PROBLEMS AND STRATEGIES FOR ISLAND-NESTING TERNS MANAGEMENT IN MAINE January 8, 2007

Problem 1: Regular surveys of tern nesting colonies will be necessary to monitor progress towards goals and objectives.

<u>Strategy 1.1</u>: Annually, survey the potential nesting islands, to determine use by nesting terns.

Strategy 1.2: Annually estimate numbers of pairs/species at nesting islands.

<u>Strategy 1.3</u>: Annually estimate breeding success at major colonies to determine productivity values.

<u>Strategy 1.4</u>: Obtain additional sources of funding to conduct population management.

Problem 2: Active management to control nesting gulls, predators, and human disturbance is necessary to maintain or increase numbers of terns at existing colonies.

<u>Strategy 2.1</u>: Continue intensive tern and gull management programs at Petit Manan, Matinicus Rock, Seal Island, Metinic Island, Eastern Egg Rock, Stratton Island, Pond Island, and Outer Green Island.

<u>Strategy 2.2</u>: Work with partners and obtain additional sources of funding to address priority disturbance and predation research issues.

Problem 3: Additional large, productive tern colonies must be established to meet population and distribution objectives.

<u>Strategy 3.1</u>: Seek to reestablish productive tern colonies in each of the following areas:

- a) Washington Co. coast between Machias Seal Island and Petit Manan
- b) Outer Blue Hill or Jericho Bay,
- c) East Penobscot Bay, and
- d) East Casco Bay

<u>Strategy 3.2</u>: Use the following criteria to identify specific islands to be intensively managed for terns:

- a) A colony is present,
- b) A colony was present historically,
- c) Location is consistent with geographic objectives,

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- d) Suitable nesting substrate is present,
- e) Mammalian or avian predation is unlikely or can be controlled,
- f) No other species listed as rare or Endangered in Maine will be negatively effected,
- g) Location and topography make it practical to maintain a field party on the island from mid-May to early August if warranted, and
- h) Island owners are agreeable to intensive management for terns.

<u>Strategy 3.3</u>: Work with partners and obtain additional sources of funding to establish and maintain new restoration site(s).

<u>Strategy 3.4</u>: Identify, protect, and "minimally manage" a suite of islands for terns in Maine's eight coastal regions.

<u>Strategy 3.5</u>: Discontinue intensive tern management on islands according to the following criteria:

- a) Predation is excessive and cannot be controlled,
- b) Number of nesting pairs shows substantial and continuing declines,
- c) Management actions have negative effects on other desirable species or on regional tern management efforts, or
- d) Productivity is consistently low for >5 years.

<u>Strategy 3.6</u>: Identify and conserve a suite of islands in each of Maine's eight coastal regions that have the potential of supporting nesting terns.

Problem 4: Protection measures are needed to maintain habitat of suitable quality and quantity to support breeding populations of island-nesting terns in Maine.

Strategy 4.1: Designate and protect "Essential Habitat" for Roseate Terns.

<u>Strategy 4.2</u>: Designate and protect "Significant Wildlife Habitat" for tern nesting islands that qualify under NRPA.

<u>Strategy 4.3</u>: Assist LURC with permit review on islands with terns designated as P-FW or P-RP zones.

<u>Strategy 4.4</u>: Track important Roseate and Arctic tern nesting islands in Biotics.

<u>Strategy 4.5</u>: Identify and conserve important tern staging and foraging habitats.

Problem 5: Management benefiting island-nesting terns and their habitats and seabird outreach requires cooperation, support, and considerable funding from conservation agencies, land managers, landowners, and the general public.

<u>Strategy 5.1</u>: Provide technical assistance on tern management to state, federal, and private entities that own or manage tern-nesting islands.

<u>Strategy 5.2</u>: Prepare and distribute interpretive and informational materials including nesting island signs, interpretive posters and brochures, press releases, and public service announcements.

Strategy 5.2: Seek additional funding for these activities.

Problem 6: Effective conservation of island-nesting terns in Maine requires coordinated actions (on-the-ground resource management and outreach and education) by many cooperators.

<u>Strategy 6.1</u>: Coordinate tern management activities via the Gulf of Maine Seabird Working Group and other cooperators through semi-annual meetings.

<u>Strategy 6.2</u>: Coordinate cooperators through regular communications, annual reports, news releases, and other means.

<u>Strategy 5.3</u>: Support U.S. Fish and Wildlife Service's and National Audubon Society's seabird education and outreach efforts by securing adequate funding.

Problem 7: Research is needed to support monitoring and management activities.

<u>Strategy 7.1</u>: Test and refine techniques for surveying tern populations.

<u>Strategy 7.2</u>: Improve and standardize methods used to estimate productivity.

<u>Strategy 7.3</u>: Investigate techniques of vegetation manipulation to maximize productivity.

<u>Strategy 7.4</u>: Document the food sources utilized by terns to understand the influence of commercial fishing and changes in the marine environment.

<u>Strategy 7.5</u>: Determine which factors constrain breeding success and population viability of terns in Maine.

Problem 8: Common, Arctic, and RoseateTerns nesting in Maine spend 7-8 months each year in habitats not associated with the nesting islands. Efforts in Maine will be of little value if winter and migration mortality and habitat degradation reduce survival rates below current levels. The long-term existence of the Roseate Tern in Maine depends on the recovery of the Northeastern population and periodic immigration from larger breeding concentrations to the south.

<u>Strategy 8.1</u>: Encourage and participate in regional efforts to protect breeding populations and habitats of Common, Arctic, and Roseate Terns beyond the nesting islands.

<u>Strategy 8.2</u>: Encourage and participate in regional and international efforts to identify, monitor, and manage staging, migration, and winter habitat of Atlantic Coast Common, Arctic, and Roseate Terns.