beach
  - (9) No fires, grills, or BBQs
  - (10) Do not walk into the dune areas
  - (11) Do not enter into the restricted environmentally sensitive areas and wildlife habitats behind the ranges and on the beach
  - (12) Fishing in approved area only (north beach)
  - (13) Remove all trash/litter from the beach and deposit in approved containers

The Sea Girt NGTC campground is located along Stockton Lake in the southeastern portion of the installation. The campground is typically open from Memorial Day through October. Facilities include a bathhouse and nine sites with water, electric, and sewer hookups. No tents, pets, or open flames are allowed. The Director's office takes reservations for campsites from 9:00 a.m. to 1:00 p.m. on Wednesdays only. Preference for reservations is given to military and retired military personnel. NJDMAVA employees may reserve sites if the campground is not full. Nightly rates are \$25 for pop-up campers and \$30 for other units. User fees go into the installation's billeting fund and are used for maintenance of the facilities. The installation also has three cottages that are available seasonally for \$45 to \$55 per night to military and retired military personnel through a lottery. Campers are provided with informational flyers identifying camp site rules, and beach and fishing rules, and identifying firing range and environmental area restrictions.

Nonconsumptive outdoor recreation activities at the installation include general use of the beach, wildlife viewing, and the Beach Picnic Area. Military units, Post tenant agencies and visitors may request the use of the Beach Picnic Area for unit or large events. There are 16 large metal picnic tables in this area that seat approximately 80 to 115 people. Tents, cabanas, and grills may be used in this area.

Consumptive uses include recreational fishing from the beach and in Stockton Lake. Surf fishing for species such as striped bass, bluefish, and weakfish is popular at the installation. Fishing in Stockton Lake is less popular because areas near the shoreline are relatively shallow and the dock previously used for fishing, adjacent to NGTC's campground, was removed during reconstruction of the bulkhead in 2011. Stockton Lake is considered a Special Restricted Shellfish Growing Water, as indicated by the NJDEP Bureau of Marine Water Monitoring's 2011 Shellfish Classification Map. "Special Restricted" means the shellfish can only be harvested under an NJDEP permit and must be further purified or processed prior to being sold. Based on this restriction, recreational shellfish harvesting is not allowed at Sea Girt NGTC. No hunting or trapping is allowed on the installation.

In the summer of 2007, the Sea Girt NGTC first identified a portion of the beach in front of the NPA as a designated fishing area to limit bathing and ocean recreation activities, which can be detrimental to rare species utilizing the protection area, while giving fisherman a safe place to

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fish. Signs are erected and brochures (included in Appendix D) are distributed identifying the extent of the designated fishing area (second jetty north area during the summer season) and informing fishermen that unused bait and fish scraps should be taken with the fisherman, and not disposed of on the beach or in trash containers. Access to the fishing area may be temporarily restricted if piping plover chicks are present at the Sea Girt NGTC.

### **7.3 PROJECT-SPECIFIC MANAGEMENT GOALS**

Project-specific management goals, which include ongoing and/or planned management measures or activities to achieve goals for Outdoor Recreation, are presented below, and implementation information (e.g., staffing, funding, and schedule) is provided in Section 9.0 . Outdoor Recreation Goal #1 is ongoing.

**Outdoor Recreation Goal #1** – Continue to implement beach access, fishing area, and campground programs for natural-resources-based outdoor recreation.

**Priority Classification: Stewardship – Class 3**

1. Administer the beach access program.
2. Enforce designated fishing area and trash/bait management procedures.
3. Administer the campground access program.
4. Update the Camp Site Guidance flyer and Fishing Area brochure as needed.

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## **SECTION 8**

### **INFORMATION MANAGEMENT PROGRAM**

#### **8.1 PROGRAM DESCRIPTION AND OVERALL MANAGEMENT GOALS**

The CFMO-EMB has developed a GIS that covers all 41 NJARNG facilities, including Sea Girt NGTC. The GIS was first developed in 1998 and 1999 as part of the statewide natural resource planning-level survey project. Since that time, the CFMO-EMB has made several additions and upgrades to the GIS. The GIS serves as an integral part of the overall natural resources management program. The GIS is designed to manage spatially referenced data related to the physical infrastructure, mission activities, natural resources, and other environmental management activities. The program addresses data development, hardware, software, and training needs, as well as general system administration. This program enhances the efficiency with which the NJDMAVA manages its property and natural resources, thereby providing essential support to the military mission.

The overall goal of the program is to support the military mission and Natural Resources Program by providing easy access to accurate information for both management and decision making. Other overall management goals include the following:

- Facilitate access to a multitude of datasets for management and program guidance.
- Provide complete and reliable sources of data for each natural resources program.
- Define, develop, and implement an automated process for maintaining and updating spatial and tabular data.
- Promote data sharing with other NJARNG/NJDMAVA users and partnering agencies.

#### **8.2 PROGRAM STATUS AND MANAGEMENT ISSUES**

##### **8.2.1 Available Resources**

The NJARNG GIS contains data for 41 NJARNG facilities and 7 veteran's facilities. The data are stored on the NJDMAVA server. Users gain access to the data from their personal computers. Currently, the CFMO-EMB does not have a full-time GIS analyst. Management of the GIS is an additional duty for the Natural Resources Manager.

Available data layers for Sea Girt NGTC include boundary, roads, buildings, streams, lakes, freshwater wetlands, contours, soils, ecological communities, digital orthophotography (color infrared 2017), rare species protection area, noise receptors, storm drains, oil/water separators, secondary containment pads, hazardous waste/materials storage, monitoring wells, and aboveground storage tanks. Complete metadata are included electronically as part of the GIS.

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The GIS data were developed from various existing sources of GIS data and site surveys in accordance with the following standards:

- Software Platform – Esri ArcGIS version 10.5
- Coordinate System – UTM, Zone 18
- Datum – WGS 84 and NAVD 88
- File Naming Conventions – Spatial Data Standards for Facilities Infrastructure and the Environment version 3.10
- Metadata Format – Federal Geographic Data Committee-compliant

### **8.2.2 Future Data Development**

Future natural resources GIS data development for Sea Girt NGTC will primarily focus on updating rare species information annually. Annual updates will include the following:

- any changes to the rare species protection area described in Section 6.0
- new nesting location for piping plover and least tern
- locations of individual seabeach amaranth and seabeach knotweed plants
- integration of invasive plant survey data and invasive plant control efforts

## **8.3 PROJECT-SPECIFIC MANAGEMENT GOALS**

Project-specific goals for the information management program have been integrated into the goals of the resource-specific management program. Therefore, no project-specific goals are presented for this program.



**SECTION 9**  
**PLAN IMPLEMENTATION SUMMARY**

**9.1 OVERVIEW**

This section presents estimated staffing and funding requirements for implementation of the Sea Girt NGTC INRMP, as well as the implementation schedule. The NJARNG intends to implement the overall management approach and project-specific goals contained in this INRMP based on authorized funding, resource availability, and time constraints. The NJARNG recognizes the need for an adaptive management approach to address changing land use requirements, natural resources conditions, and other unforeseen factors. Consequently, unforeseen factors might prohibit the NJARNG from implementing some or all of the project-specific goals in accordance with the implementation schedule. In addition, implementation of project-specific goals is contingent upon the availability of funding and other project funding priorities within the DA, NGB, and NJARNG. As discussed in Section 3.0 , the INRMP will be routinely reviewed and updated to address changing conditions.

**9.2 STAFFING REQUIREMENTS**

**9.2.1 NJDMAVA Staff**

Table 9-1 and Appendix E summarize NJDMAVA staffing estimates for implementation of project-specific goals contained in the INRMP. Estimated labor hours range from approximately 700 to 950 per year for the five-year planning period. It should be recognized that these estimates only include project-specific labor to assist in the prioritization and implementation processes. Labor for routine activities and program administration is not included. Therefore, actual staffing requirements are greater than those presented in Table 9-1.

**TABLE 9-1 NEW JERSEY ARMY NATIONAL GUARD SEA GIRT NGTC STAFFING REQUIREMENTS FOR PROJECT-SPECIFIC INRMP GOALS**

<b>Estimated NJDMAVA Labor Hours</b>							
<b>Program</b>	<b>Labor Sources</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>5-yr</b>
INRMP Management	CFMO-EMB	120	120	120	120	120	600
Land and Watershed	CFMO-EMB	214	254	144	104	104	820
Fish and Wildlife	Facilities	80	80	80	80	80	400
Rare Species	CFMO-EMB/Facilities	152	206	136	128	136	726
Outdoor Recreation	Facilities	280	296	280	280	280	1,416
<b>Totals =</b>		<b>846</b>	<b>956</b>	<b>760</b>	<b>712</b>	<b>720</b>	<b>3,994</b>

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Historically, the Natural Resources Manager within the CFMO-EMB has contracted services to implement most project-specific INRMP activities. However, since 2013, project-specific tasks have been performed by CFMO-EMB and intern staff at a greatly reduced rate. For example, in 2014 and 2015 CFMO-EMB and intern staff installed the southern protection area fencing, conducted biweekly inspection and trash removal in the protection areas, biweekly goose fecal counts, and performed a reduced vegetative assessment in the protection areas. Due to staffing issues, in 2016 and 2017, only the southern fencing was installed, trash removal was limited to monthly events, and the vegetative assessments were not performed. Goose fecal counts were conducted in 2016, but not in 2017. The CFMO-EMB intends to revive contracted support during the years covered by this INRMP.

The Natural Resources Manager is responsible for routine coordination of INRMP activities, program administration, and other conservation related activities at Sea Girt NGTC and other NJARNG facilities, which are not reflected in the project-specific labor estimates provided in Table 9-1. These activities include, but are not limited to, the following: providing input to STEP; coordinating efforts with cooperating agencies, contractors, installation personnel, and the general public; maintaining the NJARNG GIS; providing technical support to internal stakeholders; providing natural resources subject-matter expertise and input to the real property and mission planning processes; supporting the NEPA process; and obtaining environmental permits, when necessary.

The Natural Resources Manager also has responsibility for several other program areas that encompass the other 40 NJARNG and 7 veteran's facilities statewide. Therefore, only a small percentage (approximately 5 to 10 percent) of the Natural Resources Manager's time is allocated natural resources management at Sea Girt NGTC. The Director of the Sea Girt NGTC and the installation facilities management staff provides logistical and on-site support for implementation of the plan, and as such, is incorporated in estimated NJDMAVA labor hours (Table 9-1).

### **9.2.2 Contractors and Cooperating Agencies/Organizations**

The need for support from contractors and cooperating agencies/organizations has been identified for the following INRMP goals:

- Land and Watershed Management Goal #1 – Protect and rehabilitate sensitive wildlife habitats that support threatened and endangered species by controlling invasive plants.
- Land and Watershed Management Goal #2 – Minimize visitor and staff exposure to poison ivy through education and management means.
- Land and Watershed Management Goal #3 – Prevent introduction and spread of invasive species.
- Land and Watershed Management Goal #4 – Manage and protect on-site wetlands.
- Land and Watershed Management Goal #5 - Improve the functionality of two stormwater retention basins to more effectively manage stormwater runoff from

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parking lots during high flow volumes and to decrease the duration of water ponding in these basins.

- Fish and Wildlife Goal #1 – Deter resident Canada geese from using the installation.
- Rare Species Goal #1 – Implement beach management practices and protection measures for rare beach species in accordance with the INRMP, and in cooperation with the USFWS and NJDEP-ENSP.
- Rare Species Goal #2 – Conduct annual beach-nesting bird surveys.
- Rare Species Goal #3 – Conduct annual seabeach amaranth and seabeach knotweed surveys, and implement protection measures.
- Rare Species Goal #4 – Maintain and monitor osprey nesting platform in cooperation with the NJDEP-ENSP and phone company.
- Rare Species Goal #5 – Implement a predator survey and control program for target species in coordination with the NJDEP-ENSP, USFWS, and NJDEP wildlife control staff.
- Rare Species Goal #6 – Implement habitat enhancement for rare beach species in cooperation with the USFWS and NJDEP-ENSP.

### **9.3 FUNDING REQUIREMENTS**

A summary of funding requirements for project-specific INRMP goals is presented in Table 9-2 and Appendix E. Table 9-2 presents total funding requirements (i.e., equipment and supplies plus contractor support) by program, while Appendix E provides a more detailed breakdown by goal. Project-specific goals requiring significant contractor support generally incorporates supply and equipment funding within contractor funding requirements. Currently, funding requirements for equipment, supplies, and contractors totaling \$2,839,138 for the five-year operational period have been identified for the project-specific INRMP goals. Primary funding sources include the Conservation Program and Real Property Operations and Maintenance.

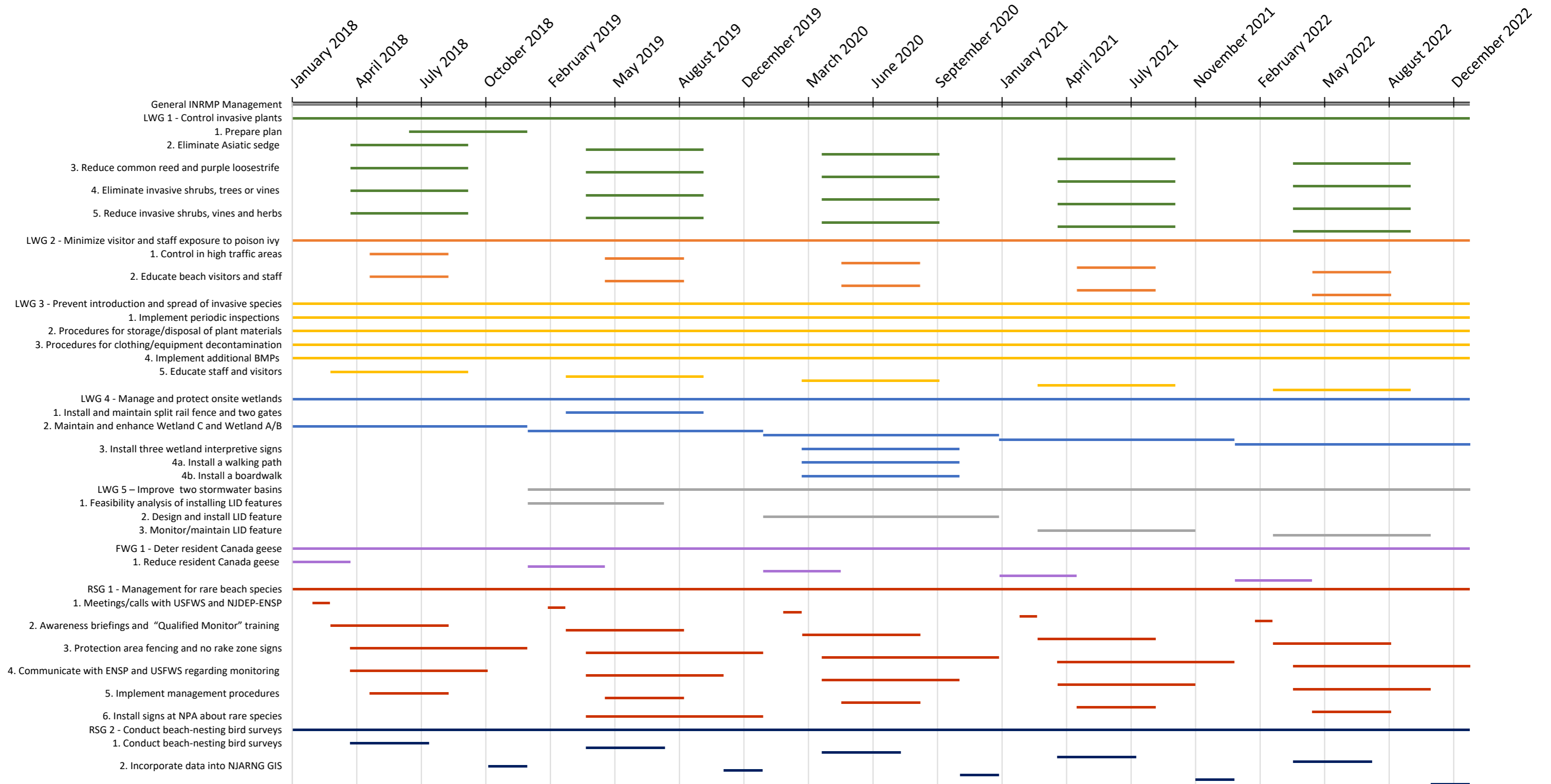
**TABLE 9-2 NEW JERSEY ARMY NATIONAL GUARD SEA GIRT NGTC FUNDING REQUIREMENTS FOR PROJECT-SPECIFIC INRMP GOALS**

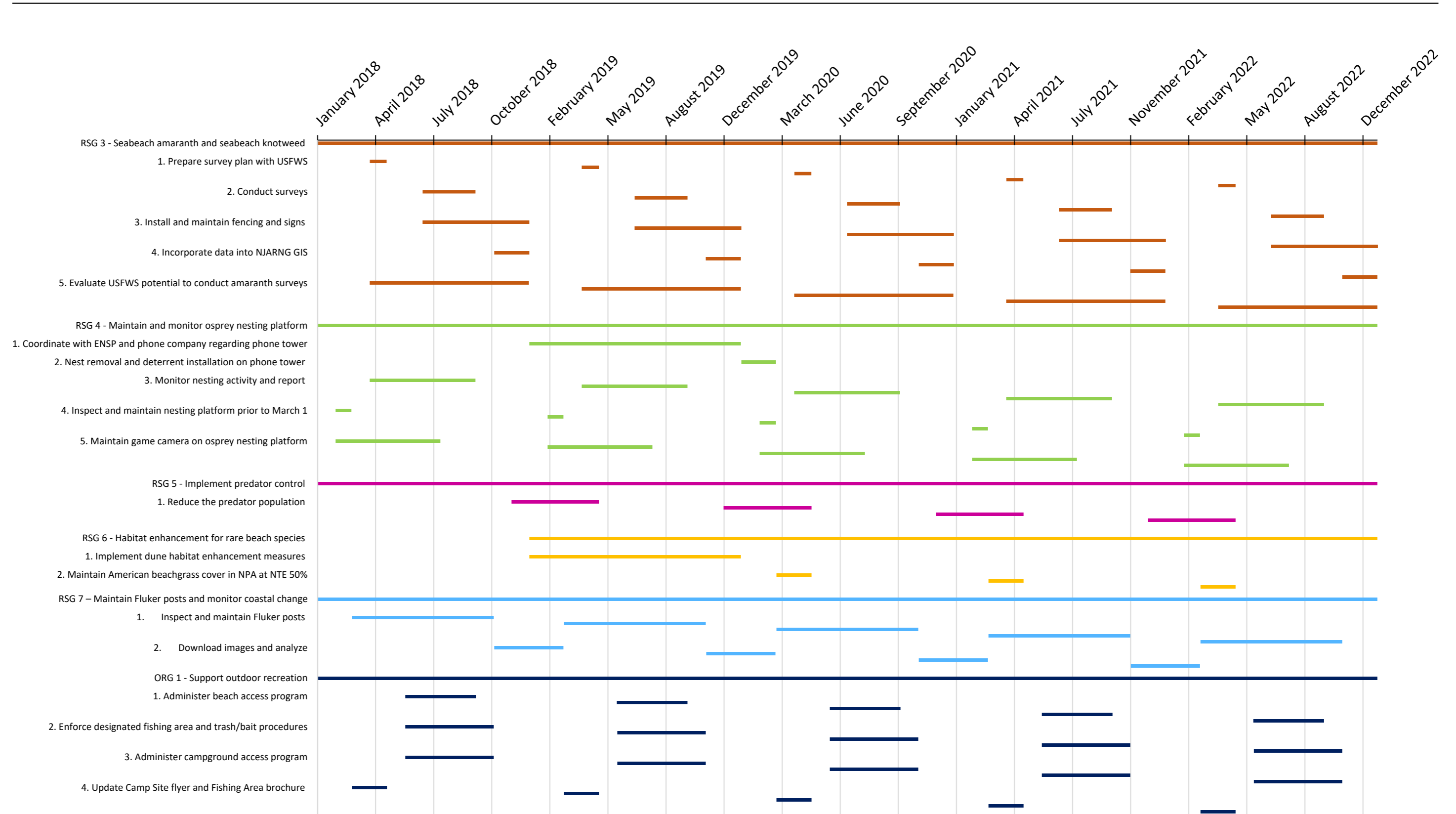
Program	Funding Sources	Estimated Total Funding Requirements					5-yr
		2018	2019	2020	2021	2022	
INRMP Management	STEP	\$54,600	\$7,400	\$7,400	\$7,400	\$54,600	\$131,400
Land and Watershed	STEP	\$321,768	\$167,952	\$443,858	\$43,100	\$42,100	\$1,018,778
Fish and Wildlife	STEP	\$40,500	\$41,000	\$41,500	\$42,000	\$42,500	\$207,500
Rare Species	STEP	\$276,300	\$289,840	\$298,640	\$303,440	\$312,240	\$1,480,460
Outdoor Recreation	User Fees	\$0	\$1,000	\$0	\$0	\$0	\$1,000
<b>Totals =</b>		\$693,168	\$507,192	\$791,398	\$395,940	\$451,440	\$2,839,138

#### 9.4 INRMP IMPLEMENTATION SCHEDULE

The overall INRMP implementation schedule is presented in Figure 9-1.

**FIGURE 9-1 INRMP IMPLEMENTATION SCHEDULE**





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**SECTION 10**  
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**APPENDIX A    ECOLOGICAL COMMUNITY AFFILIATIONS OF PLANTS OBSERVED  
AT SEA GIRT NGTC**

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Code	Scientific Name	Common Name	Native Status <sup>(1)</sup>	Ecological Community																	
				Coastal Dune Grass	Coastal Dune Shrubland	Disturbed Successional Dune	Successional / Disturbed	Maintained Lawn /	Hedgerow / Planted Trees	Successional Dune	Herbaceous / Scrub/Shrub	Modified Wetland	Managed Shrub Wetland	Salt Marsh							
ACNE2	<i>Acer negundo</i>	Box elder	N																		
ACPL	<i>Acer platanoides</i>	Norway maple	A, I						•	•	•										
ACRU	<i>Acer rubrum</i>	Red maple	N																	•	
ACSA2	<i>Acer saccharinum</i>	Silver maple	N						•	•										•	
ACMI2	<i>Achillea millefolium</i>	Common yarrow	A							•											
AIAL	<i>Ailanthus altissima</i>	Tree of heaven	A, I			•	•	•													
ALVI	<i>Allium vineale</i>	Field garlic	A, I						•	•	•	•									
AMAR2	<i>Ambrosia artemisiifolia</i>	Ragweed	N			•															
AMMA	<i>Ammannia</i>	Ammannia	N			•	•														
AMBR	<i>Ammophila breviligulata</i>	American beachgrass	N			•	•								•						
ANDRO	<i>Andropogon sp.</i>	Broom-straw	N							•					•						
AMBR7	<i>Ampelopsis brevipedunculata</i>	Porcelainberry	A, I								•										
APME	<i>Apocynum medium</i>	Intermediate dogbane	N												•						
ARVUV	<i>Artemisia vulgaris</i>	Mugwort						•	•	•	•										
ASSY	<i>Asclepias syriaca</i>	Common milkweed	N			•	•	•							•						
ASTU	<i>Asclepias tuberosa</i>	Butterfly weed	N					•													
AZALE	<i>Azalea sp.</i>	Azalea	N, A							•											
BAHA	<i>Baccharis halimifolia</i>	Groundsel tree	N			•	•													•	
BAVU	<i>Barbarea vulgaris</i>	Winter cress	A							•					•						
BRCI2	<i>Bromus ciliatus</i>	Fringed brome	N			•									•						
CAED	<i>Cakile edentula</i>	Sea rocket	N			•															
CAKO2	<i>Carex kobomugi</i>	Asiatic sand sedge	A, I			•															
CAAN6	<i>Carex annectens</i>	Yellow-fruited sedge	N								•									•	•
CAPE6	<i>Carex pensylvanica</i>	Pennsylvania sedge	N																		•
CAVU2	<i>Carex vulpinoidea</i>	Fox sedge	N																	•	
CATO6	<i>Carya tomentosa</i>	Mockernut hickory	N								•										
CEOR7	<i>Celastrus orbiculatus</i>	Oriental bittersweet	A, I			•	•	•	•	•	•	•	•	•	•	•	•				
CEOC	<i>Celtis occidentalis</i>	Hackberry	N																	•	
CETR	<i>Cenchrus tribuloides</i>	Sanddune sandbur	N			•									•						
	<i>Centuria spp.</i>	knapweeds													•						
CENI2	<i>Centaurea nigra</i>	Black knapweed	A, I						•	•	•										
CEST8	<i>Centaurea stoebe</i>	Spotted knapweed	A, I					•	•	•	•	•									

Code	Scientific Name	Common Name	Native Status <sup>(1)</sup>	Ecological Community													
				Coastal Dune Grass	Coastal Dune Shrubland	Disturbed Successional Dune	Successional / Disturbed	Maintained Lawn /	Hedgerow / Planted Trees	Successional Dune	Herbaceous / Scrub/Shrub	Modified Wetland	Managed Shrub Wetland	Salt Marsh			
CHPO6	<i>Chamaesyce polygonifolia</i>	Seaside spurge	N	•													
CHLE80	<i>Chrysanthemum leucanthemum</i>	Oxeye daisy	A									•					
CIIN	<i>Cichorium intybus</i>	Chicory	A		•		•	•			•	•					
CIAR4	<i>Cirsium arvense</i>	Canada thistle	A, I								•						
CALA5	<i>Cirsium vulgare</i>	Bull thistle	A								•						
COSE	<i>Convolvulus sepium</i>	Hedge bindweed	N								•						
COCA5	<i>Conyza canadensis</i>	Horseweed	N	•							•						
COVA2	<i>Coronilla varia</i>	Crown vetch	A					•			•						
CYES	<i>Cyperus esculentus</i>	Yellow nutsedge	N									•	•				
CYGR2	<i>Cyperus grayi</i>	Gray's flatsedge	N	•													
CYIR	<i>Cyperus iria</i>	Ricefield flatsedge	A											•			
DACA6	<i>Daucus carota</i>	Wild carrot	A, I				•	•	•								
DISA	<i>Digitaria sanguinalis</i>	Hairy crabgrass	A	•				•									
DISE	<i>Digitaria serotina</i>	Crabgrass	A					•									
DITET	<i>Diodia teres</i>	Poorjoe	N	•		•		•						•			
ELUM	<i>Elaeagnus umbellata</i>	Autumn olive	A, I			•				•	•						
ELOC	<i>Eleocharis</i> sp.	Spike Rush sp.										•	•				
ERPEP2	<i>Eragrostis pectinacea</i>	Tufted lovegrass	N	•													
EUAL13	<i>Euonymus alatus</i>	Winged euonymus	A, I					•									
EUCY2	<i>Euphorbia cyparissias</i>	Cypress spurge	A								•						
EUTE7	<i>Euthamia tenuifolia</i>	Slender-leaved	N								•		•				
FEEL	<i>Festuca elatior</i>	Meadow fescue	A								•						
FEOV	<i>Festuca ovina</i>	Sheep fescue	A								•						
FORSY	<i>Forsythia</i> sp.	Forsythia	A, I					•									
FRVI	<i>Fragaria virginiana</i>	Common strawberry	N				•	•									
GALIU	<i>Galium</i> sp.	Bedstraw	N	•							•						
HEHE	<i>Hedera helix</i>	English ivy	A, I				•	•	•								
HIPIP	<i>Hieracium pilosella</i>	Mouse ear	A				•	•									
HICA10	<i>Hieracium pratense</i>	Field hawkweed	A					•					•				
ILOP	<i>Ilex opaca</i>	American holly	N					•									
IVFR	<i>Iva frutescens</i>	Hightide bush	N									•					•

Code	Scientific Name	Common Name	Native Status <sup>(1)</sup>	Ecological Community											
				Coastal Dune Grass	Coastal Dune Shrubland	Disturbed Successional Dune	Successional / Disturbed	Maintained Lawn /	Hedgerow / Planted Trees	Successional Dune	Herbaceous / Scrub/Shrub	Modified Wetland	Managed Shrub Wetland	Salt Marsh	
JUCA3	<i>Juncus canadensis</i>	Canada rush	N								•	•	•		
JUEF	<i>Juncus effusus</i>	Common rush	N									•	•		
JUTE	<i>Juncus tenuis</i>	Path rush	N									•	•		
JUVI	<i>Juniperus virginiana</i>	Eastern red cedar	N		•	•		•	•	•					
KYGR	<i>Kyllinga gracillima</i>	Pasture spikesedge	N										•		
LAAM	<i>Lamium amplexicaule</i>	Henbit	A								•				
LAJA	<i>Lathyrus japonicus</i>	Beach pea	N	•	•						•				
LEMA	<i>Lechea maritima</i>	Beach pinweed	N	•							•				
LEVI3	<i>Lepidium virginicum</i>	Peppergrass	N								•				
LIGUS2	<i>Ligustrum</i> sp.	Privet sp.	A, I			•									
LICA6	<i>Linaria canadensis</i>	Blue toadflax	N	•							•				
LIST2	<i>Liquidambar styraciflua</i>	Sweetgum	N					•							
LOJA	<i>Lonicera japonica</i>	Japanese honeysuckle	A, I		•	•	•	•	•	•	•	•			
LOCO6	<i>Lotus corniculatus</i>	Birdsfoot trefoil	A				•	•			•				
LUNAR	<i>Lunaria</i> sp.	Honesty	N	•											
LYSA2	<i>Lythrum salicaria</i>	Purple loosestrife	A, I									•			
MIVI	<i>Microstegium vinineum</i>	Japanese stiltgrass	A, I									•			
MISI	<i>Miscanthus sinensis</i>	Chinese silvergrass	A, I					•							
MOVE	<i>Mollugo verticillata</i>	Green carpetweed	N	•							•				
MOAL	<i>Morus alba</i>	White mulberry	A, I				•								
MYCE	<i>Morella pensylvanica</i>	Northern bayberry	N	•	•							•			
	<i>Myrica (Morella) cerifera</i>	Southern bayberry									•				
OEOA	<i>Oenothera oakesiana</i>	Oake's evening	N	•	•						•				
PAAM2	<i>Panicum amarum</i>	Bitter panicgrass	N	•							•				
PAVI2	<i>Panicum virgatum</i>	Switchgrass	N								•	•			
PAQU2	<i>Parthenocissus quinquefolia</i>	Virginia creeper	N		•	•	•	•	•	•	•	•			
PALA10	<i>Paspalum laeve</i>	Field paspalum	N										•		
PHAU7	<i>Phragmites australis</i>	Common reed	N, I			•	•	•			•	•	•		•
PHAM4	<i>Phytolacca americana</i>	Pokeweed	N			•	•		•						
PIAB	<i>Picea abies</i>	Norway spruce	A					•							
PIRE	<i>Pinus resinosa</i>	Red pine	N					•							
PIST	<i>Pinus strobus</i>	Eastern white pine	N					•	•						

Code	Scientific Name	Common Name	Native Status <sup>(1)</sup>	Ecological Community												
				Coastal Dune Grass	Coastal Dune Shrubland	Disturbed Successional Dune	Successional / Disturbed	Maintained Lawn /	Hedgerow / Planted Trees	Successional Dune	Herbaceous / Scrub/Shrub	Modified Wetland	Managed Shrub Wetland	Salt Marsh		
PITH3	<i>Pinus thunbergii</i>	Japanese black pine	A						•	•						
PLAR3	<i>Plantago aristata</i>	Bracted plantain	N						•							
PLLA	<i>Plantago lanceolata</i>	English plantain	A, I	•			•		•	•				•		
PLMA2	<i>Plantago major</i>	Common plantain	A						•		•					
PLPS	<i>Plantago psyllium</i>	Sand plantain	A								•					
PLHY3	<i>Platanus hybrida</i>	London plane tree	A						•	•						
POA	<i>Poa</i> sp.	Cool season grass		•							•					
POCU6	<i>Polygonum cuspidatum</i>	Japanese knotweed	A			•	•	•	•	•	•	•				
POHY	<i>Polygonum hydropiper</i>	Water pepper	A											•		
POPE2	<i>Polygonum pensylvanicum</i>	Pennsylvania	N											•		
POPE3	<i>Polygonum persicaria</i>	Ladies thumb	A				•							•		
PODE3	<i>Populus deltoides</i>	Eastern cottonwood	N			•										
POCA17	<i>Potentilla canadensis</i>	Dwarf cinquefoil	N						•							
PRSE2	<i>Prunus serotina</i>	Black cherry	N		•				•	•	•					
PRVI	<i>Prunus virginiana</i>	Choke cherry	N		•					•						
PYRUS	<i>Pyrus</i> sp.	Bradford pear	A, I						•							
QUPA2	<i>Quercus palustris</i>	Pin oak	N				•		•							
RHODO	<i>Rhododendron</i>	Rhododendron	N,A						•							
RHCO	<i>Rhus copallinum</i>	Winged sumac	N		•	•	•				•	•				
RHTY	<i>Rhus typhina</i>	Staghorn sumac	N								•	•				
RHYNC	<i>Rhynchospora</i> sp.	Rhynchospora	N								•	•				
ROPS	<i>Robinia pseudoacacia</i>	Black locust	N				•				•					
ROCA4	<i>Rosa carolina</i>	Carolina rose	N			•										
ROMU	<i>Rosa multiflora</i>	Multiflora rose	A				•									
RORU	<i>Rosa rugosa</i>	Rugosa rose	A, I	•	•	•				•	•	•				
RUBUS	<i>Rubus</i> sp.	Raspberry	N		•	•				•	•					
RUAC3	<i>Rumex acetosella</i>	Sheep sorrel	N			•		•			•		•			
RUCR	<i>Rumex crispus</i>	Curly dock	A								•		•			
SANI	<i>Salix nigra</i>	Black willow	N										•			
SAKA	<i>Salsola kali</i>	Prickly saltwort	A, I	•												
SAOF4	<i>Saponaria officinalis</i>	Soapwort	A	•												
SAAL5	<i>Sassafras albidum</i>	Sassafras	N				•		•							

Code	Scientific Name	Common Name	Native Status <sup>(1)</sup>	Ecological Community											
				Coastal Dune Grass	Coastal Dune Shrubland	Disturbed Successional Dune	Successional / Disturbed	Maintained Lawn /	Hedge row / Planted Trees	Successional Dune	Herbaceous / Scrub/Shrub	Modified Wetland	Managed Shrub Wetland	Salt Marsh	
SCAM2	<i>Scirpus americanus</i>	Three square	N									•			
SCIRP	<i>Scirpus</i> sp.	Bulrush	N									•			
SIPR4	<i>Silene pratensis</i>	White campion	N								•				
SODU	<i>Solanum dulcamara</i>	Bitter nightshade	N								•				
SOCA6	<i>Solidago canadensis</i>	Canada goldenrod	N		•						•		•		
SONE	<i>Solidago nemoralis</i>	Gray goldenrod	N								•				
SOSE	<i>Solidago sempervirens</i>	Seaside goldenrod	N	•	•						•	•			
SOSP2	<i>Solidago speciosa</i>	Showy goldenrod	N										•		
SPAL	<i>Spartina alterniflora</i>	Smooth cordgrass	N												•
SPPA	<i>Spartina patens</i>	Salt meadow cordgrass	N	•							•				•
SPPE	<i>Spartina pectinata</i>	Prairie cordgrass	N								•				
SPRU	<i>Spergularia rubra</i>	Sandspurry	I	•									•		
SPPR	<i>Spiraea prunifolia</i>	Bridalwreath						•							
STHE9	<i>Strophostyles helvula</i>	Trailing wild bean	N	•	•						•				
SYFO	<i>Symplocarpus foetidus</i>	Skunk cabbage	N									•			
TAOF	<i>Taraxacum officinale</i>	Common dandelion	A, I					•	•	•					
TARAX	<i>Taraxacum</i> sp.	Dandelion sp.		•						•					
TAXUS	<i>Taxus canadensis</i>	American yew	N					•	•						
TORA2	<i>Toxicodendron radicans</i>	Poison ivy	N, I	•	•	•	•	•	•	•	•	•			
TRPO	<i>Tragopogon porrifolius</i>	Oyster plant	A								•				
TRAG	<i>Trifolium agrarium</i>	Hop clover	A												
TRAR4	<i>Trifolium arvense</i>	Rabbitfoot clover	A					•		•					
TRRE3	<i>Trifolium repens</i>	White clover	A		•			•							
TRPU4	<i>Triplasis purpurea</i>	Purple sandgrass	N	•						•					
VETH	<i>Verbascum thapsus</i>	Common mullein	A			•	•			•					
VERON	<i>Veronica arvensis</i>	Speedwell	N					•							
VIRE7	<i>Viburnum recognitum</i>	Northern arrowwood	N									•			
XAST	<i>Xanthium strumarium</i>	Cocklebur	N	•	•					•	•				
YUFI	<i>Yucca filamentosa</i>	Spoonleaf-yucca	N	•	•					•					

(1) A=alien, I=invasive or potentially invasive onsite, N=native

Sources: Field Surveys conducted by Parsons 1998 and 1999; Field Surveys conducted by ASGECI 2007-2013

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**APPENDIX B    WILDLIFE OBSERVED AT SEA GIRT NGTC**

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Scientific Name	Common Name
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### Mammals

<i>Canis latrans</i> <sup>(4)</sup>	Eastern coyote
<i>Condylura cristata</i> <sup>(1)</sup>	Star-nosed mole
<i>Didelphis virginiana</i> <sup>(1)</sup>	Opossum
<i>Felis catus</i>	Feral cat
<i>Marmota monax</i>	Groundhog
<i>Lasiurus borealis</i> <sup>(3)</sup>	Eastern red bat
<i>Lasiurus cinereus</i> <sup>(3)</sup>	Hoary bat
<i>Mephitis mephitis</i> <sup>(1)</sup>	Striped skunk
<i>Myotis lucifugus</i> <sup>(1)</sup>	Little brown bat
<i>Odocoileus virginianus</i> <sup>(4)</sup>	White-tailed deer
<i>Ondatra zibethicus</i>	Muskrat
<i>Peromyscus leucopus easti</i> <sup>(1)</sup>	White-footed mouse
<i>Phoca vitulina</i> <sup>(2)</sup>	Harbor seal
<i>Procyon lotor</i> <sup>(1)</sup>	Raccoon
<i>Rattus sp.</i> <sup>(4)</sup>	Rat sp.
<i>Sciurus carolinensis</i>	Gray squirrel
<i>Sylvilagus floridanus</i>	Eastern cottontail
<i>Tursiops truncatus</i> <sup>(2)</sup>	Bottlenose dolphin
<i>Vulpes vulpes</i>	Red fox

### Birds

<i>Accipiter cooperii</i>	Cooper's hawk (SC - BR)
<i>Accipiter striatus</i>	Sharp-shinned hawk (SC)
<i>Actitis macularia</i>	Spotted sandpiper (SC - BR)
<i>Agelaius phoeniceus</i>	Red-winged blackbird
<i>Ammodramus caudacutus</i> <sup>(3)</sup>	Saltmarsh sharp-tailed sparrow (SC - BR)
<i>Ammodramus henslowii</i> <sup>(3)</sup>	Henslow's sparrow (SE)
<i>Ammodramus savannarum</i> <sup>(3)</sup>	Grasshopper sparrow (ST- BR, SC – NB)
<i>Anas Americana</i>	American widgeon
<i>Anas discors</i> <sup>(3)</sup>	Blue-winged teal
<i>Anas platyrhynchos</i>	Mallard
<i>Anas rubripes</i> <sup>(3)</sup>	American black duck
<i>Archilochus colubris</i>	Ruby-throated hummingbird

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<b>Scientific Name</b>	<b>Common Name</b>
<i>Ardea alba</i>	Great egret
<i>Ardea herodias</i>	Great blue heron (SC - BR)
<i>Arenaria interpres</i>	Ruddy turnstone
<i>Asio flammeus</i>	Short-eared owl (SE – BR, SC - NB)
<i>Aythya valisineria</i> <sup>(3)</sup>	Canvasback
<i>Baeolophus bicolor</i> <sup>(3)</sup>	Tufted titmouse
<i>Bombycilla cedrorum</i> <sup>(3)</sup>	Cedar waxwing
<i>Branta bernicla hrota</i>	Atlantic brant
<i>Branta canadensis</i>	Canada goose
<i>Bubo scandiacus</i> <sup>(4)</sup>	Snowy owl
<i>Bubulcus ibis</i> <sup>(3)</sup>	Cattle egret (ST - BR, SC - NB)
<i>Bucephala albeola</i>	Bufflehead
<i>Buteo jamaicensis</i> <sup>(3)</sup>	Red-tailed hawk
<i>Butorides virescens</i>	Green heron
<i>Calidris alba</i>	Sanderling (SC - NB)
<i>Calidris minutilla</i> <sup>(4)</sup>	Least sandpiper
<i>Calidris maritima</i> <sup>(4)</sup>	Purple sandpiper
<i>Calidris melanotos</i>	Pectoral sandpiper
<i>Calidris mauri</i>	Western sandpiper
<i>Calidris pusilla</i>	Semipalmated sandpiper (SC - NB)
<i>Cardinalis cardinalis</i> <sup>(3)</sup>	Northern cardinal
<i>Carduelis tristis</i>	American goldfinch
<i>Carpodacus mexicanus</i>	House finch
<i>Carpodacus purpureus</i> <sup>(3)</sup>	Purple finch
<i>Cathartes aura</i> <sup>(3)</sup>	Turkey vulture
<i>Cathartes ustulatus</i> <sup>(3)</sup>	Swainson's thrush
<i>Catharus guttatus</i> <sup>(3)</sup>	Hermit thrush
<i>Catharus minimus</i> <sup>(3)</sup>	Gray-cheeked thrush (SC - NB)
<i>Chaetura pelagic</i> <sup>(3)</sup>	Chimney swift
<i>Charadrius melodus</i>	Piping Plover (FT, SE)
<i>Charadrius semipalmatus</i>	Semipalmated plover
<i>Charadrius vociferus</i>	Killdeer
<i>Chen caerulescens</i>	Snow goose
<i>Chordeiles minor</i> <sup>(3)</sup>	Common nighthawk (SC)
<i>Circus cyaneus</i>	Northern harrier (SE – BR, SC – NB)

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<b>Scientific Name</b>	<b>Common Name</b>
<i>Clangula hyemalis</i> <sup>(3)</sup>	Long-tailed duck
<i>Colaptes auratus</i>	Northern flicker
<i>Colinus virginianus</i> <sup>(4)</sup>	Northern bobwhite
<i>Columba livia</i>	Rock dove
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus ossifragus</i>	Fish crow
<i>Cyanocitta cristata</i> <sup>(3)</sup>	Blue jay
<i>Cygnus olor</i> <sup>(3)</sup>	Mute swan
<i>Dendroica pinus</i> <sup>(3)</sup>	Pine warbler
<i>Dendroica caerulescens</i> <sup>(3)</sup>	Black-throated blue warbler (SC - BR)
<i>Dendroica castanea</i> <sup>(3)</sup>	Bay-breasted warbler
<i>Dendroica cerulean</i> <sup>(3)</sup>	Cerulean warbler (SC)
<i>Dendroica coronate</i>	Yellow-rumped warbler
<i>Dendroica discolor</i> <sup>(3)</sup>	Prairie warbler
<i>Dendroica fusca</i> <sup>(3)</sup>	Blackburnian warbler (SC - BR)
<i>Dendroica magnolia</i> <sup>(3)</sup>	Magnolia warbler
<i>Dendroica palmarum</i>	Palm warbler
<i>Dendroica pensylvanica</i> <sup>(3)</sup>	Chestnut-sided warbler
<i>Dendroica striata</i> <sup>(3)</sup>	Blackpoll warbler
<i>Dendroica tigrina</i> <sup>(3)</sup>	Cape May warbler
<i>Dumetella carolinensis</i> <sup>(3)</sup>	Gray catbird
<i>Egretta caerulea</i> <sup>(3)</sup>	Little blue heron (SC)
<i>Egretta thula</i>	Snowy egret (SC - BR)
<i>Empidonax traillii</i> <sup>(3)</sup>	Willow flycatcher
<i>Eremophila alpestris</i>	Horned lark (ST - BR, SC - NB)
<i>Erolia minutilla</i>	Least sandpiper
<i>Falco columbarius</i> <sup>(3)</sup>	Merlin
<i>Falco peregrines</i>	Peregrine falcon (SE – BR, SC - NB)
<i>Falco sparverius</i>	American kestrel (ST)
<i>Gavia immer</i>	Common loon
<i>Gavia stellata</i>	Red-throated loon
<i>Gelochelidon nilotica</i>	Gull-billed tern (SC)
<i>Geothlypis trichas</i> <sup>(3)</sup>	Common yellowthroat
<i>Gallinago delicata</i> <sup>(4)</sup>	Wilson's snipe

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<b>Scientific Name</b>	<b>Common Name</b>
<i>Haematopus palliatus</i>	American oystercatcher (SC)
<i>Haliaeetus leucocephalus</i>	Bald eagle (SE – BR, ST - NB)
<i>Helmitheros vermivorum</i> <sup>(3)</sup>	Worm-eating warbler (SC - BR)
<i>Hirundo rustica</i>	Barn swallow
<i>Hylocichla mustelina</i> <sup>(3)</sup>	Wood thrush (SC - BR)
<i>Icterus galbula</i> <sup>(3)</sup>	Baltimore oriole
<i>Iridoprocne bicolor</i>	Tree swallow
<i>Junco hyemalis</i> <sup>(3)</sup>	Dark-eyed junco
<i>Larus argentatus</i>	Herring gull
<i>Larus atricilla</i>	Laughing gull
<i>Larus delawarensis</i>	Ring-billed gull
<i>Larus hyperboreus</i>	Glaucous gull
<i>Larus marinus</i>	Great black-backed gull
<i>Larus ribidundus</i>	Black-headed gull
<i>Limnodromus griseus</i> <sup>(3)</sup>	Short-billed dowitcher
<i>Lophodytes cucullatus</i>	Hooded merganser
<i>Mareca strepera</i> <sup>(3)</sup>	Gadwall
<i>Megaceryle alcyon</i>	Belted kingfisher
<i>Melanerpes carolinus</i> <sup>(3)</sup>	Red-bellied woodpecker
<i>Melanitta americana</i>	Black scoter
<i>Melanitta fusca</i> <sup>(3)</sup>	White-winged scoter
<i>Melanitta perspicillata</i>	Surf scoter
<i>Meleagris gallopavo</i> <sup>(3)</sup>	Wild turkey
<i>Melospiza georgiana</i> <sup>(3)</sup>	Swamp sparrow
<i>Melospiza lincolni</i> <sup>(3)</sup>	Lincoln's sparrow
<i>Melospiza melodia</i>	Song sparrow
<i>Mergus serrator</i> <sup>(3)</sup>	Red-breasted merganser
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Mniotilta varia</i> <sup>(3)</sup>	Black and white warbler
<i>Molothrus ater</i>	Brown-headed cowbird
<i>Morus bassanus</i>	Northern gannet
<i>Numenius phaeopus</i> <sup>(3)</sup>	Whimbrel (SC - NB)
<i>Nyctanassa violacea</i>	Yellow-crowned night heron (ST)
<i>Nycticorax nycticorax</i>	Black-crowned night heron (ST – BR, SC - NB)
<i>Oporornis formosus</i> <sup>(3)</sup>	Kentucky warbler (SC)

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<b>Scientific Name</b>	<b>Common Name</b>
<i>Oxyura jamaicensis</i> <sup>(3)</sup>	Ruddy duck
<i>Pandion haliaetus</i>	Osprey (ST - BR)
<i>Parula americana</i> <sup>(3)</sup>	Northern parula (SC - BR)
<i>Parus atricapillus</i>	Black-capped chickadee
<i>Passer domesticus</i>	House sparrow
<i>Passerculus sandwichensis</i> <sup>(3)</sup>	Savannah sparrow (ST - BR)
<i>Passerella iliaca</i> <sup>(3)</sup>	Fox sparrow
<i>Passerina cyanea</i> <sup>(3)</sup>	Indigo bunting
<i>Pelecanus occidentalis</i> <sup>(4)</sup>	Brown pelican
<i>Phalacrocorax auritus</i>	Double-crested cormorant
<i>Picoides pubescens</i> <sup>(3)</sup>	Downy woodpecker
<i>Pipilo erythrophthalmus</i> <sup>(3)</sup>	Eastern towhee
<i>Pirang rubra</i> <sup>(3)</sup>	Summer tanager
<i>Piranga olivacea</i> <sup>(3)</sup>	Scarlet tanager
<i>Plegadis falcinellus</i> <sup>(3)</sup>	Glossy ibis (SC - BR)
<i>Pluvialis squatarola</i> <sup>(3)</sup>	Black-bellied plover
<i>Pluvialis dominica</i>	American golden plover
<i>Poecile carolinensis</i> <sup>(3)</sup>	Carolina chickadee
<i>Pooecetes gramineus</i> <sup>(3)</sup>	Vesper sparrow (SE – BR, SC - NB)
<i>Porzana carolina</i> <sup>(3)</sup>	Sora
<i>Progne subis</i> <sup>(3)</sup>	Purple martin
<i>Prothonotaria citrea</i> <sup>(3)</sup>	Prothonotary warbler
<i>Quiscalus major</i>	Boat-tailed grackle
<i>Quiscalus quiscula</i> <sup>(3)</sup>	Common grackle
<i>Rallus crepitans</i> <sup>(3)</sup>	Clapper rail
<i>Regulus satrapa</i> <sup>(3)</sup>	Golden-crowned kinglet
<i>Riparia riparia</i> <sup>(4)</sup>	Bank swallow
<i>Rynchops niger</i>	Black skimmer (SE)
<i>Seiurus aurocapilla</i> <sup>(3)</sup>	Ovenbird
<i>Seiurus motacilla</i> <sup>(3)</sup>	Louisiana waterthrush
<i>Seiurus noveboracensis</i> <sup>(3)</sup>	Northern waterthrush
<i>Setophaga dominica</i> <sup>(3)</sup>	Yellow-throated warbler
<i>Setophaga petechia</i> <sup>(3)</sup>	Yellow warbler

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<b>Scientific Name</b>	<b>Common Name</b>
<i>Setophaga ruticilla</i> <sup>(3)</sup>	American redstart
<i>Setophaga virens</i> <sup>(3)</sup>	Black-throated green warbler (SC - BR)
<i>Somateria mollissima</i> <sup>(3)</sup>	Common eider
<i>Sopizella pusilla</i> <sup>(3)</sup>	Field sparrow
<i>Spiza americana</i> <sup>(3)</sup>	Dickcissel
<i>Spizella arborea</i> <sup>(3)</sup>	American tree sparrow
<i>Spizella passerina</i> <sup>(3)</sup>	Chipping sparrow
<i>Stelgidopteryx serripennis</i> <sup>(3)</sup>	Northern rough-winged swallow
<i>Sterna antillarum</i>	Least tern (SE)
<i>Sterna caspia</i> <sup>(3)</sup>	Caspian tern (SC - BR)
<i>Sterna dougallii</i>	Roseate tern (FE, SE)
<i>Sterna forsteri</i>	Forster's tern
<i>Sterna hirundo</i>	Common tern (SC - BR)
<i>Sturnella magna</i> <sup>(3)</sup>	Eastern meadowlark (SC)
<i>Sterna maxima</i>	Royal tern
<i>Sturnus vulgaris</i>	European starling
<i>Thryothorus ludovicianus</i> <sup>(3)</sup>	Carolina wren
<i>Toxostoma rufum</i> <sup>(3)</sup>	Brown thrasher (SC - BR)
<i>Tringa flavipes</i>	Lesser yellowlegs
<i>Tringa melanoleuca</i>	Greater yellowlegs
<i>Tringa semipalmata</i> <sup>(3)</sup>	Willet
<i>Tringa solitaria</i>	Solitary sandpiper
<i>Troglodytes aedon</i> <sup>(3)</sup>	House wren
<i>Turdus migratorius</i>	American robin
<i>Vermivora peregrina</i> <sup>(3)</sup>	Tennessee warbler
<i>Vermivora pinus</i> <sup>(3)</sup>	Blue-winged warbler
<i>Vermivora ruficapilla</i> <sup>(3)</sup>	Nashville warbler (SC - BR)
<i>Wilsonia canadensis</i> <sup>(3)</sup>	Canada warbler (SC - BR)
<i>Wilsonia citrina</i> <sup>(3)</sup>	Hooded warbler (SC - BR)
<i>Wilsonia pusilla</i> <sup>(3)</sup>	Wilson's warbler
<i>Zenaida macroura</i>	Mourning dove
<i>Zonotrichia albicollis</i> <sup>(3)</sup>	White-throated sparrow
<i>Zonotrichia leucophrys</i> <sup>(3)</sup>	White-crowned sparrow



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Scientific Name	Common Name
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### Amphibians

<i>Anaxyrus</i> [formerly <i>Bufo</i> ] <i>fowleri</i>	Fowler's toad (SC)
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### Reptiles

<i>Terrapene carolina</i> <sup>(4)</sup>	Eastern box turtle
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### Common Invertebrates

<i>Amphipoda spp.</i>	Scuds
<i>Bembix sp.</i>	Sand wasp
<i>Calosoma scrutator</i>	European caterpillar hunter
<i>Coccinella novemnotata</i>	Nine-spotted ladybeetle
<i>Dasymutilla occidentalis</i>	Cow killer
<i>Emerita talpoida</i>	Mole crab
<i>Ocypode quadrata</i>	Atlantic ghost crab
<i>Sphecidae</i>	Mud dauber wasps
<i>Tenodera aridifolia</i>	Chinese mantis
<i>Trimerotropis maritima</i>	Seaside grasshopper

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- (1) Source: Humanetrics, Inc., 1993
  - (2) Possible sighting (Source: ASGECI 2011)
  - (3) Source: WEST, Inc. 2017
  - (4) Source: ASGECI 2014

ST – State Threatened Species  
 SC – State Species of Special Concern  
 SE – State Endangered Species  
 FT – Federally Threatened Species  
 BR – Breeding Population  
 NB – Non-breeding Population

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## **APPENDIX C    AGENCY CORRESPONDENCE**

Records of outgoing and incoming correspondence for this INRMP (implementation period 2018-2022) are provided in this appendix. The tables below provides a summary of correspondence. The Errata Sheet detailing the agency comments, the NJARNG responses, and any resulting revisions made to the INRMP is also included in this appendix.

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**TABLE C-1. OFFICIAL AGENCY COORDINATION AND CONSULTATION**

<b>Date</b>	<b>Agency</b>	<b>Description</b>
10-19-17	USFWS	Outgoing request for site-visit participation letter
10-19-17	NJDEP	Outgoing request for site-visit participation letter
11-08-17	USFWS and NJDEP	Meeting minutes from the agency coordination site-visit at Sea Girt NGTC
04-30-18	USFWS	Outgoing request for comments on Draft INRMP v2
04-30-18	NJDEP	Outgoing request for comments on Draft INRMP v2
05-14-18	NJ State Police, U.S. Coast Guard Air Station Atlantic City	Outgoing request for comments on Draft INRMP v2
05-08-18 to 05-24-18	USFWS, NJDEP, NJ State Police, U.S. Coast Guard Air Station Atlantic City	AMRDEC transmittal records of Draft INRMP v2 files to these agencies
07-24-18 to 08-06-18	National Guard Bureau, USFWS, NJDEP, NJDEP Office of Permit Coordination, U.S. Coast Guard, NJ State Police, Sea Girt Borough Clerk, Sea Girt Environmental Commission, Manasquan Borough Clerk, Manasquan Environmental Commission, Monmouth County Environmental Council	AMRDEC transmittal records of Draft INRMP v4 files to these agencies
07-24-18	ARNG I&E	No further comments on the Draft INRMP v4
07-31-18	USFWS	No further comments on the Draft INRMP v4, awaiting signature page on Final INRMP
08-06-18	CWF	No additional comments on the Draft INRMP v4 (on behalf of NJDFW-ENSP)
08-06-18	Monmouth County Environmental Council	Letter regarding MCEC's comments for the Draft INRMP v4
01-28-19	USFWS	Provided minor spelling and updates to scientific names in the Final Draft INRMP.

Key: ARNG I&E: Army National Guard, Installations and Environment; CWF = Conserve Wildlife Foundation; NJDEP = New Jersey Department of Environmental Protection; NJDFW-ENSP: New Jersey Division of Fish and Wildlife – Endangered and Nongame Species Program; USFWS = U.S. Fish and Wildlife Service;

**TABLE C-2. INFORMAL EMAIL CORRESPONDANCE WITH AGENCIES<sup>1</sup>**

<b>Date</b>	<b>Agency</b>	<b>Description</b>
08-31-17	ARNG I&E	Department of Defense guidance on addressing Migratory Birds in INRMPs and clarification of the regulatory drivers
11-15-17	CWF New Jersey, NJDFW-ENSP	Breeding information for piping plover and least tern at Sea Girt NGTC for the period of 2014-2017; including 2017 Beach Nesting Bird Report and 2017 Piping Plover Nesting Report
11-20-17	NJDEP	Permission for rocket net deployment over Atlantic brant

<b>Date</b>	<b>Agency</b>	<b>Description</b>
12-07-17	USFWS	IPaC Report: List of threatened, endangered, proposed, and candidate species that may occur at Sea Girt NGTC
12-08-17	USFWS	2013-2017 Seabeach Amaranth Report for Monmouth County, New Jersey, containing information on coastal species, including piping plovers and other shorebirds across the region
05-14-18	USFWS	Comments received for the Draft v2
05-17-18	NJDEP	Comments received for the Draft v2
07-02-18	ARNG I&E	Comments received for the Draft v3
07-18-2018	USFWS NJ Field Office	Provided information about seed propagation of seabeach amaranth

1 – E.g., providing requested data, providing input to INRMP, etc.

Key: ARNG I&E: Army National Guard, Installations and Environment; CWF = Conserve Wildlife Foundation; INRMP = Integrated Natural Resource Management Plan; IPaC: Information for Planning and Consultation; NJDEP = New Jersey Department of Environmental Protection; NJDFW-ENSP: New Jersey Division of Fish and Wildlife – Endangered and Nongame Species Program; USFWS = U.S. Fish and Wildlife Service

Copies of informal agency emails are kept electronically in the administrative record.



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3650 SAYLORS POND ROAD  
JOINT BASE McGUIRE-DIX-LAKEHURST, NEW JERSEY 08640-5606

Ron Popowski, Assistant Supervisor  
U.S. Fish and Wildlife Service  
New Jersey Field Office  
4 E. Jimmie Leeds Road, Suite 4  
Galloway, New Jersey 08205-4465

19 October 2017

Subject: Agency Coordination and Site Visit – NJARNG Sea Girt NGTC INRMP Update

Dear Mr. Popowski:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. The Draft INRMP update is currently under development, and Sea Girt NGTC would like to ask for your agency's cooperation to ensure your agency priorities are taken into consideration and properly addressed in the plan. You will be given the opportunity to review and comment on the INRMP at the Draft INRMP stage in 2018, before the document is finalized.

Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement (*MOU between the U.S. Department of Defense and the U.S. Fish and Wildlife Service and the Association of Fish and Wildlife Agencies for a Cooperative INRMP Program on Military Installations*, July 2013), we seek U.S. Fish and Wildlife Service coordination concerning the conservation, protection, and management of Federal Trust Species and other fish and wildlife resources on Sea Girt NGTC. Recognizing that time and resources are limited, we would nonetheless like to ensure that the most accurate and current information is included in this INRMP. To facilitate this need, Sea Girt NGTC would like to extend an invitation to a site visit at the training center, which provisionally is scheduled for 8 November 2017. If you are interested in participating in the site visit, please contact Jennifer Allen at Marstel-Day, our contract support on this INRMP update, at 540-376-1110 or [jallen@marstel-day.com](mailto:jallen@marstel-day.com) no later than 1 November 2017.

Sincerely,



CHARLES M. APPLEBY  
Chief, Environmental Management Bureau



**State of New Jersey**  
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS  
POST OFFICE BOX 340  
TRENTON, NEW JERSEY 08625-0340

CHRIS CHRISTIE  
*Governor*  
*Commander-in-Chief*

☆  
MICHAEL L. CUNIFF  
*Brigadier General*  
*The Adjutant General*

19 October 2017

Dave Jenkins, Chief  
New Jersey Department of Environmental Protection  
Division of Fish and Wildlife  
Endangered and Nongame Species Program  
501 E. State St. Mail Code: 501-03  
P.O. Box 420  
Trenton, New Jersey 08625-0420

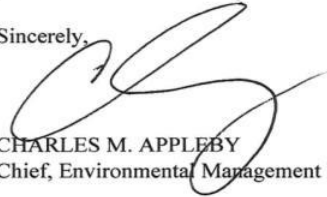
Subject: Agency Coordination and Site Visit – NJARNG Sea Girt NGTC INRMP Update

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Sincerely,

  
CHARLES M. APPLEBY  
Chief, Environmental Management Bureau



---

Agency Coordination Site Visit for  
Preparation of a Revised Integrated Natural Resources Management Plan and  
Record of Environmental Consideration for the  
Sea Girt National Guard Training Center

MEETING MINUTES

Wednesday 8 November 2017

Time: 9:00-11:30 am

Location: 1 Camp Drive, Sea Girt, NJ 08750

Attendees: Bill McBride (NJARNG), Ron Popowski (USFWS-NJFO), Meghan Kolk (Conserve Wildlife Foundation & USFWS-NJFO), Todd Pover (Conserve Wildlife Foundation – on behalf of NJDEP-ENSP), Jennifer Allen (Marstel-Day), Chuck Appleby (NJARNG)

**INRMP Update Discussion**

*Tracking of Content Changes*

- Content changes in the INRMP update will be summarized in an errata sheet, i.e., a table listing the changes for each relevant section.
- Changes are also indicated via track changes.

*Key Dates for Agencies*

- 30 Jan 2018: Version 2 Draft INRMP/REC for agency review (e-copy; courtesy copy)
  - Ron/FWS requests hard copy for this version
  - DEP only wants a hard copy for the final INRMP
- 18 Feb 2018: Optional for agencies to provide comments on V2 Draft
- 3 Apr 2018: Version 4 Draft INRMP/REC (official version; e-copy)
- 23 Apr 2018: Official agency comments due on V4 Draft
- 13 Jun 2018: Final INRMP/REC for signature (e-copy)
- 19 Jun 2018: Signatures due
- 9 Jul 2018: Final INRMP/REC for distribution (e-copy; printed copies mailed)

*Federal/State Protected Species: Management Discussion*

General: NJARNG Sea Girt NGTC does have funds to survey for beach-nesting birds for next summer.

RTE Species Data Gaps:

- Conserve Wildlife Foundation (Todd): will provide Monmouth County beach-nesting bird survey report for 2014-2016 [COMPLETE]
- DEP: Christina Davis can provide 2017 beach-nesting bird survey report (Todd will assist) [COMPLETE]
- FWS/CWF (Meghan) can provide the amaranth and knotweed 2014-2017 data. [COMPLETE]

Piping Plover:

- Low numbers of plover observations on NGTC. No plovers nesting in recent years. But NGTC is important in providing habitat and habitat connectivity for the plover's coastal distribution in NJ.
- Plovers tend to have strong site fidelity annually for nesting.

Least Tern:

- Terns tend to move colonies annually across sites (due to habitat conditions, presence of predators, disturbance levels). Even though terns do not occupy NGTC annually for nesting, NGTC still provides important habitat within the larger mosaic of suitable nesting habitat annually.
- NGTC has had issues with predators that discourage tern nesting. Foxes have been trapped. USDA removed five foxes this year.
- NGTC is also important since state is not "getting back" any more undeveloped beaches.

Red Knot:

- For the prior bird and bat surveys for a proposed wind turbine (not approved), year-round bird surveys were conducted. No red knots detected.
- If detected at some point in future, NGTC will coordinate with DEP and FWS. Wendy Walsh is the FWS Red Knot Lead. Conservation measures may be aspects such as:
  - o do not disturb feeding and roosting activities
  - o keep a distance when driving on beach
- Meghan also will send typical FWS language. [COMPLETE]

Osprey:

- Osprey nests on platform and on cell tower.

Bald Eagle:

- 
- Eagles have been observed in the spring for the past three years hanging out on the cell tower. No eagle nesting has occurred though. Eagles do nest nearby so they likely are using NGTC as a foraging area.
  - NGTC has used game cameras to monitor the behavior of the eagles. As long as the eagles continue to not show any nest building activities, the cell tower can be managed without restrictions in regards to eagles.

Seabeach Amaranth:

- High annual variability. Most years, there are small numbers at NGTC; a few years, there are high numbers.
- What is the significance of this small beach for seabeach amaranth? Small populations along this coast of NJ are fairly consistent and persistent; they help re-populate other areas.

Seabeach Knotweed:

- Has not occurred in recent years.

*Integration with NJ Wildlife Action Plan*

- Online, this SWAP is stated that it will be available in 2015. But the SWAP has been delayed. [Todd Pover followed up via email that DEP plans to release the revised SWAP by late November 2017 for public comment.]

*CZM Rules*

- CZM regulation has been updated. In INRMP, will need to check wording and numbering. Meghan will send Jenn the comparison sheet that lists the changes. [COMPLETE]
- In INRMP, ensure that we cross-walk the revised CZM regulation to the beach-raking section in particular.

*Flood Management Regulations*

- For INRMP, ensure review of these regulations, including for Monmouth County.

*Fluker Posts*

- First set was pulled out by maintenance crew before a storm (since they were ordered to remove everything from the beach); existing posts are 2<sup>nd</sup> set.
- Project in INRMP: maintain posts (paint, etc.)

---

*Habitat Restoration Plan (wetlands, beach habitats) & Coastal Permitting*

- Working with DEP-Division of Land Use Regulation for CAFRA permits (costly) to conduct invasive plant control in wetlands and beach vegetation management. POC at DEP is Kelly Davis.
- For wetlands, the habitat restoration is largely invasive species control (e.g., Phragmites).
- For beach/dunes, a lot of Asiatic sandsedge was removed this year (largely in northern protection area). Also, another restoration objective is to reduce the percent cover of American beach dunegrass.
- In the INRMP, flexible wording for adaptive management is essential to help support the implementation of these habitat restoration projects. (A barrier to the effective and adaptive implementation of the habitat restoration plan is the CAFRA permit process.)
- NGTC maybe can partner with DEP non-game and ENSP for these state divisions to voice support for relaxed permit fees for the habitat restoration.

*Climate Change*

- Ron/FWS recommends that we use as local information as possible. Rutgers Climate Institute and NJ Climate Adaptation Alliance are great resources. Also NOAA.
- Point to Hurricane Sandy for storm surge effects. Also discuss how natural coastal infrastructure such as the NGTC beach/dunes provide storm-buffering benefits.
- Include conservation measure of using native plants in NGTC landscaping because non-native plants are killed from the saltwater during storm surges.

*Pest Management*

- West Nile virus detected in mosquitoes this year sampled from the freshwater wetlands during Zeke virus monitoring (conducted by Monmouth County Mosquito Commission, Kyle Cole). There is no active mosquito control.

*Outdoor Recreation/Environmental Education*

- The following groups regularly visit NGTC for environmental education activities: Boy Scouts, NGB Youth Camp, State Police Youth Camp, and Conserve Wildlife Foundation (summer camp for youth).

Figure 6-1 Sea Girt NGJTC Rare Species Protection Areas and Endangered and Threatened Species Locations Map



Figure 2-6 Sea Girt NGJTC Ecological and Vegetation Communities Map



**FEDERALLY OR STATE-LISTED THREATENED OR ENDANGERED SPECIES  
DOCUMENTED AT SEA GIRT NGTC**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Current or Historically Known Reproductive Habitat Onsite</b>
<i>Amaranthus pumilus</i>	Seabeach amaranth	T	E	Yes (Beach)
<i>Ammodramus henslowii</i>	Henslow's sparrow	NL	E	No
<i>Ammodramus savannarum</i>	Grasshopper sparrow	NL	T (BR), SC (NB)	No
<i>Asio flammeus</i>	Short-eared owl	NL	E (BR), SC (NB)	No
<i>Bubullcus ibis</i>	Cattle egret	NL	T (BR), SC (NB)	No
<i>Charadrius melodus</i>	Piping plover	T	E	Yes (Beach)
<i>Circus cyaneus</i>	Northern harrier	NL	E (BR), SC (NB)	No
<i>Eremophila alpestris</i>	Horned lark	NL	T (BR), SC (NB)	No
<i>Falco peregrinus</i>	Peregrine falcon	NL	E (BR), SC (NB)	No
<i>Falco sparverius</i>	American kestrel	NL	T	No
<i>Haliaeetus leucocephalus</i>	Bald eagle	NL	E (BR)/T(NB)	No
<i>Nyctanassa violacea</i>	Yellow-crowned night heron	NL	T	No
<i>Nycticorax nycticorax</i>	Black-crowned night heron	NL	T (BR), SC (NB)	No
<i>Pandion haliaetus</i>	Osprey	NL	T (BR)	Yes (Adjacent to Stockton Lake)
<i>Passerculus sandwichensis</i>	Savannah sparrow	NL	T (BR)	No
<i>Polygonum glaucum</i>	Seabeach knotweed	NL	E	Yes (Beach)
<i>Pooecetes gramineus</i>	Vesper sparrow		E (BR)/SC (NB)	No
<i>Rynchops niger</i>	Black skimmer	NL	E	No
<i>Sterna antillarum</i>	Least tern	NL	E	Yes (Beach)
<i>Sterna dougallii</i>	Roseate tern	E	E	No

T=threatened, E=endangered, SC=Special Concern, NL=not listed, BR=breeding population, NB=non-breeding population.



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REPLY TO  
ATTENTION OF

NGNJ-CFMO-EM

30 April 2018

Dave Jenkins, Chief  
New Jersey Department of Environmental Protection  
Division of Fish and Wildlife  
Endangered and Nongame Species Program  
501 E. State St. Mail Code: 501-03  
P.O. Box 420  
Trenton, New Jersey 08625-0420

Subject: NJARNG Sea Girt NGTC INRMP Update – Agency Distribution Courtesy Copy

Dear Mr. Jenkins:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement, we seek New Jersey Department of Environmental Protection coordination concerning the conservation, protection, and management of protected species and other fish and wildlife resources on Sea Girt NGTC.

An early draft of the INRMP update is now available as a courtesy copy for your review. We have submitted this draft electronically to you, as well as Mr. Todd Pover at the Conserve Wildlife Foundation. At this time, it is optional for agencies to provide comments on this early draft. However, we hope you can review this current draft to ensure your agency priorities are fully taken into consideration and properly addressed in the plan. The official Draft INRMP will be released at a later date and we will formally request agency review at that point.

Please provide comments on this early draft via the Errata Sheet (provided to you electronically) by 16 May 2018 by emailing the comments to Jennifer Allen at Marstel-Day ([jallen@marstel-day.com](mailto:jallen@marstel-day.com)) William McBride ([William.McBride@dmava.nj.gov](mailto:William.McBride@dmava.nj.gov)) who is my natural resources manager.

Sincerely,

**APPLEBY.CHARLE** Digitally signed by  
**S.M.1228847409** APPLEBY.CHARLES.M.1228847409  
Date: 2018.04.30 08:16:34 -04'00'

CHARLES APPLEBY  
Chief, Environmental Management Bureau  
Environmental Protection Specialist





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REPLY TO  
ATTENTION OF

NGNJ-CFMO-EM

30 April 2018

Ron Popowski, Assistant Supervisor  
U.S. Fish and Wildlife Service  
New Jersey Field Office  
4 E. Jimmie Leeds Road, Suite 4  
Galloway, New Jersey 08205-4465

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Sincerely,

**APPLEBY.CHARLES.M.1228847409**  
Digitally signed by  
APPLEBY.CHARLES.M.122884740  
9  
Date: 2018.04.30 08:17:35 -04'00'

CHARLES APPLEBY  
Chief, Environmental Management Bureau Environmental  
Protection Specialist

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Description
Draft INRMP for Sea Girt

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Description
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Description
Draft Sea Girt INRMP for your review

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John.Hellferty@dep.nj.gov	Downloaded
jallen@marstel-day.com	Not Downloaded

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Description
Sea Girt Natural Resources Management Plan. Please review and comment on Sections 6.3.8 and 6.3.9 (helicopter operation restrictions) at least by 25 May.

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Errata Sheet_Sea Girt NJARNG DRAFT INRMP v2_May 2018_blank.xlsx (22 KB)	No	5/14/2018 7:41:27 AM	<a href="#">View File Hash</a>
NJDEP Transmittal.pdf (96 KB)	No	5/14/2018 7:41:27 AM	<a href="#">View File Hash</a>
USFWS Transmittal.pdf (95 KB)	No	5/14/2018 7:41:27 AM	<a href="#">View File Hash</a>
Sea Girt NJARNG 2018 INRMP DRAFT v2_May 2018_INRMP and Appendix combined.pdf (28 MB)	No	5/14/2018 7:41:27 AM	<a href="#">View File Hash</a>

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Christopher.N.McAndrew@uscg.mil	Downloaded
LPP5124@gw.njsp.org	Not Downloaded

### What is AMRDEC

The U. S. Army Aviation and Missile Research Development and Engineering Center, a subordinate laboratory to the Research, Development and Engineering Command, is the Army's focal point for providing research, development, and engineering technology and services for aviation and missile platforms across the lifecycle.

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REPLY TO  
ATTENTION OF

NGNJ-CFMO-EM

24 July 2018

Ms. Barbara Ilaria  
Clerk's Office  
201 East Main Street  
Manasquan, NJ 08736

Subject: NJARNG Sea Girt NGTC Draft INRMP Update – Agency Review

Dear Ms. Ilaria:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement, we seek the Borough of Manasquan's coordination concerning the conservation, protection, and management of natural resources on Sea Girt NGTC.

A draft of the INRMP update is now available for your review. We have submitted this draft to you as a hard copy. We request that you review this Draft INRMP and provide comments to ensure your agency priorities are fully taken into consideration and properly addressed in the plan.

Please provide comments on this Draft INRMP via the Errata Sheet (provided to you electronically) by 6 August 2018 by emailing the comments to Jennifer Allen at Marstel-Day ([jallen@marstel-day.com](mailto:jallen@marstel-day.com)) and William McBride ([William.McBride@dmava.nj.gov](mailto:William.McBride@dmava.nj.gov)) who is my natural resources manager.

Sincerely,

CHARLES APPLEBY  
Chief, Environmental Management Bureau  
Environmental Protection Specialist



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REPLY TO  
ATTENTION OF

NGNJ-CFMO-EM

24 July 2018

Chairman Gregory Love  
Manasquan Environmental Commission  
201 East Main Street  
Manasquan, NJ 08736

Subject: NJARNG Sea Girt NGTC Draft INRMP Update – Agency Review

Dear Chairman Love:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement, we seek the Manasquan Environmental Commission's coordination concerning the conservation, protection, and management of natural resources on Sea Girt NGTC.

A draft of the INRMP update is now available for your review. We have submitted this draft to you as a hard copy. We request that you review this Draft INRMP and provide comments to ensure your agency priorities are fully taken into consideration and properly addressed in the plan.

Please provide comments on this Draft INRMP via the Errata Sheet (provided to you electronically) by 6 August 2018 by emailing the comments to Jennifer Allen at Marstel-Day ([jallen@marstel-day.com](mailto:jallen@marstel-day.com)) and William McBride ([William.McBride@dmava.nj.gov](mailto:William.McBride@dmava.nj.gov)) who is my natural resources manager.

Sincerely,

CHARLES APPLEBY  
Chief, Environmental Management Bureau  
Environmental Protection Specialist





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REPLY TO  
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NGNJ-CFMO-EM

24 July 2018

Mr. Eric Beckley  
Army National Guard  
Natural & Cultural Resources Program Manager  
111 South George Mason Drive  
Arlington, VA 22204

Subject: NJARNG Sea Girt NGTC Draft INRMP Update – Agency Review

Dear Mr. Beckley:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement, we seek the National Guard Bureau's coordination concerning the conservation, protection, and management of natural resources on Sea Girt NGTC.

A draft of the INRMP update is now available for your review. We have submitted this draft to you electronically. We request that you review this Draft INRMP and provide comments to ensure your agency priorities are fully taken into consideration and properly addressed in the plan.

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Sincerely,

CHARLES APPLEBY  
Chief, Environmental Management Bureau  
Environmental Protection Specialist



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REPLY TO  
ATTENTION OF

NGNJ-CFMO-EM

24 July 2018

Mr. John Heiferty  
New Jersey Department of Environmental Protection  
Division of Fish and Wildlife  
Endangered and Nongame Species Program  
501 E. State St. Mail Code: 501-03  
P.O. Box 420  
Trenton, NJ 08625-0420

Subject: NJARNG Sea Girt NGTC Draft INRMP Update – Agency Review

Dear Mr. Jenkins:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement, we seek the New Jersey Department of Environmental Protection Endangered and Nongame Species Program's coordination concerning the conservation, protection, and management of natural resources on Sea Girt NGTC.

A draft of the INRMP update is now available for your review. We have submitted this draft to you electronically. We request that you review this Draft INRMP and provide comments to ensure your agency priorities are fully taken into consideration and properly addressed in the plan.

Please provide comments on this Draft INRMP via the Errata Sheet (provided to you electronically) by 6 August 2018 by emailing the comments to Jennifer Allen at Marstel-Day ([jallen@marstel-day.com](mailto:jallen@marstel-day.com)) and William McBride ([William.McBride@dmava.nj.gov](mailto:William.McBride@dmava.nj.gov)) who is my natural resources manager.

Sincerely,

CHARLES APPLEBY  
Chief, Environmental Management Bureau  
Environmental Protection Specialist



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REPLY TO  
ATTENTION OF

NGNJ-CFMO-EM

24 July 2018

Ms. Megan Brunatti  
New Jersey Department of Environmental Protection  
Office of Permit Coordination  
401 East State St.  
Mail Code: 401-07J  
P.O. Box 420  
Trenton, NJ 08625-0420

Subject: NJARNG Sea Girt NGTC Draft INRMP Update – Agency Review

Dear Ms. Brunatti:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement, we seek the New Jersey Department of Environmental Protection Office of Permit Coordination's coordination concerning the conservation, protection, and management of natural resources on Sea Girt NGTC.

A draft of the INRMP update is now available for your review. We have submitted this draft to you electronically. We request that you review this Draft INRMP and provide comments to ensure your agency priorities are fully taken into consideration and properly addressed in the plan.

Please provide comments on this Draft INRMP via the Errata Sheet (provided to you electronically) by 6 August 2018 by emailing the comments to Jennifer Allen at Marstel-Day ([jallen@marstel-day.com](mailto:jallen@marstel-day.com)) and William McBride ([William.McBride@dmava.nj.gov](mailto:William.McBride@dmava.nj.gov)) who is my natural resources manager.

Sincerely,

CHARLES APPLEBY  
Chief, Environmental Management Bureau  
Environmental Protection Specialist



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REPLY TO  
ATTENTION OF

NGNJ-CFMO-EM

24 July 2018

Mr. Ron Popowski  
Assistant Supervisor  
U.S. Fish and Wildlife Service  
New Jersey Field Office  
4 E. Jimmie Leeds Road, Suite 4  
Galloway, NJ 08205-4465

Subject: NJARNG Sea Girt NGTC Draft INRMP Update – Agency Review

Dear Mr. Popowski:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement, we seek the U.S. Fish and Wildlife Service's coordination concerning the conservation, protection, and management of natural resources on Sea Girt NGTC.

A draft of the INRMP update is now available for your review. We have submitted this draft to you electronically and by hard copy. We request that you review this Draft INRMP and provide comments to ensure your agency priorities are fully taken into consideration and properly addressed in the plan.

Please provide comments on this Draft INRMP via the Errata Sheet (provided to you electronically) by 6 August 2018 by emailing the comments to Jennifer Allen at Marstel-Day ([jallen@marstel-day.com](mailto:jallen@marstel-day.com)) and William McBride ([William.McBride@dmava.nj.gov](mailto:William.McBride@dmava.nj.gov)) who is my natural resources manager.

Sincerely,

CHARLES APPLEBY  
Chief, Environmental Management Bureau  
Environmental Protection Specialist



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REPLY TO  
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NGNJ-CFMO-EM

24 July 2018

LCDR Christopher N. McAndrew  
United States Coast Guard Air Station Atlantic City  
William J. Hughes Federal Aviation Administration Technical Center  
Atlantic City International Airport  
Egg Harbor Township, NJ 08405

Subject: NJARNG Sea Girt NGTC Draft INRMP Update – Agency Review

Dear LCDR McAndrew:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement, we seek the United States Coast Guard Air Station Atlantic City's coordination concerning the conservation, protection, and management of natural resources on Sea Girt NGTC.

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Please provide comments on this Draft INRMP via the Errata Sheet (provided to you electronically) by 6 August 2018 by emailing the comments to Jennifer Allen at Marstel-Day ([jallen@marstel-day.com](mailto:jallen@marstel-day.com)) and William McBride ([William.McBride@dmava.nj.gov](mailto:William.McBride@dmava.nj.gov)) who is my natural resources manager.

Sincerely,



CHARLES APPLEBY  
Chief, Environmental Management Bureau  
Environmental Protection Specialist



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REPLY TO  
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24 July 2018

LT Brian Westervelt  
New Jersey State Police Aviation Bureau  
152 Scotch Road West  
Ewing Township, NJ 08628

Subject: NJARNG Sea Girt NGTC Draft INRMP Update – Agency Review

Dear LT Westervelt:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement, we seek the New Jersey State Police Aviation Bureau's coordination concerning the conservation, protection, and management of natural resources on Sea Girt NGTC.

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Sincerely,

CHARLES APPLEBY  
Chief, Environmental Management Bureau  
Environmental Protection Specialist



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REPLY TO  
ATTENTION OF

NGNJ-CFMO-EM

24 July 2018

Ms. Lorraine Carafa,  
Administrator  
P.O. Box 296  
321 Baltimore Boulevard  
Sea Girt, NJ 08750

Subject: NJARNG Sea Girt NGTC Draft INRMP Update – Agency Review

Dear Ms. Carafa:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement, we seek the Borough of Sea Girt's coordination concerning the conservation, protection, and management of natural resources on Sea Girt NGTC.

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Sincerely,



CHARLES APPLEBY  
Chief, Environmental Management Bureau  
Environmental Protection Specialist



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REPLY TO  
ATTENTION OF

NGNJ-CFMO-EM

24 July 2018

Sea Girt Environmental Commission  
c/o Ms. Lorraine Carafa  
P.O. Box 296  
321 Baltimore Boulevard  
Sea Girt, NJ 08750

Subject: NJARNG Sea Girt NGTC Draft INRMP Update – Agency Review

Dear Ms. Carafa:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement, we seek the Sea Girt Environmental Commission's coordination concerning the conservation, protection, and management of natural resources on Sea Girt NGTC.

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Sincerely,

CHARLES APPLEBY  
Chief, Environmental Management Bureau  
Environmental Protection Specialist





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REPLY TO  
ATTENTION OF

NGNJ-CFMO-EM

24 July 2018

Ms. Linda Brennen  
Monmouth County Environmental Council  
Hall of Records Annex  
One East Main Street  
Freehold, NJ 07728  
Subject: NJARNG Sea Girt NGTC Draft INRMP Update – Agency Review

Dear Ms. Brennen:

The Sea Girt National Guard Training Center (NGTC), a facility of the New Jersey Army National Guard, is in the process of updating its Integrated Natural Resources Management Plan (INRMP) and Record of Environmental Consideration. This document is a 5-year plan which identifies and provides management strategies for the natural resources at this training center. Per the Sikes Act, as amended, 16 U.S.C. 670a-670f and the Sikes Act Tripartite Agreement, we seek the Monmouth County Environmental Council's coordination concerning the conservation, protection, and management of natural resources on Sea Girt NGTC.

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Please provide comments on this Draft INRMP via the Errata Sheet (provided to you electronically) by 6 August 2018 by emailing the comments to Jennifer Allen at Marstel-Day ([jallen@marstel-day.com](mailto:jallen@marstel-day.com)) and William McBride ([William.McBride@dmava.nj.gov](mailto:William.McBride@dmava.nj.gov)) who is my natural resources manager.

Sincerely,



CHARLES APPLEBY  
Chief, Environmental Management Bureau  
Environmental Protection Specialist

## Package Status

Package ID:	14523933
Sender's Name:	bill mcbride
Sender's Email:	william.mcbride@dmava.nj.gov
Date Uploaded:	7/24/2018 9:18:03 AM
Delete Date:	8/3/2018
Encrypt Email:	False
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Description
Draft Sea Girt INRMP for your review

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transmittal letters pdf (2 MB)	No	7/24/2018 9:18:03 AM	<a href="#">View File Hash</a>
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eric.r.beckley.civ@mail.mil	Downloaded
John.Heilferty@dep.nj.gov	Not Downloaded
Megan.Brunathi@dep.nj.gov	Not Downloaded
Christopher.N.McAndrew@uscg.mil	Not Downloaded
lpp5227@gw.njsp.org	Downloaded
lcarafa@seagirtboro.com	Not Downloaded
ron_popowski@fws.gov	Not Downloaded
todd.povey@conservewildlife.nj.gov	Downloaded
Christina.Davis@dep.nj.gov	Not Downloaded
tharmon@seagirtboro.com	Not Downloaded
jallen@marstel-day.com	Not Downloaded
Daniel.Dreher@dmava.nj.gov	Not Downloaded
charles.m.appleby.civ@mail.mil	Not Downloaded

## What is AMRDEC

The U. S. Army Aviation and Missile Research Development and Engineering Center, a subordinate laboratory to the Research, Development and Engineering Command, is the Army's focal point for providing research, development, and engineering technology and services for aviation and missile platforms across the lifecycle.

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Package ID:	14607594	Description:	Draft Sea Girt INRMP
Sender's Name:	william mcbride		
Sender's Email:	william.mcbride@dmava.nj.gov		
Date Uploaded:	7/30/2018 2:54:01 PM		
Delete Date:	8/9/2018		
Encrypt Email:	False		
Notification when Download Starts:	False		
Notification when Download Ends:	True		
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transmittal letters.pdf (2 MB)	No	7/30/2018 2:54:01 PM	<a href="#">View File Hash</a>

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### What is AMRDEC

The U. S. Army Aviation and Missile Research Development and Engineering Center, a subordinate laboratory to the Research, Development and Engineering Command, is the Army's focal point for providing research, development, and engineering technology and services for aviation and missile platforms across the lifecycle.

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---

**From:** Beckley, Eric R CIV NG NGB ARNG (US)  
**To:** [McBride, William C.](mailto:William.McBride@dmava.nj.gov)  
**Subject:** RE: [Non-DoD Source] Draft Sea Girt National Guard Training Center Natural Resources Management Plan (UNCLASSIFIED)  
**Date:** Monday, August 13, 2018 12:55:48 PM  
**Attachments:** [signature page Myer.docx](#)

---

From: Beckley, Eric R CIV NG NGB ARNG (US) <eric.r.beckley.civ@mail.mil>  
Sent: Tuesday, July 24, 2018 11:34 AM  
To: McBride, William C. <William.McBride@dmava.nj.gov>  
Subject: RE: [Non-DoD Source] Draft Sea Girt National Guard Training Center Natural Resources Management Plan (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Bill-

We are good to go with your INRMP as soon as all the partners are.

Our only request would be to include a word version as we may need to edit our signature page as we have new leadership coming in.

Let me know if you need anything before then. Thanks-

Eric Beckley  
Army National Guard  
Natural & Cultural Resources Program Manager  
111 South George Mason Drive  
Arlington, VA 22204  
W: 703.601.7036

-----Original Message-----

From: McBride, William C. [<mailto:William.McBride@dmava.nj.gov>]  
Sent: Tuesday, July 24, 2018 10:11 AM  
To: Linda.Brennen@co.monmouth.nj.us; Beckley, Eric R CIV NG NGB ARNG (US) <eric.r.beckley.civ@mail.mil>; Heilferty, John <John.Heilferty@dep.nj.gov>; Brunatti, Megan <Megan.Brunatti@dep.nj.gov>; Mcandrew, Christopher N LCDR USCG ATLANTIC CITY (US) <christopher.n.mcandrew@uscg.mil>; Brian Westervelt <lpp5227@gw.njsp.org>; Lorraine Carafa <lcarafa@seagirtboro.com>; Popowski, Ron <ron\_popowski@fws.gov>; Todd Pover <todd.pover@conservewildlifenj.org>; Davis, Christina <Christina.Davis@dep.nj.gov>; Tim Harmon

---

<tharmon@seagirtboro.com>  
Cc: jallen@marstel-day.com; Dreher, Daniel <Daniel.Dreher@dmava.nj.gov>; Appleby, Charles M CIV NG  
NJARNG (US) <charles.m.appleby.civ@mail.mil>  
Subject: [Non-DoD Source] Draft Sea Girt National Guard Training Center Natural Resources Management Plan

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

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Hello,

We've finalized the draft Natural Resources Management Plan for the Sea Girt National Guard Training Center in Monmouth County. The plan helps guide my agency to conserve natural resources while ensuring the continued training mission at the facility. The plan has been in place since 2003. If you're wondering why you got this email it's that all of you have some role in ensuring the successful implementation of the plan.

In a few minutes you'll be getting an email invite from the US Army's Safe Access File Exchange (AMRDEC SAFE) system to download a copy of the plan and an errata sheet. It's too big to email.

I know all of you are very busy, but we'd like you to review and, using the errata sheet, provide comments on the draft plan to me and Jennifer Allen (jallen@marstel-day.com < Caution-<mailto:jallen@marstel-day.com> > ) by 6 August. Feel free to distribute the plan to any folks in your organization that may have an interest in the plan.

You can call me to discuss if need be.

Thanks

Bill McBride  
Environmental Specialist  
NJARNG  
CFMO-EMB  
101 Eggerts Crossing Road  
Lawrenceville, NJ 08648

william.mcbride@dmava.nj.gov < Caution-<mailto:william.mcbride@dmava.nj.gov> >

(609) 530 7136 (voice)  
(609) 530 6880 (fax)  
445-9136 (DSN voice)  
445-9880 (DSN fax)

---

**From:** [Jennifer Allen](#)  
**To:** [Ashleigh Benson](#)  
**Subject:** FW: [EXTERNAL] Draft Sea Girt National Guard Training Center Natural Resources Management Plan  
**Date:** Wednesday, September 12, 2018 3:41:06 PM

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**From:** Ron Popowski [mailto:[ron\\_popowski@fws.gov](mailto:ron_popowski@fws.gov)]  
**Sent:** Tuesday, July 31, 2018 9:28 AM  
**To:** Bill McBride <[William.McBride@dmava.nj.gov](mailto:William.McBride@dmava.nj.gov)>; Jennifer Allen <[jallen@marstel-day.com](mailto:jallen@marstel-day.com)>  
**Cc:** Meghan Kolk <[meghan\\_kolk@fws.gov](mailto:meghan_kolk@fws.gov)>  
**Subject:** Re: [EXTERNAL] Draft Sea Girt National Guard Training Center Natural Resources Management Plan  
Hi Bill and Jennifer,

We have no further comments. We will await for a copy of signature page from you as soon the draft is finalized.

Appreciate your time and efforts updating the Sea Girt NGTC INRMP.

Thanks,

On Tue, Jul 24, 2018 at 10:11 AM McBride, William C. <[William.McBride@dmava.nj.gov](mailto:William.McBride@dmava.nj.gov)> wrote:

Hello,

We've finalized the draft Natural Resources Management Plan for the Sea Girt National Guard Training Center in Monmouth County. The plan helps guide my agency to conserve natural resources while ensuring the continued training mission at the facility. The plan has been in place since 2003. If you're wondering why you got this email it's that all of you have some role in ensuring the successful implementation of the plan.

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Bill McBride  
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445-9880 (DSN fax)  
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<http://www.nj.gov/military/army/index.html>



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--

Ron Popowski  
Endangered Species/Conservation Planning Assistance Supervisor

New Jersey Field Office  
U.S. Fish and Wildlife Service  
4 E. Jimmie Leeds Road, Suite 4  
Galloway, New Jersey 08205  
609.241.7872

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**From:** [Jennifer Allen](#)  
**To:** [Elizabeth Pratt](#); [Ashleigh Benson](#)  
**Subject:** FW: Draft Sea Girt National Guard Training Center Natural Resources Management Plan  
**Date:** Monday, August 6, 2018 1:54:58 PM

---

**From:** Todd Pover [mailto:todd.pover@conservewildlifenj.org]  
**Sent:** Monday, August 6, 2018 9:33 AM  
**To:** McBride, William C. <William.McBride@dmava.nj.gov>; Jennifer Allen <jallen@marstel-day.com>  
**Cc:** John <John.Heiferty@dep.nj.gov>; Christina Davis <Christina.Davis@dep.nj.gov>  
**Subject:** Re: Draft Sea Girt National Guard Training Center Natural Resources Management Plan

Bill,

On behalf of the NJDFW-ENSP, I reviewed the "final" draft version of the INRMP. As you know, we were given a courtesy review of an earlier draft version of the plan and made comments at that time. We appreciate that all of the earlier comments made by us were incorporated into this revised version. We have no additional comments on or suggested revisions to this finalized draft. Thanks again for the opportunity to review this document.

Todd Pover  
Senior Wildlife Biologist  
Conserve Wildlife Foundation of New Jersey  
609.306.4475  
[todd.pover@conservewildlifenj.org](mailto:todd.pover@conservewildlifenj.org)

On Tue, Jul 24, 2018 at 10:10 AM, McBride, William C. <[William.McBride@dmava.nj.gov](mailto:William.McBride@dmava.nj.gov)> wrote:

Hello,

We've finalized the draft Natural Resources Management Plan for the Sea Girt National Guard Training Center in Monmouth County. The plan helps guide my agency to conserve natural resources while ensuring the continued training mission at the facility. The plan has been in place since 2003. If you're wondering why you got this email it's that all of you have some role in ensuring the successful implementation of the plan.

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---

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Thanks

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<http://www.nj.gov/military/army/index.html>



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**MONMOUTH COUNTY PLANNING BOARD**  
ENVIRONMENTAL COUNCIL



EDWARD SAMPSON, PP, AICP  
*Director of Planning*

WILMA MORRISSEY  
*Council Chairman*

---

August 6, 2018

Bill McBride  
Environmental Specialist  
NJARNG  
CFMO-EMB  
101 Eggerts Crossing Road  
Lawrenceville, NJ 08648

Re: Sea Girl National Guard Training Center (NGTC)  
Draft Natural Resources Management Plan

Dear Mr. McBride:

The Monmouth County Environmental Council appreciates the opportunity to review the Sea Girl National Guard Training Center Draft Integrated Natural Resources Management Plan (INRMP). Staff and members of the County Environmental Council have reviewed the INRMP to ensure Council's priorities are fully taken into consideration and properly addressed in the plan. The Council offers comments in the attached Errata Sheet.

If you have any questions, please do not hesitate to contact Amber Mallm, Environmental Specialist and staff to the MCEC. She can be reached at 732-431-7460 ext. 7473 or via email at [amber.mallm@co.monmouth.nj.us](mailto:amber.mallm@co.monmouth.nj.us).

Very truly yours,

Wilma Morrissey, Chairman  
Monmouth County Environmental Council

C: Linda J. Brennen, PP/AICP, Supervisor, Environmental & Sustainability Planning  
Amber Mallm, Environmental Specialist, Environmental & Sustainability Planning

HALL OF RECORDS ANNEX - ONE EAST MAIN STREET - FREEHOLD, NEW JERSEY 07728  
TPI - PHONE: 732-431-7460 • FAX 732-460-7640  
<https://co.monmouth.nj.us/page.aspx?id=3005>

Errata Sheet of Agency Comments  
 Updates to 2013 INRMP  
 Sea Girt National Training Center  
 Sea Girt, New Jersey

**Errata Sheet of Draft INRMP v2 (May 2018) – Agency Courtesy Review Copy**

Source of Comment	Applicable Section; Page; line number	Comment	NJARNG Response	Changes Made to Draft INRMP in response to Comment
USFWS - Meghan Kolk	Figure 4-2; Page 4-15	I don't see where asiatic sand sedge is located on the map.	we don't typically have any locational data on it as we don't gps it when we find it. We find it throughout both protection areas.	There is a small occurrence shown on Figure 4-2 within the Northern Protection Area. We added the NPA and the SPA to figure 4-2 to make it easier to find this small occurrence. And we also added this text to the INRMP content for 4.2.6.1 Invasive Species Management Priorities/Primary Dune: "On Figure 4-2, this small occurrence can be found within the Northern Protection Area." That said, the sedge appeared to be more widely distributed in the primary dune after Hurricane Sandy (as stated in the INRMP).
USFWS - Meghan Kolk	6.2.8; 6-16; 3-4	According to N.J.A.C. 7:5C-3.1 and 5.1, seabeach evening primrose is a Species of Special Concern (not endangered).	accepted	Text revised to Species of Special Concern.
USFWS - Meghan Kolk	6.2.8; 6-16; 5-6	According to N.J.A.C. 7:5C-3.1 and 5.1, sea-milkwort is a Species of Special Concern, presumed extirpated (not endangered).	accepted	Text revised to Species of Special Concern.
USFWS - Meghan Kolk	6.2.8; 6-16; 7-8	According to N.J.A.C. 7:5C-3.1 and 5.1, seabeach sandwort is state-listed as endangered (not Species of Special Concern).	accepted	Text revised to state-listed endangered.

Source of Comment	Applicable Section; Page; line number	Comment	NJARNG Response	Changes Made to Draft INRMP in response to Comment
USFWS - Meghan Kolk	6.3.5; 6-26; 31-34	An addendum to the <i>USFWS 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</i> dated March 9, 2015 gives a new definition for "fledged" as follows: For purposes of management plover chicks are considered fledged when observed in sustained flight for at least 15 meters, irrespective of age. In most cases, piping plover attain flight capability by 35 days of age, but longer pre-fledge periods may occur.	accepted	Text has been revised to reflect new "fledged" definition.
USFWS - Meghan Kolk	6.3.5; 6-29; 2-4	Same comment as above.	accepted	Text has been revised to reflect new "fledged" definition.
USFWS - Meghan Kolk	6.3.10.1; 6-35; 22	I could be wrong, but I believe NJDEP-ENSP typically starts monitoring the week of April 1; confirm with Christina Davis (ENSP)	accepted; see NJDEP comment on same issue	Text revised to 1 April.
USFWS - Meghan Kolk	6.3.10.2; 6-36; 21	NJDEP-ENSP technically has no jurisdiction over rare plants and is trying to limit their involvement; confirm with Christina Davis (ENSP) if they want to be part of the interagency surveys for rare plants.	accepted; see NJDEP comment on same issue	NJDEP-ENSP removed from the list.
USFWS - Meghan Kolk	6.3.11; 6-40; 26	In a meeting with Sea Girt Borough on May 8, 2018 , the Borough expressed interest in allowing leashed dogs on their beach in their "Recreational Zone" from October 1 through May 15. This zone begins at the border with NGTC and extends north to Beacon Blvd. This change is not yet in practice, but will become part of their Beach Management Plan and a new ordinance in the future. Dogs would still be prohibited from Beacon Blvd. north to the border with Spring Lake from March 15 through September 30, as this is their rare species protection area.	accepted	Text revised to note possible leash law change.

Source of Comment	Applicable Section; Page; line number	Comment	NJARNG Response	Changes Made to Draft INRMP in response to Comment
USFWS - Meghan Kolk	6.3.14; 6-45; 29	Red knots do not nest in NJ, and piping plovers and black skimmers would be done nesting by September 7. By this time all three species would be staging for migration or on a stopover during migration. In the future, would the presence of these species using the habitat for these purposes cancel the fireworks?	Maybe, but for last year's event, USFWS/NJDEP were only interested in nesting birds not those migrating through. The fireworks are of such short duration I doubt it would have any affect on a bird just resting or feeding at the site.	Text revised to remove red knot. Added that September 7th was outside of the nesting season for the rare bird species. Other text not revised since the text in question covered an event that occurred in 2017.
USFWS - Meghan Kolk	6.4; 6-48; 16	Will asiatic sand sedge control be part of the goal for habitat enhancement?	yes It's objective 3 of the management plan	In the INRMP, Asiatic sand sedge management is listed under the Land and Watershed Management Goal #2 (Section 4.3). Added a note in Section 6.4 under Rare Species Goal #6 pointing to Section 4.3 for the Asiatic sand sedge goal.
USFWS - NJFO	2.8.2.2; 2.29; 7-35	Recommendation: Opportunities to enhance some of the 95 acres of mowed lawn at Sea Girt NGTC, perhaps converting some of it to native warm season grasses to discourage Canada geese.	I'm not sure how to address these...maybe a take them under consideration and mention them somewhere, but definitely not a INRMP goal. That mowed area is recreational fields that they won't want to get rid of	In Section 2.8.2.2, added this text: Since these maintained lawns function as the parade grounds and support recreational activities, it is expected that these 95 acres will remain in a lawn state for the foreseeable future. However, if installation mission changes in the future result in not needing this current vegetative state, alternatives may be considered such as converting some of the lawns to native warm season grasses that would discourage the large concentrations of Canada geese, which is considered a nuisance species on the NGTC (see Section 5.2.2).

Source of Comment	Applicable Section; Page; line number	Comment	NJARNG Response	Changes Made to Draft INRMP in response to Comment
USFWS - NJFO	4.2.5; 4-11; 2-6	Recommendation: Opportunities for living shoreline a riparian habitat along Stockton Lake on the Sea Girt NGTC side.	we won't do any shoreline work until the bulkhead is replaced. there's no replacement date for that on.	In Section 4.2.5, added this text: It is anticipated that this steel bulkhead will last for decades; however, when it becomes time to replace the current bulkhead, the installation may consider whether a living shoreline is appropriate for this location.
NJDFW-ENSP	Section 2 Page 37	It indicates there was active LETE nesting at NGTC in years 2000-2003, 2005, 2012, but neglects the recent years of 2015-17, when nests were also present. Also, state records indicate fledglings in 2000-2002, not 2001-2003 as indicated here in the plan. It is correct in a later table.	accepted	LETE nests/fledgling numbers updated.
NJDFW-ENSP	Section 6 Page 9	The plan indicates, "No seabeach amaranth plants were identified from 2010 through 2013". It does not mention that plants were present each year from 2014-2017 as indicated in your table on Section 6 - Page 11. These being the most recent survey years, it seems they should be noted.	accepted	Text has been updated to include the recent survey data.
NJDFW-ENSP	Section 6 Page 12	Again, no mention in the narrative of least tern activity from 2014-2017, even though they are mentioned in the table immediately following and there was active use in the most recent years from 2015-17.	accepted	Text has been updated to include the recent survey data.
NJDFW-ENSP	Section 6 Page 19	It indicates all nesting to date (PIPL, LETE) has been in the NPA. However, in June 2015, LETE nesting did occur in the SPA (including nests and chicks).	accepted	Text has been updated per comment.
NJDFW-ENSP	Section 6 Page 19-20	Effective 2017, ENSP is no longer maintaining SBA fence during the Sept 1 - Dec 1 closure period. Those responsibilities will be with the USFWS or its designee. Fence provided by ENSP for the BNB closure may still be used, but the USFWS or its designee will coordinate on the removal and return the materials to ENSP.	NJARNG confirmed via email that this statement is correct.	NJDEP-ENSP removed from the group that maintains the fencing, and "USFWS (or its designee)" was added, per email clarification.

Source of Comment	Applicable Section; Page; line number	Comment	NJARNG Response	Changes Made to Draft INRMP in response to Comment
NJDFW-ENSP	Section 6 Page 26	The plan states, "However, routine lifeguard patrols may drive through the no rake zones in front of the NPA if no piping plover/least tern chicks are present and/or no adult piping plover/least terns are exhibiting mating behavior and/or are constructing a nest scrape." Shouldn't this also include when piping plover/least tern have a nest already (i.e. eggs)?	declined. Three bullets down on that page addresses when eggs are present. No vehicles in no rake zone	A subsequent bullet described the additional protection measures that are implemented if eggs are identified, including vehicle access restrictions. No change made.
NJDFW-ENSP	Section 6 Page 35 (Second bullet)	ENSP generally starts regular monitoring at this site in early April, not mid-March.	Accepted	Text updated per comment.
NJDFW-ENSP	Section 6 Page 36	ESNP is no longer participating in the June-August rare plant surveys, coordination with them as it relates to nesting bird activity is still needed, but they aren't physically involved. Also the ONLM is still conducting coastwide SBA/rare beach plant surveys once a year, including at NGTC, typically in late July or August.	Accepted. I'll ask todd if he has POC from ONLM to invite to plant survey	Text updated to remove NJDEP-ENSP from plant surveys, and the following sentence added: "Coordination also occurs with NJDEP-ENSP as it relates to nesting bird activity, but NJDEP-ENSP does not participate in the annual surveys."  Text added regarding ONLM annual rare beach plant surveys.
NJDFW-ENSP	Section 6 Page 41	The 50% veg cover cited as likely idea for piping plover is very high. The following link includes veg cover targets, triggers, and thresholds for piping plover. See Table 3 of the paper which is based on assessment of NJ habitat. <a href="http://www.conservewildlifenj.org/downloads/cwnj_137.pdf">http://www.conservewildlifenj.org/downloads/cwnj_137.pdf</a>	Accepted. Our habitat management plan (Objective 4) already identifies American beachgrass vegetation cover goals in NPA to levels no greater than 50% with patches ranging from 5% to 20% cover in frontal portions. Todd's report mention a target cover goal of <10% and	Text updated to reference journal article and suggested cover levels, and that the Sea Girt habitat management plan addresses these cover levels.

Source of Comment	Applicable Section; Page; line number	Comment	NJARNG Response	Changes Made to Draft INRMP in response to Comment
			13% for back and primary dune.	
NJDFW-ENSP	Cover Page	Just a quibble...it is great that a piping plover is pictured on the cover, but the photo is of a Great Lakes subspecies, by band and appearance, perhaps ENSP could provide a photo of an Atlantic population bird and NJ band (if a banded bird is desired).	Accepted.	Replaced with a picture of a piping plover observed on the East Coast.
NJDFW-ENSP	Signature Page	In recent beach management plans, we have been using the signature from the Assistant Commissioner of NJDEP Natural and Historic Resources, rather than the NJDFW Director because the plan encompasses both wildlife <b>and</b> plants; plants are under NJDPF, a separate division from NJDFW, but both are under the AC. The new recently appointed AC is Ray Bukowski.	Accepted	Signature page updated.
NJDMA VA	Section 7.2.2	Add new beach pass to appendix and update relevant INRMP sections	n/a	Replaced Appendix D with the 2018 beach pass policy; Updated beach pass policy text in the INRMP section 7.2.2/Outdoor Recreation Areas and Uses.



**Errata Sheet of Draft INRMP v3 (June 2018) – Army National Guard Installations and Environment Directorate Review Copy**

Source of Comment	Applicable Section; Page; line number	Comment	NJARNG Response	Changes Made to Draft INRMP in response to Comment
ARNG I&E	Cover	Consider taking 2022 off the cover page. . In 5 years if nothing has changed you can just update the project section and any small areas and have it re-signed again without the need for a contractor or extra effort.	Disagree. The regulators know it's a five year plan and, when the 5 year review comes due, they start asking about it. We can try to do it in house for the next iteration if time permits. Contract support is appreciated for revisions/updates.	None
ARNG I&E	Signature Page	Change National Guard Bureau, Environmental Programs Division to: Army National Guard Directorate, Installations & Environment. Suggest global search and replace. Acronym is ARNG I&E	ok	NGB Environmental Programs Division changed to ARNG I&E on signature page and in references
ARNG I&E	Signature Page	Signature for ARNG I&E is: Line 1: ERIK T. GORDON Line 2: COL, GS Line 3: I&E, Army National Guard	ok	Added to 1st line on signature page.
ARNG I&E	Page 2-47	Considering deleting the cultural section or reducing to just reference the ICRMP. If you want to leave it the way it is, that's fine, but not required	Leave it in. The last time we did an update, NGB wanted an expanded cultural section since natural and cultural issues are usually lumped together.	None
ARNG I&E	Page 3-6, line 4	Change DA Conservation Program to : ARNG Installations & Environment Division (ARNG I&E)	ok	Changed to ARNG I&E
ARNG I&E	Sect 4,5,6,7	Consider (your decision) Moving the "Project-Specific Management Goals' all to one stand alone Appendix. The thought here is that each year you can add, change, delete objectives as required to meet new goals/projects/challenges. If they are all in one appendix, then just that appendix can be updated in house without editing the entire document.	Disagree. I like having the goals embeded in each section since each section is about a particular "natural resource feature" at the site and the reader can easily see which management goals support each "feature."	None
ARNG I&E	Section 9.4	Suggest moving the INRMP Implementation Schedule to Appendix E as a stand-alone Appendix. This way it can be updated annually or as needed to reflect accomplishments, new projects, and push back the dates of anything that wasn't funded.	Disagree. Section 9 is about plan implementation so including the schedule in the section is logical.	None

<b>Source of Comment</b>	<b>Applicable Section; Page; line number</b>	<b>Comment</b>	<b>NJARNG Response</b>	<b>Changes Made to Draft INRMP in response to Comment</b>
ARNG I&E	Table E-3	Consider adding a Column for STEP Project #. So each project has its STEP # there. When projects are reviewed in STEP, we look to the INRMP to see if they are included. This could be an easy crosswalk to ensure projects are automatically approved.	Agree. See next tab.	Inserted STEP Project # column with project numbers from Bill.
ARNG I&E	2.8.4, pg 2-35	Any indication as to why plovers have not been successful? Any way to improve potential success? Same with terns.	As mentioned on page 6-40, foxes, dogs, and cats are the biggest problem to plovers and terns. Dog owners don't obey post "no dog" signs. A few years ago, we sent letters to pet owners requesting they comply with the no pet policy and the Site received several irate calls ranging from wanting to know how we got their name/address to they've lived in Sea Girt so long that it's their beach to use.	Added a brief summary on the threats affecting the plovers and terns, and referred to other sections for additional information.
ARNG I&E	4.2.4, pg 4-6	What are the restrictions/requirements within a protected wetland transition area?	NJAC 7:7A-2.3 presents the regulated activities in transition areas. We'll mention that in the section	Regulated activities in transition areas added.
ARNG I&E	4.2.4, pg 4-8	Include the FWPA permits in the Appendices.	agree, but we haven't gotten the permits yet so we can't include them	Defer until the permits are issued.

Source of Comment	Applicable Section; Page; line number	Comment	NJARNG Response	Changes Made to Draft INRMP in response to Comment
ARNG I&E	6.1, pg 6-1	Lines 24-26 are a little deceiving. Federal agencies cannot "take" listed species unless they undergo Section 7 formal consultation and receive an Incidental Take Statement. USFWS or NMFS must assess whether the proposed action will jeopardize the continued existence of a species or adversely modify critical habitat. So, "take" is unauthorized without the ITS or authorization for plants. It is best to implement an action to avoid take and simply undergo informal Section 7 consultation. However, if measures to avoid "take" compromises necessary implementation of an action, then Section 7 formal consultation should be pursued.	I think the sentence is fine as written, but maybe just add the section 7 language to it?	Added "unless they undergo formal consultation under Section 7 of the ESA and receive an Incidental Take Statement" to the text.
ARNG I&E	6.1, 6-3	Since Sea Girt is a State-owned installation, I recommend identifying what actions need to be taken to comply with the NJ ESA, and what are any non-discretionary requirements involving NJ State-listed species.	The NJ Endangered Species Conservation Act of 1973 states no person may take, possess, transport, export, process, sell or offer for sale, or ship, and no common or contract carrier may knowingly transport or receive for shipment any species of wildlife appearing on: (1) the State list of endangered species; (2) the list of nongame species regulated by the Department of Environmental Protection (DEP); and (3) the federal list of endangered species. Take means to harass, hunt, capture, kill, or attempt to harass, hunt, capture, or kill, wildlife. There is no "Section 7 Consultation" process as provided in the US ESA. ESA protections have been written into the various land use regulations promulgated by state regulators.	Clarification text provided by Bill added to this section.

<b>Source of Comment</b>	<b>Applicable Section; Page; line number</b>	<b>Comment</b>	<b>NJARNG Response</b>	<b>Changes Made to Draft INRMP in response to Comment</b>
ARNG I&E	6.2.2, pg 6-6	Explain factors believed to influence nesting success. From literature research I've done on the Piping Plover, human and animal disturbance greatly impacts nest success for a number of reason - reduced foraging, greater flushing from nest, predation, etc. Seems like focus should be on establishing foraging or roosting habitat.	Our habitat resoration plan and Land and Watershed Management Goal #1 and Rare Species Goal #6 attempts to improve the protection areas. Unfortunatly, since they're ground nesters and the hatchlings feed themselves from the wrack line, both forgaing and nesting areas are the same. We occasioaly see individual plovers and terns forage at the Site, but once nesting season starts, if they haven't established nests at the Site, they won't forage there as the parents don't stray far from the nests.	Text added to this section regarding protection of nests to prevent failure, impacts to nesting and foraging, and directed readers to Section 6.3.11 (Predator Control).
ARNG I&E	6.2.3, pg 6-8	Consider augmenting the population of seabeach amaranth on Sea Girt. The area is already being protected and there appears to be no impact on mission, so an augmentation could help establish a more robust population and would be a good Section 7(a)(1) project.	Several years ago we approached USFWS about this and they said intentional seed distribution wasn't what they wanted to do. We'll reach out to them again to see if they changed their minds.	USFWS did not previously believe plant propagation was the way to go, but they are now implementing it in certain areas. Added text to this section, and to Rare Species Goal #6 regarding potential to work with USFWS and USDA to implement a plant propagation program for seabeach amaranth.
ARNG I&E	App B-3	A 12-month determination for the Saltmarsh sharp-tailed Sparrow is scheduled for FY19. Consider addressing species in INRMP.	ok	Information about species added to Section 2.8.5 and added as its own sub-heading under Section 6.2 since it has been observed at Sea Girt.
ARNG I&E	Section 4.2.6.2, line 10	Add "Pesticide use will be in accordance with the requirements of the NJARNG Integrated Pest Management Plan."	ok	Added to page 4-18, line 13 (it fit better here under Chemical Controls -- Herbicide Use)

<b>Source of Comment</b>	<b>Applicable Section; Page; line number</b>	<b>Comment</b>	<b>NJARNG Response</b>	<b>Changes Made to Draft INRMP in response to Comment</b>
ARNG I&E	Section, 5.2.2, line 8 and 10	Correct "Zeke" to "Zika".	ok	Changed to "Zika"
Bill McBride	page 4-23	spell out "LID features" and describe what low impact development is		LID is first defined on page 4-4, so description of LID was added there.

### **Errata Sheet of Draft INRMP v4 (July 2018) – Agency Review Copy**

<b>Source of Comment</b>	<b>Applicable Section; Page; line number</b>	<b>Comment</b>	<b>NJARNG Response</b>	<b>Changes Made to Draft INRMP in response to Comment</b>
Monmouth Environmental Council	2.8.6; 2-45; 7	There is a typo in the sentence beginning, "Of these, 31..." Delete the word "were."	Thanks. We'll change it	Typo fixed.
Monmouth Environmental Council	2.8.2.4; 2-27; 8-9	As the current maintained laws will continue to be in use, we suggest refraining from using any fertilizers on the maintained lawns due to potential run-off to the nearby water bodies.	We'll take it under consideration. However, all pesticides are applied by licensed applications in accordance with the manufacturer's recommendation in an attempt to reduce non-point sources of pollution.	Added the following text: "All pesticides used in maintaining the lawns on the NGTC are applied by licensed applications in accordance with the manufacturer's recommendation in an attempt to reduce non-point sources of pollution to nearby water bodies."
Monmouth Environmental Council	6.3.11; 6-39; 30	The plan mentions that trapping and killing predators is a controversial method of control. In the case of feral cats, has the NCTC considered practicing Trap-Neuter-Return (TNR) to reduce the cat population?	We'll take it under consideration. However, it is difficult to identify feral or pet cats once they are captured. As such, if the capture program is implemented, any cats that are caught will be brought to the county animal shelter.	No change made. Page 6-41 states: "Any observation of unattended domestic or feral dogs or cats on the beach will be referred to

<b>Source of Comment</b>	<b>Applicable Section; Page; line number</b>	<b>Comment</b>	<b>NJARNG Response</b>	<b>Changes Made to Draft INRMP in response to Comment</b>
				Monmouth County Animal Control."
Monmouth County Environmental Council	5.2.2; 5-5; 20-22	The plan states the potential use of eagle kite decoys to harass Canada Geese from April 1- August 31. Please consider that the eagle kite's presence could interfere with Piping Plover activity from March to August.	If implemented, the kites would be used on the Parade Ground and near the buildings not on the beach to avoid any plover impacts.	Added the italics text to this sentence: "Decoy use would be limited to the parade grounds north and west of the eastern extent of the motorcycle training area (see Figure 2 2) to avoid impact on sensitive habitat (beach, dunes, wetlands, and Stockton Lake) and to avoid interference with potential piping plover activity on the beach."
Monmouth County Environmental Council	6.3.11; 6-41; 9-10	We recommend considering coordination between NGTC, Sea Girt Borough and Manasquan Borough to include information on protecting rare species and the purpose of the NGTC's beach no pet policy on the Borough websites. This could be the same information as displayed on the future interpretive signs mentioned on Section 6.4, Page 6-47, Line 8-13.	Each year both boroughs are invited and usually attend an annual rare species awareness brief where rare species protection methods at the NGTC are discussed. In addition, the NGTC's pet policy letter is submitted to both boroughs and requested to be added to their website annually.	Text added on page 6-41: "Also, both Boroughs are invited to attend an annual awareness brief where rare species protection methods at the NGTC are discussed."
Monmouth County Environmental Council	6.3.13; 6-44; 19	The link for the site-specific Field Guide for visitors turns up as "404 error page not found:" <a href="http://www.nj.gov/military/installations/docs/3307-booklet-FINAL.pdf">http://www.nj.gov/military/installations/docs/3307-booklet-FINAL.pdf</a> . Please correct the link.	The DMAVA recently revised its webpage and the link will be updated to <a href="https://www.nj.gov/military/construction-facilities-management/environmental-management/documents/3307-booklet-FINAL.pdf">https://www.nj.gov/military/construction-facilities-management/environmental-management/documents/3307-booklet-FINAL.pdf</a>	Website updated and other weblinks checked/updated throughout INRMP.
Monmouth County Environmental Council	7.2.2; 7-1; 31	The plan lists individuals granted beach pass access. Is it possible to extend beach pass access to veterans?	As mentioned in the NGTC's beach pass policy dated 15 May 2018, limited parking spaces curtails the amount of visitors to the beach. However, honorably discharged veterans have	No change made.

Source of Comment	Applicable Section; Page; line number	Comment	NJARNG Response	Changes Made to Draft INRMP in response to Comment
			several ways to obtain a beach pass. These include veterans who have retired from military service or are associated with current or retired NJ National Guard, active and reserve military service members, DMAVA employees, Department of Defense employees supporting the NJ National Guard, state law enforcement personnel, and local first responders that support the NGTC.	
Bill McBride	Rare species goal 4	Can you add to rare species goal 4 to work with the USFWS to get them to band any osprey chicks hatched in the nesting platform (not cell tower) each year?		Osprey banding added to Rare Species Goal #4
Bill McBride	Signature page	Update signature block from COL Gordon to COL Myer		Signature block updated.
Bill McBride	Signature page	Add COL(Ret) Dreher to the signature page.		Signature block updated.

### Errata Sheet of Final Draft INRMP (September 2018) – Agency Review Copy

Source of Comment	Applicable Section; Page; line number	Comment	NJARNG Response	Changes Made to Draft INRMP in response to Comment
USFWS	Page 6-10	seameach should be spelled seabeach.		Change made.
USFWS	Page 6-16	scientific name for common tern ( <i>Sterna hirundo</i> )		Change made.
USFWS	Page C-43	In NJARNG Response column, third row, "We won't do any shoreline work until the bulkhead is replaced, there is no replacement date for that on." should be moved to next row on Page C-44.		Change made.
USFWS	Page 2-23	Error: <i>Charadrus melodes</i> Correction: <i>Charadrius melodus</i> Reason: Spelling		Change made.

Source of Comment	Applicable Section; Page; line number	Comment	NJARNG Response	Changes Made to Draft INRMP in response to Comment
USFWS	Page 2-23	Error: <i>Amaranthus pulilis</i> Correction: <i>Amaranthus pumilus</i> Reason: Spelling		Change made.
USFWS	Page 2-23	Error: <i>Haematopus palliates</i> Correction: <i>Haematopus palliatus</i> Reason: Spelling		Change made.
USFWS	Page 2-23	Error: Sanderling Correction: Sanderling ( <i>Calidris alba</i> ) Reason: Missing scientific name		Change made.
USFWS	Page 2-24	Error: <i>Dendroica petechia</i> Correction: <i>Setophaga petechia</i> Reason: Used old genus		Change made.
USFWS	Page 2-24	Error: <i>Dendroica coronata</i> Correction: <i>Setophaga coronata</i> Reason: Used old genus		Change made.
USFWS	2-25	Error: <i>Dendroica petechia</i> Correction: <i>Setophaga petechia</i> Reason: Used old genus		Change made.
USFWS	2-25	Error: <i>Dendroica coronata</i> Correction: <i>Setophaga coronata</i> Reason: Used old genus		Change made.
USFWS	2-27	Error: <i>Charadrius vociferous</i> Correction: <i>Charadrius volciferus</i> Reason: Spelling		Change made.
USFWS	2-29	Error: Common Snipe ( <i>Gallinago gallinago</i> ) Correction: Wilson's Snipe ( <i>Gallinago delicata</i> ) Reason: Common snipe species was split – Wilson's snipe is North American species now, and common snipe is European		Change made.
USFWS	2-29	Error: Short-billed dowitcher ( <i>Plegadis falcinellus</i> ) Correction: <i>Limnodromus griseus</i> Reason: Wrong scientific name		Change made.
USFWS	2-31	Error: great egret ( <i>Egretta alba</i> ) Correction: <i>Ardea alba</i> Reason: Used old genus		Change made.
USFWS	2-31	Error: clapper rail ( <i>Rallus longirostris</i> ) Correction: <i>Rallus crepitans</i> Reason: Split into 3 species		Change made.
USFWS	2-31	Error: common tern ( <i>Sterns herundo</i> ) Correction: <i>Sterna hirundo</i> Reason: Spelling		Change made.



Source of Comment	Applicable Section; Page; line number	Comment	NJARNG Response	Changes Made to Draft INRMP in response to Comment
USFWS	2-31	Error: gadwall ( <i>Anas strepera</i> ) Correction: <i>Mareca strepera</i> Reason: Used old genus		Change made.
USFWS	2-31	Error: American widgeon ( <i>Anas americana</i> ) Correction: American wigeon ( <i>Mareca americana</i> ) Reason: Spelling and used old genus		Change made.
USFWS	2-36	Error: bottlenose dolphin ( <i>Tursiops truncatus</i> ) Correction: <i>Tursiops truncatus</i> Reason: Spelling		Change made.
USFWS	2-36	Error: feral cat ( <i>Felis silvestris</i> ) Correction: <i>Felis catus</i> Reason: Wrong species		Change made.
USFWS	2-36	Error: groundhog ( <i>Marmotta monax</i> ) Correction: <i>Marmota monax</i> Reason: Spelling		Change made.
USFWS	2-36	Error: cattle egret ( <i>Bubulcus ibis</i> ) Correction: <i>Bubulcus ibis</i> Reason: Spelling		Change made.
USFWS	2-38	Error: <i>Bubulcus ibis</i> Correction: <i>Bubulcus ibis</i> Reason: Spelling		Change made.
USFWS	2-38	Error: <i>Nycticorax</i> Correction: <i>Nycticorax nycticorax</i> Reason: Missing species		Change made.
USFWS	6-2	Error: The Galloway Field Office Correction: The New Jersey Field Office		Change made.

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## APPENDIX D PERMITS, AGREEMENTS, AND PROCEDURES

1. National Guard Joint Training Center Health & Safety Goose Control Program Standard Operating Guide
2. Coastal Area Facility Review Act (CAFRA), Authorization for a Coastal General Permit, 26 June 2014, DLUR File No. 1344-03-0001.2 CAF 140001 (Purpose: beach and dune maintenance activities)
3. CAFRA Permit Modification Letter, 22 February 2016, DLUR File No. 1344-03-0001.2 CDT 140001 (Purpose: add NGTC as beach rake operator)
4. NJDEP Freshwater Wetlands Letter of Interpretation - Extension, 13 November 2017, DLUR File No. 1300-11-0004.1 FWW170001
5. NJDEP Freshwater Wetlands General Permit for Maintenance and Repair of an Existing Feature (GP1), 27 October 2011, DLUR File No. 1344-03-0001.1 FWW110001 [*The application to renew this permit was in process as of September 2018.*]
6. Freehold Soil Conservation District, NJ Natural Resources Conservation Program, 2 October 2017, Ref # 2017-0650, Certification Letter (Purpose: Erosion and Sediment Control Plan for the Freshwater Wetlands and Coastal Habitat Enhancement Project)
7. NJDEP, DLUR FWGP16 Habitat Create/Enhance Permit and Water Quality Certificate, 25 April 2018, Permit Number: 1344-03-0001.2 FWW170002 (Purpose: Freshwater Wetlands and Coastal Habitat Enhancement Plan activities)
8. NJDEP, DLUR CAFRA Individual Permit Extension, 1 June 2018, Original DLUR File No. 1344-03-0001.2 CAF120002, Extension File No. 1344-03-0001.2 CAF80003 (Purpose: construction activities and stormwater management)
9. NJDEP, DLUR Modification to CAFRA Individual Permit, 1 June 2018, Original DLUR File No. 1344-03-0001.2 CAF120002, Modification File No. 1344-03-0001.2 CAF180001 (Purpose: habitat restoration activities of the Fre Freshwater Wetlands and Coastal Habitat Enhancement Plan)
10. National Guard Training Center Beach Pass Policy (2018)
11. National Guard Training Center Fishing Permit Guidance Brochure
12. National Guard Training Center Camper and Beach Handout

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**NATIONAL GUARD JOINT TRAINING CENTER**  
**HEALTH & SAFETY GOOSE CONTROL PROGRAM**  
**STANDARD OPERATING GUIDE (SOG)**

**CHAPTER 1**

**GENERAL**

**500:1-1. PURPOSE.** The purpose of this Standing Operating Guide (SOG) is to establish basic procedures for the conduct of a Goose Control Program at the National Guard Joint Training Center (NGJTC), Sea Girt.

**500:1-2. GENERAL.** This SOG is established for the following general reasons:

- a. Over the past many years previous methods of goose control have been used to no avail, e.g., use of a dog to scare away the geese, fake coyote signs, driving small vehicles close to the flocks to scare them, etc.
- b. Flocks have increased with the laying of eggs on the Post grounds that have imprinted with the goslings as they have grown.
- c. Goose droppings overwhelm the fields, campsites, roads, and walkways, as well as in and around the buildings.
- d. People contracting the use of the field, as well as parents, have complained because those playing on the field events in games and training occasionally fall and are covered with goose droppings. This is an unsafe condition as the foot slips on the droppings and an unhealthy condition when falling into the droppings.
- e. People stepping in goose droppings and walking into buildings, Dining Facility, etc., create unhealthy conditions for those working and eating.
- f. Soldiers and tenant agency recruits when conducting training on the fields and around the various buildings are limited to where they conduct calisthenics in a healthy and safe environment.

**500:1-2. BACKGROUND.** The following additional background regarding Canadian Geese is provided as information.

- a. Canadian Geese are a nationwide problem. Here in New Jersey they range in flocks of 80 to 100,000 depending on the time of the year and other circumstances.
- b. The ideal habitats are golf courses and large open fields, such as at the NGJTC.  
\*This SOP supersedes SOG 500, dtd 14 Feb 2011
- c. Their primary source of food is grass and water from ponds.
- d. The safe havens provide little or no danger from humans and predators.

**500:1-3. PUBLICATION CHANGES.** Recommendations for changes to this publication will be forwarded to the Director, NGJTC Sea Girt, PO Box 251, Sea Girt, New Jersey 08750 for consideration.

## **CHAPTER 2**

### **RESPONSIBILITIES**

#### **500:2-1. RESPONSIBILITIES.**

a. Contracting. It is the responsibility of the New Jersey Department of Military & Veterans Affairs (DMAVA) to enter into a contract on behalf of the NGJTC to assist in the eradication of the Canadian Geese. Such a contract has been entered into with Goose Control Technology of New Jersey.

b. Training. It is the responsibility of Goose Control Technology of New Jersey to train NGJTC fulltime staff to assist in the Goose Control Program. Further, it is the responsibility of Goose Control Technology to periodically visit throughout the year to evaluate and assist in the Goose Control Program.

c. Equipment. A hand held .50mW green laser device will be the primary method used to disperse the geese. Additional methods may include a dog, fake coyote signs, and driving small utility vehicles close to the flocks.

d. Trained Personnel. It is the responsibility of the Director, NGJTC to have personnel trained and qualified to conduct the Goose Control Program at the NGJTC.

#### **500:2-2. LASER EQUIPMENT RESPONSIBILITIES.**

##### a. Avian Laser Development.

(1). Lasers were first developed for use in England and France to protect the shellfish beds along the coast. This was very expensive and very difficult to use because of the distance from the shore to the shellfish grounds.

(2). The first practical laser developed was very large, with a limited range, very expensive and looked like a radar gun or large handgun.

(3). The United States Department of Agriculture conducted a study to scientifically examine the use of the laser for bird control. They looked at both the effect of lasers on birds and the efficiency of their use. The results proved that properly used lasers are an effective tool for the dispersal of avian species.

(4). The laser causes a flight response by the geese, as it is believed to be perceived as a predator.

b. Laser Setup. The handheld laser is simple to setup. Insert C batteries, turn on the safety device and key, open cover, hold the laser away from the face and pointed at the ceiling to test, and press the button. The green laser beam will take a few seconds to energize before it will operate.

c. Laser Maintenance. Certain basic procedures should be followed as follows:

- (1). Do NOT drop the laser.
- (2). Keep the unit clean, to include the end cap and key area.
- (3). Do not leave the batteries in the laser when it is stored.
- (4). Battery life is limited so keep spare batteries with the unit.

d. Laser Safety. Safety precautions will be followed when handling and using the laser as follows:

- (1). Only trained personnel will operate the laser.
- (2). Do NOT drop the laser.
- (3). Do NOT shine the laser into eyes--yours, other persons, animals, etc.
- (4). Do NOT shine the laser on skin for a long period, as it will burn.
- (5). DO NOT SHINE THE LASER AT AIR CRAFT OR UP INTO THE SKY.
- (6). DO NOT SHINE THE LASER AT MOTOR VEHICLES.
- (7). Do NOT shine the laser into or out of windows, or at mirrors.
- (8). Do NOT shine the laser at the water when it is windy as the ripple effect may bounce the beam off to places you do not want it to go.
- (9). Do NOT use the laser when birds are molting or only goslings, as they cannot fly away.
- (10). Do NOT shine the laser directly on the birds if at all possible.

### **CHAPTER 3**

#### **GOOSE CONTROL OPERATING PROCEDURES**

**500:3-1. BASIC PROCEDURES.** The laser will be used as follows for Goose Control operations.

- a. Elimination of roosting locations. Geese need an undisturbed roosting location, thus the laser shining on the grass or adjacent structure will be used to disrupt the roosting sites.
- b. Elimination of feeding sites. When geese are field in the fields and in and around buildings the laser will be used to disrupt the feeding site. Shine the beam in front of the geese on vegetation or other birds.
- c. Elimination of drinking sites. When geese are in and around the water drinking the laser will be used to disrupt the drinking site. Shine the beam on the water. With the exception of Stockton Lake the laser will not be used on Stockton Lake.

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d. Additional Guidelines. Additional guidelines are established in the Integrated Natural Resources Management Plan, published by the New Jersey Department of Military and Veterans Affairs for the NGJTC.

**500:3-1. OPERATIONS ON POST.**

a. Generally. The following general laser operations will be practiced.

- (1). Carefully move the beam around keeping previous safety precautions in mind, and the following operational tips.
- (2). Start and stop the process to haze and make the birds move.
- (3). Turn the laser off and on periodically to save the battery, do NOT use it for extended periods.
- (4). Hazing operations will normally be conducted during the period 1 April through 31 August to avoid migrating Canada Geese and other migratory birds.
- (5). Lasers will not be used where people are congregating or when people are engaged in sports or other events on the fields.
- (6). Extra caution will be used during the summer periods when the NGJTC beaches are open, or when personnel are firing on the ranges.
- (7). Hazing is not conducted during the molting period for humane reasons, which is typically during the month of June.

a. Field Site Operations. Basic tips for field operations.

- (1). Work in low light conditions. Best at dawn or dusk, thus normal operations will be early in the morning when the shifts arrive for work.
- (2). The laser can be used during rain, snow and limited fog conditions.
- (3). Laser use will be restricted to parallel operations with Sea Girt Avenue and Stockton Lake aiming from the West to the East.
- (4). When operating from small utility vehicles travel North to South or South to North across fields aiming the laser from the West to the East, ensuring that it is not directed towards private homes outside the Post perimeter.
- (5). Shine the laser through an open door or window only when riding in a small utility vehicle.

b. Nesting Site Operations. Nesting sites may be in and around buildings and campsites. Thus the following precautions will be observed.

- (1). Shine the laser on a surface adjacent to the nest.
- (2). Be careful not to shine the laser towards windows and open doors.
- (3). Be careful when the campsites are being occupied, and when the Manasquan Little League Fields are in use.



(4). Try to operate on foot, again aiming West to East to avoid shinning the light onto private homes outside the Post perimeter.

c. Taking Birds by Capture and Euthanization.

(1). A Federal Fish and Wildlife Permit is required, and is maintained in the Superintendent's Office allowing for the taking of birds by capture and euthanization.

(2). The permit allows for up to Two-Hundred Fifty (250) Canada Geese and they MUST be buried or incinerated, by the authorized subcommittee "Goose Control Technology."

(3). More detailed guidance is provided on the permit and in the Standard Conditions 50 CFR 21.41 found in the Superintendent's Office.

(4). NGJTC staff and subcommittee staff will comply with all appropriate guidance and regulations.

(5). The taking of Canada Geese will be recorded on the NGJTC Hazing Record as a remark in the Results column.

d. No Feeding Policy. The feeding of Canada Geese and other migratory birds and endangered species are strictly prohibited on the NGJTC. Violators will be immediately identified to the Superintendent for further action and/or discipline. This includes providing water from other than natural resources found on post. All post personnel and transient personnel will be notified by various means of the "No Feeding Policy."

**500:3-2. HAZING EFFECTS.**

a. In most cases geese will disperse from the area within three (3) to seven (7) days of hazing.

b. They will tend to start to come back in small numbers in a week to 12 days.

c. Be watchful and continue to haze as needed.

**500:3-3. RECORDS.** A record of all hazing events will be maintained in the Headquarters Officer, see Enclosure 1, NGJTC Hazing Record

**OFFICIAL:**

**JEFFREY L. PIERSON**

**BG (Ret) USA**

**Director, NGJTC-SG**

Enclosures:

1—NGJTC Hazing Record



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Division of Land Use Regulation  
Mail Code 501-02A  
P.O. Box 420  
Trenton, New Jersey 08625-0420  
www.state.nj.us/dep/landuse

CHRIS CHRISTIE  
Governor

KIM GUADAGNO  
Lt. Governor

BOB MARTIN  
Commissioner

CO

JUN 26 2014

Lorraine Carafa  
Borough Administrator  
Borough of Sea Girt  
612 Philadelphia Boulevard  
PO Box 296  
Sea Girt, NJ 08750

RE: Authorization for Coastal General Permit  
DLUR File No.: # 1344-03-0001.2 (CAF 140001)  
Applicant: Borough of Sea Girt  
Project location: National Guard Training Center  
Block(s): 106; Lot(s): 1  
Borough of Sea Girt, Monmouth County

Dear Ms. Carafa:

The Division of Land Use Regulation has reviewed the referenced application for a General Permit authorization pursuant to the requirements of the Coastal Permit Program Rules at N.J.A.C. 7:7-7 and in accordance with the Coastal Area Facility Review Act (N.J.S.A. 13:19 et seq.) and/or the Waterfront Development Law (N.J.S.A. 12:5-3).

This permit authorizes beach and dune maintenance activities conducted in accordance with Best Management Practices as found in the Rules on Coastal Zone Management at N.J.A.C. 7:7E-3A. These activities are to be conducted under the supervision of the National Guard Training Center Gary Schmitz and Joseph Landree, who are available by phone at: (732) 974-5951. Ultimate responsibility for the work is with the Borough of Sea Girt's Department of Public Works, Manager, Jared McKittrick, 612 Philadelphia Boulevard, Sea Girt, NJ 08750, who is available by phone at (732) 449-6463.

This permit authorizes beach and dune maintenance activities only, and does **NOT** authorize the replacement of any street-end bulkheads.

The approved maintenance area is the beach within the municipal boundaries, specifically as shown on one sheet, entitled "Beach Maintenance Plan Beach Maintenance Coastal General Permit Sea Girt National Guard Training Center Block: 106; Lot 1 - Borough of Sea Girt

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Monmouth County, New Jersey” dated March 2014, unrevised and prepared by Kinsey Associates.

By this permit, the State of New Jersey does not relinquish tidelands ownership or claim to any portion of the subject property or adjacent properties.

**Project Specific Conditions**

In addition to the conditions noted at N.J.A.C. 7:7-1.5, the activities allowed by this authorization shall comply with the following conditions. Failure to comply with these conditions shall constitute a violation of the Coastal Area Facility Review Act (N.J.S.A. 13:19-1 et seq.) and/or the Waterfront Development Law (N.J.S.A. 12:5-3).

1. In order to minimize impact to Endangered and Threatened Species, all activities must be conducted in accordance with the National Guard Training Center’s Integrated Natural Resource Management Plan, for the protection of federally and state-listed species, which was revised in March 2013, and has been approved by the United States Fish and Wildlife Service and NJDFW.
2. It should be noted that NJDEP Division of Land Use regulation (DLUR) will annually send the Club the “CAFRA No-Rake Zones for Beach Nesting Birds” list which is generated by the NJDEP Division of Fish and Wildlife (NJDFW). This list indicates any habitat areas of a State or Federally listed endangered or threatened shorebird species located on the Borough’s beachfront. DLUR will also send the Club the Seabeach amaranth Protective Zone list which is generated by the United States Fish and Wildlife Service (USFWS). This list indicates any areas which require protection for Seabeach amaranth.
3. This authorization does not allow any one time raking event to grade tire ruts in front of the protection area before plover eggs hatch or any berming of the beach in the off season.
4. This permit does not authorize the repair or reconstruction of street end seawalls and/ or bulkheads.
5. If the applicant determines it is necessary to charge a beach use fee, the public beach fee income, as at municipal beaches statewide, may not exceed that portion of direct beach maintenance and operation costs attributable to public usage.
6. The applicant cannot limit vertical or horizontal public access to its dry sand beach area nor interfere with the public’s right to free use of the dry sand for intermittent recreational purposes connected with the ocean and wet sand. The applicant must provide customary lifeguard services for members of the public who use the ocean areas up to the high water mark, regardless of whether they are just passing through or remaining on the beach area of its property.

The Division reserves the right to reassess the applicant's beach access fee at a later date and the applicant must make associated financial records available upon Division request.

7. The proposed activities **MUST** be conducted in accordance with Best Management Practices as defined by the Department in the Rules on Coastal Zone Management, N.J.A.C. 7:7E-3A (copy enclosed). Activities other than those outlined in this Subchapter (3A) shall require additional authorization from the Division. Failure to receive such additional authorization prior to activities may warrant enforcement action by the Bureau of Coastal and Land Use Enforcement.
8. Sand transfers to or from wetland areas that may exist on a beach are **NOT** authorized by this permit.
9. Records of all sand transfer activities shall be maintained by the Borough, and shall be available for inspection by the Department, upon request. These records shall include, but not be limited to, dates of transfer, borrow area limits, fill area limits, estimates of amount of sand transferred, the name of the person supervising the transfer activities, and the engineering certification required (if appropriate) for all sand transfer activities.
10. Bulldozing, excavation, grading, vegetation removal or clearing and relocation of existing dunes whether existing or constructed in conjunction with this permit are **NOT** authorized under this general permit.

#### **Standard Permit Conditions**

The following standard conditions shall apply to all General Coastal Permits:

1. Acceptance of permit: If you begin any activity approved by this permit, you thereby accept this document in its entirety, and the responsibility to comply with the terms and conditions. If you do not accept or agree with this document in its entirety, do not begin construction. You are entitled to request an appeal within a limited time as detailed on the attached Administrative Hearing Request Checklist and Tracking Form.
2. This permit, including all conditions listed herein, shall be recorded in the office of the County Clerk (the Registrar of Deeds and Mortgages if applicable) in the county or counties wherein the lands included in the permit are located within ten (10) days after receipt of the permit by the applicant. A copy of the recorded permit shall be forwarded to the Division of Land Use Regulation immediately thereafter.
3. The permittee shall notify, in writing, the NJDEP, Bureau of Coastal and Land Use Enforcement at 1510 Hooper Avenue, Toms River, NJ 08753, three working days prior to the commencement of construction on the site or site preparation.
4. The issuance of this permit shall in no way expose the Department to liability for the sufficiency or correctness of the design of any construction or structures. Neither the

State nor the Department shall be liable for any loss of life or property which may occur by virtue of the activity or development resulting from any permit.

5. The permittee shall allow the authorized representatives of the Department free access to the site at all time when construction activity is taking place, and at other times upon notice to the permittee.
6. The activities shown by plans and/or other engineering data, which are this day approved, shall be constructed and/or executed in conformity with such plans and/or engineering data and conditions herein. No change in plans or specifications upon which this permit is issued shall be made except with the prior written permission of the Department, in accordance with N.J.A.C. 7:7-4.10.
7. A copy of this permit and approved plans shall be kept at the construction site and shall be exhibited upon request to any person.
8. The permittee shall immediately inform the Department of any unanticipated adverse effects on the environment not described in the application or in the conditions of this permit. The Department may, upon discovery of such anticipated adverse effects, and upon the failure of the permittee to submit a report thereon, notify the permittee of its intent to suspend the permit, pursuant to N.J.A.C. 7:7-4.11.
9. This permit does not waive the obtaining of any local, State or Federal permits which may be required. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained.
10. All fill and other earth work on the lands encompassed within this permit authorization shall be stabilized in accordance with "Standards for Soil Erosion and Sediment Control in New Jersey," (obtainable from local Soil Conservation District Offices) promulgated by the New Jersey State Soil Conservation Committee, pursuant to the soil Erosion and Sediment Control Act of 1975, N.J.S.A. 4:24-42 et. seq. and N.J.A.C. 2:90-1.3 through 1.14. These standards are hereby incorporated by reference.

#### **Duration of Authorization/Notification of Work**

This authorization for a General Permit is valid for a term not to exceed five years from the date of receipt from the Department. If the term of this authorization exceeds the expiration date of the general permit issued by rule, and the permit upon which the authorization is based is modified by rule to include more stringent standards or conditions, the permittee must comply with the requirements of the new regulations by applying for a new General Permit authorization unless construction is already underway. If this General permit is not reissued, the permittee must apply for an individual CAFRA permit unless construction pursuant to the prior General Permit is underway. The expiration date of the General Permits issued by rule is December 15, 2015

If you or anyone is aggrieved by this permit decision, an administrative appeal may be filed in accordance with the Coastal Permit Program Rules, (N.J.A.C. 7:7-5). Any interested person who considers himself or herself aggrieved by this permit decision may request a hearing within 30 days after notice of the decision is published in the DEP Bulletin by addressing a written request for such hearing to the following address: Office of Legal Affairs, Department of Environmental Protection, P. O. Box 402, Trenton, NJ 08625-0402, Attention: Adjudicatory Hearing Requests.

This written request must include a completed copy of the Administrative Hearing Request Checklist and all information identified in Section III of that list. The DEP bulletin and Checklist is available through the Department's website at [www.state.nj.us/dep](http://www.state.nj.us/dep).

In order to promote inter-governmental cooperation in management of our natural resources, a copy of this decision shall be shared with appropriate local and federal agencies.

If you have any questions regarding this General Permit authorization, please contact Kara Turner of our staff by email at [kara.turner@dep.state.nj.us](mailto:kara.turner@dep.state.nj.us), by phone at (609) 777-0454, or in writing at the above address. Please reference the permit number in any future communication concerning this action.

Sincerely,



Linda Fisher  
Supervisor  
Division of Land Use Regulation

Attachments: Subchapter 3A. Standards for beach and Dune Activities

C: US Army Corps of Engineers, New York District  
Borough Clerk and Construction Official



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Division of Land Use Regulation  
Mail Code 501-02A  
P.O. Box 420  
Trenton, New Jersey 08625-0420  
www.state.nj.us/dep/landuse

CHRIS CHRISTIE  
Governor

KIM GUADAGNO  
Lt. Governor

BOB MARTIN  
Commissioner

February 22, 2016

Bill McBride  
Environmental Specialist  
NJARNG  
CFMO-EMB  
101 Eggerts Crossing Road  
Lawrenceville, NJ 08648

RE: Coastal General Permit #6  
DLUR File No. 1344-03-0001.2 CDT 140001  
Project Location: National Guard Training Center  
Block: 106, Lot: 1  
Borough of Sea Girt, Monmouth County

Dear Mr. McBride:

Please be advised that this correspondence revises the Coastal General permit issued on June 26, 2014 to include CW4 Frank R. Albanese, Jr., Superintendent, Sea Girt National Guard Training Center, as an authorized entity to conduct beach and dune maintenance activities in accordance with the permit referenced above. He can be reached at 1 Camp Drive, Sea Girt, NJ 08750, 732-974-5996 (v), 732-974-5969 (f), [frank.r.albanese4.mil@mail.mil](mailto:frank.r.albanese4.mil@mail.mil). Both The Borough of Sea Girt and the National Guard Training Center are authorized to conduct beach and dune maintenance activities in accordance with the permit referenced above.

A copy of this revision shall be appended to the original permit. All conditions of the original permit shall remain in force.

Please attach this revision letter to the original Determination. If you have any questions, please do not hesitate to contact Kara Turner at (609) 777-0454.

Sincerely,

Joanne B. Davis  
Supervisor  
Bureau of Coastal Regulation

Cc: Lorraine Carafa, Borough Administrator, Borough of Sea Girt, 612 Philadelphia Boulevard  
PO Box 296, Sea Girt, NJ 08750

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State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Division of Land Use Regulation  
Mail Code 501-02A, P. O. Box 420  
Trenton, New Jersey 08625-0420  
[www.state.nj.us/dep/landuse](http://www.state.nj.us/dep/landuse)

CHRIS CHRISTIE  
Governor

KIM GUADAGNO  
Lt. Governor

BOB MARTIN  
Commissioner

NOV 13 2017

NJ Army National Guard CFMO  
c/o Michael Lyons  
101 Eggerts Crossing Road  
Lawrenceville, NJ 08648

RE: Authorization for Freshwater Wetlands Letter of Interpretation - Extension  
File No.: 1300-11-0004.1  
Activity Number: FW170001  
Applicant: NJ Army National Guard CFMO  
Block(s) and Lot(s): [54, 2.01] [106, 1]  
Sea Girt Borough, Monmouth County

Dear Mr. Lyons:

The Division issued an original Freshwater Wetlands Letter of Interpretation (LOI) for the referenced site on August 3, 2012. You have requested that this LOI be extended in accordance with the requirements at N.J.A.C. 7:7A-3.6.

After review of the most recently updated resource value information and site conditions, the Division hereby extends the original LOI without modification to August 2, 2022, five years from expiration of the original LOI. Please be advised that wetland resource value of the wetlands on the property is subject to change if new information is received by the Division.

In accordance with N.J.A.C. 7:7A-1.7, any person who is aggrieved by this decision may request a hearing within 30 days after notice of the decision is published in the DEP Bulletin by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, 401 East State Street, P.O. Box 402, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist which can be downloaded at [www.state.nj.us/dep/landuse/forms](http://www.state.nj.us/dep/landuse/forms). The DEP bulletin is available through the Department's website at [www.state.nj.us/dep/bulletin](http://www.state.nj.us/dep/bulletin).

Please contact Iman Olguin-Lira of our staff by e-mail at [iman.olguin-lira@dep.nj.gov](mailto:iman.olguin-lira@dep.nj.gov) or (609) 777-0454 should you have any questions regarding this letter. Be sure to indicate the Department's file number in all communication.

Sincerely,

  
Robert B. Kozachek  
Environmental Specialist 3  
Division of Land Use Regulation

c: Township Clerk  
Township Construction Official  
Agent

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State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Division of Land Use Regulation  
Mail Code 501-02A  
P.O. Box 420  
Trenton, New Jersey 08625-0420  
www.state.nj.us/dep/landuse

CHRIS CHRISTIE  
Governor

KIM GUADAGNO  
Lt. Governor

RECEIVED

NOV 02 2011

AMY S. GREENE  
ENVIRONMENTAL CONSULTANTS, INC.

BOB MARTIN  
Commissioner

3307

OCT 27 2011

Amy S. Greene  
Amy S. Greene Environmental Consultants, Inc.  
4 Walter E. Foran Blvd., Suite 209  
Flemington, NJ 08822

RE: Freshwater Wetlands Statewide General Permit #1 and Water Quality Certification  
File No.: 1344-03-0001.1  
Activity No.: FW110001  
Applicant: Jeffrey Pierson BG (ret) Director NGTC for  
NJ Department of Military and Veterans Affairs  
Block(s): 106; Lot(s): 1  
Borough of Sea Girt, Monmouth County

Dear Ms. Greene:

The Division of Land Use Regulation has reviewed the referenced application for a Freshwater Wetlands Statewide General Permit authorization pursuant to the requirements of the Freshwater Wetlands Protection Act Rules at N.J.A.C. 7:7A. This letter of authorization to conduct a regulated activity in a wetland or open water includes a Water Quality Certificate for these activities.

The following regulated activities hereby authorized by this letter are depicted on the approved plan consisting of one (1) sheet entitled: "WETLAND LOCATION PLAN PORTION OF ONSITE FRESHWATER WETLANDS, NATIONAL GUARD TRAINING CENTER, BLOCK 106, LOT 1, BOROUGH OF SEA GIRT, MONMOUTH COUNTY, NEW JERSEY", dated 12/27/2010, unrevised, and prepared by John J. Hanlon, P.L.S. of VS Land Data.

General Permit No. 1 Authorization (N.J.A.C. 7:7A-5.1)

The authorized activity involves the disturbance of 0.0472 acres of freshwater wetlands and 0.01489 acres of freshwater wetland transition area for the excavation of sediment and vegetation within a legally existing man-made ditch. Any additional disturbance of freshwater wetlands, State open waters or transition area shall be considered a violation of the Freshwater Wetlands Protection Act unless the activity is exempt or a permit is obtained prior to the start of the disturbance from the Division Land Use Regulation. **Please be advised this letter does not verify the extent of delineated wetlands on the subject property beyond the limit of disturbance authorized under this General Permit.**

Any additional disturbance of freshwater wetlands or State open waters shall be considered a violation of the Freshwater Wetlands Protection Act unless the activity is exempt or a permit is obtained prior to the start of the disturbance from the Division of Land Use Regulation

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**Please be advised that the repair project meets Flood Hazard Area (FHA) Permit by Rule, therefore, a FHA permit is not required.**

Permit Conditions

The activities allowed by this authorization shall comply with the conditions noted at N.J.A.C. 7:7A-4.3, 5.1 and 13.1. Failure to comply with these conditions shall constitute a violation of the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et.seq.). In addition, the following conditions must be met for the activity authorized under this Statewide General Permit:

General Conditions:

1. The permittee shall erect a silt fence at the limits of disturbance herein, prior to beginning any disturbance on-site and they shall be maintained in proper condition throughout the project duration, and until the soil is stabilized by vegetation to prevent sediment, debris and unauthorized construction activities from affecting adjacent wetlands, transition areas and/or State open waters.
2. All fill and other earth work on the lands encompassed within this permit authorization shall be stabilized in accordance with "Standards for Soil Erosion and Sediment Control in New Jersey" (obtainable from local Soil Conservation District Offices), or equal engineering specifications, to prevent eroded soil from entering adjacent waterways or wetlands at any time during and subsequent to construction.
3. All excavated material must be lawfully disposed of outside any flood plain, open water, freshwater wetlands or transition area.
4. The wetlands shall only be disturbed in the areas specifically shown on the approved drawing/s. No other area within the wetlands and/or surrounding transition area shall be disturbed for any reason.
5. This permit is revocable, or subject to modification or change at any time, when in the judgement of the Department of Environmental Protection of the State of New Jersey, such revocation, modification or change shall be necessary.
6. The issuance of this permit shall not be deemed to affect in any way other actions by the Department on any future application.
7. The activities shown by plans and/or other engineering data, which are this day approved, subject to the conditions herewith established, shall be constructed and/or executed in conformity with such plans and/or engineering data and the said conditions.
8. No change in plans or specifications shall be made except with the prior written permission of the Department.
9. The granting of this authorization shall not be construed to in any way affect the title or ownership of the property, and shall not make the Department or the State a party in any suit or question of ownership of the property.
10. This authorization is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained.

11. A copy of this authorization shall be kept at the work site and shall be exhibited upon request of any person.
12. The permittee shall allow the Department the right to inspect the construction site and also shall provide the Bureau of Coastal and Land Use Enforcement, NJDEP with written notification 7 days prior to the start of the authorized work.

This authorization is valid for five years from the date of this letter unless more stringent standards are adopted by rule prior to this date.

Appeal of Decision

In accordance with N.J.A.C. 7:7A-1.7, any person who is aggrieved by this decision may request a hearing within 30 days after notice of the decision is published in the DEP Bulletin by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, 401 East State Street, P.O. Box 402, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist which can be downloaded at [www.state.nj.us/dep/landuse/forms](http://www.state.nj.us/dep/landuse/forms). The DEP bulletin is available through the Department's website at [www.state.nj.us/dep/bulletin](http://www.state.nj.us/dep/bulletin).

If you have any questions regarding this letter, please contact Heather Parkinson of our staff at (609) 777-0454. Be sure to indicate the Department's file number in any communication.

Sincerely,



Joanne B. Davis, Supervisor  
Bureau of Coastal Regulation

- c. Applicant  
Township Clerk  
Township Construction Official  
NJDEP-Bureau of Coastal & Land Use Compliance & Enforcement

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**NJDEP Freshwater Wetlands General Permit for  
Maintenance and Repair of an Existing Feature (GP1)**

Permit renewal application was in process as of September 2018.



**FREEHOLD SOIL CONSERVATION DISTRICT**  
(Serving Middlesex and Monmouth Counties)

4000 Kozloski Road, P.O. Box 5033  
Freehold, New Jersey 07728-5033  
Tel: (732) 683-8500  
Fax: (732) 683-9140  
E-mail: info@freeholdscd.org  
Website: www.freeholdscd.org

**10/2/17**

N.J. DEPT. OF MILITARY AND VETERAN'S AFFAIRS  
101 EGGERTS CROSSING ROAD  
COL. MICHAEL LYONS  
LAWRENCEVILLE NJ 08648

Ref.#: 2017-0650  
Proj.: FRESHWATER WETLANDS & COASTAL HABITAT ENHANCEMENT  
Twp. : SEA GIRT  
Block: 106  
Lots : 1

**CERTIFICATION LETTER**

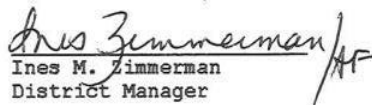
Pursuant to the New Jersey Soil Erosion and Sediment Control Act; N.J.S.A. 4:24-39 et. seq., Chapter 251, P.L. 1975 and as amended by C. 264, P.L. 77 and C. 459, P.L. 79, the Freehold Soil Conservation District hereby grants certification of the soil erosion and sediment control plan for the above referenced project, subject to the following:

1. That the applicant carries out all land disturbance activities in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey, promulgated by the State Soil Conservation Committee.
2. The owner/applicant must obtain a District issued Report of Compliance prior to the issuance of any Certificates of Occupancy by the municipality.
3. Changes in the certified plan relating to, or that will affect land disturbance on the site, must be submitted to the District office for certification.
4. The owner / applicant must notify the District forty-eight (48) hours prior to any land disturbing activity.

A copy of the certified plan must be kept on the job site at all times.

This plan certification is valid for 3 ½ years (valid until 4/2/2021) and is limited to the controls specified in this plan. It is not authorization to engage in proposed land use unless the municipality or other controlling agency has previously approved such use. Failure to comply with the above conditions may result in the issuance of a **STOP CONSTRUCTION ORDER**.

Sincerely,

  
Ines M. Zimmerman  
District Manager

cc: Planning Board  
Construction Official  
Municipal Engineer  
Applicant's Engineer

STATE DEPARTMENT OF AGRICULTURE, STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION, RUTGERS SCHOOL OF ENVIRONMENTAL AND BIOLOGICAL SCIENCES AND UNITED STATES NATURAL RESOURCES CONSERVATION SERVICE, COOPERATING

Revised 05/09


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STATE OF NEW JERSEY  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 DIVISION OF LAND USE REGULATION  
 Mail Code 501-02A, P.O. Box 420, Trenton, New Jersey 08625-0420  
 Telephone: (609) 777-0454 or Fax: (609) 777-3656  
 www.nj.gov/dep/landuse



**PERMIT**

<p>In accordance with the laws and regulations of the State of New Jersey, the Department of Environmental Protection hereby grants this permit to perform the activities described below. This permit is revocable with due cause and is subject to the limitations, terms and conditions listed below and on the attached pages. For the purpose of this document, "permit" means "approval, certification, registration, authorization, waiver, etc." Violation of any term, condition or limitation of this permit is a violation of the implementing rules and may subject the permittee to enforcement action.</p>		Approval Date <b>APR 25 2018</b>
		Expiration Date <b>APR 24 2023</b>
Permit Number(s):  1344-03-0001.2 FWW170002	Type of Approval(s):  FWGP16 habitat create/enhance Water Quality Certificate	Enabling Statute(s):  N.J.S.A. 13:9B-1 et seq. N.J.S.A. 58:10A-1 et seq.
Permittee: NJ Army National Guard CFMO c/o Michael Lyons 101 Eggerts Crossing Road Lawrenceville, NJ 08648		Site Location:  Block(s) & Lot(s): [106, 1] Municipality: Sea Girt Borough County: Monmouth
<b>Description of Authorized Activities:</b>  This permit authorizes the permanent disturbance of <b>0.02 acres (731 square feet)</b> and temporary disturbance of <b>4.08 acres (177,881 square feet)</b> of freshwater wetlands and permanent disturbance of <b>0.09 acres (4,128 square feet)</b> and temporary disturbances of <b>2.27 acres (98,873 square feet)</b> of transition area for the habitat enhancement, ditch maintenance and construction of trail, boardwalk and split rail fencing under a Freshwater Wetlands General Permit 16 as shown on the plans referenced on the last page of this permit. This authorization to conduct activities in freshwater wetlands includes the issuance of a Water Quality Certificate.  The Division of Land Use Regulation has reviewed the referenced application for a General Permit 16 authorization pursuant to the requirements of the Freshwater Wetlands Protection Act Rules at N.J.A.C. 7:7A-7. The activities allowed by this authorization shall comply with applicable conditions noted at N.J.A.C. 7:7-5.7, 7.16 and 20.2. Failure to comply with these conditions shall constitute a violation of the Freshwater Wetland Protection Act (N.J.S.A. 13:9B-1 et. seq.).  Any additional un-permitted disturbance of freshwater wetlands, State Open Waters and/or transition areas besides that shown on the approved plans shall be considered a violation of the Freshwater Wetlands Protection Act rules unless the activity is exempt or a permit is obtained from the Department prior to the start of the proposed disturbance.		
Prepared by:  Iman Olgun-Lira		Received and/or Recorded by County Clerk:
If the permittee undertakes any regulated activity authorized under a permit, such action shall constitute the permittee's acceptance of the permit in its entirety as well as the permittee's agreement to abide by the permit and all conditions therein.		
This permit is not valid unless authorizing signature appears on the last page.		

**FRESHWATER WETLAND SPECIAL CONDITIONS:**

1. The total amount of permanent and temporary disturbance associated with this authorization shall not exceed 6.46 acres (281,613 SF) of freshwater wetlands and transition area for the habitat enhancement, ditch maintenance and construction of trail, boardwalk and split rail fencing under a Freshwater Wetlands General Permit No. 16 .
2. The wetlands affected by this permit authorization are of intermediate resource value and the standard transition area or buffer required adjacent to these wetlands is 50 feet. This general permit includes a transition area waiver, which allows encroachment only in that portion of the transition area, which has been determined by the Department to be necessary to accomplish the regulated activities. Any additional regulated activities conducted within the standard transition area on-site shall require a separate transition area waiver from the Division. Regulated activities within a transition area are defined at N.J.A.C. 7:7A-2.3. Please refer to the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et seq.) and implementing rules (N.J.A.C. 7:7A) for additional information.
3. This authorization for a General Permit is valid for a term not to exceed five years from the date of this permit. If the permittee wishes to continue an activity covered by the permit after the expiration date of the permit, the permittee must apply for and obtain a permit extension or a new permit, prior to the permit's expiration. If the term of the authorization exceeds the expiration date of the general permit issued by rule, and the permit upon which the authorization is based is modified by rule to include more stringent standards or conditions, or is not reissued, the applicant must comply with the requirements of the new regulations by applying for a new GP authorization or an Individual permit.
4. The permittee will be responsible for the installation of a sediment barrier around all disturbed soils, which is sufficient to prevent the sedimentation of the remaining wetlands and transition area.
5. The activities shall disturb the minimum amount of freshwater wetlands, transition areas, and/or State open waters necessary to successfully implement the project plan.
6. Upon completion of the project, the permittee must incorporate features designed to educate the user about the importance of freshwater wetlands, transition areas and State open waters as per N.J.A.C. 7:7A-5.17 of the Freshwater Wetlands Protection Act Rules.
7. The permittee shall ensure that the proposed activities do not interfere with the natural hydrology of the area.
8. Non-polluting wood-products must be used in the construction of the retaining wall; no creosote or CCA lumber shall be used in order to protect the environment from the effects of leaching.
9. The permittee shall continue to adhere to Integrated Natural Resources Management Plan 2013-2017 to protect threatened and endangered species on the project site.

**STANDARD CONDITIONS:**

1. The issuance of a permit shall in no way expose the State of New Jersey or the Department to liability for the sufficiency or correctness of the design of any construction or structure(s). Neither the State nor the Department shall, in any way, be liable for any loss of life or property that may occur by virtue of the activity or project conducted as authorized under a permit.
2. The issuance of a permit does not convey any property rights or any exclusive privilege.



3. The permittee shall obtain all applicable Federal, State, and local approvals prior to commencement of regulated activities authorized under a permit.
4. The permittee will be responsible for the installation of a sediment barrier around all disturbed soils, which is sufficient to prevent the sedimentation of the remaining wetlands and transition area. In addition, a permittee conducting an activity involving soil disturbance, the creation of drainage structures, or changes in natural contours shall obtain any required approvals from the Soil Conservation District having jurisdiction over the site.
5. The permittee shall take all reasonable steps to prevent, minimize, or correct any adverse impact on the environment resulting from activities conducted pursuant to the permit, or from noncompliance with the permit.
6. The permittee shall immediately inform the Department by telephone at (877) 927-6337 (Warn DEP Hotline) of any noncompliance that may endanger the public health, safety, and welfare, or the environment. In addition, the permittee shall inform the Division of Land Use Regulation by telephone at (609) 777-0454 of any noncompliance within twelve hours of the time the permittee becomes aware of the noncompliance, and in writing within five working days of the time the permittee becomes aware of the noncompliance. Such notice shall not, however, serve as a defense to enforcement action if the project is found to be in violation of this chapter. The written notice shall include:
  - a. A description of the noncompliance and its cause;
  - b. The period of noncompliance, including exact dates and times;
  - c. If the noncompliance has not been corrected, the anticipated length of time it is expected to continue; and
  - d. The steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
7. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the authorized activity in order to maintain compliance with the conditions of the permit.
8. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to:
  - a. Enter upon the permittee's premises where a regulated activity is located or conducted, or where records must be kept under the conditions of the permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit; and
  - c. Inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. Failure to allow reasonable access under this paragraph shall be considered a violation of this chapter and subject the permittee to enforcement action under.
9. The permittee and its contractors and subcontractors shall comply with all conditions, site plans, and supporting documents approved by the permit. Any noncompliance with a permit constitutes a violation of this chapter and is grounds for enforcement action under, as well as, in the appropriate case, suspension and/or termination of the permit.

10. All conditions, site plans, and supporting documents approved by a permit shall remain in full force and effect so long as the regulated activity or project, or any portion thereof, is in existence, unless the permit is modified.
11. If any condition or permit is determined to be legally unenforceable, modifications and additional conditions may be imposed by the Department as necessary to protect public health, safety, and welfare, or the environment.
12. A copy of the permit and all approved site plans and supporting documents shall be maintained at the site at all times and made available to Department representatives or their designated agents immediately upon request.
13. A permit shall be transferred to another person only in accordance with the regulations N.J.A.C. 7:7A-20.5.
14. A permit can be suspended or terminated by the Department for cause as specified at N.J.A.C. 7:7A-20.8 and 20.9.
15. The submittal of a request to modify a permit by the permittee, or a notification of planned changes or anticipated noncompliance, does not stay any condition of a permit.
16. Where the permittee becomes aware that it failed to submit any relevant facts in an application, or submitted incorrect information in an application or in any report to the Department, it shall promptly submit such facts or information.
17. The permittee shall submit written notification to the Bureau of Coastal and Land Use Compliance and Enforcement, 401 East State Street, 4th Floor, P.O. Box 420, Mail Code 401-04C, Trenton, NJ 08625, seven days prior to the commencement of site preparation or of regulated activities, whichever comes first. The notification shall contain proof of recording of a conservation restriction or easement, if one was required as part of the permit.
18. The permittee shall not cause or allow any unreasonable interference with the free flow of a regulated water by placing or dumping any materials, equipment, debris, or structures within or adjacent to the channel while the regulated activity(ies) is being undertaken. Upon completion of the regulated activity(ies), the permittee shall remove and dispose of in a lawful manner, all excess materials, debris, equipment, and silt fences and other temporary soil erosion and sediment control devices from all regulated areas.
19. The regulated activity shall not destroy, jeopardize, or adversely modify a present or documented habitat for threatened or endangered species, and shall not jeopardize the continued existence of any local population of a threatened or endangered species.
20. Best management practices as defined at N.J.A.C. 7:7A-1.3, shall be followed whenever applicable.
21. If the permittee, before or during the work authorizes, encounters a possible historic property, as described at N.J.A.C. 7:7A-19.5(l), that is or may be eligible for listing in the New Jersey or National Register, the permittee shall preserve the resource and immediately notify the Department and proceed as directed.
22. The permittee shall record the permit, including all conditions listed therein, with the Office of the County Clerk (the Registrar of Deeds and Mortgages, if applicable) of each county in which the site is located. The permit shall be recorded within 30 calendar days of receipt by the permittee, unless

the permit authorizes activities within two or more counties, in which case the permit shall be recorded within 90 calendar days of receipt. Upon completion of all recording, a copy of the recorded permit shall be forwarded to the Division of Land Use Regulation at the address set forth at N.J.A.C. 7:7A-1.4.

**APPROVED PLANS:**

The drawings hereby approved are four (4) sheets prepared by Amy S. Greene Environmental Consultants, INC., dated July 24, 2017, unless otherwise noted, entitled: "NATIONAL GUARD TRAINING CENTER (NGTC), BLOCK 106, LOT 1, BOROUGH OF SEA GIRT, MONMOUTH COUNTY, NEW JERSEY".

Sheet 3 of 6: "PROPOSED CONSTRUCTION AND NJDEP PERMIT PLAN", revised on 3/20/2018

Sheet 4 of 6: "PLANTING PLAN", revised on 3/20/2018

Sheet 5 of 6: "SOIL EROSION AND SEDIMENT CONTROL PLAN", unrevised

Sheet 6 of 6: "NOTES & DETAILS", revised on 3/20/2018

**APPEAL OF DECISION:**

In accordance with N.J.A.C. 7:7A-21, any person who is aggrieved by this decision may request a hearing within 30 days of the date the decision is published in the DEP Bulletin by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, Mail Code 401-04L, P.O. Box 402, 401 East State Street, 7<sup>th</sup> Floor, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist found at [www.state.nj.us/dep/landuse/forms](http://www.state.nj.us/dep/landuse/forms). Hearing requests received after 30 days of publication notice may be denied. The DEP Bulletin is available on the Department's website at [www.state.nj.us/dep/bulletin](http://www.state.nj.us/dep/bulletin). In addition to your hearing request, you may file a request with the Office of Dispute Resolution to engage in alternative dispute resolution. Please see the website [www.nj.gov/dep/odr](http://www.nj.gov/dep/odr) for more information on this process.

If you need clarification on any section of this permit or conditions, please contact the Division of Land Use Regulation's Technical Support Call Center at (609) 777-0454.

Approved By:



Robert B. Kozachek,  
Environmental Specialist 3  
Division of Land Use Regulation

Date

4/25/18

Original sent to Agent to record  
c: Permittee  
Construction Official



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Division of Land Use Regulation  
Mail Code 501-02A  
P.O. Box 420  
Trenton, New Jersey 08625-0420  
www.nj.gov/dep/landuse

PHILIP D. MURPHY  
Governor

SHEILA Y. OLIVER  
Lt. Governor

CATHERINE R. McCABE  
Acting Commissioner

Charles M. Appleby  
Chief, Environmental Management Bureau JUN 01 2018  
State of New Jersey  
Department of Military and Veterans Affairs  
PO Box 340  
Trenton, NJ 08625

RE: CAFRA Individual Permit Extension  
Original DLUR File No.: 1344-03-0001.2 CAF120002  
**Extension File No.: 1344-03-0001.2 CAF180003**  
Applicant: Sea Girt National Guard Training Center  
Block: 106, Lot: 1  
Borough of Sea Girt, Monmouth County

Dear Mr. Appleby:

This is in response to the May 7, 2018 letter requesting an extension to the above referenced CAFRA Individual Permit issued by the Division of Land Use Regulation (Division) on July 19, 2013 (DLUR File No. 1344-03-0001.2 CAF120002). The permit authorized the construction of an education/administration complex (49,581 square feet), barracks (7,453 square feet), demolition of 8 buildings, construction of 225 parking spaces, telecom-IT upgrades and stormwater management facilities. In addition, a subsequent modification was issued on June 16, 2015 (DLUR File No.: 1344-03-0001.2 CAF140002) which authorized the demolition of various facilities on site, and the construction of three (3) facilities: an EHMS/FMS building, MED/GIB building, PPB building, parking lots and associated improvements, in response to Superstorm Sandy.

Pursuant to N.J.A.C. 7:7-8.2(d) of the Coastal Zone Management Rules, if construction under an individual permit for an activity landward of the mean high water line does not commence within five years from the date of issuance due to circumstances beyond the permittee's control, or has commenced but will cease for a cumulative period of one year or longer due to circumstances that are beyond the permittee's control, then the permit shall be valid for 10 years from the original permit issuance date, provided the permittee submits a written request for approval to commence construction before the end of the period that is 10 years from the original permit issuance date and to continue construction thereafter to completion. The request must be received by the Department no less than 20 working days prior

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to the five-year expiration date of the permit. Construction may continue while the request is under review.

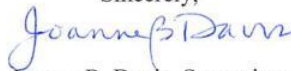
You have provided documentation that, due to circumstances beyond the permittee's control, all of the proposed work has not been completed. In addition, your request for an extension was submitted within the regulatory timeframe established by Rule. The permit, issued on July 19, 2013, will expire on July 18, 2018. Therefore, this CAFRA Individual Permit is extended as it meets the requirements of N.J.A.C. 7:7-8.2(d).

Please be advised that pursuant to N.J.A.C. 7:7-8.2(e), this approval shall expire if construction either does not commence or does not re-commence after cessation before the end of the period that is 10 years from the original permit issuance date, or by July 17, 2023. However, if construction does commence or re-commence before July 17, 2023 and construction must continue beyond that date, then the permit shall be valid until the project is completed provided the requirements at N.J.A.C. 7:7-8.2(e) are met. If these requirements are not met and the permit expires, a new CAFRA Individual permit will be required.

**All terms and conditions of the original permit (DLUR File No. 1344-03-0001.2 CAF120002, and any subsequent modifications, remain in effect.**

Please contact Kara Turner of our staff at (609) 633-2289 should you have any questions regarding this letter. Be sure to reference the Division's file number in any communication.

Sincerely,



Joanne B. Davis, Supervisor  
Division of Land Use Regulation

c: NJDEP Bureau of Coastal and Land Use Compliance and Enforcement, Toms River  
Construction Official  
Planning Board



State of New Jersey

PHILIP D. MURPHY  
Governor

SHEILA Y. OLIVER  
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Division of Land Use Regulation  
Mail Code 501-02A  
P.O. Box 420  
Trenton, New Jersey 08625-0420  
www.nj.gov/dep/landuse

CATHERINE R. McCABE  
Acting Commissioner

Col. Michael Lyons  
NJ National Guard Training Center  
101 Eggerts Crossing Road  
Lawrenceville, NJ 08648

JUN 01 2018

RE: Modification to CAFRA Individual Permit  
Permit #1344-03-0001.2 (CAF 120002)  
**Modification File #1344-03-0001.2 CAF 180001**  
Applicant: NJ National Guard Training Center  
Project Location: Camp Drive and Sea Girt Avenue  
Block: 106 Lot: 1  
Borough of Sea Girt, Monmouth County

Dear Col. Lyons:

Please be advised that pursuant to your modification request, the Division has reviewed the information submitted and the revised plans with regards to the above referenced permit and found it acceptable to modify the above referenced CAFRA Permit.

The original permit allowed the applicant to construct an education/administration complex (49,581 square feet), barracks (7,453 square feet), demolition of 8 buildings, construction of 225 parking spaces, telecom-IT upgrades and stormwater management facilities.

This CAFRA Individual Permit Modification authorizes habitat restoration including invasive species removal and grading to improve wetland hydrology, planting of native wetlands vegetation, invasive species and vegetation control of native species on the dunes, installation of riprap along the ditch, upland of the mean high-water line, a clamshell walkway, and a boardwalk, as shown on the approved plans.

**APPROVED PLANS:**

The drawings hereby approved are five (5) sheets prepared by Amy S. Greene Environmental Consultants, INC., dated July 24, 2017, last revised June 20, 2018 otherwise noted, entitled: **"NATIONAL GUARD TRAINING CENTER (NGTC), BLOCK 106, LOT 1, BOROUGH OF SEA GIRT, MONMOUTH COUNTY, NEW JERSEY"**.

Sheet 2 of 6: **"EXISTING CONDITIONS AND SITE PREPARATION"**,  
Sheet 3 of 6: **"PROPOSED CONSTRUCTION AND NJDEP PERMIT PLAN"**,  
Sheet 4 of 6: **"PLANTING PLAN"**,  
Sheet 5 of 6: **"SOIL EROSION AND SEDIMENT CONTROL PLAN"** and  
Sheet 6 of 6: **"NOTES & DETAILS"**.

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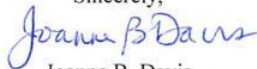
**Additional Conditions:**

- 1) All temporarily disturbed areas shall be restored to the preconstruction conditions upon completion of the proposed project.
- 2) The permittee shall adhere to the Integrated Natural Resources Management Plan (2013-2017), New Jersey Army National Guard Sea Girt National Guard Joint Training Center document dated March 2013, and any subsequent updates to this plan. All vegetation management practices shall take place outside of the seabeach amaranth growing and beach-nesting bird seasons (i.e. from December 1 through March 14) unless otherwise authorized in writing by, and coordinated with, the United State Fish & Wildlife Service and the NJDEP, Division of Fish & Wildlife, Endangered and Nongame Species Program.
- 3) This approval does not authorize any work below the mean high-water line.
- 4) This permit does not authorize any grading of the dunes on site.
- 5) Any temporary disturbance to the dunes as a result of the invasive species removal, or native vegetation control, shall be restored to pre-disturbance conditions immediately after completion of the work.
- 6) All footings of the proposed structure/s shall be designed to resist uplift, floatation, collapse and displacement due to hydrostatic and hydrodynamic forces resulting from flooding up to an elevation of one foot above the flood hazard area design flood elevation. Furthermore, all structural components shall be designed to resist the same forces.
- 7) The Department has determined that this project meets the requirements of the Stormwater Management rules at N.J.A.C. 7:8 without the construction of a stormwater BMP. Any future expansion or alteration of the approved stormwater management system, which would affect water quality, increase the rate or volume of stormwater leaving the site, affect the infiltration capacity on the site, or alter the approved low impact site design, shall be reviewed and approved by the Department prior to construction. This includes any proposed changes to the discharge characteristics of any basin, the construction of new inlets or pipes that tie into the storm sewer network and/or the replacement of existing inlets or pipes with structures of different capacity.

A copy of this permit modification shall be appended to the original permit. All conditions of the original permit, including the expiration, as well as any subsequent modifications, shall remain in force.

If you have any questions regarding this letter, please contact Kara Turner at (609) 633-2289.

Sincerely,



Joanne B. Davis  
Supervisor

Bureau of Coastal Regulation

c: Municipal Clerk & Construction Official (w/plan)  
Agent (w/plan)



**State of New Jersey**  
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS  
POST OFFICE BOX 340  
TRENTON, NJ 08625-0340

PHILIP D. MURPHY  
Governor  
Commander-in-Chief

SHEILA OLIVER  
Lieutenant Governor

★  
JEMAL J. BEALE  
Brigadier General  
The Adjutant General

**TAG POLICY LETTER 18-3\***

**15 May 2018**

**NATIONAL GUARD TRAINING CENTER (NGTC) BEACH PASS POLICY – 2018**

**1. National Guard Training Center (NGTC).**

a. The National Guard Training Center (NGTC) in Sea Girt, New Jersey is a state owned and operated facility funded and organized to support the New Jersey National Guard (NJNG) under the Department of Military and Veterans Affairs (DMAVA). In addition to the National Guard units located at the NGTC, there are four (4) long-term tenant organizations based at the Training Center; the New Jersey State Police (NJSP), the New Jersey Division of Criminal Justice (DCJ), the New Jersey Juvenile Justice Commission (JJC), and the New Jersey Department of Corrections (DOC). There are numerous other government, public, and private lessees who use the premises on various occasions such as the Drug Enforcement Agency (DEA), the Borough of Sea Girt Police Department, and the Wall Township Police Department.

b. The NGTC is not part of the State Park system. The beach is patrolled by the Sea Girt Beach Patrol through a Cooperative Agreement. Due to the limited number of parking spaces and over 400,000 New Jersey Veterans, there is a limited number of beach passes to access the National Guard Training Center for personnel as indicated in paragraph 2.

c. Four (4) changing rooms and two (2) outside showers are provided at the left side of the beach parking areas. Additionally, in the same vicinity are several Porta-Johns (including handicapped) that are available.

2. **NGTC Access.** In support of Force Protection measures, the NGTC is a restricted access facility. Individuals must present credentials to the Security Guard at the Main Gate. The following users are authorized access:

a. All Active Duty and Reserve Component military personnel living or stationed in New Jersey have access to the NGTC with the presentation of a valid military or dependent ID. NJNG current and retired members are authorized to sponsor three (3) additional beach passes. Reserve Component and Active Duty current and retired members are authorized to sponsor one (1) additional beach pass.

b. Current and retired DMAVA state employees and NJNG federal DOD employees (non-dual status) have access to the NGTC with the presentation of a valid DMAVA or DOD ID card and are authorized to sponsor three (3) additional beach passes.

c. Current and retired federal and state law enforcement officers from the NJSP, DOC, JJC, and DCJ have access with the presentation of a valid federal or state ID card and are authorized to sponsor one (1) additional beach pass for a spouse or other dependent.

d. Local First Responders who support the NGTC have access with presentation of a valid ID. Local First Responders include current members of the Sea Girt, Manasquan, Spring Lake, Spring Lake Heights, Brielle, and Wall Police, Fire, and Rescue Squad/EMS. Local First Responders are authorized to sponsor one (1) additional beach pass for spouse or other dependent.

*\*This document supersedes TAG Policy Letter 17-2, dated 2 June 2017*



e. Current NJNG and DMAVA state employees can purchase an additional four (4) beach passes for family members 12 years and older above the authorized amount for \$25.00 per beach pass by Credit Card in Room 132, Building 7, National Guard Training Center, Sea Girt, N.J. 08750. The revenue generated by additional beach passes above authorized amount will be used to maintain the beach.

3. **Beach Passes.**

a. Military members or retirees, who also qualify for access due to employment at an agency listed in paragraph 2, are not authorized dual access. For example, if a military member or retiree is also a member of the NJSP or DMAVA, then they must use their military access privileges and would not be authorized an additional beach pass.

b. The Adjutant General (TAG) reserves the right to direct access to the NGTC to supporters of the NJNG (e.g. civic groups, Veterans' organizations, donors).

c. The TAG, DAG/AAG, and LCC will be provided a limited number of passes for discretionary distribution to support the good of the organization.

d. Sponsors will be issued beach passes starting 15 May 2018 from Tuesday to Friday between the hours of 0900-1200 in Room 132, Building 7, National Guard Training Center, Sea Girt, N.J. 08750.

4. **Additional Responsibilities and Disciplinary Actions.**

a. Beach passes are published annually by the Director, NGTC. Forged, improperly completed or beach passes presented by anyone other than the cardholder will be confiscated by the Security Guard. The person(s) will be denied entrance and a report will be filed with the Director, NGTC.

b. Clearly printed name of user and sponsor on the beach pass must match driver license or other identification to gain access.

c. Appropriate Commanders and agencies will be notified by the Director, NGTC, for further disciplinary action in the event person(s) with beach passes are denied entrance or told to leave the Post for violating policies.

5. **Beach Rules.**

a. The following beach rules apply to visitors and those stationed at the NGTC:

- (1) Park only in authorized areas
- (2) Swimming is only permitted on the southern portion of the beach
- (3) No boats, kayaks, rafts, surf boards or personal water craft
- (4) No dogs or pets
- (5) No glass containers
- (6) No alcoholic beverages
- (7) No tents, lean-tos, cabanas, etc.
- (8) No vehicles on the beach
- (9) No fires, grills, or BBQs
- (10) Do not walk into the dune areas
- (11) Do not enter into the restricted environmentally sensitive areas and wildlife habitats behind the ranges and on the beach
- (12) Fishing in approved area only (north beach)
- (13) Remove all trash/litter from the beach and deposit in approved containers.

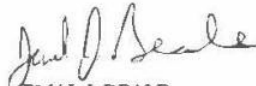
b. Beach visitors will comply with the Sea Girt beach patrol and the NGTC swimming restrictions and guidance. Visitors to the NGTC are subject to the rules, regulations and other guidance applicable to Post operations.

c. Failure to comply with this guidance will be cause for eviction from the Post and other appropriate actions as required by the situation.

6. Beach Picnic Area Events.

a. Military units, Post tenant agencies and visitors may request the use of the Beach Picnic Area for unit or large events. A written request must be submitted to the Director, National Guard Training Center, P.O. Box 251, Sea Girt, NJ, 08750. The request must contain: the proposed date(s) to include primary and alternate date(s), purpose of the event, and Point of Contact information, i.e. name, telephone number, email address

b. There are sixteen (16) large metal picnic tables in this area that will seat approximately eighty (80) to one hundred and fifteen (115) people. Tents, cabanas, and grills may be used in this area, but are not provided by the NGTC. Rental units are available through the Outdoor Recreation Center at Joint Base McGuire-Dix-Lakehurst, as well as other local commercial establishments.



JEMAL J. BEALE  
Brigadier General, NJARNG  
The Adjutant General

DISTRIBUTION: A, B, C, D, E, F



**WELCOME**  
**National Guard Joint Training Center**  
**Sea Girt, New Jersey 08750**

**FISHING PERMIT GUIDANCE**



**NGJTC Flyer 12-1**

**Welcome Statement**

On behalf of Brigadier General Michael L. Cunniff, the Adjutant General, and my staff I wish to welcome you to the National Guard Joint Training Center. We hope your visit is enjoyable and safe.



***Brigadier General Michael L. Cunniff***  
***The Adjutant General***  
***New Jersey National Guard***

**Fishing Rules**

Fishing on the NGJTC beaches is a privilege and not a right. It is limited to those members of the current National Guard, retired military, and tenant agencies on Post. This privilege may be extended upon written request to the Director, NGJTC, PO Box 251, Sea Girt, NJ 08750. The following basic rules apply for Post permitted fishers:

- Place trash in proper receptacles
- **No tents/cabanas**
- **No Open fires or campfires**
- Fish in approved areas only
- **No PETS**
- Use Port-a-Johns located near beach
- Pass is limited only to the applicant, and guests are not permitted.
- Fishing during the summer season described under Beach Rules & Operations will be limited to the 2<sup>nd</sup> North Jetty area
- Fishing during the winter season is authorized from the 2<sup>nd</sup> Jetty South to the boundary with Manasquan
- Fishing hours are limited to 0700-2000 hours
- This permit must be presented to gain entrance, and then displayed (permit number) on the dashboard, drivers side of vehicle
- Unused bait and fish scraps will be taken with the fisher, and **not** disposed on the beach or in trash containers:
- Beach is open to bathers 0900-1900 hours daily during the summer season-during Lifeguards on duty 0900-1700 on weekends only from Saturday before Memorial Day through June 30<sup>th</sup>
- Lifeguards are on duty daily 0900-1700 from July 1 through second Sunday in September.
- **No vehicles** on the beach
- Park only in authorized areas
- **No boats, jet skis, kayaks, surfboards, or tents** allowed
- Must vacate the water immediately when directed by the Lifeguards or Beach Security
- You may eat on the beach, but you must clean up your mess and place it in the receptacles.

**Beach Safety**

**Caution:** when entering the water as the beach drops off. If you are not an experienced swimmer do not enter into the water far from the beach.

**Rip Currents:** Be careful swimming on the Sea Girt Beach. Rip currents are frequent. Pay attention do not panic. Tread water and float, then swim parallel to the beach. Holler and wave to attract attention.

**Range Firing:** When the RED FLAGS are up on the end of the Range Road, when on the beach stay out of the Range Impact Area. Failure to do so could cause you to be removed from the beach.

**Environmental Areas:** Stay out of the dunes and the environmental areas that are marked on the beach. There are protected birds and plants within these areas.

**General Post Rules:** The following general rules apply:

- ***No smoking*** and no ***smokeless tobacco*** in buildings
- Obscene gestures, lewd or indecent conduct by any guest will not be tolerated
- Destruction of property will not be tolerated. Reimbursement for damaged property is expected, and the possibility of prosecution exists.
- Obey the Post 20 MPH speed limit

**Failure to Comply:** Your failure to comply may:

- Cause your stay to be terminated early and without refund
- Cause you to lose future use of Training Site facilities
- Trigger additional charges for cleaning and repair services
- Cause you to be prosecuted

**Visit the Militia Museum**



Building #66 inside and outside displays. Open Tuesday & Thursday year round 10:00 AM-3:00 PM. Also, open selected days and most weekends during the summer. *Note outside displays are open all the time, but please do not climb on the displays.*

**PERMIT NO.** \_\_\_\_\_

**NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**EMERGENCY PHONE #:** \_\_\_\_\_

**EMERGENCY CONTACT:** \_\_\_\_\_

**RELATIONSHIP:** \_\_\_\_\_

**VEHICLE PLATE #:** \_\_\_\_\_

**DRIVERS LICENSE #:** \_\_\_\_\_

**DATE ISSUED:** \_\_\_\_\_

**DATE EXPIRES:** \_\_\_\_\_

**Hold Harmless Statement**

The user shall assume all risk and responsibility for, and save harmless the State of New Jersey, the New Jersey Department of Military and Veterans Affairs, and the employees of Military and Veterans Affairs, from and all claims, demands, suits, actions, recoveries, judgments, and costs, and expenses in connection therewith on account of any loss of life or property, or injury or damages to the person, body or property of a person, persons or entity, which shall arise from or result directly or indirectly from User's use of the premises. The Department shall under no circumstances be liable to User or any persons, for any loss, damage or destruction of property, sustained in connection with activities conducted by the User while on the National Guard Training Center.



**WELCOME TO THE NATIONAL GUARD TRAINING CENTER, SEA GIRT, NJ  
08750**

**WELCOME STATEMENT**

**On behalf of Brigadier General Michael L. Cunniff, the Adjutant General,  
and my staff, I wish to welcome you to the National Guard Training Center.  
We hope your stay is enjoyable and safe.**



***Brigadier General Michael L. Cunniff  
The Adjutant General  
New Jersey National Guard***

**CAMPSITE RULES**

**Electrical, water, and sewage facilities are provided. A Beach house is  
with toilet and shower facilities for your use. The beach house is locked  
daily. A key is provided for your use. The following Campsite rules apply:**

- **No tents**
- **No open fires**
- **No pets**
- **No discharging gray water**
- **No jet skis, boats, kayaks or surfboards**
- **No smoking**
- **No more than 2 additional cars authorized for  
each campsite**
- **Place all trash in proper receptacles**
- **Check in 12:00 pm/Check out 11:00 am**

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### **BEACH RULES AND OPERATIONS**

The beach located at the National Guard Training Center is open between 0900 and 1900 through 10 September 2017. All guests and visitors to the Sea Girt Beaches will adhere to the following provisions:

- Park only in authorized areas
- Swimming is only permitted on the southern portion of the beach
- No boats, kayaks, rafts, surf boards or personal water craft
- No dogs or pets
- No glass containers
- No alcoholic beverages
- No tents, lean-tos, cabanas, etc.
- No vehicles on beach
- No fires, grills or BBQs
- Do not walk into the dune areas
- Do not enter into the restricted environmentally sensitive areas and wildlife habitats behind the ranges and on the beach
- Fishing in approved areas only (North beach)
- Remove all trash/litter from beach and deposit into approved containers
- No pets

### **BEACH FLAGS**

Red Flag: Rough Surf - NO SWIMMING  
Orange Flag: Swim between the flagged area  
Yellow Flag: Restricted bathing. Swim near the Lifeguards  
Green Flag: Swimming Permitted

### **RANGE FIRING**

When the RED flags are up on the end of Range Road, stay out of the Range impact area. Failure to do so could cause you to be removed from the beach

### **ENVIROMENTAL AREAS**

Stay out of the dunes and environmental areas that are marked on the beach. There are protected birds and plants within these areas.

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**FORMATION OF RIP CURRENTS (Courtesy of the Sea Girt Beach Patrol)**

Most waves are formed by wind on the water. Sea waves usually result from storms, often hundreds of miles from shore. Waves are not all equal in size. Sometimes a group of larger waves comes ashore one after another. This is known as a “set” of waves. When waves break, water is pushed up the slope of the shore. Gravity pulls the water back toward the sea. If it converges in a narrow, river-like current moving away from shore, it forms what is known as a rip current. Rip currents can be 50 feet to 50 yards offshore. Some 80% of rescues by lifeguards at America’s surf beaches are due to persons being caught in rip currents. Rip currents may pull continuously but they can suddenly appear or intensify after a set of waves, or when there is a breach in an offshore sandbar. Long shore currents, inshore holes, and other bottom conditions contribute to the formation of rip currents. Inshore holes and sandbars can also greatly increase the danger of spinal injury.

**RIP CURRENT SURVIVAL**

The sea is a wonderful playground, but you must respect its power. Learn to swim and consider participating in a junior lifeguard program. When swimming, choose an area protected by lifeguards. If you are not a strong swimmer, go no further than knee deep. If you decide to swim, check the conditions first to identify a rip current by its foamy and choppy surface. The water in a rip current may be dirty (from the sand being turned up by the current). The water may be colder than the surrounding water. Waves usually do not break as readily as in adjacent water. If caught in a rip current, try to relax. A rip current is not an “undertow”-it will not pull you under. Do not try to swim against the current as this is very difficult, even for an experienced swimmer. If you can do so, tread water and float. Call or wave for assistance. You can also try to swim parallel to shore until you are out of the current, then swim directly toward shore.

**FISHING AND CRABBING**

Fishing and crabbing are authorized in Stockton Lake, in the vicinity of the Campsites only. When crabbing, only single hand lines and collapsible traps can be used without a NJDEP crabbing license. If using a crab pot or trot line, a valid crab pot license must be issued by the NJDEP and on file with the Administrative Office at the NGTC.

**HOLD HARMLESS STATEMENT**

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**The user shall assume all risk and responsibility for, and save harmless the State of New Jersey, the New Jersey Department of Military and Veterans Affairs, and the employees of Military and Veterans Affairs, from and all claims, demands, suits, actions, recoveries, judgments, and costs and expenses in connection therewith on account of any loss of life or property, or injury or damages to the person, body or property of a person, persons or entity, which shall arise from or result directly or indirectly from User's use of the premises. The Department shall under no circumstances be liable to User or any persons, for any loss, damage or destruction of property, sustained in connection with activities conducted by the User while on the National Guard Training Center.**



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**APPENDIX E    INRMP IMPLEMENTATION SUMMARY**

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INRMP Implementation Summary

TABLE E-1. NEW JERSEY ARMY NATIONAL GUARD, SEA GIRT NGTC INRMP IMPLEMENTATION SUMMARY

Program and Goal	Labor Source	Months	Start Year - End Year	DMAVA Labor Hours						Contractor and/or Equipment/Supply Funding (Equipment/Supply Funding Only indicated by *)						Funding Source	STEP Project #	
				CY18	CY19	CY20	CY21	CY22	5-yr	FY18	FY19	FY20	FY21	FY22	5-yr			
General INRMP Management	CFMO-EMB, Contractor	Ongoing		120	120	120	120	120	600	\$54,600	\$7,400	\$7,400	\$7,400	\$54,600	\$130,200	EPR-CON		
<b>LAND AND WATERSHED MANAGEMENT</b>																		
Land and Watershed Goal #1 - Protect and rehabilitate sensitive wildlife habitats that support threatened and endangered species by controlling invasive plants.	CFMO-EMB, Facilities, Contractor	Ongoing		-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90060002	
1. Prepare a treatment, restoration, and prevention plan.		Jul-Dec	2018	40	0	0	0	0	40	-	-	-	-	-	-	-	-	
2. Eliminate Asiatic sedge from the primary dune areas and prevent reinfestation. [WCHEP] <sup>1</sup>		Apr-Sept	2018-2022	-	-	-	-	-	-	\$40,000 <sup>3</sup> for treating nearly 4 acres	\$20,000 <sup>3</sup> for re-treating 2 acres	\$10,000 <sup>3</sup> for re-treating 1 acre	\$5,000 <sup>3</sup> for spot treatments	\$5,000 <sup>3</sup> for spot treatments	\$80,000	-		
3. Reduce levels of common reed and purple loosestrife in the palustrine freshwater wetland complex. [WCHEP] <sup>1</sup>		Apr-Sept	2018-2022															
4. Eliminate all highly invasive shrubs, trees or vines that have limited occurrence within the secondary dune habitats.		Apr-Sept	2018-2022							\$1000*	\$1000*	\$1000*	\$1000*	\$1000*	\$5,000*	-		
5. Reduce established high priority invasive shrubs, vines and herbs in coastal dune shrubland and adjacent dune successional habitat.		Apr-Sept	2018-2022													-		
<b>Totals=</b>				<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>\$41,000</b>	<b>\$21,000</b>	<b>\$11,000</b>	<b>\$6,000</b>	<b>\$6,000</b>	<b>\$85,000</b>	<b>STEP</b>		
Land and Watershed Goal #2 - Minimize visitor and staff exposure to poison ivy through education and management means.	CFMO-EMB, Facilities, Contractor	Ongoing		-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90060002	
1. Control in high traffic areas.		May-Aug	2018-2022	24	24	24	24	24	120	\$1000*	\$1000*	\$1000*	\$1000*	\$1000*	\$5000*	-		
2. Make most beach visitors and all staff aware of poison ivy habitat presence, benefits and potential health hazards.		May-Aug	2018-2022	40	40	40	40	40	200	-	-	-	-	-	-	-		
<b>Totals=</b>					<b>64</b>	<b>64</b>	<b>64</b>	<b>64</b>	<b>64</b>	<b>320</b>	<b>\$1000</b>	<b>\$1000*</b>	<b>\$1000*</b>	<b>\$1000*</b>	<b>\$1000*</b>	<b>\$5000*</b>	<b>STEP</b>	
Land and Watershed Goal #3 - Prevent introduction and spread of invasive species.	CFMO-EMB, Facilities, Contractor	Ongoing		-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90060002	
1. Implement periodic inspections for early detection of invasive species.		Ongoing	2018-2022	0	0	0	0	0	0	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$75,000	-		
2. Implement procedures for storage and disposal of plant materials.		Ongoing	2018-2022	20	0	0	0	0	20	\$1000*	\$1000*	\$1000*	\$1000*	\$1000*	\$5000*	-		
3. Implement procedures for clothing and equipment decontamination.		Ongoing	2018-2022	20	0	0	0	0	20							-		
4. Implement additional BMPs as identified in the treatment, restoration, and prevention plan.		Ongoing	2018-2022	20	0	0	0	0	20							-		
5. Educate staff and visitors.		Mar-Sept	2018-2022	10	10	10	10	10	50							-		
<b>Totals=</b>				<b>70</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>110</b>	<b>\$16,000</b>	<b>\$16,000</b>	<b>\$16,000</b>	<b>\$16,000</b>	<b>\$16,000</b>	<b>\$80,000</b>	<b>STEP</b>		
Land and Watershed Goal #4 - Manage and protect onsite wetlands.	CFMO-EMB, Facilities, Contractor		2018-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90060002	
1. Install and maintain split rail fence (and two gates) around the perimeter of the modified herbaceous portion of Wetland C. [WCHEP] <sup>1</sup>		Mar-Sept	2019	0	40	0	0	0	40	-	\$25,960 <sup>2</sup>	-	-	-	\$25,960 <sup>2</sup>	-		

2. Maintain and enhance Wetland C and Wetland A/B. [WCHEP] <sup>1</sup>		Jan-Dec	2018-2022	40	20	10	10	10	90	\$263,768	\$73,992	\$17,400	\$17,400	\$17,400	\$389,960 <sup>2</sup>	-	
3. Install three wetland interpretive signs. [WCHEP] <sup>1</sup>		Mar-Oct	2020	-	40	-	-	-	40	-	-	\$15,000 (design) \$4,500* (fabrication/ install)	-	-	\$15,000 \$4,500*	-	
4a. Install a walking path. [WCHEP] <sup>1</sup>		Mar-Oct	2020	-	20	-	-	-	20	-	-	\$3,058 <sup>2</sup>	-	-	\$3,058 <sup>2</sup>	-	
4b. Install a boardwalk. [WCHEP] <sup>1</sup>		Mar-Oct	2020	-	20	-	-	-	20	-	-	\$45,600 <sup>2</sup>	-	-	\$45,600 <sup>2</sup>	-	
<b>Totals=</b>				<b>40</b>	<b>140</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>210</b>	<b>\$263,768</b>	<b>\$99,952</b>	<b>\$85,558</b>	<b>\$17,400</b>	<b>\$17,400</b>	<b>\$484,078</b>	<b>STEP</b>	
<b>Land and Watershed Management</b>																	
Land and Watershed Goal #5 – Improve the functionality of two stormwater retention basins.	CFMO-EMB, Facilities, Contractor		2019-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90060002
1. Conduct a feasibility analysis of installing LID features, such as a rain garden/bioswale.		Jan-Jul	2019	0	40	0	0	0	40	-	\$30,000	-	-	-	\$30,000	-	
2. Design and install LID feature.		Jan-Dec	2020	0	0	60	0	0	60	-	-	\$330,300 <sup>4</sup>	-	-	\$330,300	-	
3. Monitor effectiveness of the LID feature, and maintain as needed.		Mar-Oct	2021-2022	0	0	0	20	20	40	-	-	-	\$2,700 <sup>4</sup>	\$2,700 <sup>4</sup>	\$5,400	-	
<b>Totals=</b>				<b>0</b>	<b>40</b>	<b>60</b>	<b>20</b>	<b>20</b>	<b>140</b>	<b>-</b>	<b>\$30,000</b>	<b>\$330,300</b>	<b>\$2,700</b>	<b>\$2,700</b>	<b>\$365,700</b>	<b>STEP</b>	
<b>Land and Watershed Management Totals =</b>				<b>214</b>	<b>254</b>	<b>144</b>	<b>104</b>	<b>104</b>	<b>820</b>	<b>\$321,768</b>	<b>\$167,952</b>	<b>\$443,858</b>	<b>\$43,100</b>	<b>\$42,100</b>	<b>\$1,018,778</b>		
<b>FISH AND WILDLIFE MANAGEMENT</b>																	
Fish and Wildlife Goal #1 - Deter resident Canada geese from using the installation.	Facilities, Contractor	Ongoing		-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90060002
1. Reduce the number of resident Canada geese to no more than 20 and eliminate nesting onsite.		Jan-Apr	2018-2022	80	80	80	80	80	400	\$40,000 \$500*	\$40,500 \$500*	\$41,000 \$500*	\$41,500 \$500*	\$42,000 \$500*	\$205,000 \$2,500*	-	
<b>Totals=</b>				<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>400</b>	<b>\$40,500</b>	<b>\$41,000</b>	<b>\$41,500</b>	<b>\$42,000</b>	<b>\$42,500</b>	<b>\$207,500</b>	<b>STEP</b>	
<b>Fish and Wildlife Management Totals =</b>				<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>400</b>	<b>\$40,500</b>	<b>\$41,000</b>	<b>\$41,500</b>	<b>\$42,000</b>	<b>\$42,500</b>	<b>\$207,500</b>		
<b>RARE SPECIES MANAGEMENT</b>																	
Rare Species Goal #1 - Implement beach management practices and protection measures for rare beach species.	CFMO-EMB, Facilities, Contractor, ENSP, USFWS	Ongoing		-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90180002
1. Hold annual meetings or conference calls with the USFWS and NJDEP-ENSP.		Feb	2018-2022	24	64	24	24	24	160	\$38,000	\$39,000	\$40,000	\$41,000	\$42,000	\$200,000	-	
2. Conduct annual environmental awareness briefings and annual “Qualified Monitor” training for Sea Girt NGTC staff and users.		Mar-Aug	2018-2022													-	
3. Install rare species protection area fencing and no rake zone signs.		Apr-Dec	2018-2022													-	
4. Communicate with ENSP and USFWS biologists regarding rare species monitoring results.		Apr-Oct	2018-2022													-	
5. Implement special management procedures based on monitoring data.		May-Aug	2018-2022													-	
6. Install interpretive signs at north and south ends of NPA about rare species management. [WCHEP] <sup>1</sup>		Apr-Dec	2019													-	
<b>Totals=</b>				<b>24</b>	<b>64</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>160</b>	<b>\$38,000</b>	<b>\$39,000</b>	<b>\$40,000</b>	<b>\$41,000</b>	<b>\$42,000</b>	<b>\$200,000</b>	<b>STEP</b>	
<b>Rare Species Management</b>																	
Rare Species Goal #2 - Conduct annual beach-nesting bird surveys.	CFMO-EMB, Contractor, ENSP,	Ongoing		-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90180003
1. Conduct beach-nesting bird surveys from April 1 through August 31.		Apr-Aug	2018-2022	-	-	-	-	-	-	\$62,500	\$64,000	\$65,500	\$67,000	\$68,500	\$327,500	-	
2. Incorporate data into NJARNG GIS.		Nov-Dec	2018-2022	-	-	-	-	-	-							-	
<b>Totals=</b>				<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$62,500</b>	<b>\$64,000</b>	<b>\$65,500</b>	<b>\$67,000</b>	<b>\$68,500</b>	<b>\$327,500</b>	<b>STEP</b>	

Rare Species Goal #3 - Conduct annual seabeach amaranth and seabeach knotweed surveys, and implement protection measures.	CFMO-EMB, Contractor	Ongoing		-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90180004
1. Prepare annual survey work plan in coordination with USFWS.		Apr	2018-2022	16	16	16	16	16	80	\$10,300	\$10,600	\$10,900	\$11,200	\$11,500	\$54,500	-	
2. Conduct surveys.		Jul-Sept	2018-2022													-	
3. Install and maintain fencing and signs around plants that are found outside the existing rare species protection areas.		Jul-Dec	2018-2022													-	
4. Incorporate survey data into NJARNG GIS, prepare annual survey report, and submit report to USFWS.		Nov-Dec	2018-2022													-	
5. Continue to evaluate the possibility of partnering with the USFWS to conduct long-term seabeach amaranth surveys.		Apr-Dec	2018-2022													-	
<b>Totals=</b>				<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>80</b>	<b>\$10,300</b>	<b>\$10,600</b>	<b>\$10,900</b>	<b>\$11,200</b>	<b>\$11,500</b>	<b>\$54,500</b>	<b>STEP</b>	
Rare Species Goal #4 - Maintain, and monitor osprey nesting platform in cooperation with ENSP and phone company.	CFMO-EMB, Facilities, Phone Company	Ongoing		-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90060002
1. Coordinate with ENSP and phone company regarding design of nesting deterrent for cellular phone tower.		Jan-Dec	2019	24	0	0	0	0	24	\$2500	\$2500	\$2500	\$2500	\$2500	\$12,500	-	
2. Coordinate removal of existing nesting materials from the cellular phone tower and installation of nesting deterrent with the phone company and ENSP.		Jan-Feb	2020	24	8	0	0	0	32	\$500*	\$500*	\$500*	\$500*	\$500*	\$2500*	-	
3. Monitor nesting activity and report findings to ENSP annually.		Apr-Sept	2018-2022	48	48	48	48	48	240							-	
4. Inspect and maintain nesting platform annually prior to March 1.		Feb	2018-2022	8	8	8	8	8	40							-	
5. Continue to maintain the game camera on the osprey nesting platform as needed		Feb-Jul	2018-2022	8	8	8	8	8	40							-	
6. Work with USFWS to band any osprey chicks hatched in the nesting platform each year.		Apr-Sept	2018-2022	8	8	8	8	8	40								
<b>Totals=</b>				<b>96</b>	<b>80</b>	<b>72</b>	<b>72</b>	<b>72</b>	<b>392</b>	<b>\$3000</b>	<b>\$3000</b>	<b>\$3000</b>	<b>\$3000</b>	<b>\$3000</b>	<b>\$15,500</b>	<b>STEP</b>	
Rare Species Goal #5 - Implement a predator control program for target species in coordination with ENSP, USFWS and NJDEP wildlife control staff.	CFMO-EMB, Contractor, ENSP, USFWS, NJDEP wildlife control	Ongoing		-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90180005
1. Reduce the predator population to a sustainable level as determined by a predatory population management plan and continue annual maintenance/control as necessary (subtasks include develop and implement survey protocol, prepare management plan, and conduct control measures).		Dec-Apr	2018-2022	-	-	-	-	-	-	\$162,000	\$166,500	\$171,000	\$174,500	\$179,000	\$853,000	-	
<b>Totals=</b>				<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$162,000</b>	<b>\$166,500</b>	<b>\$171,000</b>	<b>\$174,500</b>	<b>\$179,000</b>	<b>\$853,000</b>	<b>STEP</b>	
Rare Species Goal #6 - Implement habitat enhancement for rare beach species in cooperation with the USFWS and ENSP.	CFMO-EMB, Facilities, ENSP, USFWS	2019-2022		-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90060002
1. Implement dune habitat enhancement measures.		Jan-Dec	2019	0	30	0	0	0	30	\$6,240	\$6,240	\$6,240	\$6,240	\$6,240	\$31,200 <sup>2</sup>	-	
2. Maintain American beachgrass vegetation cover in NPA at no greater than 50% with patches of 5-20% in frontal portions. [WCHEP] <sup>1</sup>		Mar-Apr	2020-2022	0	0	8	0	8	16	0	0	\$1500	0	\$1500	\$3,000 <sup>2</sup>	-	
<b>Totals=</b>				<b>0</b>	<b>30</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>46</b>	<b>0</b>	<b>\$6,240</b>	<b>\$7,740</b>	<b>\$6,240</b>	<b>\$7,740</b>	<b>\$34,200</b>	<b>STEP</b>	

Rare Species Goal #7 – Maintain the three Fluker posts of the NGTC beach and monitor citizen-submitted images for coastal landform and vegetation changes	CFMO-EMB, Facilities	Ongoing		-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90060002
1. Inspect and maintain Fluker posts annually.		Mar-Oct	2018-2022	8	8	8	8	8	40	\$500*	\$500*	\$500*	\$500*	\$500*	\$2500*	-	
2. Download images annually to assess changes in coastal topography and dune vegetation.		Nov-Feb	2018-2022	8	8	8	8	8	40							-	
<b>Totals=</b>				<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>80</b>	<b>\$500*</b>	<b>\$500*</b>	<b>\$500*</b>	<b>\$500*</b>	<b>\$500*</b>	<b>\$2500*</b>	<b>STEP</b>	
<b>Rare Species Management Totals=</b>				<b>152</b>	<b>206</b>	<b>136</b>	<b>128</b>	<b>136</b>	<b>726</b>	<b>\$276,300</b>	<b>\$289,840</b>	<b>\$298,640</b>	<b>\$303,440</b>	<b>\$312,240</b>	<b>\$1,480,460</b>		
<b>OUTDOOR RECREATION MANAGEMENT</b>																	
Outdoor Recreation Goal #1 - Continue to implement beach access, fishing area, and campground programs for natural resources-based outdoor recreation.	Facilities	Ongoing		-	-	-	-	-	-	-	-	-	-	-	-	-	NJB90060002
1. Administer beach access program.		Jun-Sept	2018-2022	120	120	120	120	120	600	0	\$1000*	0	0	0	\$1000*	-	
2. Enforce designated fishing area and trash/bait management procedures.		Jun-Oct	2018-2022	40	40	40	40	40	200							-	
3. Administer campground access program.		Jun-Oct	2018-2022	120	120	120	120	120	600							-	
4. Update Camp Site Guidance flyer and Fishing Area brochure as needed.		Mar-Apr	2018-2022	0	16	0	0	0	16							-	
<b>Totals=</b>			<b>280</b>	<b>296</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>1,416</b>	<b>\$0</b>	<b>\$1000*</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1000*</b>	<b>User Fees</b>		
<b>Outdoor Recreation Totals=</b>			<b>280</b>	<b>296</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>1,416</b>	<b>\$0</b>	<b>\$1000*</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1000*</b>			
<b>INRMP Grand Totals =</b>			<b>846</b>	<b>956</b>	<b>760</b>	<b>712</b>	<b>720</b>	<b>3,994</b>	<b>\$693,168</b>	<b>\$507,192</b>	<b>\$791,398</b>	<b>\$395,940</b>	<b>\$451,440</b>	<b>\$2,839,138</b>			

<sup>1</sup> WCHEP = This project is a component of the Freshwater Wetlands and Coastal Habitat Enhancement Plan (ASGECI 2017).

<sup>2</sup> Cost estimates derived from the WCHEP.

<sup>3</sup> Invasive plant treatment cost estimates based on the assumption that one acre can be treated twice within one year for \$10,000.

<sup>4</sup> For LWG 5.2 (installing LID feature), the two stormwater features are assumed to be 22,020 square feet total. Cost estimate of installing bioswales at this location is based on \$15/sq ft. Cost estimate for maintenance is \$0.12/sq ft. These estimates are from [http://greenvalues.cnt.org/national/cost\\_detail.php](http://greenvalues.cnt.org/national/cost_detail.php).

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**APPENDIX F    RECORD OF ENVIRONMENTAL CONSIDERATION FOR  
IMPLEMENTATION OF AN  
INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN AT SEA GIRT NGTC**

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<b>Enviro Tracking #:</b>	<b>ARNG ENVIRONMENTAL CHECKLIST</b>		<b>State ARNG</b>
Enter information in the yellow shaded areas.			
<b>PART A - PROJECT INFORMATION</b>			
1. PROJECT NAME: Update to the Sea Girt National Guard Training Center Integrated Natural Resources Management Plan (2018-2022)			
2. PROJECT NUMBER: (MILCON if applicable)		3. DATE PREPARED: September 2018	
4. DESCRIPTION AND LOCATION OF THE PROJECT/PROPOSED ACTION:			
a. Location (Include a detailed map, if applicable): Sea Girt National Guard Training Center (Sea Girt, New Jersey)			
b. Description: The updated Integrated Natural Resources Management Plan (INRMP) incorporates new survey data and revisions to the existing 2013-2017 INRMP for Sea Girt NGTC. The plan outlines continuing and proposed projects and management goals to provide for natural resources management on Sea Girt NGTC. The INRMP includes all current RTE listed species and relevant Section 7 information. The INRMP will be			
c. The proposed action will involve (check all that apply):			
<input type="checkbox"/> Training activities/areas <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Natural resource management <input type="checkbox"/> Maintenance/repair/rehabilitation <input type="checkbox"/> Real estate action <input type="checkbox"/> Environmental plans/surveys <input type="checkbox"/> Innovative readiness training project <input type="checkbox"/> Other (Explain):			
d. Project size (acres): 171 Acres of new surface disturbance (proposed): (if applicable) (if applicable)			
5. START DATE OF PROPOSED ACTION (dd-mmm-yy): 1 September 2018 Note: This must be a future date.			
6. PROGRAMMED FISCAL YEAR (if applicable):			
7. END DATE (if applicable): 31 December 2022			
<b>PART B - DECISION ANALYSIS GUIDE</b>			
To use a categorical exclusion, the project must satisfy the following three screening criteria: no segmentation, no exceptional circumstances and a qualifying categorical exclusion that covers the project. The following decision tree will guide the application and documentation of these three screening criteria. The criteria were extracted from 32 CFR Section 651.29 and represent the most common screening conditions experienced in the ARNG. NOTE: Each question in Part B must have an applicable block checked for concurrence with REC.			
1. Is this action segmented (the scope of the action must include the consideration of connected, cumulative, and similar actions)? <input type="checkbox"/> YES (go to #30) <input checked="" type="checkbox"/> NO (go to #2)			
2. Is there reasonable likelihood of significant environmental effects (direct, indirect, and cumulative)? If action meets screening criteria but is assessed in an existing EA or EIS, check NO and proceed to the next question. <input type="checkbox"/> YES (go to #30) <input checked="" type="checkbox"/> NO (go to #3)			
3. Is there a reasonable likelihood of significant effects on public health, safety or the environment? If action meets screening criteria but is assessed in an existing EA or EIS, check NO and proceed to the next question. <input type="checkbox"/> YES (go to #30) <input checked="" type="checkbox"/> NO (go to #4)			
4. Is there an imposition of uncertain or unique environmental risks? If action meets screening criteria but is assessed in an existing EA or EIS, check NO and proceed to the next question. <input type="checkbox"/> YES (go to #30) <input checked="" type="checkbox"/> NO (go to #5)			
5. Is the project of greater scope or size than is normal for the category of action? If action meets screening criteria but is assessed in an existing EA or EIS, check NO and proceed to the next question. <input type="checkbox"/> YES (go to #30) <input checked="" type="checkbox"/> NO (go to #6)			
6. Does the project introduce or employ unproven technology? If action meets screening criteria but is assessed in an existing EA or EIS, check NO and proceed to the next question. <input type="checkbox"/> YES (go to #30) <input checked="" type="checkbox"/> NO (go to #7)			

<b>PART B - DECISION ANALYSIS (continued)</b>	
7. Will there be reportable releases of hazardous or toxic substances as specified in 40 CFR Part 302? If action meets screening criteria but is assessed in an existing EA or EIS, check NO and proceed to the next question.	<input type="checkbox"/> YES (go to #30) <input checked="" type="checkbox"/> NO (go to #8)
8. If proposed action is in a non-attainment or maintenance area, will air emissions exceed de minimus levels or otherwise require a formal Clean Air Act (CAA) conformity determination? If action meets screening criteria but is assessed in an existing EA or EIS, check NO and proceed to the next question.	<input type="checkbox"/> YES (go to #30) <input checked="" type="checkbox"/> NO (go to #9) <input type="checkbox"/> NA (go to #9)
9. Will the project have effects on the quality of the environment that are likely to be highly controversial? If action meets screening criteria but is assessed in an existing EA or EIS, check NO and proceed to the next question.	<input type="checkbox"/> YES (go to #30) <input checked="" type="checkbox"/> NO (go to #10)
10. Will the project establish a precedent (or make decisions in principle) for future or subsequent actions that are reasonably likely to have future significant effects? If action meets screening criteria but is assessed in an existing EA or EIS, check NO and proceed to the next question.	<input type="checkbox"/> YES (go to #30) <input checked="" type="checkbox"/> NO (go to #11)
11. Has federal funding been secured for the Innovative Readiness Training (IRT) project?	<input checked="" type="checkbox"/> N/A (go to #13) <input type="checkbox"/> YES (go to #13) <input type="checkbox"/> NO (go to #12)
12. NOTE: IRT projects not currently funded can secure approved NEPA documentation. However, once funding is secured State ARNG is required to coordinate with ARNG-ILE-T to complete natural and cultural surveys via proponent funding.	<input type="checkbox"/> CONFIRMED (go to #27)
13. Do you have a species list from the U.S. Fish and Wildlife Service that is less than 90 days old?	<input checked="" type="checkbox"/> YES (go to #14)      Date of List: <b>29 August 2018</b> <input type="checkbox"/> NO (update species list return to #13)
14. In reviewing the species list, what determination was made by the State ARNG?	<input type="checkbox"/> No species present (go to #16) <input checked="" type="checkbox"/> No affect (go to #16) <input type="checkbox"/> May affect but not likely to adversely affect (go to #15)      Date of USFWS concurrence: _____ <input type="checkbox"/> May affect likely to adversely affect (go to #15)
15. Does an existing Biological Opinion cover the action?	<input type="checkbox"/> YES (go to #16)      Date of BO: _____ <input type="checkbox"/> NO (go to #30)
16. Have the Endangered Species Act, Section 7 requirements completed?	<input checked="" type="checkbox"/> YES (go to #17)      Date of Documentation: <b>31 July 2018</b> <input type="checkbox"/> NO (complete documentation, return to #16)
17. Does the project involve an undertaking to a building or structure that is 50 years of age or older?	<input type="checkbox"/> YES (go to #18) <input checked="" type="checkbox"/> NO (go to #20)
18. Has the building or structure been surveyed for the National Register of Historic Places?	<input type="checkbox"/> YES (go to #19) <input type="checkbox"/> NO (complete inventory, return to #18)
19. Is the building or structure eligible for or listed on the National Register of Historic Places?	<input type="checkbox"/> YES (go to #20) <input type="checkbox"/> NO (go to #20)
20. Does the action involve ground disturbing activities?	<input checked="" type="checkbox"/> YES (go to #21) <input type="checkbox"/> NO (go to #22)
21. Has an archaeological inventory or research been completed to determine if there are any archeological resources present?	<input checked="" type="checkbox"/> YES (go to #22) <input type="checkbox"/> NO (complete inventory or conduct research, return to #21)
22. In reviewing the undertaking, under the National Historic Preservation Act (NHPA) (for both above and below ground resources), what determination was made by the State ARNG?	<input type="checkbox"/> No 106 undertaking; no additional consultation required under NHPA (go to question #27) <input type="checkbox"/> No properties affected (go to #24)      Date of SHPO Concurrence: _____ <input checked="" type="checkbox"/> No adverse effect (go to #24)      Date of SHPO Concurrence: <b>6-6-2006</b> <input type="checkbox"/> Adverse effect (go to #23)
23. Has the State ARNG addressed the adverse effect?	<input type="checkbox"/> YES (place date of MOA or existing PA and explanation of mitigation in box below, go to #24) <input type="checkbox"/> NO (go to #30)
23a.	

**PART B - DECISION ANALYSIS (continued)**

24. Per DoDI 4710.02 did the state ARNG determine that tribal consultation was necessary for this project?  
 YES (go to #25)  
 NO (Provide reason in this block 24a, go to #27)

24a. Consultation occurred during the initial Environmental Assessment for implementation of the INRMP; this is an update to the existing INRMP and does not warrant tribal consultation.

25. Did the Tribes express an interest or respond with concerns about the project?  
 YES (go to #26)     NO (go to #27)    Date of Documentation: \_\_\_\_\_

26. Has the State ARNG addressed the Tribal concerns?  
 YES (place date of MOU or explanation of how State ARNG addressed tribal concerns in box below, go to #27)  
 NO (address concerns, return to #26)

Complete only if additional documentation is required in question #26

26a. \_\_\_\_\_

27. Does the project involve an unresolved effect on areas having special designation or recognition such as those listed below? For any yes responses go to #30 otherwise go to #28. If any No response is a result of negotiated and/or previously resolved effects please describe resolution in box 27a below.

TYPE	Unresolved Effects?	TYPE	Unresolved Effects?
a. Prime/Unique Farmland	no	e. Wild/Scenic River	no
b. Wilderness Area/National Park	no	f. Coastal Zones	no
c. Sole-Source Aquifer	no	g. 100-year Floodplains	no
d. Wetlands	no	h. National Wildlife Refuges	no

27a. \_\_\_\_\_

28. Is this project addressed in a separate EA or EIS review?  
 YES (complete table below; go to Part C, Determination)     NO (go to #29)

Document Title:	Environmental Assessment for Implementation of an Integrated Natural Resources Management Plan at Sea Girt National Guard Training Center
Lead Agency:	New Jersey Army National Guard (NJARNG)
Date of Decision Document:	6 June 2006

29. Does the project meet at least one of the categorical exclusions listed in 32 CFR 651 App B?  
 YES (complete table below; go to Part C, Determination)     NO (go to #30)

List primary CAT EX code	D-4: Studies, data collection, monitoring, and information gathering...
Describe why CAT EX applies	The project provides for updates to the existing INRMP with inclusion of data collected over the term of the previous document, and supports longterm, ongoing natural resource and threatened and endangered species management programs that regularly occur with coordination with federal, state, and local environmental regulatory officials.

30. At this time your project has not met all the qualifications for using a categorical exclusion under 32 CFR 651. Unless the scope of the project is changed, it will require an Environmental Assessment or possibly an Environmental Impact Statement. If you feel this is in error, please call your NEPA Regional Manager to discuss. If needed, go to Part C Determination.

Additional Information (if needed):  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**PART C - DETERMINATION**

**On the basis of this initial evaluation, the following is appropriate:**

- IAW 32 CFR 651 Appendix B, the proposed action qualifies for a Categorical Exclusion (CX) that does not require a Record of Environmental Consideration.
- A Record of Environmental Consideration (REC).
- An Environmental Assessment (EA).
- A Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS).

\_\_\_\_\_  
Signature of Proponent (Requester)

\_\_\_\_\_  
Environmental Program Manager

\_\_\_\_\_  
Printed Name of Proponent (Requester)

\_\_\_\_\_  
Printed Name of Env. Program Manager

\_\_\_\_\_  
Date Signed

\_\_\_\_\_  
Date Signed

**Other concurrence (as needed):**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

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Printed Name

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Date Signed

Enviro Tracking #:	ARNG Record of Environmental Consideration	State ARNG
Enter information in the yellow shaded areas.		
1. PROJECT NAME: Update to the Sea Girt National Guard Training Center Integrated Natural Resources Management Plan (2018-2022)		
2. PROJECT NUMBER: (MILCON if applicable)		3. DATE PREPARED: September 2018
4. START DATE of PROPOSED ACTION (dd-mmm-yy): 1 July 2018		Note: This must be a future date
5. PROGRAMMED FISCAL YEAR:		
6. END DATE (if applicable): 30 December 2022		
7. DESCRIPTION AND LOCATION OF THE PROPOSED ACTION:		
a. Location (Include a detailed map, if applicable): Sea Girt NGTC is located along the Atlantic coastline of New Jersey at the south end of the Borough of Sea Girt in southern Monmouth County. The installation encompasses 171 acres. The installation is bounded by Stockton Lake (a tributary of the Manasquan River) to the south and the Atlantic Ocean to the east.		
b. Description: The updated Integrated Natural Resources Management Plan (INRMP) incorporates new data and revisions to the existing INRMP for Sea Girt NGTC. The plan provides for inclusion of ongoing annual threatened and endangered species survey results, natural resources data collected over the term of the		
8. CHOOSE <b>ONE</b> OF THE FOLLOWING:		
<input checked="" type="checkbox"/> An existing environmental assessment* adequately covers the scope of this project. Attach FNSI if EA was completed by another federal agency (non-ARNG). EA Date (dd-mmm-yy): 06-06-2006      Lead Agency: New Jersey Army National Guard (N		
<input type="checkbox"/> An existing environmental impact statement* adequately covers the scope of this project. EIS Date (dd-mmm-yy):      Lead Agency:		
<input type="checkbox"/> After reviewing the screening criteria and completing the ARNG environmental checklist, this project qualifies for a Categorical Exclusion Code: See 32 CFR 651 App. B Categorical Exclusion Code: <b>See 32 CFR 651 App. B</b> Categorical Exclusion Code: <b>See 32 CFR 651 App. B</b>		
<input type="checkbox"/> This project is exempt from NEPA requirements under the provisions of: Cite superseding law:		
*Copies of the referenced EA or EIS can be found in the ARNG Environmental Office within each state.		
9. REMARKS:		
_____ Signature of Proponent (Requester)		_____ Environmental Program Manager
_____ Printed Name of Proponent (Requester)		_____ Printed Name of Env. Program Manager
_____ Date Signed		_____ Date Signed
Proponent Information:		
10. Proponent: New Jersey Department of Military and Veteran's Affairs		
11. Address: 101 Eggerts Crossing Rd., Lawrenceville, NJ 08648		
12. POC: William McBride		
13. Comm. Voice: 609-530-7136		
14. Proponent POC e-mail: William.Mcbride@njdmava.state.nj.us		

**FINDING OF NO SIGNIFICANT IMPACT  
ENVIRONMENTAL ASSESSMENT FOR IMPLEMENTATION OF AN  
INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN AT  
SEA GIRT NATIONAL GUARD TRAINING CENTER**

**Introduction**

The New Jersey Army National Guard (NJARNG) prepared an Environmental Assessment (EA) to identify and evaluate potential environmental effects from proposed implementation of an Integrated Natural Resources Management Plan (INRMP) at Sea Girt National Guard Training Center (NGTC), Borough of Sea Girt, Monmouth County, New Jersey. The NJARNG prepared the EA in accordance with the National Environmental Policy Act (NEPA, 42 USC § 4321 to 4370e), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (CEQ Regulations, 40 CFR Parts 1500-1508), and *Environmental Analysis of Army Actions* (32 CFR 651).

**1. Description of Proposed Action and Alternatives**

**a. Proposed Action.** The Proposed Action is to implement an INRMP at Sea Girt NGTC. The purpose of the action is to implement an ecosystem-based conservation program to support sustainable military use of installation lands and to ensure compliance with applicable natural resources management legal requirements. The Proposed Action is needed to comply with Army Regulation 200-3 (*Environmental Quality – Natural Resources – Land, Forest, and Wildlife Management*) and Department of the Army and National Guard Bureau (NGB) policy, which require preparation of an INRMP for Sea Girt NGTC. The installation is located on state property owned by the New Jersey Department of Military and Veterans Affairs and consists of 171 acres. The INRMP defines responsibilities for natural resources management and establishes specific management goals, practices, and implementation schedules. The INRMP includes an Endangered Species Management Plan (ESMP) for two federally listed species, piping plover (*Charadrius melodus*) and seabeach amaranth (*Amaranthus pumilus*). The INRMP was developed in cooperation with the U.S. Fish and Wildlife Service (USFWS) and the New Jersey Department of Environmental Protection, Division of Fish and Wildlife, Endangered and Nongame Species Program (ENSP). The INRMP establishes a mutual agreement of the parties concerning conservation, protection, and management of fish and wildlife resources. The Proposed Action is the NJARNG's Preferred Alternative.

**b. Alternatives Considered.** In addition to the Proposed Action, the NJARNG considered the following alternatives:

(1) **No Action Alternative.** Under this alternative, the INRMP would not be implemented and natural resources would continue to be managed in accordance with existing directives and procedures. Some of the management procedures described in the INRMP are currently implemented at Sea Girt NGTC and would continue to be implemented under the No Action Alternative. However, natural resources decision-making would not be formally integrated with other mission activities and there would be no consistent framework or approach for implementing natural resources programs under the No Action Alternative. The No Action Alternative was carried forward for analysis in the EA.

(2) **Lower Intensity Management Alternative.** Under the lower intensity management alternative, the INRMP would only contain goals that are required to achieve compliance with federal and state regulations. While this alternative would result in the implementation of goals and objectives that would be beneficial to natural resources, opportunities to provide additional benefits would not be possible. Therefore, this alternative was not considered reasonable and was not carried forward for detailed analysis in the EA.

(3) **Higher Intensity Management Alternative.** Under the higher intensity management alternative, additional low priority stewardship goals and objectives would be contained in the INRMP and implemented regardless of their priority. This alternative was considered infeasible since it would require extensive funding and personnel. Therefore, this alternative was not considered reasonable and was not carried forward for detailed analysis in the EA.

## 2. Environmental Analysis

Based on the analysis contained in the EA, it has been determined that the known and potential adverse impacts of the Proposed Action would not be significant. The Proposed Action would have a beneficial effect on the military mission, land use, geological resources, water resources, and biological resources. No effects were identified for cultural resources and socioeconomics. Minor adverse effects were identified for hazardous materials/wastes and toxic substances due to a slight increase in the use of herbicides to control invasive plants. The Proposed Action would not have disproportionately high or adverse human health and environmental effects on minority and low-income populations.

Implementation of the INRMP would result in long-term, significant benefits to federally listed species (piping plover and seabeach amaranth). All effects from implementation of the ESMP (Section 6 of the INRMP) would be beneficial. Continued implementation of the outdoor recreation program (Section 7 of the INRMP) could result in minor, adverse effects to the piping plover and seabeach amaranth. These effects would be reduced relative to baseline conditions through implementation of the ESMP and are considered insignificant or discountable. Therefore, the Proposed Action is not likely to adversely affect piping plovers or seabeach amaranth. The USFWS has concurred with this finding.

**Mitigation.** The Proposed Action would have no significant environmental impacts. Therefore, mitigation measures would not be required to reduce adverse environmental impacts to below significant levels.

## 3. Regulations

The Proposed Action would not violate NEPA, its regulations promulgated by the CEQ, *Environmental Analysis of Army Actions*, or any other federal, state, or local environmental regulations.

## 4. Commitment to Implementation

The NGB and NJARNG affirm their commitment to implement this EA in accordance with NEPA. Implementation is dependent on funding. The NJARNG and the NGB's Environmental

Programs, Training, and Installations Divisions will ensure that adequate funds are requested in future years' budgets to achieve the goals and objectives set forth in this EA.

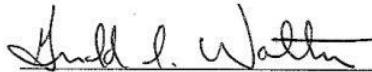
#### **5. Public Review and Comment**

The Revised Draft INRMP and EA were made available for public review from August 11 through September 9, 2005, and the Final INRMP, Final EA, and Draft Finding of No Significant Impact (FNSI) were made available for public review from February 16 through March 17, 2006 at Sea Girt Library, Sea Girt, New Jersey. The public notices were advertised in The Coast Star, Manasquan, New Jersey. No comments from the general public were received. All comments received from the USFWS and ENSP have been addressed.

#### **6. Finding of No Significant Impact**

After careful review of the EA, I have concluded that implementation of the Proposed Action would not generate significant controversy or have a significant impact on the quality of the human or natural environment. This analysis fulfills the requirements of NEPA and the CEQ Regulations. An Environmental Impact Statement will not be prepared and the NGB is issuing this FNSI.

6 June 2006  
Date



Gerald I. Walter  
Colonel, US Army  
Chief, Environmental  
Programs Division



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**APPENDIX G      PRELIMINARY ASSESSMENT OF IMPACTS FROM HURRICANE  
SANDY**

*The discussion provided in the body of this Sea Girt NGJTC 2013-2017 INRMP does not include a review of impacts to natural resources resulting from Hurricane Sandy. Provided herein is a summary of the preliminary assessment of post-storm impacts conducted and prepared by Amy S. Greene Environmental Consulting Inc. (ASGECI) through January of 2013. It is expected that a complete evaluation will require seasonal observations throughout 2013 to fully assess on-site changes to ecological communities and wildlife.*

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## PRELIMINARY ASSESSMENT OF IMPACTS FROM HURRICANE SANDY

On October 29, 2012, Hurricane Sandy made landfall near Atlantic City New Jersey and caused unprecedented damage along coastal Monmouth and Ocean Counties. The maximum wind gusts at Sea Girt NGJTC registered at a maximum of 79 mph and the site received approximately 2.5 inches of rain according to the NGJTC facility weather station. The barometric pressure was as low as 28.23” during October 29. Flooding occurred throughout much of the eastern and southern portions of the facility. Areas that flooded included the majority of the primary and secondary dune, beach parking lots, and much of the fields, facilities and buildings bordering Stockton Lake and on the southern end of the grounds.

Following the storm, AECOM returned to the site on November 1, 2012 to continue predator population surveys (initiated in fall of 2012) and assess damage on cameras and trapping equipment. AECOM noted that there was minimal damage to the trapping equipment and cameras (loss of one of four cameras posted on-site). ASGECI waited to return to the site on November 19, to allow for restoration of power and major clean up within the region. On November 19, 2012, ASGECI conducted a preliminary assessment of impacts to beach habitats and communities. Damage included the following vegetation and natural resource impacts:

- The loss of the osprey tower, which snapped at its base
- The loss of the osprey nest atop the facility cell tower
- Flooding and sand deposition within portions of the secondary dune habitat
- Flooding within the NGJTC freshwater wetland and adjacent fields
- The loss of nearly all above ground vegetation (mainly American beachgrass) and much of the root systems within the primary dune. Including the northern protection area (NPA), southern protection area (SPA) and the southern beach area
- Major topographic alterations (primarily beach erosion) to the primary dune and the unconsolidated shore/intertidal zone.

ASGECI revisited the NGJTC on January 10, 2013 to further assess topographic and tidal impacts to the beach and primary dune areas. Within the NGJTC beach, preliminary observation indicates that the total topography has dropped by a range of three to six or more feet depending on the location. Evidence of this decrease in topography was apparent by the new exposure of old bulkhead remains in both the NPA and SPA, which included erect wooden planks two or more feet above ground. In addition, two jetties were exposed in the NPA with rocks ranging from several inches to over one foot above the sand surface. These jetties ran in an east west orientation from the middle-western portion of the NPA to inside the “no rake” zone east of the NPA. These jetties are associated with the onsite rock piles that were exposed in the no rake /intertidal zone before the Hurricane. Some larger pieces of loose debris, including large pieces of wood remained on the beach, primarily within the SPA.

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At the time of observation in January of 2013, most of the NGJTC beach topography extended in a relatively uniform slope toward the ocean, with a very slight upward berm in portions of the intertidal zone. The steepest portions of the NPA (excess of 30% slope) remained primarily along its western boundary with the sea wall and the secondary dune. Variation in primary dune topography in protection areas including peaks (of 13 feet AMSL or more) in the middle-frontal portions and troughs in rear areas were no longer present. Observations of the beach front revealed a steep shelf of several feet just before the tide line in the intertidal zone. This shelf was most prominent in the “no rake” zone east of the NPA.

Based on these preliminary observations, it appeared that spring high tides under calm conditions, would not infiltrate the NPA and the tidal inundation would stay below the shelf described above. It would appear; however, that high tides combined with moderate wavers of several feet could regularly inundate the NPA frontal portions based on the lowered topography. The wrack line on January 10th, which appeared to have occurred under moderate wave conditions sometime previous to the spring high tide was 40 feet from the typical NPA boundary and approximately 220 feet from the concrete sea wall at the western end of the NPA.

Remaining aboveground vegetation onsite within the primary dune protection areas amounted to approximately less than one percent cover and did not appear to be viable. Few root systems appeared to remain intact and those remaining, primarily in the westernmost portion of the NPA and SPA, may not be viable. American beach grass thrives in dynamic beach environments, and it would be expected to recolonize the protection areas in upcoming seasons; however, it would likely take multiple seasons of relative stability to recover to cover and density levels recorded previous to Hurricane Sandy.

The combination of low topography combined with the exposure of new jetties and high tides and moderate surf could make lifeguard passage in front of the NPA on a regular basis more difficult. It is possible there could be some sand recovery on the NGJTC beach as the spring approaches; however, it appears likely that overall beach topography will generally remain several feet below the previous condition. Based on current and previous observations, the reduction of vegetation could result in a higher probability of nest attempts by beach nesting birds in the spring. It would be expected; however, that there would be a greater probability of nest inundation from spring high tides and storm surges during the incubation period. Additionally, regular occurrences of red fox have been observed onsite following the storm by both ASGECI and AECOM. Two foxes were observed on December 19, 2013, two on January 10, 2013, and one fox on January 27, 2013. Fox tracks were visible throughout the NGJTC including protection areas on various site visits and game cameras further verified regular activity on-site.

Large portions of secondary dune, particularly lower successional dune areas, were also inundated during Hurricane Sandy. It appears large areas of shrub flora, particularly Northern bayberry, was impacted by wind and water during the storm. Many of the shrub limbs and trunks are cracked, but may still be viable. The storm surge appears to have extended through beach access points north and south of the secondary dune (along the alternate driving route) and into the eastern portions of the field and parking lot. Several feet of sand accretion occurred within the

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northern and southern ends of the secondary dune habitats from the storm's wave action. It is possible that the ratios of plant composition and structure within the secondary dune areas will change in some areas as a result of the storm. These communities should be monitored to see how various invasive species and other vegetation respond to the impact.

The full impacts and necessary courses of action resulting from Hurricane Sandy, including lifeguard beach access and protection area maintenance, will be continually assessed by NJDMAVA in conjunction with USFWS and NJDEP as the active season in 2013 approaches.

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**APPENDIX H    INRMP BENEFITS TO FEDERAL TRUST SPECIES**

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## INRMP BENEFITS FOR ENDANGERED SPECIES, CRITICAL HABITAT, AND MIGRATORY BIRDS

Section 4(a)(3)(B)(i) of the Endangered Species Act of 1973 (ESA) prohibits the Secretaries of the Departments of Interior and Commerce from designating as critical habitat any lands or other geographical areas owned or controlled by the DOD, or designated for its use, that are subject to an INRMP prepared pursuant to Section 670a of the Sikes Act (Department of Defense Manual [DODM] 4715.03). This restriction applies if either Secretary determines that a given INRMP provides a benefit to the species for which critical habitat is proposed for designation.

The USFWS uses three criteria to determine if an INRMP provides adequate special management or protection to obviate the need for critical habitat designation:

1. The INRMP provides a conservation benefit to the listed species.
2. The INRMP provides certainty that relevant agreed-on actions will be implemented.
3. The INRMP provides certainty that the conservation effort will be effective.

The federally listed species that have been observed on Sea Girt NGTC include seabeach amaranth (*Amaranthus pumilus*) and piping plover (*Charadrius melodus*), both federally threatened species.

The INRMP provides several goals (listed below) focused on providing a conservation benefit to these protected species.

- Land and Watershed Management Goal #1 – Protect and rehabilitate sensitive wildlife habitats that support threatened and endangered species by controlling invasive plants.
- Rare Species Goal #1 – Implement beach management practices and protection measures for rare beach species in accordance with the INRMP, and in cooperation with the USFWS and ENSP.
- Rare Species Goal #2 – Conduct annual beach-nesting bird surveys.
- Rare Species Goal #3 – Conduct annual seabeach amaranth and seabeach knotweed surveys, and implement protection measures.
- Rare Species Goal #5 – Implement a predator control program for target species in coordination with ENSP, USFWS and NJDEP wildlife control staff.
- Rare Species Goal #6 – Implement habitat enhancement for rare beach species in cooperation with the USFWS and ENSP.

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Two of these seven goals projects are focused on survey and monitoring work; four focus on direct habitat restoration and maintenance actions; and one is focused on a predator control program for target species. As implemented, these projects will provide key data, information, and habitat protection and restoration activities to maintain and potentially increase species populations and their habitats on Sea Girt NGTC (criterion 1). Appendix E includes the implementation schedule for these conservation efforts (criterion 2). Five of the above-listed projects outline periodic and annual monitoring to both assess protected species population numbers and to provide data for adaptive management of project implementation (criterion 3).

No critical habitat has been proposed or designated for Sea Girt NGTC lands, relative to any federally protected species (described above). Measures included in the INRMP (e.g., to manage and protect wetlands and to control invasive species) will indirectly benefit protected species that occur immediately surrounding the Sea Girt NGTC, including nearby waterbodies. In the event that future federal listed species occur on Sea Girt NGTC, the installation might be able to avoid USFWS designation of critical habitat by implementing its INRMP through the execution of appropriate projects and activities, in accordance with the specific timeframes identified in this INRMP.

Federal trust species also include migratory birds protected under the Migratory Bird Treaty Act (MBTA) of 1918. Beyond the piping plover since it is also protected by the ESA, migratory birds afforded protection under the MBTA that are occurring or potentially occurring at the NGTC include the least tern and osprey, both of which directly benefit from several NGTC management measures (listed below).

- Land and Watershed Management Goal #1 – Protect and rehabilitate sensitive wildlife habitats that support threatened and endangered species by controlling invasive plants.
- Rare Species Goal #1 – Implement beach management practices and protection measures for rare beach species in accordance with the INRMP, and in cooperation with the USFWS and ENSP.
- Rare Species Goal #2 – Conduct annual beach-nesting bird surveys.
- Rare Species Goal #4 – Maintain and monitor osprey nesting platform in cooperation with ENSP and phone company.
- Rare Species Goal #5 – Implement a predator control program for target species in coordination with ENSP, USFWS and NJDEP wildlife control staff.
- Rare Species Goal #6 – Implement habitat enhancement for rare beach species in cooperation with the USFWS and ENSP.

The above goals include projects to manage and enhance nesting habitat, improve nesting success potential, and collect survey data. In addition to benefitting least terns and osprey, most of

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the above goals as well as the following ones may benefit other migratory birds listed in Table 2-6 of the INRMP by supporting the ecological integrity of breeding, wintering, and stopover habitats.

- Land and Watershed Management Goal #3 – Prevent introduction and spread of invasive species.
- Land and Watershed Management Goal #4 – Manage and protect on-site wetlands.

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**APPENDIX I      PLANNING FOR CLIMATE CHANGE IMPACTS TO NATURAL  
RESOURCES**

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## PLANNING FOR CLIMATE CHANGE IMPACTS TO NATURAL RESOURCES

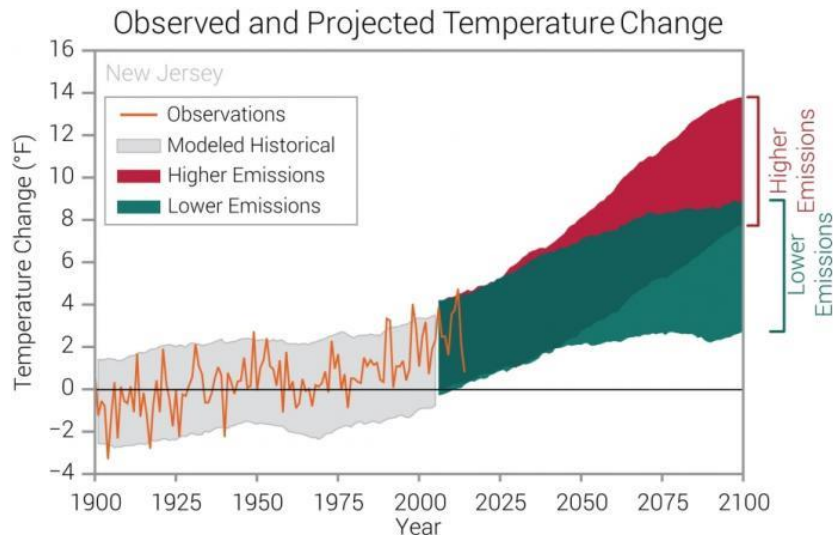
Climate change refers to fluctuations in the Earth’s climate over a long period of time, and may be due to a combination of both natural and human causes. However, in recent years increased greenhouse gas emissions from human activities have caused the acceleration of climatic change throughout the globe. DODI 4715.03 Natural Resources Conservation Program instructs that the changing climate be addressed in INRMPs to help mitigate potential impacts on the natural resources on installations. DODM 4715.03 INRMP Implementation Manual (Enclosure 8) provides guidance on how to integrate changing climate considerations into an INRMP. Based on these policies, historical and projected climate change information are briefly summarized below. Then, potential ecological impacts to the natural resources at the NGTC are discussed, and the implications to the NGTC’s natural resources are outlined. (For a climatological data summary for the NGTC, see the INRMP, Section 2.5 Climate.)

### CHANGING CLIMATE EFFECTS: TRENDS AND PROJECTIONS

Numerous climate-driven changes have been documented in New Jersey, and future projections suggest these trends will continue:

- *Increasing Temperature:* The temperature for New Jersey has warmed about 3 degrees Fahrenheit (°F), or 5 to 10 percent, in the last century (USEPA 2016). Rising temperatures are expected to continue in the decades to come and occur in all seasons (see Figure I-1 for projections based on global climate models under two greenhouse gas emission scenarios) (Battisti and Naylor 2009; Runkle et al. 2017). Over the last 25 years, more unusually warm months have occurred in New Jersey (Runkle et al. 2017). By 2050, 70 percent of summers in the state are projected to be hotter than the warmest summer on record (Runkle et al. 2017).

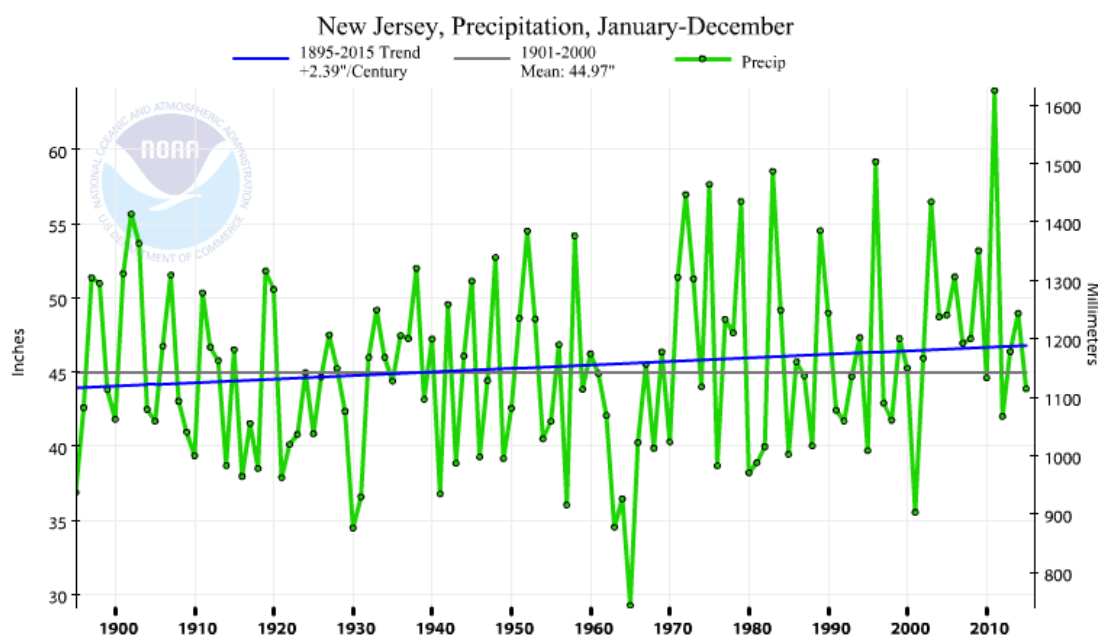
**FIGURE I-1 OBSERVED AND PROJECTED TEMPERATURE CHANGE FOR NEW JERSEY FROM 1900-2100**



Source: (Runkle et al. 2017)

- Changing Precipitation Patterns:* Over the last 10 years, New Jersey has experienced an increase in annual precipitation of about 8 percent above average, as well as an increase in extreme precipitation events (i.e., events with more than 2 inches) (Runkle et al. 2017). NCEI (2016) reports that the state’s annual precipitation has increased at a rate of 2.4 inches per century since 1895 (Figure I-2). Although increased precipitation and the frequency of heavy downpours are projected for New Jersey’s future climate, particularly during the winter and spring (USEPA 2016; Runkle et al. 2017), there is considerable uncertainty with respect to the magnitude of change, which remains an active area of research.

**FIGURE I-2 NEW JERSEY STATEWIDE ANNUAL INCHES OF PRECIPITATION**

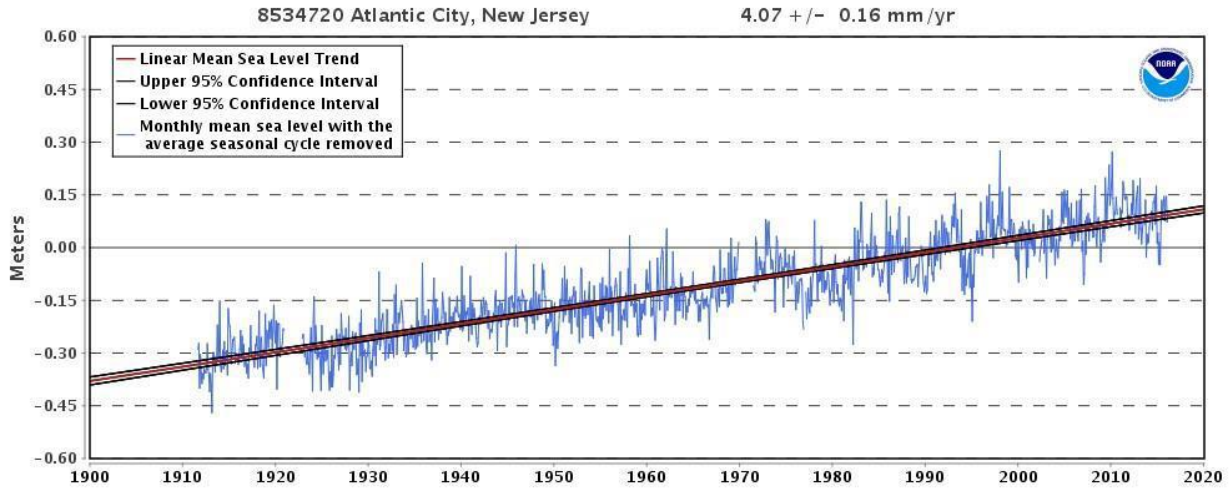


Source: (Moran et al. 2017)

- Sea Level Rise:* Two factors primarily contribute to a rising sea level globally: the expansion of the ocean as it warms and melting glaciers and ice sheets that contribute water volume to the oceans (NJDEP 2017). In addition, sea level rise along the New Jersey shore is exacerbated by land subsidence, a sinking of the Earth’s surface due to sediment compression, groundwater extraction, and past glacial retreat. As compared to the global average, sea level has risen faster along the shores of New Jersey, approximately 12 inches over the last century, primarily due to land subsidence but also potentially from changes in ocean circulation in the North Atlantic (Melillo et al. 2014; Miller et al. 2014). Observations beginning in 1911 show sea level has risen an average rate of 1.6 inches per decade over the period of record at Atlantic City, about double the global rate (Figure I-3) (Moran et al. 2017; Runkle et al. 2017). Based on observations, model projections, and expert assessment, long-term projections of sea level rise for the New Jersey shore range from 13 to 28 inches by 2050 and 30 to 71 inches by 2100 (Miller et al. 2013; Miller et al. 2014; USEPA 2016; NJDEP 2017).



**FIGURE I-3 MEAN SEA LEVEL TREND, ATLANTIC CITY**



Source: (Moran et al. 2017)

- *Extreme Weather Events:* Damaging flood and heavy storm events have increased more than 70 percent from 1958 to 2010 in the northeast United States (Melillo et al. 2014). As sea level has risen along the New Jersey coastline, the number of annual tidal flood days has also increased (Runkle et al. 2017). As the current climate trend continues, sea level rise will lead to more frequent and extensive coastal flooding. Although there is natural variability in the factors affecting the formation of severe storms, models predict that warming ocean waters have the potential to strengthen storms such as tropical storms and hurricanes (Lau et al. 2016). In addition, the Northeast is also experiencing longer drought periods particularly during the summer months, and by the end of this century, it is predicted that droughts may increase in frequency (Frumhoff et al. 2007). The result is a drier growing season, especially during the summer months, when temperatures and evapotranspiration are highest. The effects of this drier growing season on human and natural factors are exacerbated by how this region also is experiencing a longer growing season.

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## ECOLOGICAL IMPACTS OF THE CHANGING CLIMATE

Based on the projections for changing climate conditions, natural resources on the Sea Girt NGTC may be particularly vulnerable to the following stressors:

- *Coastal Habitat Loss*: Sea level rise and increased frequency/intensity of storms and flooding may lead to the loss of beach and dune habitats on the NGTC that support special status plants and beach-nesting birds (i.e., the federally threatened seabeach amaranth and piping plover; state endangered seabeach knotweed and least tern). It also is anticipated that a reduction of sediment load to beaches and other coastal habitats will limit the ability of these areas to maintain accretion at a rate that could match sea level rise (Rutgers University 2014; USEPA 2016). The loss of coastal habitat related to sea level rise and erosional storm processes (i.e., flooding, wind) would increase the stressors affecting the federal and state listed species utilizing the NGTC beach and dune system (see Section 2.8.5 and Section 6.2 of the INRMP for more information on these rare plants and birds).
- *Invasive Species and Pests/Pathogens*: With a changing climate, new invasive species and pests and pathogens may expand into coastal New Jersey due to conducive environmental conditions (Karl et al. 2009; Rutgers University 2016). Similarly, incidences of vector-borne diseases may increase due to reasons such as a prolonged mosquito season (NJDEP 2016), a human health consideration (Moran et al. 2017).
- *Salinity Changes / Saltwater Intrusion*: Increased salinity is a major threat to tidal and freshwater wetlands, an important habitat and ecological resource at Sea Girt NGTC, particularly when their ability to migrate inland is hindered by development (Kreeger et al. 2010). In addition, extreme storms and floods cause saltwater intrusion into the freshwater wetlands and on the maintained grounds on the installation.
- *Ocean Acidification*: Increasing greenhouse gas emissions in the atmosphere are predicted to cause a decrease in ocean pH, affecting marine ecosystems off of New Jersey's coastlines (NJDEP 2015). This increased acidity is expected to adversely affect a variety of marine organisms, in particular those with calcium carbonate shells (e.g., mollusks and calcareous plankton), and change marine food web dynamics including for near-shore and coastal systems.

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## ADAPTATION STRATEGIES FOR NATURAL RESOURCES MANAGEMENT

With how the natural resources of the Sea Girt NGTC likely are vulnerable to the above climate-influenced stressors, adaptation strategies need to be defined and implemented to support the resilience of the installation's natural resources and ensure that limited funds are directed towards effective management practices. A strong focus on coastal resiliency adaptation strategies will promote natural resources sustainability. Potential adaptation strategies for consideration include the following ones:

- **Decrease Stressors:** Continue to decrease other stressors that negatively affect at-risk species, priority habitats, and freshwater wetlands by full implementation of the INRMP projects. Example stressors include invasive species, disease vectors, polluted stormwater runoff, development, and human recreational impact on remaining natural areas and open space. Many of these stressors will be adaptively managed to minimize/avoid impacts on key resources by INRMP projects such as the Land and Watershed Management Goals 1, 3, and 4 and the Rare Species Goals 1, 2, 3, 5, and 6. Beyond the projects defined in the INRMP, additional approaches to mitigate stressors may be needed, such as enhancing stormwater management by minimizing impervious cover on the NGTC (e.g., by replacing impervious surfaces with pervious pavers) and encouraging the preservation and establishment of vegetative cover.
- **Planned Habitat Retreat:** If practical, plan for the natural inland migration of the beach and dune habitats over the long term, due to their dual benefits of storm-buffering (reducing the impact of storm events on the built infrastructure of the NGTC) and providing key habitat for several special status species. Development should be minimized immediately inland of the beach and dune system, to allow these key coastal habitats to migrate landward.
- **Restore Habitat:** Continue to restore priority habitats and ecosystems including habitat for at-risk species. Actions include:
  - Undertake restoration and enhancement of the beach, dunes, wetlands and other natural habitats that are most threatened by the changing climate (see the INRMP Section 4.3 for a description of Land and Watershed Management projects related to this action). Periodically conduct beach replenishment to raise elevation to mitigate beach habitat loss due to sea level rise. Note that the NJDEP Science Advisory Board reports that beach replenishment may become costlier due to greater demand for the sand, threatening the feasibility of beach replenishment (NJDEP 2016).
  - As a component of dune management and landscaping/grounds maintenance practices at Sea Girt NGTC, native plants should be used, as practical, for plantings rather than non-native plants. Native plants to coastal New Jersey are generally more resilient to stressors such as storm surges/flooding (bringing with it saltwater intrusion), drought, and pests and pathogens.

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- **Practice Adaptive Management:** Ongoing scientific monitoring and assessment of key natural resources (e.g., at-risk species, beach/dune system, and wetlands) should continue to be conducted to provide the information needed for adaptive management decisions (USEPA 2016).
  - **Education and Outreach:** Educate Sea Girt NGTC personnel, visitors, and surrounding communities on the threat climate change poses to natural resources and the potential resulting impacts on property, structures, and infrastructure.

#### Fluker Posts

Sea Girt NGTC conducts photographic monitoring along its beach with the aid of Fluker Posts ([www.flukerpost.com](http://www.flukerpost.com)). These permanent posts enable citizen-science participation, via online posting of images, in detecting short- and long-term changes in coastal landforms and habitats. Tracking change in this manner supports the NGTC's ability to manage its coastal resources, and optimally, it will inform a coastal vulnerability assessment.

### PROJECT-SPECIFIC MANAGEMENT GOALS

One project-specific management goal is presented below to further the NGTC's efforts at assessing climate change vulnerabilities and planning adaptation strategies for natural resources.

**Changing Climate Planning Goal #1** - Conduct a climate change vulnerability assessment with defined adaptation strategies.

#### **Priority Classification: Compliance – Class X**

1. Organize or participate in a regional partnership focused on climate adaptation to develop a joint vulnerability assessment and adaptation strategies.
2. With regional partnership input or assistance, conduct a vulnerability assessment to define with more granularity potential impacts such as how much acreage of the beach, dunes, and wetland habitats, and the other grounds of the installation, will be vulnerable to sea level rise and projected storm/flood surges. This information will aid in identifying more detailed regional scientific information that is relevant to the NGTC, better defining adaptation strategies, and projecting implementation costs and timelines, such as the necessary frequency and intensity of beach re-nourishments to maintain this natural storm-buffer.
3. Define climate adaptation strategies in conjunction with the vulnerability assessment to refine the potential strategies above.

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**APPENDIX J      CANADA GOOSE DAILY FECAL COUNTS ON THE SEA GIRL NGTC  
AT EACH PLOT**

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**TABLE J-1 2012 CANADA GOOSE DAILY FECAL COUNT DATA**

<b>Plot ID</b>	<b>8/2/2012</b>	<b>8/7/2012</b>	<b>8/16/2012</b>	<b>8/21/2012</b>	<b>8/30/2012</b>	<b>9/7/2012</b>	<b>9/12/2012</b>	<b>9/21/2012</b>	<b>9/25/2012</b>	<b>9/28/2012</b>	<b>10/8/2012</b>
A	0	2	5	0	12	0	1	0	14	0	2
B	0	0	5	0	9	0	0	0	0	0	27
C	0	1	0	0	0	0	0	0	0	1	0
D	0	3	2	0	4	0	0	0	1	0	1
E	0	5	1	4	0	0	0	0	1	0	2
F	0	2	4	3	5	1	0	0	0	0	0
G	0	2	3	17	6	0	0	0	0	0	0
H	0	8	6	15	10	4	0	2	0	0	0
I	0	0	11	ND	12	2	1	3	0	1	0
J	0	16	14	15	22	5	13	3	0	0	0
K	0	1	5	ND	16	0	0	0	1	0	0
L	0	0	11	0	0	0	0	0	0	0	0
M	0	3	8	7	5	3	0	0	0	0	0
N	0	1	7	10	10	0	1	1	0	0	0
O	0	1	6	17	3	1	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>45</b>	<b>88</b>	<b>88</b>	<b>114</b>	<b>16</b>	<b>16</b>	<b>9</b>	<b>17</b>	<b>2</b>	<b>32</b>
<b># days since previous survey</b>	0	5	9	5	9	8	5	9	4	3	10
<b>DARf (total)</b>	0	9	9.8	17.6	12.7	2.0	3.2	1.0	4.3	0.7	3.2

**TABLE J-2 2013 CANADA GOOSE DAILY FECAL COUNT DATA**

<b>Plot ID</b>	<b>4/3/2013</b>	<b>4/9/2013</b>	<b>4/17/2013</b>	<b>4/24/2013</b>	<b>4/30/2013</b>	<b>5/10/2013</b>	<b>5/14/2013</b>	<b>5/22/2013</b>	<b>5/30/2013</b>	<b>6/5/2013</b>
<b>A</b>	0	2	4	1	10	1	2	0	0	0
<b>B</b>	0	0	2	13	3	0	15	6	8	3
<b>C</b>	0	0	1	2	2	2	1	2	0	1
<b>D</b>	0	0	0	10	10	3	5	1	8	2
<b>E</b>	0	4	0	9	10	22	10	5	5	1
<b>F</b>	4	2	15	14	4	0	2	8	2	0
<b>G</b>	11	2	0	0	4	1	0	1	0	0
<b>H</b>	11	2	0	11	23	0	1	0	1	0
<b>I</b>	0	6	0	14	84	80	15	13	0	1
<b>J</b>	0	3	135	13	0	67	5	0	4	3
<b>K</b>	ND	14	73	0	21	122	10	0	2	1
<b>L</b>	2	5	5	4	10	2	4	0	0	0
<b>M</b>	12	3	20	1	0	0	2	0	0	0
<b>N</b>	0	4	103	121	27	40	5	0	0	0
<b>O</b>	0	0	ND	0	5	ND	0	0	0	0
<b>Total</b>	<b>40</b>	<b>47</b>	<b>358</b>	<b>213</b>	<b>213</b>	<b>340</b>	<b>77</b>	<b>36</b>	<b>30</b>	<b>12</b>
<b>% plots with feces</b>										
<b># days since previous survey</b>	7	6	8	7	6	10	4	8	7	6
<b>DARf (total)</b>	6	8	45	30	0	34	18	4.5	4.3	2.0

**TABLE J-2 2013 CANADA GOOSE DAILY FECAL COUNT DATA (CONTINUED)**

Plot ID	6/12/2013	6/20/2013	6/27/2013	7/2/2013	7/10/2013	7/17/2013	7/24/2013	7/31/2013	8/6/2013	8/14/2013
<b>A</b>	0	0	17	186	25	7	30	21	12	192
<b>B</b>	5	0	31	132	8	134	81	35	16	0
<b>C</b>	1	0	5	18	0	6	5	1	7	0
<b>D</b>	0	0	67	179	1	65	18	20	16	1
<b>E</b>	2	0	4	15	0	6	3	2	1	0
<b>F</b>	1	0	0	12	1	3	4	0	4	2
<b>G</b>	0	0	0	0	0	0	1	0	0	0
<b>H</b>	0	0	0	0	0	0	0	0	4	1
<b>I</b>	0	0	0	0	0	0	0	0	7	9
<b>J</b>	1	0	0	0	0	0	0	15	30	9
<b>K</b>	2	0	0	0	0	1	0	6	13	0
<b>L</b>	0	0	0	0	0	1	0	0	0	14
<b>M</b>	0	0	0	0	0	0	0	0	0	0
<b>N</b>	0	0	0	0	0	0	0	2	0	0
<b>O</b>	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>12</b>	<b>0</b>	<b>124</b>	<b>542</b>	<b>35</b>	<b>223</b>	<b>142</b>	<b>102</b>	<b>110</b>	<b>228</b>
<b>% plots with feces</b>										
<b># days since previous survey</b>	7	8	7	5	8	7	7	7	6	8
<b>DARf (total)</b>	1.7	0	17.7	108.4	4.4	31.9	20.3	14.6	18.3	28.5

**TABLE J-2 2013 CANADA GOOSE DAILY FECAL COUNT DATA (CONTINUED)**

Plot ID	8/22/2013	8/29/2013	9/5/2013	9/11/2013	9/26/2013	10/3/2013	10/9/2013	10/17/2013	10/22/2013	10/31/2013
A	1	11	0	3	27	3	1	15	7	5
B	2	1	32	4	31	9	4	22	4	4
C	2	0	11	0	20	3	8	10	1	1
D	4	0	0	8	2	ND	3	0	0	6
E	2	0	0	14	0	ND	0	0	0	3
F	1	1	3	5	2	ND	5	1	0	2
G	12	0	1	7	0	ND	4	3	6	3
H	12	20	6	3	0	4	10	2	0	1
I	0	11	7	0	10	6	6	4	1	0
J	0	23	0	0	0	1	0	4	0	2
K	8	4	8	0	0	2	1	1	0	0
L	18	3	0	0	4	0	0	9	6	1
M	0	0	0	0	0	0	1	0	0	0
N	5	1	1	0	1	0	0	1	ND	0
O	0	0	0	0	0	2	0	6	0	0
<b>Total</b>	<b>67</b>	<b>75</b>	<b>69</b>	<b>44</b>	<b>97</b>	<b>30</b>	<b>43</b>	<b>78</b>	<b>25</b>	<b>28</b>
<b>% plots with feces</b>										67%
<b># days since previous survey</b>	8	7	7	6	15	7	6	8	5	9
<b>DARf (total)</b>	8.4	10.7	9.9	7.3	6.5	4.3	7.2	9.8	5	3.1

**TABLE J-3 2015 CANADA GOOSE DAILY FECAL COUNT DATA**

<b>Plot ID</b>	<b>4/30/2015</b>	<b>5/13/2015</b>	<b>5/29/2015</b>	<b>6/11/2015</b>	<b>6/25/2015</b>	<b>7/10/2015</b>	<b>7/24/2015</b>	<b>8/20/2015</b>	<b>9/4/2015</b>	<b>9/18/2015</b>
<b>A</b>	120	7	22	21	4	0	11	13	0	0
<b>B</b>	53	17	2	12	2	0	0	1	3	0
<b>C</b>	3	0	0	0	0	0	0	0	0	0
<b>D</b>	75	4	5	0	0	0	2	0	2	2
<b>E</b>	29	3	3	0	0	0	3	0	0	0
<b>F</b>	32	0	5	1	0	0	0	0	0	1
<b>G</b>		11	14	0	0	0				
<b>H</b>	2	0	0	0	0	0	0			
<b>I</b>	0	16	4	0	0	0	0	1	0	0
<b>J</b>	109	144	22	7	0	0	0	5	0	0
<b>K</b>	158	307	75	9	0	0	0	1	0	1
<b>L</b>	112	23	46	0	0	0	0	29	0	0
<b>M</b>	1	0	3	0	0	0	0	0	4	0
<b>N</b>	0	0	3	0	0	0	0	0	0	0
<b>O</b>	2	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>696</b>	<b>532</b>	<b>204</b>	<b>50</b>	<b>6</b>	<b>0</b>	<b>16</b>	<b>50</b>	<b>9</b>	<b>4</b>
<b># days since previous survey</b>	16	13	16	13	14	15	14	27	15	14
<b>DAR (total)</b>	43.5	40.9	12.8	3.8	0.4	0.0	1.1	1.9	0.6	0.3

**TABLE J-4 2016 CANADA GOOSE DAILY FECAL COUNT DATA**

Plot ID	5/9/ 2016	5/27/ 2016	6/17/ 2016	7/6/ 2016	7/15/ 2016	8/5/ 2016	8/12/ 2016	8/26/ 2016	9/16/ 2016	10/14/ 2016	11/4/ 2016	11/16/ 2016
<b>A</b>	71	6	144	310	349	32	8	24	37	11	42	46
<b>B</b>	82	3	5	167	2	17	15	10	26	2	16	17
<b>C</b>	32	3	0	3	102	0	.	0	0	3	36	28
<b>D</b>	78	5	20	4	2	5	20	32	0	7	10	45
<b>E</b>	.	31	4	11	1	10	13	1	0	.	.	25
<b>F</b>	2	5	4	0	0	9	3	3	0	.	.	.
<b>G</b>	11	6	0	1	0	1	0	1	0	0	0	3
<b>H</b>	12	5	.	.	0	.	0	0	0	.	.	11
<b>I</b>	0	5	0	.	0	0	3	.	0	.	0	47
<b>J</b>	1	8	0	0	0	10	26	3	30	6	2	34
<b>K</b>	53	8	0	0	0	0	0	0	.	4	0	0
<b>L</b>	144	18	14	18	7	5	2	54	3	0	40	127
<b>M</b>	.	3	0	0	0	0	1	0	.	0	0	.
<b>N</b>	1	2	0	0	0	0	0	0	0	0	0	0
<b>O</b>	2	1	0	1	0	1	0	0	0	0	3	0
<b>Total</b>	<b>489</b>	<b>109</b>	<b>191</b>	<b>515</b>	<b>463</b>	<b>90</b>	<b>91</b>	<b>128</b>	<b>96</b>	<b>33</b>	<b>149</b>	<b>383</b>
<b># days since previous survey</b>	17	18	20	19	9	22	7	14	21	28	21	12
<b>DAR (total)</b>	28.8	6.1	9.6	27.1	51.4	4.1	13.0	9.1	4.6	1.2	7.1	31.9