



# Wallops Island Protected Species Training

## Protected Species of Wallops Island



## Identification Awareness



# Wallops Island Protected Species Training

## The Two **BIG** Questions...

### What do we monitor?

- Threatened & Endangered species on the beach:
  - ☐ piping plover
  - ☐ red knot
  - ☐ marine sea turtles

### Why do we monitor?

- To protect shore birds, sea turtles, and marine mammals
- It is a requirement of the Endangered Species Act and Biological Opinion issued by U.S. Fish and Wildlife Service (USFWS).

- There are a multitude of migratory birds and sea life present on and around Wallops Island beach.
- Some of these animals require protection and monitoring because they are listed as either 'threatened' or 'endangered' (T&E) by the USFWS.

- The most common T&E species on our beach are the piping plover, red knot, and loggerhead sea turtle.
- There could be other T&E species in the vicinity, such as Kemp's Ridley, Atlantic green, or leatherback sea turtles, but their occurrences are rare.





# Wallops Island Protected Species Training

## Red Knots

- They are listed as “threatened.”
- They migrate from the Arctic to the southernmost tip of South America.
- WFF beach is a feeding habitat from **May to June**.
  - ❑ On Wallops Island, their major food sources are mole crabs and coquina clams.



- The primary listing factor is the loss of habitat due to sea level rise, shoreline stabilization, and coastal development, as well as the loss of prey due to climate change and commercial harvesting.



# Wallops Island Protected Species Training

## Piping Plover

Piping plovers only breed in three geographic regions of North America

- Atlantic Coast
- Northern Great Plains
- Great Lakes

Atlantic Coast plovers nest on

- Coastal beaches
- Sandflats at the ends of sand spits and barrier islands
- Gently sloped foredunes
- Sparsely vegetated dunes
- Wash over areas cut into or between dunes.



Wallops Island Breeding Adult, 2010

- Piping plover migratory and breeding season starts **March 15 and ends at the beginning of September.**
- During this timeframe, the northern portion of Wallops Island is closed.
- Entry past the barrier is strictly prohibited without prior permission from the Environmental Office.





# Wallops Island Protected Species Training

## Piping Plover

Piping plovers became protected under the Endangered Species Act in 1986

- Atlantic Coast plovers are “threatened”
- Currently there are < 2000 breeding pairs

### Several Factors for Decline

- Development reduces coastal habitat
- Human disturbance
- Domestic animals and predators
- Storm tides

By managing the population on Wallops Island

- We are helping to increase the number of successful breeding pairs to increase the piping plover population.



Wallops Island Breeding Adult, 2010



Wallops Island Hatchlings, 2010



# Wallops Island Protected Species Training

# We need your help!

The following slides show  
how to identify a piping  
plover and the measures  
you can take to help ensure  
nest success.





# Wallops Island Protected Species Training

## *Piping Plover Identification*

Piping plovers are small, approximately seven inches long.

Plovers have sand-colored plumage on backs and crown with white underparts.

Breeding birds have a single black breastband, a black bar across the forehead, bright orange legs and bill, and a black tip on the bill.

During winter, the birds lose the black bands, the legs fade to pale yellow, and the bill becomes mostly black.



**Plover with breeding plumage**

Piping plovers are known for their distinctive melodic mating call: The Piping Plover's call is a plaintive cry, sometimes described as a whistled *peep-lo*, with the first syllable higher.



# Wallops Island Protected Species Training

## *Piping Plover Identification*

**The same coloration that makes it difficult for predators to see piping plover also makes it difficult for you to see them!**

Plovers commonly nest in sparsely vegetated areas, sand flats or shell flats.

Recently they have been nesting in and around beach grass.

Plovers rely on cryptic coloration and open areas to hatch nests.

This makes both birds and eggs hard to see.







# Wallops Island Protected Species Training

## *Piping Plover Identification*



**When still, piping plover blend into the pale background of open, sandy habitat on outer beaches where they feed and nest.**





# Wallops Island Protected Species Training

## *Piping Plover Identification*

**This plover is near the dune line, a popular hangout for plovers.**







# Wallops Island Protected Species Training

## *Piping Plover Identification*

When conducting beach patrols be sure to tread lightly!

**Drive along the intertidal zone only!**

- Birds, chicks, and eggs in soft sand can be very hard to see.
- Birds and chicks have an affinity for tire tracks.

Plovers love to walk in and near tire tracks.



A plover nest narrowly missed by tire tracks.



Baby plovers buried in the softer sand.



A baby plover napping in a tire track.







# Wallops Island Protected Species Training

There is the potential for many other shorebirds to nest on Wallops Island. They nest in “scrapes” or small indentations in the sand or shells. It is important to be vigilant as these nests can be extremely difficult to spot and further stresses the importance of driving in the intertidal zone only.



**Oystercatcher eggs**



**Least Tern eggs**



**Black Skimmer eggs**



**Royal Tern eggs**





# Wallops Island Protected Species Training

## *Piping Plover Identification*



**Killdeer**

These birds can  
be seen on  
Wallops Island  
but are NOT a  
piping plover.



**Semipalmated  
Plover**



**Piping Plover for  
comparison**





# Wallops Island Protected Species Training

## *Monitoring and Management*

### Environmental Office Responsibilities



**Locate piping plover pairs**



**Find Nests**



**Exclosure Nests**



**Monitor nests until hatching**



**Monitor chicks until fledged**



**Manage breeding habitat for minimal human and predator disturbance**





## Marine Turtles

The following slides will explain  
how to identify a sea turtle's  
nest via its crawl tracks.



# Wallops Island Protected Species Training

## Sea Turtles near Wallops Island:



Loggerhead



Leatherback



Atlantic Green



Kemp's Ridley

Although there is a potential for these turtles to be near Wallops Island, **the loggerhead sea turtle would be the most likely sea turtle in the area.**





# Wallops Island Protected Species Training

## Sea Turtle Crawls

Since most turtles, except for Kemp's Ridley, nest very late at night or early in the morning hours, you will most likely NOT see an actual turtle, just the evidence that they have been there...sea turtle crawl tracks.



Sea turtle crawl tracks have been likened to an ORV coming up out of the ocean, doing a donut and then going back in.





# Wallops Island Protected Species Training

## *Identifying a Sea Turtle Crawl*

### What to look for

- Entrance tracks,
- Exit tracks, and
- Nest mound.



If you see signs of a sea turtle crawl notify the Environmental Office **IMMEDIATELY...**

The wind can erase crawl tracks in a matter of a few hours or less.

Do NOT walk on or over nest mound.

Note the general location of nest and mark near (NOT on) nest mound with a large shell, branch, etc.

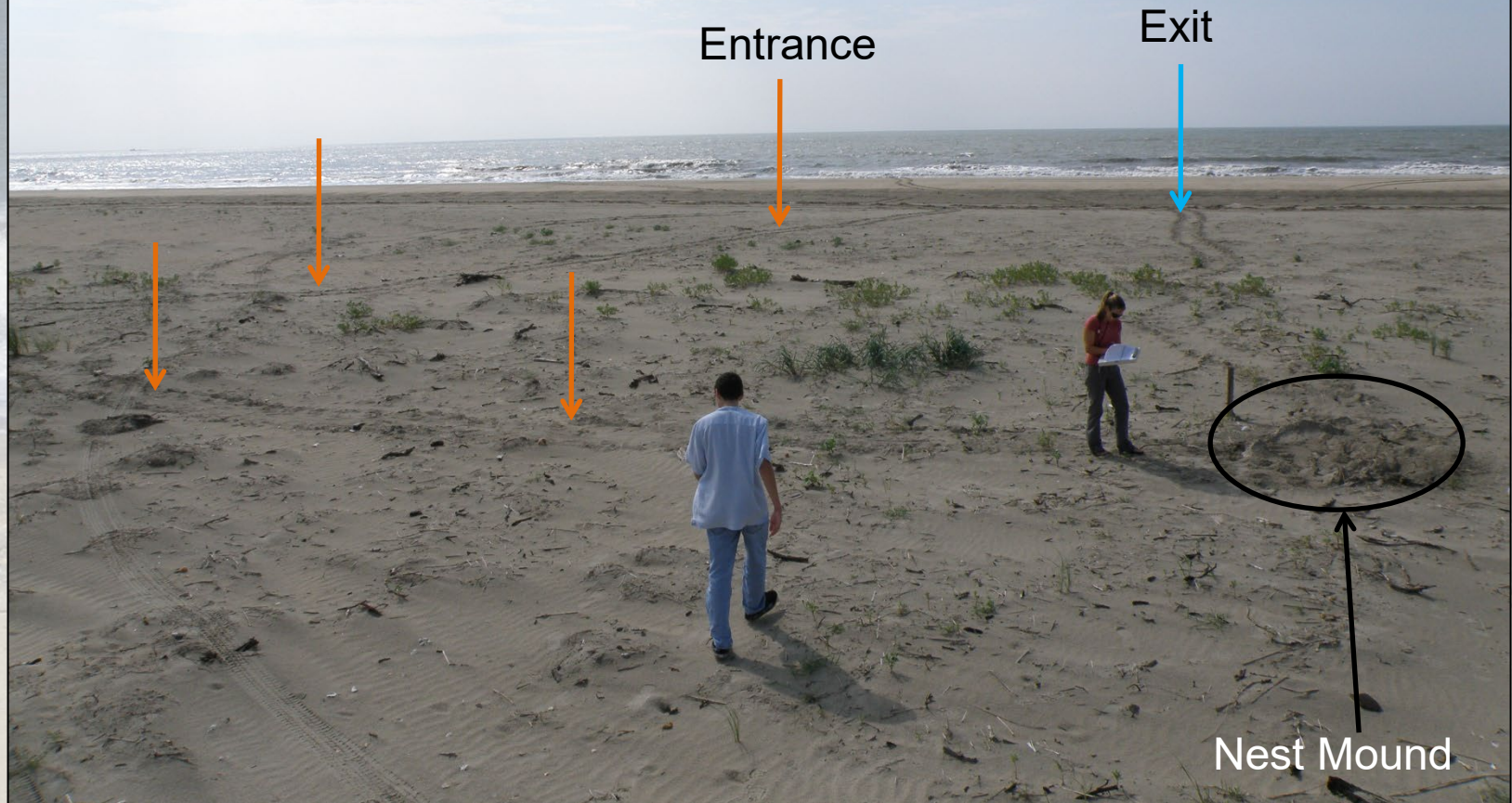




# Wallops Island Protected Species Training

## *Identifying a Sea Turtle Crawl*

Most crawls will follow this same path entrance, exit and a nest mound; however, the point of entrance and exit can be farther apart.







# Wallops Island Protected Species Training

## *Monitoring and Management*

### Environmental Office responsibilities:



- Verify a sea turtle crawl
- Check for eggs in nest mounds/verify nest
- Exclose nests
- Monitor exclosed nests weekly
- Wait for baby sea turtles to arrive
- Excavate hatched nests







## Wallops Island Protected Species Training

# Stranded Marine Life



The Environmental Office  
assists the Virginia Aquarium  
Stranding Response Team in  
their recovery efforts with  
stranded marine mammals  
and sea turtles.





# Wallops Island Protected Species Training

In the spring, seals make their annual return to local beaches where they rest during migration. If you find a marine animal on the beach, here are a few things to keep in mind:

- **It is illegal to harm or harass T&E species and marine mammals.**
- Harassment includes interaction with an animal. Give animals space; stay at least 150 feet away.
- NEVER approach, feed, or touch a wild animal. Seals, for instance, are sensitive and can become aggressive.
- It's also illegal to keep parts of a marine animal, e.g., sea turtle shell, whale vertebrae, or dolphin teeth. If you find them on the beach, leave them there.



Harbor seal on Wallops Island beach, 2021





# Wallops Island Protected Species Training

## *Stranded Marine Mammals*

**If you see a stranded marine mammal (dolphin, seal, whale, etc.) or sea turtle, contact**

- Lori at [lori.m.levine@nasa.gov](mailto:lori.m.levine@nasa.gov) or 301.286.6741 **or**
- Shane at [jonathan.s.whealton@nasa.gov](mailto:jonathan.s.whealton@nasa.gov) or 757-854-8917

**If no response and the animal appears injured**, contact the Virginia Stranding Network (<https://www.virginiaaquarium.com/research-and-conservation/stranding-response>) or call 757.385.7575

- The Stranding Network is in Virginia Beach, and it typically takes 3-5 hours for arrival. Before arriving, the Stranding Network may give specific instructions.
- Quick notification is important for survival or for educational necropsy.
- Notify the Environmental Office that the Stranding Network was contacted.



# Wallops Island Protected Species Training

## *Bats*

- The Northern Long-Eared Bat (NLEB) was listed as endangered in 2022.
- The Tricolored Bat was proposed to be listed as endangered in 2022.
- The bats face extinction due to the range-wide impacts of white-nose syndrome.
- ALL tree clearing/trimming activities on the Island must be coordinated with the Environmental Office before work starts. NASA must consult with the US Fish and Wildlife Service for potential impacts to these bat species.



Northern long-eared bat



Tricolored bat





# Wallops Island Protected Species Training

## Environmental Contacts

**Immediately** notify the Security Supervisor on duty, who will then contact the Environmental Office, regardless of time day or night.

Recreational Beach users are encouraged to call Security at the Wallops Island Gate **(757) 824-2780**, if they spot any protected species.

Natural Resources Manager: Lori Levine at [lori.m.levine@nasa.gov](mailto:lori.m.levine@nasa.gov) or 301.286.6741

Lead Biologist: Shane Whealton at [jonathan.s.whealton@nasa.gov](mailto:jonathan.s.whealton@nasa.gov) or 757.824.1090



Wallops Island Pining Plover Fledgling, 2010



## Wallops Island Protected Species Training

**Thank you for your help!  
Security often helps us find our  
friends on the beach!**