

**Attachment J: Report on Delaware Bay Regional Landscape  
Stakeholder Implementation Meeting (September 12, 2007)**

---

**DRAFT**  
**Summary Report on the**  
**Wildlife Action Plan**  
**Delaware Bay Implementation Meeting**

**Environmental Law Institute**  
**to**  
**New Jersey Department of Environmental Protection**  
**Division of Fish and Wildlife**  
**Endangered and Nongame Species Program**

**September 2007**

**Executive Summary**

In February 2006, the Conserve Wildlife Foundation of New Jersey, in partnership with the New Jersey Department of Environmental Protection's Division of Fish and Wildlife, convened over 40 stakeholders from organizations that focus on statewide issues. The first statewide stakeholders' meeting was held at Duke Farms in Hillsboro, New Jersey. Their role was to discuss and select priority state-level goals from those identified in the New Jersey Wildlife Action Plan. Stakeholders identified 13 priority state-level goals, which can be found in Attachment A.

The second statewide Wildlife Action Plan Stakeholder Meeting was held on Thursday, April 6, 2006, at Duke Farms. The primary goal of the meeting was to solicit stakeholder input into prioritizing state-level conservation strategies (actions) associated with the 13 priority state-level conservation goals identified at the first meeting. Participants from organizations that focus on statewide issues discussed and debated the state-level conservation strategies and provided their input on refining and prioritizing them. Seventy-two conservation strategies were selected as priorities. These can also be found in Attachment A.

On September 12, 2007, local stakeholders associated with the Delaware Bay Regional Landscape convened for the Delaware Bay Wildlife Action Plan Implementation Meeting held at the New Jersey Audubon's Center for Education and Research in Goshen, Cape May County. This was the fifth of five regional landscape meetings held across the state. The goal of this meeting was to identify a set of priority conservation actions to drive implementation of the state's Wildlife Action Plan in the Delaware Bay Regional Landscape.

## **Background**

On September 12, 2007, the Conserve Wildlife Foundation of New Jersey (CWF) convened the Delaware Bay Wildlife Action Plan Implementation Meeting in partnership with the New Jersey Department of Environmental Protection's (DEP) Division of Fish and Wildlife (DFW). The meeting was held at New Jersey Audubon's Center for Education and Research in Goshen, Cape May County.

The meeting was the third of five Wildlife Action Plan landscape-level prioritization meetings. Twenty-nine (29) attendees including nineteen (19) stakeholders (non-DFW personnel), who attended the meeting, worked to identify a set of fifty-five (55) priority conservation actions among the 104 conservation actions\* identified in the Delaware Bay portion of the New Jersey Wildlife Action Plan. These fifty-five (55) priority conservation actions will be used by DFW and its conservation partners to guide conservation efforts and resources toward implementation of the state's Wildlife Action Plan in the Delaware Bay Regional Landscape.

The New Jersey Wildlife Action Plan (Plan) is a proactive plan to conserve wildlife species before they become more rare and more costly to protect. The multi-scale plan identifies threats, conservation goals, and conservation actions at the state, landscape (5 regions; ocean is currently part of the Atlantic Coastal Regional Landscape), and sub-regional levels (identified as conservation zones within New Jersey's Plan). New Jersey submitted its Plan to the U.S. Fish and Wildlife Service on October 1, 2005, submitted its revised plan on July 26, 2006, and received final approval from the Service in September 2006.

The New Jersey Wildlife Action Plan is a living document and will undergo periodic revisions per comments and recommendations received by the public, through the regional stakeholder meetings, and as part of the adaptive management strategy outlined within the Plan. Digital copies of the Plan are available at the Division of Fish and Wildlife's Web site: [www.state.nj.us/dep/fgw/ensp/waphome.htm](http://www.state.nj.us/dep/fgw/ensp/waphome.htm)

## **Summary of Delaware Bay Implementation Meeting**

The objectives of the Delaware Bay Implementation Meeting were to convene regional leaders and stakeholders to:

- Provide stakeholders with a review the Delaware Bay Regional Landscape conservation goals and actions;
- Provide opportunity for stakeholders to discuss and seek clarification on priority conservation actions; and
- Seek stakeholder input on and identify fifty-five (55) specific and broad-based\* priority conservation actions for the Delaware Bay Regional Landscape.

*\*For the purpose of the prioritization exercise, conservation goals and conservation actions that were similar between conservation zones (sub-regional levels) were consolidated into one conservation goal or action. Such an action selected as a priority during the meeting would then affect all similar or related actions within the relevant conservation zones, making all of them priority actions.*

The Delaware Bay Regional Landscape section of the New Jersey Wildlife Action Plan includes 8 goals, which focus on issues such as habitat conservation and protection, the conservation of populations of species of greatest conservation need, water quality, and public education and viewing opportunities. Each of the goals has a varying number of conservation actions associated with them. In total, the Delaware Bay portion of the Plan identifies 104 specific and broad-based\* conservation actions.

- Provide local leaders and stakeholders with background on the objectives of the Wildlife Action Plan and its implementation;
- Provide a foundation for potential partnerships to implement the Wildlife Action Plan; and
- Seek stakeholder input to determine priority conservation actions for the Delaware Bay Regional Landscape.

In preparation for the working meeting, the Division of Fish and Wildlife (DFW) staff reviewed the 104 conservation actions associated with the Delaware Bay Regional Landscape and selected thirty-nine (39) actions considered priorities. The invited stakeholders were asked to review *in advance* the goals and actions associated with the Delaware Bay Region, as well as those actions pre-selected by DFW. The majority of the day was devoted to further discussion and final prioritization of the conservation actions.

#### *Introductory Sessions*

Jane Galetto, President of Citizens United to Protect the Maurice River and its Tributaries and chair of the Endangered and Nongame Species Advisory Committee gave welcoming remarks. She stressed the importance of partnerships in meeting the conservation goals of the New Jersey Wildlife Action Plan.

Dave Jenkins, Chief of ENSP, welcomed stakeholders and provided attendees with background on the purpose of the New Jersey Wildlife Action Plan and its basis in the Landscape Project. Jenkins stated that the plan is designed to be a blueprint for wildlife conservation for the full array of traditional and non-traditional conservation partners in the state, not solely the Division of Fish and Wildlife. His presentation focused on the conservation potential in New Jersey and he discussed the role and importance of partnerships in achieving conservation objectives in New Jersey.

Jessica Wilkinson, a senior policy analyst with the Environmental Law Institute, served as the facilitator, and gave an overview of the meeting objectives and agenda.

Kathy Clark, Principal Zoologist with the Endangered and Nongame Species Program, gave a presentation on threats to the habitat and wildlife of the Delaware Bay Regional Landscape.

*\*For the purpose of the prioritization exercise, conservation goals and conservation actions that were similar between conservation zones (sub-regional levels) were consolidated into one conservation goal or action. Such an action selected as a priority during the meeting would then affect all similar or related actions within the relevant conservation zones, making all of them priority actions.*

Larry Niles, a biologist with the Conserve Wildlife Foundation of New Jersey, gave a presentation on Delaware Bay migratory shorebirds.

Steve Eisenhauer, Regional Director of Stewardship for the natural Lands Trust, discussed the importance of old growth swamp forests to the region.

Kris Schantz, a Senior Zoologist with ENSP and coordinator of the New Jersey Wildlife Action Plan, gave a summary of the priority actions selected by DFW in advance of the meeting. She stated that for the Delaware Bay Region, the plan includes 8 broad-based\* conservation goals and 104 specific and broad-based\* conservation actions associated with those goals. In addition, Ms. Schantz informed participants that the actions not selected as priority will remain in the Plan as an integral part of the Plan's success to achieve the desired objectives, but that the priority list helps provide guidance to our stakeholders when allocating limited resources for future conservation projects. Ms. Schantz also informed participants that granting organizations such as the Geraldine Dodge Foundation and the Doris Duke Charitable Foundation will be more likely to fund projects that are addressed in the states' Wildlife Action Plans.

#### *Facilitated Discussion*

The majority of the remainder of the day was devoted to a discussion of the conservation actions associated with each of the region's conservation goals. Wilkinson led the participants through a discussion of each of the goals in turn. She asked participants to offer their comments on which of the conservation actions they considered to be of particular importance and which they felt were of lesser importance. In addition, participants were able to seek clarification on any of the actions that were unclear and add back in for further consideration actions not identified by DFW as priorities.

After a thorough discussion of the actions associated with each goal, the participants were asked to select a predetermined number of conservation actions they considered the highest priority for implementation within that goal. The number of actions participants were asked to select for each goal are found in Chart 1 below. In addition, ENSP staff assured the stakeholders that the potential edits to the actions discussed at the meeting would be reviewed and incorporated where feasible. The results of the participants' selection and the original and revised actions can be found in Attachment D.

*\*For the purpose of the prioritization exercise, conservation goals and conservation actions that were similar between conservation zones (sub-regional levels) were consolidated into one conservation goal or action. Such an action selected as a priority during the meeting would then affect all similar or related actions within the relevant conservation zones, making all of them priority actions.*

	Number of conservation actions per goal
Goal 1	18
Goal 2	2
Goal 3	4
Goal 4	11
Goal 5	9
Goal 6	N/A – 1 by default
Goal 7	6
Goal 8	4

*Chart 1: Number of conservation actions participants were asked to select for each of the conservation goals.*

### *Concluding Remarks*

Dave Jenkins gave closing remarks and thanked the participants for their time and contributions.

### **ATTACHMENTS:**

- A: Priority State-level Conservation Goals and Strategies (Actions)**
- B: List of Delaware Bay Regional Landscape Invitees and Attendees**
- C: Delaware Bay Wildlife Action Plan Stakeholder Meeting Final Agenda**
- D: Delaware Bay Priority Conservation Actions & Action-related Comments per the Stakeholders' Meeting**

Attachment A: Priority State-level Conservation Goals and Strategies (Actions)

**New Jersey Wildlife Action Plan**  
**Priority State-level Goals and Strategies**

Below you will find thirteen priority state-level goals identified at the First Wildlife Action Plan Stakeholder Meeting held on February 23, 2006, and the associated priority conservation strategies identified at the Second Wildlife Action Plan Stakeholder Meeting held on April 6, 2006. The goals have been categorized by the main topic and, where appropriate, the sub-topic as identified within the New Jersey Wildlife Action Plan. The goals and associated priorities have been arranged in categories and key words and concepts appear in bold to provide focus for the array of New Jersey partners in conservation, land managers and stewards, outreach initiatives, and residents interested in managing their lands to support native wildlife.

All of the goals and strategies have integrated public education and outreach and are to be implemented with an active adapted management strategy. The New Jersey Division of Fish and Wildlife hopes to receive continual feedback on implementation successes and failures that our state can integrate into the Wildlife Action Plan and implementation process.

**Addressing National, Interstate, and Statewide Threats**

***Suburban sprawl and large-acre zoning***

**Goal:** Identify and **protect** breeding, migration, and wintering **habitats** and landscapes essential for long-term viability of wildlife and fish populations of species of conservation concern.

1. NJ Division of Fish and Wildlife (DFW) will collaborate with municipal and county planners to identify critical wildlife habitats for sensitive species and natural systems within their borders.
2. Increase the number of data sources to populate the Biotics database and work to improve data quality and decrease the time necessary to review and input the data.
3. Use geographic information systems (GIS) to create map products that guide land management, habitat conservation, restoration, land acquisition, and land planning at all levels of government and non-government organizations.
4. Mitigate impacts of existing development, particularly when adjacent to open space, through non-regulatory measures, (e.g., create and restore habitat on private lands through landowner incentive programs, backyard habitat initiatives, keeping cats indoors).
5. Increase the effective size and connectivity of public lands through the Landowner Incentive Program and targeted land acquisition.
6. Refine existing Landscape Project species occurrence areas through research and, where lacking, develop new species occurrence areas as data on species requirements become available. Develop, review and improve species-habitat associations as new land use/land cover data become available.
7. DEP will encourage New Jersey counties and/or municipalities to develop Regional Habitat Conservation Plans within the next 5 years as part of their smart growth plan by collaborating in the development of planning documents and zoning ordinances that consider the larger landscape region. Various methods to achieve this include



- clustering development and in-fill development to maximize infrastructure, avoiding large-acre zoning, and minimizing fragmentation of habitat.
8. Work with Division of Land Use Regulation to strengthen and enforce existing regulations to prevent illegal stream cleaning or snag removal activities.
  9. Require that all lands purchased with Green Acres funds develop management plans consistent with the NJ Wildlife Action Plan.

**Goal:** Maintain **connectivity of habitats** at the landscape scale.

1. Develop smart-growth plans at the municipal and county level whereby development is clustered and in-fill development maximizes infrastructure efficiency and cost savings while minimizing loss of habitat with priority on counties not already included in other regional planning areas such as the Pinelands or Highlands. Create incentives to encourage inter-municipal planning.
2. DEP will create a staff internally to provide technical support to New Jersey counties and/or municipalities to develop wildlife conservation planning integrated with watershed planning and land use regulations, within the next 10 years, to benefit wildlife, habitat, and the quality of life for New Jersey citizens. Prioritize in areas outside of regional planning areas of the Highlands and Pinelands.
3. Counties and municipalities should collaborate in developing master planning documents and ordinances that implement Habitat Conservation Plans.
4. Identify and prioritize, for Green Acres, the habitat corridors for acquisition or other preservation to decrease isolation of public natural lands.

### ***Invasive Terrestrial and Aquatic Species and Exotic Pathogens***

**Goal:** Identify, restore, and protect **unique ecosystem processes** including the control and/or removal of non-native invasive species, fire management, and delayed and alternate patch mowing.

1. Reduce regulatory impediments to restoration and enhancement activities.
2. Develop management techniques that can safely be used to mimic the historic role of fire in shaping ecosystems.
3. Increase the area of habitat enhanced by controlled burning techniques that mimic natural wildfires and support legislation to facilitate increased prescribed burning where appropriate.
4. Using a regional approach, identify and prioritize areas where ecosystem processes are threatened by invasive plants, organisms, and diseases; prioritize the threats relative to the vulnerability of affected wildlife and plant communities.
5. Reduce the area of phragmites and maintain native vegetation by restoring natural tidal flow in coastal wetlands.
6. Develop techniques to mimic or replace natural coastal sediment transport processes and integrate into implementation of beach replenishment and other shore protection projects.

7. Increase area and seral-stage range of successional habitats on managed lands where appropriate as indicated by GIS analysis.
8. Develop species- and habitat- specific “Best Management Practices” (BMPs) for management of various communities dependent upon disturbance.
9. Develop and recommend BMPs for use of biological control agents to reduce non-native or overabundant pests.

**Goal:** Reduce the adverse impacts of **non-native invasive species, subsidized predators, and over-abundant native species** on critical wildlife, natural communities, and habitat quality.

1. Create aggressive outreach programs for targeted groups (e.g., landscape designers, waterwatch groups, nurseries, etc) that reduce or eliminate the introduction and spread of invasive plants and animals.
2. Develop species- and habitat- specific “Best Management Practices” (BMPs) for controlling the most common and detrimental invasive species and incorporate that guidance into BMPs developed for other activities such as forestry, wildlife management, stream stabilization, dune stabilization, etc.
3. Educate the public about the negative impacts of free-roaming cats (“owned” and feral) on New Jersey’s native wildlife and encourage responsible cat ownership and care through public service announcements, brochures, public presentations, etc.
4. Collaborate with animal rights/welfare groups, local municipalities and conservation organizations to develop and implement model ordinances, policies, and guidance documents to address the impacts of predators, including feral and free roaming cats, on native wildlife species, including:
  - a. A model ordinance for municipalities that elect to implement or allow trap, neuter, and release (TNR) programs to attempt to reduce feral cat populations.
  - b. A guidance document/protocol for minimizing the impacts TNR on native wildlife.
  - c. A model ordinance for regulating feeding of wildlife.
  - d. A model pet licensing ordinance.
  - e. Mapping of colonies to evaluate impact on species of conservation concern.
5. Identify areas where predation is significantly diminishing reproductive success of wildlife species of conservation concern and apply appropriate integrated predation management techniques.
6. Create and implement a system for reporting and qualifying new locations of priority invasive species.
7. Develop and support research to provide better information on the impacts of feral and free-roaming cats on native wildlife populations.
8. Create implementation plan for Invasive Species Task Force recommendations when completed.

***Unsustainable Land Management Practices on both Private and Conserved Lands and Water***

**Goal:** Encourage farmers, foresters, and land stewards of private, local, state, and federal lands to develop **habitat management plans** that enhance habitats for species of conservation concern and maintain or improve the ecological integrity of the natural community.

1. Increase staff in the NJ Habitat Incentive Team (NJ HIT) to educate and provide technical assistance for landowners enrolling in Landowner Incentive Programs.
2. Increase number of landowners through NJ HIT that conduct delayed mowing of hayfields and fallow fields until after most ground nesting birds have fledged at least one brood; leave a minimum of 20% of grass fields standing during winter for cover; and/or plant and maintain native warm season grasses.
3. Develop best-management practices (BMPs) or management prescriptions for species of conservation concern to reduce negative impacts of various land management practices such as forestry, agriculture, dune stabilization, stream stabilization, aquaculture, DOT mowing, etc.
4. Through surveys, increase the number of Category 1 streams justified by endangered and threatened species data.
5. Dedicate staff in DFW to provide technical assistance to develop site-based management plans with forestry or wildlife production goals using GIS and principles of landscape ecology as the foundation.

***Direct Human Impacts on Native Wildlife and Ecosystem Health***

**Goal:** Identify, protect, and **minimize human disturbance** at sensitive locations (nests, hibernacula, breeding pools, critical concentration or feeding areas, etc.).

1. Create funding that will allow a minimum of one conservation officer for each landscape region dedicated to increase protection of sensitive habitats at risk from frequent human disturbance, collection/poaching, and at protective barriers such as gates restricting entry to bat hibernacula.
2. Design and implement protective measures to minimize deleterious impacts of direct human disturbance at osprey and colonial waterbird nest sites, shorebirds along Delaware Bay, rare reptile and amphibian denning, nesting/breeding, and gestation sites, as well as bat hibernacula.
3. Review all stream encroachment and other permit applications within the Division of Fish and Wildlife and apply restrictions on acoustic intrusions and other activities with deleterious effects on aquatic wildlife.
4. Investigate impacts of controlled water releases on aquatic organisms (e.g., freshwater mussels) through current and future research.

### ***Development and Long-term Monitoring***

**Goal:** Conduct **long-term monitoring** to evaluate **population viability** through statewide surveys and atlases to determine the **effectiveness of protection and restoration** efforts of both wildlife and their habitats.

1. Maintain monitoring programs that collect data on species, suites of species, and habitats statewide, including but not limited to the following:
  - o Breeding Bird Atlas
  - o Breeding Bird Survey
  - o Delaware Bay Migratory Shorebird Survey
  - o Bald Eagle Midwinter Survey
  - o Herptile Atlas
  - o Calling Amphibian Monitoring Program
  - o Fish Monitoring-Streams and Ponds
  - o Freshwater Mussel Atlas
  - o Mid-Winter Waterfowl Survey
  - o Atlantic Flyway Breeding Waterfowl Survey
  - o DFW Bobwhite Call-Count Survey
  - o Woodcock Call-Count Survey
  - o DFW Beaver-Otter Survey
  - o Migratory Game Bird Banding Programs
  - o Colonial Waterbird Survey
  - o Beach Nesting Bird Survey
  - o Site-specific Fish Monitoring Programs
2. Complete the Coordinated Bird Monitoring Plan to increase the efficiency and effectiveness of regional and national bird surveys.
3. Develop GIS measures to evaluate the effectiveness of habitat conservation programs including acquisition, restoration, and connectivity.
4. Measure the enrollment acreage and effectiveness of backyard habitat management.
5. Through GIS, track the acreage and management of land enrolled in habitat enhancement programs administered by NJ HIT; monitor each site and evaluate the effectiveness of the management technique.
6. Where appropriate, install and monitor fish ladders to assist passage of anadromous fish in areas with dams; prioritize by waterways with fish species of conservation concern.

### ***High Deer Densities***

**Goal:** Identify, maintain, and restore natural vegetative communities through sustainable, **area-specific deer densities**.

1. Conduct forest health surveys and use forest health indices as a main factor in developing deer management goals with priority areas being contiguous forest blocks on public and private lands within Skylands, Delaware Bay, Piedmont Plains, and Pinelands Landscape Regions.
2. Amend regulation or legislation to implement programs that support increased hunter access and hunting opportunities like reduction of safety zone for bow hunting,

- Sunday bow hunting, and providing economic incentives for hunters to spend more time in the field.
3. Institute measures to require addressing deer management for any property that receives state or federal funding. The land or agricultural management plans must include harvest quotas and mechanisms to insure implementation.
  4. Fully fund the Hunters Helping the Hungry venison donation program, which allows hunters to donate venison to food kitchens. Many hunters are reluctant to harvest deer that would be wasted because they have no need of or an outlet for the venison. Full funding of this program will expand the program and help provide an incentive for hunters to continue harvesting deer and therefore help meet harvest quotas.
  5. Expand the DFW community-based deer management program to work with private landowners and public land stewards to achieve deer densities compatible with the NJ Wildlife Action Plan's habitat management goals.
  6. Develop and implement, through regulation or legislation, programs that require anyone receiving preferential tax treatment based on land-management practices to achieve deer management goals, including harvest quotas, to qualify for farm tax assessment or farmland preservation programs.

### ***Contaminants***

**Goal:** Restore and maintain wildlife and fish populations and critical habitats by eliminating or reducing **exposure to point and nonpoint source contamination**.

1. Reduce contaminants of concern (e.g., PCBs, DDT, mercury, petroleum products) to "No Adverse Effects" levels in areas where they are currently significantly affecting wildlife populations, such as the lower Delaware River, NY-NJ Harbor, and portions of the Atlantic coast.
2. Analyze tissues of raptors and waterbirds on a regular basis using 1) failed eggs, 2) nestling blood, 3) adults found dead, and 4) living adults, where appropriate, to assess contaminant levels and determine causes of mortality and nest failures. Analyze tissues of actual or typical prey items in nest areas to assess the level of contaminants and determine the threat within the food web; repeated measures may be used to indicate trend of contaminants in local prey.
3. Following the Meadowlands model, where contaminants are impacting wildlife populations and/or restoration efforts, develop a working group of experts to, 1) identify data gaps, 2) design study methodologies to measure existing ecosystem effects on wildlife (food chain studies), and 3) evaluate post restoration/clean-up effects on wildlife populations.

### ***Motorized Recreation Vehicles***

**Goal:** Identify and actively **protect public natural lands and water** with wildlife species of conservation concern **from off-road vehicle and personal watercraft use**.

1. Identify areas where off-road vehicle (ORV) or personal watercraft (PWC) use occurs in critical wildlife habitats and direct law enforcement to concentrate on those areas to enforce seasonal restrictions and posted/restricted areas. Obtain additional funding for additional officers to assist with enforcement.

2. Investigate the impacts that personal watercraft and off-road vehicles have on those species whose breeding, roosting, haul-out, and migratory stopover areas' requirements make them vulnerable to injury, mortality, or disturbance. Use Natural Resource Damage Assessment (NRDA) and economic methods to quantify benefits and losses relative to these resources and ORV/PWC damages.
3. Identify appropriate areas for establishing off-road vehicle use in accordance with local and/or regional Habitat Conservation Plans to minimize impact to important wildlife habitat. Concurrently, increase the legal and financial penalties for illegal off-road vehicle use.
4. Enact legislation to require registration of all all-terrain vehicles (ATVs) at time of purchase and annually thereafter.
5. Collaborate with off-road organizations and state and non-government agencies to address the problem of unlawful use of public and private natural lands by off-road vehicles. Develop and disseminate educational materials to all riders via registration, public areas and public service announcements, and investigate mentoring programs by off-road organizations.

### **Endangered, Threatened and Rare Wildlife**

**Goal:** Restore populations of **endangered and threatened wildlife** to stable levels that allow their **delisting** through population management, protection of critical habitat, and habitat restoration and enhancement.

1. Develop recovery plans for species of greatest priority that are based on reliable assessment and monitoring of population levels and the identification of limiting factors. Species recovery plans should establish clear and specific strategies for reducing threats and improving habitat conditions and lead to recovery and maintenance of populations at viable levels that complement complete, viable, functioning ecosystems.
2. Reevaluate the status of listed and non-listed nongame wildlife every five years using the Delphi review process.
3. Conduct surveys to identify migratory corridors for bats, marine mammals, anadromous fish, Lepidoptera, and Odonata.

### **Migratory Stopover and Important Bird Areas Planning**

**Goal:** Identify, monitor, and **conserve key migratory corridors and stopover locations** for migratory birds.

1. Conduct surveys of migrating passerines and raptors at major stopover areas, primarily the Cape May Peninsula, every five years.
2. Annually monitor shorebird populations along the Delaware Bayshore stopover.
3. Prioritize land acquisition, conservation easements, private landowner incentive programs, and mitigation funding, and develop management plans to conserve stopover habitat.

4. Identify a network of locations that will help sustain migratory bird populations by producing a set of recommendations for the conservation of Important Bird Areas (IBA) statewide.
5. Conduct studies and create models to identify migratory bird routes and assess the potential risks to avifauna from wind turbines, tall buildings, radio towers, and other "human-made" tall structures.
6. Conduct baseline surveys of other stopover areas such as Sandy Hook, Island Beach, and inland habitats important to migrating birds.

### **Review of Wildlife Action Plan**

**Goal:** Ensure that **conservation activities** of federal, state, county, municipal, and private (non-government organizations and utility companies) lands affecting species of conservation concern are **consistent** with the NJ Wildlife Action Plan (Plan).

1. The most current version of the Plan will be continually available for review on the Division of Fish and Wildlife's Web site with an open invitation to submit comments.
2. Every five years, the Division of Fish and Wildlife's Endangered and Nongame Species Program will initiate review of the Plan beginning with Division and Department biologists in a process that includes DEP staff, the Endangered and Nongame Species Advisory Committee (ENSAC), and a wildlife summit in which adaptive management will be built into the revision.
3. DFW will work with federal, state, county, municipal, and private (NGOs) land managers to incorporate the goals and strategies of the Plan into current management plans by the first formal review in 2011.
4. Dedicate one meeting per year to reviewing the progress and soliciting input on the Plan, participants to include representatives of the ENSAC, the Fish and Game Council, and the Marine Fisheries Council.

Attachment B: List of Skylands Regional Landscape Invitees and Attendees



**Delaware Bay Regional Landscape Stakeholder Meeting:  
Wildlife Action Plan**

**List of Attendees**

<b>First name</b>	<b>Last name</b>	<b>Organization</b>	<b>Invited</b>	<b>Attended</b>
Russ	Allen	NJDEP-Division of Fish and Wildlife, Marine Fisheries	X	X
Steve	Atzert	USFWS-Forsythe NWR	X	
Lisa	Barno	NJDEP-Division of Fish and Wildlife, FWF, Chief	X	
Matt	Blake	American Littoral Society	X	X
Peter	Bosak	Cape May County Dept of Mosquito Control	X	
Grace	Bottitta	Ducks Unlimited, Inc./GLARO/Mid-Atlantic Field Office	X	
Mark	Botton	Fordham University	X	
Jeanette	Bowers-Altman	NJDEP-Division of Fish and Wildlife, ENSP	X	
Andrew	Bowman	Doris Duke Charitable Foundation	X	
Dianne	Brake	The Regional Planning Partnership	X	
Beth	Brandreth	US Army Corps. of Engineers-PA District	X	
Robert	Brewer	Cumberland County Planning Dept.	X	
Barbara	Brummer	The Nature Conservancy-NJ Chapter	X	
Joanna	Burger	ENSP Advisory Committee	X	
Brent	Burke	The Nature Conservancy-NJ Chapter	X	X
Andrew	Burnett	NJDEP – Division of Fish and Wildlife, Bureau of Wildlife Management	X	
Patti	Burns	Association of NJ Environmental Commissions	X	
Jody	Carrara	Association of NJ Environmental Commissions	X	
Robert	Cartica	NJDEP-Division of Parks and Forestry, Natural Lands Management	X	
Ben	Casella	NJ Farm Bureau	X	X
Paul	Castelli	NJDEP-Division of Fish and Wildlife, BWM	X	
Michael	Catania	Conservation Resources, Inc.	X	
Dave	Chadwick	Association of Fish and Wildlife Agencies	X	
Dave	Chanda	NJDEP-Division of Fish and Wildlife, Director	X	
Beth	Ciuzio	NJ Audubon Society	X	X
Kathleen	Clark	NJDEP-Division of Fish and Wildlife, ENSP	X	X
Betsy	Clarke	USDA – APHIS Wildlife Services	X	X
Karen	Cole	NJDEP- Div. Water Quality, Municipal Finance & Const. Element	X	
Robert	Connell, Jr.	NJDEP – Bureau of Marine Water Monitoring	X	

## ATTACHMENT B (continued)

<b>First name</b>	<b>Last name</b>	<b>Organization</b>	<b>Invited</b>	<b>Attended</b>
Philip	Correll	National Park Service	X	
Amy	Cradic	NJDEP, Asst. Commissioner	X	
Camille	Crichton-Sumners	NJDOT – Division of Project Planning and Development	X	
Michael	Davenport	Conserve Wildlife Foundation of NJ	X	
Joe	DeMartino	Ducks Unlimited	X	
Emile	DeVito	The NJ Conservation Foundation-Bamboo Brook and ENSP Advisory Committee	X	
Amanda	Dey	NJDEP-Division of Fish and Wildlife, ENSP		X
Tim	Dillingham	American Littoral Society	X	
Mark	Dobelbower	NJDEP – Division of Fish and Wildlife, Bureau of Law Enforcement, Chief	X	
Burt	Doremus	Cohansey Area River Preservation	X	
Donna	Drewes	Municipal Land Use Center	X	
Tom	Drewes	Natural Resources Conservation Service	X	
Pete	Dunne	NJ Audubon Society – Cape May Bird Observatory	X	
Rick	Dutko	NJDEP-NJ Natural Heritage Program, Office of Nat. Lands Mgmt.	X	
Ruth	Ehinger	NJDEP-Coastal Management Program	X	
Steve	Eisenhauer	Natural Lands Trust/ Peek Preserve	X	X
Janet	Eisenhauer	South Jersey Land and Water Trust	X	
Susan	Elbin	Wildlife Trust	X	
Troy	Ettel	NJ Audubon Society	X	
Jose	Fernandez	NJDEP-Division of Parks and Forestry	X	
Leslie	Ficcaglia	Cumberland County Planning Board	X	
Lynn	Fleming	NJDEP-Division of Parks and Forestry	X	
John	Flynn	NJDEP-Green Acres	X	
Cristina	Frank	NJ Audubon Society	X	X
Jane	Galetto	ENSP Advisory Committee	X	X
Kathy	Giordano	NJDEP – Division of Water Quality, Municipal Finance/ Land Acquisition	X	
Tom	Gravel	The Trust for Public Lands	X	
Amy	Green	Amy S. Green Environmental Consultants	X	
William	Harrison	Office of Smart Growth	X	
Bruce	Hawkinson	NJ Department of Transportation	X	
Helen	Heinrich	NJ Farm Bureau	X	
Jean	Herb	NJDEP – Office of Policy, Planning, and Science	X	
Dan	Hernandez	Stockton State College	X	
Larry	Herrighty	NJDEP-Division of Fish and Wildlife, BWM, Chief	X	

ATTACHMENT B (continued)

<b>First name</b>	<b>Last name</b>	<b>Organization</b>	<b>Invited</b>	<b>Attended</b>
Rebecca	Hersh	NJ Future	X	
Peter	Himchak	NJDEP – Bureau of Marine Fisheries	X	
Damian	Holynskyj	NJDEP – Division of Fish and Wildlife, Environmental Review	X	
George	Howard	NJ State Federation of Sportsmen's Clubs	X	
Lisa	Jackson	NJDEP, Commissioner	X	
Dave	Jenkins	NJDEP-Division of Fish and Wildlife, ENSP, Acting Chief	X	X
Amanda	Johnson	National Marine Fisheries Service – Northeast Regional Office	X	
Elizabeth	Johnson	American Museum of Natural History	X	
Jim	Joseph	NJDEP – Bureau of Shellfisheries	X	
Teri	Jover	Pinelands Preservation Alliance	X	
Russell	Juelg	Pinelands Preservation Alliance	X	
Beth	Kabert	USDA – APHIS Wildlife Services	X	
Tom	Keck	NJDEP-Division of Parks and Forestry	X	
Craig	Kessler	Ducks Unlimited, Inc.	X	
Jung	Kim	Office of Smart Growth	X	
Michelle	Knapik	Geraldine R. Dodge Foundation	X	
Kim	Korth	NJDEP – Division of Fish and Wildlife, ENSP	X	X
Tony	Kramer	Natural Resources Conservation Service	X	
Jan	Larson	ENSP Advisory Committee	X	
Rick	Lathrop	Rutgers University-CRSSA Lab and ENSP Advisory Committee	X	
Jay	Laubengeyer	The Nature Conservancy-NJ Chapter	X	
Theresa	Lettman	Pinelands Preservation Alliance	X	
Chris	Linn	DE Valley Regional Planning Commission	X	
Julie	Lockwood	Rutgers University	X	
Lisa	Manning	National Marine Fisheries Service – Office of Protected Resources	X	
Robert	Marshall	NJ Department of Transportation, Division of Project Planning and Development	X	
Mark	Mauriello	NJDEP-Division of Land Use	X	
Martha	Maxwell-Doyle	Partnership for the Delaware Estuary	X	
Suzanne	McCarthy	DE Valley Regional Planning Commission	X	X
Tom	McCloy	NJDEP – Division of Fish and Wildlife	X	
Flo	McNelly	NJDEP – Division of Parks and Forestry	X	X
Bill	MacQueen	Cape May County Zoological Society, Inc.	X	X
Nancy	Merritt	Salem County Watershed Task Force	X	

ATTACHMENT B (continued)

<b>First name</b>	<b>Last name</b>	<b>Organization</b>	<b>Invited</b>	<b>Attended</b>
Erica	Miller	Tri-State Bird Rescue	X	
Nick	Miller	Wildlife Conservation Society	X	
David	Mizrahi	NJ Audubon Society	X	X
Krista	Nelson	Partnership for the Delaware Estuary	X	
Ted	Nichols	NJDEP – Division of Fish and Wildlife, Bureau of Wildlife Management	X	
Tom	Niederer	NJ Forestry Association	X	
Larry	Niles	Conserve Wildlife Foundation of NJ	X	X
Cindy	O'Connor	The Wetlands Institute	X	
Margaret	O'Gorman	Conserve Wildlife Foundation of NJ, Executive Director	X	
Tony	Petrongolo	NJDEP-Division of Fish and Wildlife, Bureau of Land Management, Chief	X	X
Laurie	Pettigrew	NJDEP-Division of Fish and Wildlife, Bureau of Land Management	X	X
Lisa	Plevin	US Senator Frank Lautenberg's Office	X	
Fran	Rapa	NJ Conservation Foundation	X	X
Brad	Rosenthal	Woodbine Public Works – Mayor's Office	X	
Dale	Rosset	NJ Audubon Society – Cape May Bird Observatory	X	
Ron	Ruckenstein	Salem County Planning Dept.	X	
Renee	Scagnelli	Citizens United	X	
Kris	Schantz	NJDEP-Division of Fish and Wildlife, ENSP	X	X
Annette	Scherer	USFWS – NJ Field Office	X	X
Howard	Schlegel	USFWS – Cape May & Supawna Refuges	X	X
Eric	Shrading	USFWS-NJ Field Office	X	
Dale	Schweitzer	ENSP Advisory Committee	X	
Jim	Sciascia	NJDEP-Division of Fish and Wildlife, I & E, Chief	X	
Bill	Shadel	American Littoral Society	X	
Mark	Shaffer	Doris Duke Charitable Foundation	X	
Chris	Smith	Natural Resources Conservation Service	X	
James	Smith	Cape May County Planning Dept.	X	
Richard	Smith	Ducks Unlimited, Inc.	X	
Larissa	Smith	Conserve Wildlife Foundation of NJ	X	X
Randall	Solomon	New Jersey Sustainable State Institute	X	
Ben	Spinelli	Office of Smart Growth	X	
Kimberly	Springer	NJDEP – Coastal Management Program	X	
John	Staples	USFWS-NJ Field Office	X	
Eric	Stiles	NJ Audubon Society	X	

ATTACHMENT B (continued)

<b>First name</b>	<b>Last name</b>	<b>Organization</b>	<b>Invited</b>	<b>Attended</b>
Ken	Strait	PSE & G	X	
Chris	Sturm	NJ Future	X	
Terry	Terry	NJDEP-Division of Fish and Wildlife, ENSP	X	
Alicia	Tillet	Cumberland County Planning Dept.	X	
Larry	Torok	NJDEP-Division of Land Use	X	X
Maya	VanRossum	Delaware Riverkeeper	X	
Kathleen	Walz	NJDEP-NJ Natural Heritage Program, Office of Nat. Lands Mgmt.	X	
Jay	Watson	NJDEP-Commissioner's Office, Deputy Commissioner	X	
Erika	Webb	Dept. of Community Affairs, Office of Smart Growth	X	
Michael	Weinstein	NJ Sea Grant	X	
Kelly	Westervelt	Partnership for the Delaware Estuary	X	
Alison	Whitlock	USFWS – Division of Federal Assistance	X	
Lee	Widjeskog	NJDEP – Division of Fish and Wildlife	X	
Diane	Wieland	Cape May County Tourism Dept.	X	
Donald	Wilkinson	NJDEP-Division of Fish and Wildlife	X	
Jessica	Wilkinson	Environmental Law Institute	X	X
Peter	Winkler	NJDEP-Division of Fish and Wildlife, ENSP	X	X
Patrick	Woerner	NJDEP-Division of Fish and Wildlife, ENSP	X	X
Kim	Wood	Cumberland County	X	
Meghan	Wren	Bayshore Discovery Project	X	
Thomas	Wright	Regional Plan Association	X	
Neil	Yoskin	Bennett & Yoskin	X	
Cindy	Zipf	Clean Ocean Action	X	
Cindy	Zirkle	Cohansey Area River Preservation	X	

Attachment C: Delaware Bay Wildlife Action Plan Stakeholder Meeting Final Agenda



CONSERVE WILDLIFE  
FOUNDATION OF NEW JERSEY

---

**Wildlife Action Plan  
Delaware Bay Regional Landscape Implementation Meeting**

Wednesday, September 12, 2007

9:00 a.m. to 4:30 p.m.

NJ Audubon's Center for Education and Research in Goshen, Cape May County

---

**Meeting Objectives**

- Review Delaware Bay Landscape goals and conservation actions
- Provide opportunity for stakeholders to discuss and seek clarification on priority conservation actions
- Seek stakeholder input on selection of priority conservation actions

**Meeting Agenda**

8:30 a.m. Continental Breakfast

9:00 a.m. Welcome and Opening Remarks

- Jane Galetto, Citizens United to Protect the Maurice River and its Tributaries

9:10 a.m. Introduction to the New Jersey State Wildlife Action Plan (WAP)

- Dave Jenkins, Acting Chief, Endangered and Nongame Species Program  
Division of Fish and Wildlife, Department of Environmental Protection
- Questions and Answers (5 minutes)

9:40 a.m. Overview and Introductions

- Jessica Wilkinson, Environmental Law Institute

9:50 a.m. Threats to the Habitat and Wildlife of the Delaware Bay Regional Landscape

- Kathy Clark, Principal Zoologist, Endangered and Nongame Species Program  
Division of Fish and Wildlife, Department of Environmental Protection

10:05 a.m. Presentation– Larry Niles. Delaware Bay migratory shorebirds

- Questions and Answers (5 minutes)

ATTACHMENT C (continued)

10:30 a.m. Break

10:45 a.m. Presentation– Steve Eisenhauer, Natural Lands Trust: Old growth swamp forests

- Questions and Answers (5 minutes)

11:05 a.m. Summary of WAP Prioritization Process

- Kris Schantz, Senior Zoologist, Endangered and Nongame Species Program  
Division of Fish and Wildlife, Department of Environmental Protection

11:20 a.m. Facilitated Discussion of Priority Actions (continued)

12:30 – 1:30 p.m. Lunch

1:30 p.m. Facilitated Discussion of Priority Actions (continued)

ATTACHMENT C (continued)

3:15 p.m. Break

4:00 p.m. Wrap-Up & Next Steps

- Dave Jenkins, Acting Chief, Endangered and Nongame Species Program

4:30 p.m. Meeting Adjourns



Attachment D: Wildlife Action Plan Priority Conservation Actions  
& Action-related Comments per the Stakeholders' Meeting

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
1	<b>Identify, restore, enhance and/or protect important habitats to maintain viable populations of endangered, threatened, and species of conservation concern.</b>			
	<b>1a Forests, woodlands</b>			
	1a-1	Use GIS, other remote sensing tools, and surveys to identify <b>critical habitats</b> supporting local bald eagle nesting, summering and wintering populations and assess their condition. Take action to minimize habitat loss and maintain contiguous habitats by restoring, enhancing, and/or protecting woodland and riverine habitats and waterways on public and private lands through direct purchase or easements. Enlist private lands in preservation programs that will maintain forest free of human disturbance during key periods.		There was some concern over the accuracy and precision of mapping. However, mapping will only be as accurate or precise as the available GIS data layers permit. Therefore, no revisions were made to this action, but it is noted that NJ should continue to improve/ refine available GIS-based information and maintain equipment of "up-to-date" remote sensing tools.
	1a-2	Use GIS, other remote sensing tools, and surveys to identify <b>critical core forests</b> and assess their condition for forest-nesting birds and bald eagles, and maintain information. Identify protection strategies (e.g., landowner incentives and acquisition) to maintain large core areas in perpetuity. Identify adjacent habitats that can be managed to enhance the total size of forest habitat.		
	1a-3	Maintain and manage forest patches adjacent to marshes and grasslands for bald eagle and raptor suitability. Maintain and enhance floodplain forests for forest passerines and raptors. Set and implement guidelines for human disturbance on critical lands and allow forests and forest patches to mature to old growth to maximize suitability.		
	1a-4	Increase the effective size and connectivity of forests on permanently protected public lands and surrounding private lands through incentive programs and targeted land acquisition. Use GIS measures and surveys to identify important corridors that connect large, contiguous tracts of forest and target these areas for acquisition to maintain a system of large, connected tracts of forest within and between conservation zones. Where appropriate, enhance and restore forested habitat through reforestation, revegetation, forest improvement cuts, and other forest management prescriptions.		

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
		<p>Increase the area of forests managed to contain a mix of seral (successional) stages to provide habitat for a wide range of forest-dwelling species (e.g., woodland raptors, pine snakes, corn snakes, black-throated green warbler, and woodcock) within large contiguous tracts while maintaining suitability for area-sensitive species per the Forest Management Guidelines for Nongame Species in New Jersey (in prep).</p> <ul style="list-style-type: none"> <li>• The primary goal being to maintain or manage for large and contiguous areas of mature and near-mature forests with large trees and an uneven-age structure that is suitable for woodland nesting raptors (forest raptors). (Excluding Cape May Peninsula)</li> <li>• Selected areas of second-growth forested wetlands of moderate wildlife value should be allowed to mature to create optimal habitat for barred owl and red-shouldered hawk. (Excluding Cape May Peninsula)</li> <li>• All areas of second-growth forested wetlands of moderate wildlife value should be allowed to mature to create optimal habitat for barred owl and red-shouldered hawk. (Cape May Peninsula ONLY)</li> </ul>	<b>PRIORITY</b>	
		<ul style="list-style-type: none"> <li>• These forest types to also include but are not limited to: an uneven-age structure; mature forests and near-mature forest with &gt;80% canopy closure, 65-80% canopy closure and structural diversity; limited areas of pine-oak with &lt; 25% canopy closure; scrub-oak communities; and regenerating stands of forests (e.g., Atlantic white cedar). (Excluding Cape May Peninsula)</li> <li>• These forest types to include but are not limited to: an uneven-age structure; mature forests with 65-95% canopy closure and structural diversity; scrub-oak communities and regenerating stands of forests (e.g., Atlantic white cedar). (Cape May Peninsula ONLY)</li> <li>• Take action to minimize loss of older forest stands with large trees in large, contiguous tracts by protecting, maintaining, enhancing, and/or restoring habitat on public and private lands through programs such as fee purchases, conservation easements, landowner incentives, and/or forest management and stewardship plans.</li> </ul>		
		<p>Develop, implement, and evaluate best management practices (BMPs) and guidelines to maintain, enhance, and/or restore resident and migratory bald eagle, osprey, and forest-interior passerine and raptor habitat on public and private lands. //Following portion found within Cape May Peninsula only: Develop an action plan for immediate implementation should habitat levels fall below the minimum necessary to sustain the migration. Actively manage state and other conservation lands to enhance autumn food availability, and promote backyard habitat management to make similar improvements on private lands.</p>	<b>PRIORITY</b>	
		<p>Collaborate with Division of Parks and Forests to enhance Belleplain State Forest for wildlife species of conservation concern: uneven-age stand management, preserve standing and fallen dead biomass, manage harvest practices in wetland forests and adjacent upland forest to promote older-growth.</p>		

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
<b>1b Grasslands, early-successional fields, and scrub-shrub habitats</b>				
	1b-1	Use GIS, other remote sensing tools, and surveys to identify <b>critical grassland habitats</b> and assess their condition for nesting birds, maintain information, and incorporate all new survey and mapping data into the Landscape Project and Biotics database. Identify protection strategies (e.g., landowner incentives, farmland preservation, and acquisition) to maintain large core areas of grassland in perpetuity. Identify proximate habitats that can be managed to enhance the total size of suitable grassland habitat, with the goal of managing grassland/early succession areas totaling 2,000-3,000 ha (7.7–11.5 square miles). <b>(Cohansey only)</b>	<b>PRIORITY</b>	
	1b-2	Use GIS measures, other remote sensing tools, and surveys to identify <b>critical scrub-shrub</b> (areas with >25% woody vegetation <20 feet in height) and open field habitats, assess their condition for local populations of frosted elfins (e.g., on powerlines), nesting birds (e.g., yellow-breasted chat, blue-winged warbler, brown thrasher), marsh-edge birds (e.g., sedge wrens) and other wildlife, maintain information, and incorporate all new survey and mapping data into the Landscape Project and Biotics database. Identify protection (e.g., landowner incentives, farmland preservation, and acquisition) and management strategies (e.g., timing restrictions for management, cooperative agreements with utility companies for maintenance of rights-of-ways) to maintain, enhance, and/or create them.	<b>PRIORITY</b>	Revised to include marsh edge birds: "...nesting birds (e.g., yellow-breasted chat, blue-winged warbler, brown thrasher), marsh-edge birds (e.g., sedge wrens) and other wildlife, maintain..."
	1b-3	Increase the effective size and connectivity of grasslands on permanently protected public lands and surrounding private lands through incentive programs and targeted land acquisition. Use GIS measures and surveys to identify important corridors that connect large, contiguous tracts of grasslands and target these areas for acquisition to maintain a system of large, connected tracts of grasslands within and between conservation zones. Where possible, enhance and restore grassland habitat through revegetation and management practices such as prescribed burns and appropriate mowing strategies. Work with the NJ DEP, Green Acres Program and the Dept. of Agriculture to identify parcels for acquisition or purchase of development rights. Acquire habitat through direct purchase or easements and enlist private lands in preservation and management programs that offer long-term stability of a matrix of grassland schemes. Target 2,000 hectare (7.7 sq. mi.) regions. <b>(Cohansey only)</b>		Stakeholders asked if this action supports converting forest to grassland. No, it does not. As such, it has been revised for clarification to include the following: "...Where possible, enhance and restore grassland habitat through revegetation and management practices such as prescribed burns and appropriate mowing strategies, brush-hogging, and other appropriate methods with little or no impact to forested and wetland dependent species of greatest conservation need. Work with the NJ...."
	1b-4	Develop, implement, and evaluate best management practices (BMPs) for <b>rights-of-way that benefit species with small area requirements</b> (e.g., frosted elfin, moths, and early-successional birds). BMPs should focus on maintaining existing early succession habitats and work to establish new grassland and scrub-shrub habitats along utility line rights-of-way, at field/forest edges, and adjacent to fire breaks where appropriate for small-area species.		
	1b-5	Develop, implement, and evaluate best management practices to protect, maintain, and/or <b>enhance habitats (other than rights-of-way)</b> for resident and migratory grassland bird and scrub-shrub bird communities on public and private lands and that support populations of bronze copper, frosted elfin, Hessel's hairstreak, and scrub-shrub birds, particularly at locations where early-successional habitats are maintained for (other) primary purposes. Actively manage state and other conservation lands to enhance autumn food availability, and promote backyard habitat management to make similar improvements on private lands.		

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
	<b>1b-6</b>	Promote landowner incentives and manager cooperation to protect and enhance local populations of frosted elfins (e.g. on powerlines), and scrub-shrub/open field birds (e.g., on airports).		
	<b>1c</b>	<b>Aquatic, wetland, riparian, floodplain, and marsh habitats</b>		
	<b>1c-1</b>	Use GIS, other remote sensing tools, and surveys to identify <b>critical aquatic and wetland habitats</b> and assess their condition for migratory and wintering waterfowl populations of conservation concern, snow geese concentration areas, and finfish and shellfish populations. Take action to minimize habitat loss by restoring, enhancing and/or protecting habitat on public and private lands through protection strategies (e.g., acquisition, landowner incentives) and to maintain/enhance existing waterfowl habitat where such management complements rare species management. // Maintain and enhance upland and floodplain forests on private and public lands for forest birds by promoting contiguous forests and discouraging fragmentation.	<b>PRIORITY</b>	
	<b>1c-2</b>	<b>Locate potential vernal pools</b> through aerial imagery and surveys and <b>integrate certified vernal pool data</b> into the DEP regulations database and Landscape Project.	<b>PRIORITY</b>	Stakeholders agreed that this action was missing a key element, the actual species' surveys and/or certification of the vernal pools based on the species present. This action has been revised as follows throughout all regions: "Locate potential vernal pools through aerial imagery and surveys, <u>conduct species surveys</u> , and integrate certified vernal pool data into the NJ DEP regulations database and Landscape Project."
	<b>1c-3</b>	<b>Identify and protect habitat for fish</b> by plotting distributions of special concern fish species, and integrate those data into the Biotics database.	<b>PRIORITY</b>	
	<b>1c-4</b>	Work with the NJ Division of Fish and Wildlife Bureau of Law Enforcement, the Division of Parks and Forestry's State Park Rangers, and the USFWS officers to enforce regulations governing recreational activities (including the use of personal watercraft) in refuges and other sensitive habitats, and discourage activities that cause harm or disturbance to vegetation, wetlands and wildlife.	<b>PRIORITY</b>	Revisions to this action include changing "Parks and Forestry's State Park Rangers" to "Parks and Forestry's State <u>Park Police</u> ." For clarification, we revised "...recreational activities (including the use of personal watercraft) in refuges..." to "...recreational activities (including <u>but not limited to</u> the use of personal watercraft, <u>all terrain vehicles, etc.</u> ) in refuges..."
	<b>1c-5</b>	Develop, implement, and evaluate best management practices to enhance and/or restore aquatic (open waters, streams, and freshwater wetlands) and adjacent riparian habitats supporting populations of special concern and rare fish such as by removing obstructions to fish passage in rivers and streams. Restore and protect NJ's critical non-trout streams through the use of protection strategies (e.g., acquisition of adjacent riparian habitats, working with municipality planning boards to require ecologically-sound buffers, easements).	<b>PRIORITY</b>	There were concerns that this action is dedicated to fish while other species may benefit. Given we do not have rare mussels in this region and this action was purposely created to target fish, it remains as is.
	<b>1c-6</b>	Develop, implement, and evaluate best management practices and guidelines to maintain, enhance, and/or restore tidal marsh habitats on public and private lands to support foraging bald eagles, as well as osprey, peregrine falcon, northern harrier and black rail on the bayshore, especially with regard to disturbance, mosquito control and vegetation management in marshes.	<b>PRIORITY</b>	Revised to include "shorebirds" among the list of species that can benefit from restored tidal marsh habitats.

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
	1c-7	Work with NJDEP-OCE, USACE, and other appropriate agencies to develop, implement, and evaluate best management practices for using dredged material to improve habitat for wildlife, particularly for spawning horseshoe crabs and migrating shorebirds.	<b>PRIORITY</b>	
	1c-8	Identify and protect critical areas of submerged aquatic vegetation to benefit waterfowl, finfish, and shellfish species through surveys, GIS measures and other remote sensing tools, expert opinion, and historical records. Reestablish/restore historically important submerged aquatic vegetation beds in Delaware Bay tributaries to benefit waterfowl and waterbirds.	<b>PRIORITY</b>	
	1c-9	Investigate and improve current marsh management techniques to benefit critical wildlife species, in particular high marsh nesting birds and waterfowl.		There was some concern at the meeting that impoundments have not been addressed elsewhere and this action seemed an appropriate place to integrate that information. As such, this action has been revised to: "Investigate and improve current marsh management techniques to benefit critical wildlife species, in particular high marsh nesting birds and waterfowl, <u>and include in marsh BMPs and species dependent on mudflats and impoundments.</u> "
	1c-10	Identify areas that may benefit from marine conservation zone status to protect sensitive habitats and species from human disturbance. Develop and implement protection measures in marine and riverine habitats. /// Develop and evaluate the creation of a marine conservation area to minimize human disturbances and concomitant damage to habitat in areas of breeding and foraging marsh wildlife.		
	1c-11	Develop, implement, and evaluate habitat management that will promote foraging and roosting of black skimmer and least tern.		
	1c-12	Develop, implement, and evaluate best management practices to enhance and/or restore riparian habitats to maintain the migration of raptor and passerine populations at viable levels. Actively manage state and other conservation lands to enhance autumn food availability and contiguous wetlands and wetland networks for forest birds and Lepidopteran species, and discourage the loss of wetland habitats through filling, nutrient loading, or contamination.	<b>PRIORITY</b>	There was confusion about what riparian habitats this action targeted. As such, "freshwater" has been added to the statement where appropriate throughout this region's portion of the Wildlife Action Plan (Plan).
	1c-13	Use GIS measures and surveys to identify and assess <b>core forested wetland and riparian/floodplain habitat</b> for forest-dependent breeding species: forest raptors (red-shouldered hawk, long-eared owl, and barred owl) and forest-interior songbirds. Take action to minimize habitat loss by restoring, enhancing and/or protecting habitat on public and private lands through programs such as fee purchases, conservation easements, landowner incentives, and/or forest management and stewardship plans.		
	1c-14	<b>Identify threats to vernal pools</b> through systematic monitoring and devise strategies to protect vernal pool dependent species.		

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
	<b>1d</b>	<b>Beach and dune habitat</b>		
	<b>1d-1</b>	Use GIS, other remote sensing tools, and surveys to identify <b>critical beach habitats</b> and assess their condition for <b>migratory shorebirds</b> and maintain appropriate information in the Landscape Project and Biotics database. Identify protection strategies and best management practices to maintain suitable habitat for migratory shorebirds in perpetuity.	<b>PRIORITY</b>	Revised to clarify this action is targeting "...critical Delaware Bay beach habitats..."
	<b>1d-2</b>	Develop, implement, and evaluate best management practices to minimize beach loss and preserve optimal shoreline habitats for horseshoe crabs and migratory shorebirds.	<b>PRIORITY</b>	
	<b>1d-3</b>	Investigate the potential for management and creation of migratory shorebird feeding and roosting areas on Cape May peninsula, particularly at Cox Hall Creek, Fishing Creek, and Cape May NWR.	<b>PRIORITY</b>	One stakeholder requested that actions 1d-2 and 1d-3 be combined. However, given both actions were identified as priorities and given stakeholders' limited resources, these actions remain separate so that stakeholders can which action(s) they are able to conduct/ implement.
	<b>Broad-based habitat actions (include various habitat types)</b>			
	<b>1e</b>	Use GIS, other remote sensing tools, and surveys to identify <b>critical habitats (upland and wetland)</b> for bald eagles (resident and migratory), and <b>critical stopover habitats</b> for migratory birds, bats, and Lepidopteran species, assess their condition, and maintain information. Identify habitat requirements and monitor trends in habitat change to develop protection strategies and best management practices (e.g., regulations, land acquisition, incentive programs) to maintain the migration at viable levels for species populations.	<b>PRIORITY</b>	
	<b>1f</b>	Use GIS, other remote sensing tools, and surveys to identify and map <b>significant natural vegetative communities that may host wildlife species of conservation need</b> , particularly on public lands and lands that serve as wildlife corridors.		
	<b>1g</b>	Protect habitats through innovative public and private partnerships. Promote existing landowner incentives for protecting and managing wildlife habitat and develop landowner cooperative agreements to protect significant populations of bald eagles, grassland and scrub-shrub birds, forest-interior wildlife, migratory shorebirds, songbirds, and raptors, freshwater wetland birds, vernal pools, and rare amphibian and invertebrates.		
	<b>1h</b>	Develop, implement, and evaluate best management practices for <b>forest, shrub, and field habitats along the upland edge of the shoreline and marshes</b> for raptor and passerine suitability, especially to maintain feeding and roosting habitat for autumn-migrating birds.		This action has been revised for clarification, targeting landbirds. The revision includes changing "...autumn-migrating birds" to "...autumn-migrating landbirds."
	<b>1i</b>	Revise existing Landscape Project species occurrence areas through research and, where lacking, develop new species occurrence areas as data on species habitat requirements become available. Develop, review, and improve species-habitat associations as new land use/land cover data become available.	<b>PRIORITY</b>	
	<b>1j</b>	Reclaim degraded rare species habitats by working with land management agencies to determine the appropriate actions needed to restore habitat value for the documented species. Appropriate actions might include the control of harmful, invasive, vegetation, restoring natural stream flows, revegetation with native plants or restoring habitat structure.	<b>PRIORITY</b>	Revisions to the action included targeting the areas for mitigation. The action was revised throughout the Plan to: " <u>Identify, prioritize, and</u> reclaim degraded rare species..."

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
<b>2</b>	<b>Protect water quality and the availability of wetland habitats.</b>			
	<b>2a</b>	Maintain optimal biological buffers (beyond regulatory requirements) around wetlands, riparian, and floodplain areas and minimize destruction per the NJ DEP Wetland Buffer Guidelines for Species of Conservation Concern in New Jersey (in prep). Stabilize wetland buffers and streambanks by encouraging plantings of native vegetation through public education, volunteer programs, and land managers to stabilize wetland buffers and stream banks and prevent erosion.	<b>PRIORITY</b>	
	<b>2b</b>	Protect water quality and aquatic-dependent species by appropriately designating Category 1 waters. Seek appropriate classifications for stream segments based on Index of Biotic Integrity (IBI) results that do not fulfill Category One requirements.	<b>PRIORITY</b>	
	<b>2c</b>	Maintain water chemistry/ water quality important for aquatic-dependent or semi-dependent species native to the Pinelands. For example, maintain low pH waters important for breeding populations of Pine Barrens treefrogs and carpenter frogs.		
	<b>2d- ADDED</b>	Investigate impacts of aquaculture on water quality. Determine relative effects of locations and aquaculture techniques. Develop and implement management actions to minimize impacts.		Action was added to the Delaware Bay Region's Bayshore Conservation Zone. It was added after the stakeholders' meeting and therefore, was not part of the prioritization exercise.
<b>3</b>	<b>Maintain ecological integrity of natural communities and regional biodiversity by controlling invasive species and overabundant wildlife.</b>			
	<b>3a</b>	Identify areas where invasive, non-indigenous plants and animals are either already established or are becoming established through GIS, other remote sensing tools, surveys, public participation, and creating a system for reporting and qualifying new locations of invasive species. Prioritize areas in need of control projects according to the level of impact on the ecosystem.	<b>PRIORITY</b>	
	<b>3b</b>	Work with appropriate government agencies to survey for and monitor the spread of invasive insect species that jeopardize forest health. The species of primary concern include the southern pine beetle, orange-striped oakworm, gypsy moth, and oak lace bug. Take appropriate control methods to reduce tree damage and limit the spread of infestations, provided such methods avoid excessive direct or indirect harm to non-target species.	<b>PRIORITY</b>	
	<b>3c</b>	Work with public and private landowners and managers and regulatory agencies to employ appropriate physical, chemical, or biological control measures, or a combination of these, to reduce invasive, non-indigenous plants in areas that are identified as providing critical habitat for endangered, threatened, or priority wildlife species and are being threatened by such plants. // Use appropriate measures to control the spread of phragmites (common reed) and restore the marshes to native species.	<b>PRIORITY</b>	



Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
	3d	The NJ Division of Fish and Wildlife, Bureau of Wildlife Management will consider forest health and biodiversity as one of the primary determinants in making deer management decisions regarding deer densities. Forest health and biodiversity will be determined by using long term monitoring of forest regeneration via a system of exclosures and vegetative sample plots (or other methods that will empirically and objectively measure the effect of deer herbivory) throughout New Jersey in order to evaluate habitat health in response to changing deer densities. DFW will recommend adjustments to existing Deer Management Zone deer densities goals and recommend changes to zone specific deer harvest and control strategies, as required in order to meet this objective.		
	3e	Where appropriate, continue to develop and expand incentives for harvesting antlerless deer.		
	3f	Develop, implement, and evaluate management strategies to reduce the impacts of mute swan herbivory on native vegetation in impoundments and marshes supporting species of conservation concern. // Monitor and evaluate the impacts of snow goose herbivory to the salt marshes and the native wildlife that rely upon this habitat. Develop, implement, and evaluate management strategies to minimize any unreasonable negative impacts on native wildlife, focusing on areas supporting species of conservation concern. // Monitor and evaluate the impacts of vegetative damage to the wild rice marshes by resident Canada geese. Develop, implement, and evaluate management strategies to maintain and enhance the wild rice marshes by minimizing goose damage and controlling resident Canada goose populations.	<b>PRIORITY</b>	
	3g	Assess the impact of laughing gull population on habitat used by migratory shorebirds to assess the need for <b>integrated wildlife damage management of gulls</b> is necessary.	<b>PRIORITY</b>	
<b>4</b>	<b>Prevent, stabilize and/or reverse declines of endangered, threatened, and special concern species.</b>			
	4a	ENSP biologists will be responsible for notifying the NJ Division of Fish and Wildlife's Bureau of Law Enforcement and where appropriate, the Division of Parks and Forestry Bureau of Law Enforcement of critical sites (nesting, basking, gestation, dens, spawning and nursery sites) to implement stringent enforcement of endangered species laws, including protection of wildlife from illegal collection (northern pine snakes) and human disturbance (off-road vehicles) and harassment; update map as additional data become available.	<b>PRIORITY</b>	A stakeholder requested that managers be informed as well as law enforcement so that they can also protect critical sites. Due to the sensitive nature of these sites, we have incorporated managers as follows: "...Division of Parks and Forestry Bureau of Law Enforcement, <u>and managers, as appropriate</u> , of critical sites..."
	4b	Recruit and educate local law enforcement of endangered species laws by developing and hosting a training seminar. Develop a partnership between local law enforcement, USFWS Special Agents, and the NJ Division of Fish and Wildlife's Bureau of Law Enforcement to enforce protection of native wildlife from illegal collection (northern pine snakes, corn snakes, timber rattlesnakes) and human disturbance (off-road vehicles).		USFWS representatives explained that "Special Agents" would only be involved in investigations. As such, throughout the Plan, where this action is found, we have determined and revised the text to address the appropriate agencies and/or law enforcement(e.g., National Wildlife Refuge officers, National Park Service Rangers, US Army and Navy Natural Resource Managers).

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
	4c	Actively protect, monitor, and manage bald eagle nests and foraging areas, including posting signs in waterways to prevent disturbance by recreational activity, delineating and posting nests and significant roosting areas, building cooperation with private landowners, and working closely with law enforcement and volunteers to minimize disturbance at nest sites. Continue to monitor reproductive success of eagles.		
	4d	Reduce the impacts of human disturbance on red knots and other migratory shorebirds that use the intertidal zone of beaches and inlets by posting and/or fencing critical migratory sites, and developing management plans or policies that minimize human impact // Notify wildlife law enforcement agents (and when applicable, conservation organizations and local municipalities) of critical staging areas; identify and enforce the necessary restrictions to human activities.// Control and reduce disturbance to red knots and migratory shorebirds by closing posted areas during peak migration periods and increasing the regular presence of state conservation officers at beach nesting bird sites during the nesting season.	<b>PRIORITY</b>	
	4e	Conduct surveys determine locations of, and identify habitat management requirements for, secretive marsh nesting birds.	<b>PRIORITY</b>	
	4f	Research the impact of land use patterns on Pine Barrens treefrog, northern pine snake, and corn snake populations.		
	4g	Investigate impacts of aquaculture on migratory shorebirds, waterfowl, finfish, shellfish, and other wildlife species of conservation concern. Determine relative effects of locations and aquaculture techniques. Develop and implement management actions to minimize impacts.	<b>PRIORITY</b>	
	4h	Research the intensity and characteristics of threats to wildlife species of conservation concern and their habitats, including causes and effects of habitat loss, degradation, and alteration, edge, disturbance, impacts of roads, predation, competition by invasive plants and animals, disease, contaminants, food availability, hybridization, and how water quality degradation and contaminants affect rare species.	<b>PRIORITY</b>	
	4i	Develop and implement proactive habitat conservation goals that will meet and maintain the recovery needs of all endangered and threatened wildlife and fish populations, shorebirds, coastal marsh birds, migratory songbirds and raptors, bald eagles, osprey, colonial waterbirds, freshwater wetland birds, and waterfowl (consistent with the North American Waterbird Conservation Plan), northern harrier and other high-marsh species, and plans for amphibian and reptile populations (consistent with NE Amphibian and Reptile Conservation).	<b>PRIORITY</b>	
	4j	Prevent chemical contamination, siltation, eutrophication, and other forms of pollution/contamination to wetlands used by wildlife especially as breeding sites that could directly harm breeding species or their food supply (including birds, amphibians, and invertebrates). Evaluate protection efforts through regular monitoring of water quality.	<b>PRIORITY</b>	
	4k	Work with public and private landowners and managers with significant grassland bird and scrub-shrub/open field bird populations, bald eagle, cavity-nester, freshwater wetland bird, and raptor populations to enhance targeted wildlife habitat through the implementation of best management practices and incentive programs.		

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
	4L	Develop a fish Index of Biotic Integrity (IBI) to better assess the presence and distribution of fish species within the area's streams.	<b>PRIORITY</b>	
	4M	Research the habitat requirements for resident and migratory grassland birds, forest passerines, and woodland raptors, corn snakes, northern pine snakes, Cope's gray treefrog, Pine Barrens treefrog, and Indiana bats, when appropriate. Recommend appropriate management and regulations based on the results. Experimentally implement silviculture techniques as needed to develop guidance for enhancing forests for forest-dependent species. Develop guidance on prescribed burning and other management techniques for grassland species. // Research the population size, recruitment, habitat requirements, and threats to the northern diamondback terrapin population; and population distribution to determine critical areas for protection.	<b>PRIORITY</b>	
	4N	Assess changes in availability of low and high marsh, directly, and by using indicator species (black rail, northern harrier), and relate habitat changes to marsh management practices. Evaluate management practices and revise as appropriate to benefit species of conservation concern.	<b>PRIORITY</b>	
	4o	Enhance northern diamondback terrapin populations by: a) determine the sustainable population goal, b) enforcing compliance with current crab trap regulations (e.g. turtle excluder devices), c) evaluating if current regulations are sufficient, in conjunction with naturally occurring survivorship rates, to protect and reduce mortality of northern diamondback terrapin populations, and d) closing the harvest season until sustainable population levels are reached.		
	4p	Collaborate with DOTs, NGOs, and volunteers to identify key road-crossing areas of northern diamondback terrapin and work with appropriate government agencies to install turtle crossing signs and erect turtle barriers or provide safe passage, as appropriate, depending on the habitat and location.	<b>Potential DFW PRIORITY</b>	
	4Q	Develop strategies to maximize food availability and beach suitability for migratory shorebirds by working with regulatory agencies to restore horseshoe crabs populations to 1990 level, minimize beach loss/development, and investigate beach enhancement.	<b>PRIORITY</b>	Stakeholders commented that this action, as is, implies the horseshoe crab population decline is due to beach management, when it should emphasize overharvesting. As such, this action has been revised to: "Develop strategies to restore horseshoe crab populations to 1990 level, using methods including (but not limited to) harvest restrictions, minimizing beach loss and development, and beach enhancement."
	4r	Develop, implement, and evaluate BMPs for shoreline management to maintain and enhance horseshoe crab spawning habitat.		
	4s	Evaluate the impacts of roads on endangered and threatened species and other nongame wildlife. Research, develop, and implement methods to reduce roadside mortality of wildlife (e.g., implementing wildlife underpasses, road closures).		

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
	4t	Protect wildlife species of conservation need, especially slow moving terrestrial-bound species (e.g. reptiles, amphibians) and sensitive forest nesters (e.g. red-shouldered hawks, barred owls) by prohibiting off-road vehicles from all critical wildlife habitats, public and private conservation lands.	<b>PRIORITY</b>	Stakeholders commented that we should not focus solely on destruction of "critical habitat" but rather any habitat where these wildlife species occur. The action was revised to: "Protect wildlife <u>species of conservation concern</u> , especially slow moving terrestrial-bound species (e.g. reptiles, amphibians) and sensitive forest nesters (e.g. red-shouldered hawks, barred owls) by prohibiting off-road vehicles <u>from all public and private conservation lands except where authorized by the governing agency by working with law enforcement agencies and implementing other means as they are developed.</u> "
	4u	Work with state and non-government agencies to evaluate the impacts of enduro events on listed species and species of special concern. If such events are to be permitted in the future, work with the Divisions of Parks & Forestry and Fish & Wildlife to designate riding areas develop/implement BMPs.		
<b>5</b>	<b>Inventory, determine distribution, and monitor all endangered, threatened, special concern wildlife and fish species.</b>			
	5a	Use the Biotics database and Landscape Project to identify where species location data and monitoring gaps exist. Design and implement coordinated presence/absence surveys and monitoring to acquire data in those areas.	<b>PRIORITY</b>	
	5b	Conduct surveys in appropriate habitats and work with partners in conservation to determine species <b>distributions and identify critical habitats</b> and protection needs for dragonflies and damselflies, timber rattlesnakes, corn snakes, northern pine snakes, Pine Barrens treefrog, frosted elfin, bronze copper, and Hessel's hairstreaks. // Encourage landowners to report timber rattlesnake sightings for inclusion in the distribution mapping and potential inclusion in telemetry study. Monitor habitat use and survival of encountered animals using radio-telemetry to locate dens and identify critical habitats.		
	5c	Survey suitable habitats for wildlife species of greatest conservation need to determine distribution <b>establish baseline information, and monitor trends</b> for wildlife species of greatest conservation need: grassland birds every four years, with more frequent surveys in actively managed grasslands, bald eagle nesting and production annually, ospreys every three years, woodland raptors' distribution every four years, shoreline surveys annually, northern harrier and black rail surveys every two to four years, American woodcock every five years, Cope's gray treefrog and eastern tiger salamander annually, and migratory raptors and passerines every five years. Develop marsh surveys for migratory shorebirds. Identify and record important migratory shorebird foraging and roosting areas. Develop baseline surveys for listed and SC rail species, and migratory songbird use.	<b>PRIORITY</b>	

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
	5d	Conduct concentrated field sampling for listed or special concern fish species (e.g., Atlantic and shortnose sturgeon, margined madtom) in areas indicated by Fish Track Database queries and incorporate data into the Biotics database.	<b>PRIORITY</b>	
	5e	Conduct breeding waterfowl surveys annually to monitor population trends.		
	5f	Develop and conduct nighttime surveys to inventory nightjars (whip-poor-wills, chuck-will's-widows, common nighthawks), northern saw-whet owls, and eastern screech-owls.		
	5g	Conduct surveys to identify migratory pathways of bats in the shoreline conservation zone through telemetry or Radio Detection And Ranging (RADAR). Data to be used in evaluation of potential impacts of wind turbines or other coastal structures on migratory bat populations.	<b>PRIORITY</b>	
	5h	Conduct state-wide sampling (e.g., mist netting) to <b>determine distribution, range, and habitat use of summer bats</b> . Long-term sampling of forest dwelling bat species should be conducted to determine population trends and species response to changes in habitats. If Indiana bats are found, conduct telemetry study during summer months to determine roost characteristics and habitat requirements for Indiana bat maternity colonies.		The phrase "state-wide" has been removed from this action throughout the Plan.
	5i	Continue volunteer-based summer bat concentration surveys to locate maternity sites and determine roost characteristics. Trap bats at summer concentration sites to identify bat species; apply colored, plastic bands to Indiana bats to aid in recognition during hibernation surveys.		
	5J	Conduct surveys in suitable, previously un-surveyed areas to determine if listed or special concern freshwater mussel species are present. Repeat surveys every four years to monitor populations. Incorporate freshwater mussel survey results into the Biotics database and determine critical areas for listed species.	<b>PRIORITY</b>	
	5k	Assess population levels of listed and special concern rails, and determine whether directed management efforts are needed to reach or maintain viable population levels.	<b>PRIORITY</b>	
	5L	Monitor horseshoe crab population and egg densities relative to migratory shorebird needs, and recommend management to increase horseshoe crab populations in the short term (e.g., harvest restrictions) and long term (e.g., habitat enhancement and harvest moratorium). // Monitor red knot movements to identify all habitats used in relation to food (horseshoe crab egg) densities. Identify habitat standards to maintain optimal migratory shorebird populations and implement within land acquisition and management plans.	<b>PRIORITY</b>	
	5M	Investigate the habitat suitability and techniques for restoring bobcats to the Maurice River Watershed conservation zone. Conduct presence/absence surveys for bobcat using scent-post surveys within suitable habitat.		

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
	5N	Investigate carrying capacity of area marshes for wintering American black ducks to help inform management actions and priorities.		Stakeholders requested clarification of the objective of this action at the meeting and within the Plan. The action has been revised to: "Determine carrying capacity of area marshes for wintering American black ducks to inform decisions in setting Atlantic Flyway population objectives and to guide management actions."
	5o	Identify and research water quality parameters for bald eagle, osprey, spotted turtle, special concern amphibians including vernal pool obligate and facultative species, and rare dragonfly and damselfly populations. // Investigate the effects of mosquito control on amphibian, dragonfly, and damselfly populations.	<b>PRIORITY</b>	Revised to clarify that [part of] this action is targeting the effects of " <u>chemical</u> mosquito control" on amphibians.
	5p	Investigate habitat parameters of rare fish (e.g., margined madtom) and recommend management and protection guidelines.	<b>PRIORITY</b>	
	5Q	Use GIS measures, other remote sensing tools, and surveys to identify important staging areas for red knots and other migratory shorebirds and determine and enforce the necessary restrictions on human activities to minimize disturbance at and destruction of these sites. Obtain necessary approvals from New Jersey Tidelands Council for management actions.		
<b>6</b>	<b>Assess large-scale habitat change (every five to 10 years).</b>			
	6a	Collaborate with NJ DEP's Bureau of Geographic Information and Analysis and Rutgers Center for Remote Sensing and Spatial Analysis to develop methods to update DEP's land use/land cover data every five years and perform critical habitat change analysis to assess trend in habitat loss and conversion.	<b>PRIORITY</b>	
<b>7</b>	<b>Promote public education, awareness, wildlife conservation, and participation in habitat restoration efforts on private land.</b>			
	7a	Develop and maintain educational brochures and posters and viewing opportunities for the public consistent with species recovery goals to enhance public awareness of wildlife conservation and environmental issues by cooperating with federal, state, and local government, and non-governmental organization partners.		
	7b	Develop, maintain, and enhance opportunities for eco-tourism in a manner consistent with wildlife and habitat enhancement including but not limited to the creations of interpretive trails, the creation of viewing areas, and wildlife-related recreational opportunities that do not negatively impact species of conservation concern and their habitats.	<b>PRIORITY</b>	
	7c	Develop brochures and posters to educate the public and increase awareness of New Jersey's indigenous nongame fish species.		
	7d	Educate the public about the importance of the habitats [within the appropriate zones] to the Atlantic coast bird, bat, and Lepidopteran species' migration through newsletters, press releases, brochures, presentations, and web pages.		
	7e	Raise public awareness of the Tuckahoe, Maurice, and Cohansey River as a significant bald eagle and raptor wintering area through newsletters, press releases, brochures, presentations, and web pages.	<b>PRIORITY</b>	

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
	7f	Preventing establishment of non-indigenous species is the simplest and most cost-effective means of stopping invasions. Encourage native plant use in landscaping through public awareness and discouraging sales of non-native ornamental plants which are often a major source of non-indigenous species that invade natural plant communities.	<i>PRIORITY</i>	
	7g	Develop targeted outreach brochures for pet owners, outdoor-recreation enthusiasts, and local citizens adjacent to critical habitats about the importance of specific habitats to populations of migratory birds and the importance of maintaining disturbance-free areas for them.		
	7h	Educate public about the importance of keeping cats indoors through newsletters, press releases, brochures, presentations, web pages, etc. Work to develop a statewide policy for local communities to discourage managed cat colonies and trap, neuter and release programs; encourage academic research that examines the full range of impacts of feral cat colonies on local wildlife populations and of feral cat colony management (including TNR) on local wildlife populations and local feral cat populations.	<i>PRIORITY</i>	
	7i	Educate homeowners, through newsletters, press releases, brochures, presentations, etc., on the proper eviction of house-dwelling bat populations and the importance of providing alternative roosting structures for maternity colonies.		
	7J	Engage landowners and NJ citizens in protection and survey efforts for endangered species by increasing enrollment in landowner incentives, forest stewardship, backyard habitat management, and Citizen Science Program.	<i>PRIORITY</i>	
	7k	Develop brochures and posters regarding the most aggressive, invasive non-indigenous plants to educate and involve the public in detecting problem areas early while they are still manageable. Early recognition of the establishment of new populations is the key to successful control.	<i>PRIORITY</i>	
<b>8</b>	<b>Protect and enhance important and unique natural communities.</b>			
	8a	Identify (through Landscape Project, radar studies, IBAs, and surveys), protect (through incentive programs and land acquisition), and enhance (through incentive programs and best management practices) critical migratory stopover habitats, including but not limited to all habitats in the southern 30K of the peninsula, the drainages of Fishing Creek, Dias Creek, Bidwell Creek, Dennis Creek and Cedar Swamp Creek, the Cohansey River, Stow Creek, Raccoon Ditch, and habitats in and adjacent to tidal wetlands. Recognize the particular importance of the autumn migratory corridor along the upland edge of bayshore marshes.	<i>PRIORITY</i>	There were questions regarding the "southern 30K" as the critical point for the migratory stopover, is it enough? Research conducted by the NJ DEP, Division of Fish and Wildlife's Endangered and Nongame Species Program (ENSP) has shown that this portion of the peninsula is the critical stopover habitat. The action remains as is in the appropriate zones with the inclusion of the "drainages of the Maurice River" added to the Maurice River conservation zone.

Goals (1-8)	Conservation Actions' Numbers	DELAWARE BAY Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on September 12, 2007.
	8b	Incorporate sightings data from nominated and approved Important Bird Areas into the Biotics database and Landscape Project mapping.		Stakeholders discussed the conflict between data entering or not entering the ENSP's Biotics database and/or Landscape Project map. Due to the lack of detail or missing information, IBA data is/was not sufficient for ENSP's database or Landscape Project map. For clarification, this action has been revised to: "Incorporate <u>ENSP approved</u> sightings data from nominated and approved Important Bird Areas into the Biotics database and Landscape Project mapping <u>providing the sightings meet the ENSP Biotics and Landscape Project standards.</u> "
	8c	Identify (through Landscape Project, radar studies, IBAs, and surveys), protect (through incentive programs and land acquisition), and enhance (through incentive programs and best management practices) <b>unique habitats such as Pinelands-ecotype forest and streams</b> in the Manumuskin and Menantico tributaries, and older swamp forests of east and west Bear Swamps.		
	8d	Identify (through Landscape Project, radar studies, IBAs, and surveys), protect (through incentive programs and land acquisition), and enhance (through incentive programs and best management practices) the <b>marsh and wetland forests</b> of the Tuckahoe, and the marsh and upland edge of the Great Egg Harbor River system.		
	8e	Protect (through incentive programs and land acquisition), and enhance (through incentive programs and best management practices) Belleplain State Forest and Peaslee Wildlife Management Area <b>for forest (e.g., northern pine snake, red-headed woodpecker) and forest-interior (e.g., barred owl, red-shouldered hawk) wildlife.</b>	<b>PRIORITY</b>	This action was revised for clarification that enhancement of the forest means to enroll private surrounding lands in incentive programs, managing to increase effective forest size. The action was revised to: "Protect (through incentive programs and land acquisition), and enhance (through incentive programs and best management practices) <u>lands surrounding</u> Belleplain State Forest and Peaslee Wildlife Management Area for forest (e.g., northern pine snake, red-headed woodpecker) and forest-interior (e.g., barred owl, red-shouldered hawk) wildlife."
	8f	Develop and implement <b>long term protection for beaches on the lower bayshore</b> , including Villas, Kimble's and Reed's beaches, which are particularly important to migrating shorebirds in spring, as is the vast marsh matrix of Egg Island Wildlife Management Area between Fortescue and the Maurice River.	<b>PRIORITY</b>	
	8g	Develop and implement <b>long term protection for habitats along the major rivers</b> of the Cohansey, Back Creek, Nantuxent, and the Maurice, as centers of bald eagle nesting and wintering populations for southern NJ.	<b>PRIORITY</b>	One stakeholder requested a similar action that targets waterfowl concentrations, however action 1c-1 addresses this so no new action was created.