



Habitat Information Tracking System



Dec 9, 2009

Project Overview

Project: (57568) Shorebird Horseshoe Crab Management 2009

Type: Technical Assistance
Orgcode: (51120) DELAWARE BAY ESTUARY PROJECT
Entered By: Gregory Breese, (302) 653-9152
Point of Contact: Gregory Breese
Creation Date: Aug 28, 2009
Status: Completed
Completion Date: Sep 2009
State: Delaware
FWS Region: 5

Project Narrative:

Delaware Bay hosts the largest spawning population of horseshoe crabs in the world and the second largest population of migrating shorebirds in North America. Delaware Bay is designated within the Western Hemisphere Shorebird Reserve Network as having the highest reserve status. In addition to providing the principal food source for migratory birds in Delaware Bay, research indicates horseshoe crabs may comprise the main diet of juvenile loggerhead turtles.

The Delaware Bay is a critical migratory stopover for Western Hemispheric populations of migratory shorebirds, including red knot (*Calidris canutus rufa*), ruddy turnstone (*Arenaria interpres*), sanderling (*Calidris alba*), and semipalmated sandpiper (*Calidris pusilla*). These migrants depend on the eggs of spawning horseshoe crabs for a major portion of their diets (50 to 90 percent) each spring before migrating from the Delaware Bay beaches to Arctic nesting grounds.

Migratory shorebirds on the Delaware Bay beaches declined in the late 1990s and early 2000s. Since 2003 the population has been stable based on winter surveys in South America and Aerial Peak Counts in Delaware Bay. The local threats that have been identified include reduced food availability, human disturbance, predation, loss of sandy beaches and suitable roost sites, and risk of oil and hazardous materials spills. The high harvest of horseshoe crabs leading up until the late 1990s has reduced the crab population and may have led to declines in migratory shorebirds including red knot, sanderling, semipalmated sandpiper, and ruddy turnstone.

The issue of meeting the energetic requirements of migratory Shorebirds has driven the controversy over

management of horseshoe crab (*Limulus polyphemus*) populations in the mid-Atlantic region and particularly in Delaware Bay. The ASMFC Horseshoe Crab Fishery Management Plan has multiple goals: 1) sustaining horseshoe crab population levels, 2) providing critical food resources for other species (migratory shorebirds in particular), 3) allowing harvest for bait, and 4) providing continued use for LAL production, which is required for testing the safety of medical supplies World-wide. Even more problematic is the fact that the migratory shorebird populations are dependent on horseshoe crab eggs that are surplus to the needs of the horseshoe crab population.

Recognizing the need for a more integrated approach, the Atlantic States Marine Fisheries Commission has requested technical assistance from the US Fish & Wildlife Service to provide expertise in shorebird biology and management to their Horseshoe Crab Fishery Management Process. The FWS chairs the Shorebird Technical Committee.

The Delaware Bay Estuary Project provides leadership and coordination in conserving the Delaware Bay Spring Shorebird Migration Stopover by representing the FWS on the Atlantic States Marine Fisheries Commission's Horseshoe Crab Technical Committee, serving as Coordinator for the FWS's Shorebird Technical Committee, and helping to prioritize projects and identify funding sources to carry out high priority research, monitoring and management actions to conserve shorebirds, especially focused upon the declining red knot (*Calidris canutus*) population.

Work on the Strategic Habitat Conservation (SHC) and Structured Decision Making effort has continued and is almost completed. The results of this effort will be used to inform the Atlantic States Marine Fisheries Management Board. Several Joint Meetings of the Shorebird and Horseshoe Crab Technical Committees were held in FY 2009.

Public Description:

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The issue of meeting the energetic requirements of migratory Shorebirds has driven the controversy over management of horseshoe crab (*Limulus polyphemus*) populations in the mid-Atlantic region and particularly in Delaware Bay. The ASMFC Horseshoe Crab Fishery Management Plan has multiple goals: 1) sustaining horseshoe crab population levels, 2) providing critical food resources for other species (migratory shorebirds in particular), 3) allowing harvest for bait, and 4) providing continued use for LAL production, which is required for testing the safety of medical supplies World-wide. Even more problematic is the fact that the migratory shorebird populations are dependent on horseshoe crab eggs that are surplus to the needs of the horseshoe crab population.

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Project mechanism(s):

1. Title: Atlantic Coastal Fisheries Cooperative Management Act

Mechanism Type: Cooperative Agreement

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Mechanism Type: Cooperative Agreement

Primary Non-FWS Party: Other

Date of Mechanism: Jan 01, 1993

Perpetuity? yes

Funds Obligated Date: Oct 2008

Funding Source Fiscal Year: 2009

Additional Comments:

Congress enacted this agreement to support the states and federal agencies in cooperatively managing shared fisheries resources.

Mechanism accomplishment(s):

1. **Title:** 2009 HCrab-Shorebird Management

Habitat Type: Rivers/Streams/Shoreline

Accomplishment: 2009 HCrab-Shorebird Management

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Watershed (HUC): DELAWARE BAY

County: Sussex

State: Delaware

FWS Region: 5 - Region 5

FWS Ecoregion: Delaware River/Delmarva Coastal Area

Joint Venture Area: Atlantic Coast Joint Venture

Accomplishment Status: Final

Habitat Type: Rivers/Streams/Shoreline

Habitat Class: Shoreline

Habitat Sub-Class: Tidal

Completion Date: Sep 10, 2008

Primary Trust/Resource Benefits: Threatened/Endangered/Candidate Species

Secondary Trust/Resource Benefits: Migratory Birds

Other Trust/Resource Benefits: Interjurisdictional Fish

Comments:

see narrative

Assistance activity(s)

1. Assistance Title: 2009 HCrab-Shorebird Management
Assistance Type: Habitat Assessment

Activity: 2009 HCrab-Shorebird Management

Accomplishment: 2009 HCrab-Shorebird Management

Activity: 2009 HCrab-Shorebird Management

Assistance Title: 2009 HCrab-Shorebird Management
Primary Non-FWS Party: Other
Assistance Type: Habitat Assessment
Assistance Activity: Technical Committee Participation
Assistance Program: Other Agencies, Programs, Individuals (Non-USDA Activities)
Fiscal Year of Activity: 2009
Assistance Title: 2009 HCrab-Shorebird Management
Est. Activities: 20
Activities: 25
Est. Staff Days: 41.0
Staff Days: 16.0

Activity sub-Activity(s):

FWS Sub-Activity: Coastal Program - 1124
Contribution Fiscal Year: 2009
Funding Source Fiscal Year: 2009
Inkind: \$1000.00
Est. FWS Days: 41.0
FWS Days: 16.0

Comments: for Coastal Program - 1124

Technical Assistance includes: Chairing the Shorebird Technical Committee, Reporting to the ASMFC's Horseshoe Crab Management Board, Participating on the Horeshoe Crab Technical Committe, Coordinating with Endangered Species, and coordinating the joint meeting.

Activity ITIS species:

Species Name: Limulus polyphemus

Species Name: Arenaria interpres

Common Name: Ruddy Turnstone

Species Name: Calidris canutus

Species Name: Calidris pusilla

Common Name: Red Knot

Common Name: Semipalmated Sandpiper

Species Name: Calidris alba

Common Name: Sanderling

Total Area

Total Assistance Area By Habitat Type

Est. Riparian Staff Days: 41

Riparian Staff Days: 16

Est. Riparian Activities: 20

Riparian Activities: 25

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Total Contributions

Total Service Contribution to Project By Habitat Type

Riparian Inkind: \$1000.00

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