Attachment I: Report on Pinelands Regional Landscape Stakeholder Implementation Meeting (June 13, 2007)

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Summary Report on the Wildlife Action Plan Pinelands Implementation Meeting

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

June 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 (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, also 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 June 13, 2007, local stakeholders associated with the Pinelands Regional Landscape convened for the Pinelands Wildlife Action Plan Implementation Meeting held at the Richard Stockton College of New Jersey in Pomona, New Jersey. This was the fourth of five regional landscape meetings to be held throughout 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 Pinelands Regional Landscape.

Background
On June 13, 2007, the Conserve Wildlife Foundation of New Jersey (CWF) convened the Pinelands 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 the Richard Stockton College of New Jersey in Pomona, New Jersey.

The meeting was the fourth of five Wildlife Action Plan landscape-level prioritization meetings. Thirty-six stakeholders who attended the meeting worked to identify a subset of forty-one (41) priority conservation actions among the eighty (80) conservation actions* identified in the Pinelands portion of the New Jersey Wildlife Action Plan. These forty-one (41) 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 Pinelands Regional Landscape.

The New Jersey Wildlife Action Plan is a proactive plan to conserve wildlife 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

Summary of Pinelands Implementation Meeting
The objectives of the Pinelands Implementation Meeting were to convene regional leaders and stakeholders to:

- Provide stakeholders with a review the Pinelands 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 forty-one (41) specific and broad-based* priority conservation actions for the Pinelands 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 Pinelands Regional Landscape section of the New Jersey Wildlife Action Plan include a number of 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 that were developed to address the specific needs of each conservation zone (sub-regional level) within the Pinelands Regional Landscape. The implementation meeting was designed to:

- 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 Pinelands Regional Landscape.

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

Introductory Sessions

Dennis Weiss, Dean of Natural Sciences and Mathematics at the Richard Stockton College of New Jersey, gave welcoming remarks. He expressed enthusiasm for hosting the meeting and emphasized the college's commitment to the science and conservation.

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, and is 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.

Dave Golden, a senior zoologist with the ENSP responsible for the Pinelands Regional Landscape, discussed the threats to the Pinelands Landscape habitat and wildlife and DEP's role in conservation in the region.

**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.*

Walter Bien, Director of Pinelands Research at Drexel University discussed the effects of wildlife on Pinelands plants and wildlife.

Emile DeVito, the Manager of Science and Stewardship for the New Jersey Conservation Foundation gave a presentation on the natural resource inventories and ecological restoration being conducted at the group's Franklin Parker Preserve.

Kris Schantz, a senior biologist with ENSP and coordinator of the New Jersey Wildlife Action Plan, gave a summary of the high-priority actions selected by DFW in advance of the meeting. She stated that for the Pinelands Region, the plan includes 8 broad-based* conservation goals and 100 broad-based* conservation actions associated with those goals. She informed participants that 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.

Finally, Herman Saatkamp, the President of Richard Stockton College of New Jersey greeted the group.

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, and the actions would be revised to include measurable outcomes. The results of the participants' selection and the original actions with notes of revisions incorporated into the Plan 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	3
Goal 2	9
Goal 3	2
Goal 4	3
Goal 5	12
Goal 6	6
Goal 7	N/A – 1 by default
Goal 8	5

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 Pinelands Regional Landscape Invitees and Attendees
C: Pinelands Wildlife Action Plan Stakeholder Meeting Final Agenda
D: Pinelands 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 Pinelands Regional Landscape Invitees and Attendees

ATTACHMENT B

Pinelands Regional Landscape Stakeholder Meeting: Wildlife Action Plan

List of Attendees

First name	Last name	Organization	Invited	Attended
Fred	Akers	Great Egg Harbor Watershed Association	X	X
Robert	Allen	The Nature Conservancy-NJ Chapter, Delaware Bayshores Office	X	
James	Applegate	ENSP Advisory Committee	X	
Larry	Baier	DEP-Water Monitoring & Standards	X	
Lisa	Barno	NJDEP-Division of Fish and Wildlife, FWF, Chief	X	
Jim	Barresi	NJDEP-Division of Parks and Forestry	X	
Sandy	Batty	ANJEC	X	
Gena	Berg	Burlington Co. Resource Conservation Dept.	X	
Walt	Bien	Drexel University, Department of Bioscience and Biotechnology	X	X
Laurie	Brewster	The Nature Conservancy-NJ Chapter, Delaware Bayshores Office		X
Ben	Brickner	Office of the Governor	X	
Barbara	Brummer	The Nature Conservancy-NJ Chapter	X	
John	Bunnell	Pinelands Commission	X	X
Joanna	Burger	ENSP Advisory Committee	X	
Robert	Cartica	NJDEP-Division of Parks and Forestry, Natural Lands Management	X	
Terry	Caruso	NJDEP-Green Acres	X	X
Paul	Castelli	NJDEP-Division of Fish and Wildlife, BWM	X	X
Michael	Catania	Conservation Resources, Inc.	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
Cynthia	Coritz	NJDEP-Division of Parks and Forestry, Bass River State Forest		X
Amy	Cradic	NJDEP, Asst. Commissioner	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	X
Donna	Drewes	Municipal Land Use Center	X	
Bryon	DuBois	Trident Environmental Consultants	X	

First name	Last name	Organization	Invited	Attended
Mariana	DuBrul	Pinelands Commission	X	
Michael	Dunphy	U.S. Army - Fort Dix, Environmental Division, IMNE-DIX-PWE	X	X
Rick	Dutko	NJDEP-NJ Natural Heritage Program, Office of Nat. Lands Mgmt.	X	
Ruth	Ehinger	NJDEP-Coastal Management Program	X	
Troy	Ettel	NJ Audubon Society	X	
Daniel	Ferrigno	NJDEP-Division of Fish and Wildlife, BLM	X	
Jose	Fernandez	NJDEP-Division of Parks and Forestry	X	
Lynn	Fleming	NJDEP-Division of Parks and Forestry	X	
John	Flynn	NJDEP-Green Acres	X	
Jane	Galetto	ENSP Advisory Committee	X	
Dave	Golden	NJDEP-Division of Fish and Wildlife, ENSP	X	X
Amy	Green	Amy S. Green Environmental Consultants	X	
Brian	Henderson	Conserve Wildlife Foundation of NJ		X
Dan	Hernandez	Stockton State College	X	
Larry	Herrighty	NJDEP-Division of Fish and Wildlife, BWM, Chief	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	
Christopher	Jage	New Jersey Conservation Foundation	X	
Dave	Jenkins	NJDEP-Division of Fish and Wildlife, ENSP, Acting Chief	X	X
Elizabeth	Johnson	American Museum of Natural History	X	
Russell	Juelg	Pinelands Preservation Alliance	X	
Carole	Kandoth	NJDEP-Division of Fish and Wildlife, BWM	X	X
Tom	Keck	NJDEP-Division of Parks and Forestry	X	
Michal	Klemens	Wildlife Conservation Society	X	
Jon	Klischies	NJ Forest Service	X	X
Kim	Laidig	Pinelands Commission	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	X
Lynn	Maun	Great Egg Harbor Watershed Association	X	X
Mark	Mauriello	NJDEP-Division of Land Use	X	

First name	Last name	Organization	Invited	Attended
Lorraine	McCay	NJDEP-Division of Parks and Forestry, Wharton State Forest	X	X
Maura	McManimon	NJ Office of Smart Growth	X	
Flo	McNeily	NJDEP-Division of Parks and Forestry, Belleplain State Forest		X
Erica	Miller	Tri-State Bird Rescue	X	
David	Mizrahi	NJ Audubon Society	X	
Carleton	Montgomery	Pinelands Preservation Alliance	X	
Dan	Mott	Burlington Co. Dept. Resource Conservation	X	
Al	Newman	Trident Environmental Consultants		X
Tom	Niederer	NJ Forestry Association	X	
Margaret	O'Gorman	Conserve Wildlife Foundation of NJ, Executive Director	X	
Tony	Petrongolo	NJDEP-Division of Fish and Wildlife, BLM, Chief	X	X
Laurie	Pettigrew	NJDEP-Division of Fish and Wildlife, BLM	X	X
Carlo	Popolizo	USFWS-NJ Field Office	X	
Ray	Porutski	NJDEP-Division of Fish and Wildlife, BLM	X	
Emily	Pugliese	NJDEP-Division of Land Use	X	X
Howard	Reinert	The College of NJ, Department of Biology	X	
Lee	Rosensen	ENSP Advisory Committee	X	X
Kris	Schantz	NJDEP-Division of Fish and Wildlife, ENSP	X	X
Annette	Scherer	USFWS-NJ Field Office	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	
James	Shissias	ENSP Advisory Committee	X	
Carol	Slocum	Richard Stockton College of NJ	X	
Ronald	Smith	Drexel University, Department of Bioscience and Biotechnology	X	X
John	Staples	USFWS-NJ Field Office	X	
Eric	Stiles	NJ Audubon Society	X	
John	Stokes	Pinelands Commission	X	
Kristen	Symanski	NJDEP-Division of Land Use	X	X
Terry	Terry	NJDEP-Division of Fish and Wildlife, ENSP	X	X
Larry	Torok	NJDEP-Division of Land Use	X	X-alt representative for DLU
Jon	Wager	Conservation Resources, Inc.	X	

First name	Last name	Organization	Invited	Attended
Kathleen	Walz	NJDEP-NJ Natural Heritage Program, Office of Nat. Lands Mgmt.	X	
Jay	Watson	NJDEP-Commissioner's Office, Deputy Commissioner	X	
Donald	Wilkinson	NJDEP-Division of Fish and Wildlife	X	
Jessica	Wilkinson	Environmental Law Institute	X	X
Robert	Williams	Land Dimensions Engineering	X	X
Andy	Windisch	NJDEP-Division of Parks and Forestry, Natural Lands Management	X	
Peter	Winkler	NJDEP-Division of Fish and Wildlife, ENSP		X
Robert	Zampella	Pinelands Commission	X	
Robert	Zappalorti	Herpetological Associates	X	
George	Zimmerman	Richard Stockton College of NJ	X	X
Adam	Zellner	NJDEP-Commissioner's Office	X	

Attachment C: Pinelands Wildlife Action Plan Stakeholder Meeting Final Agenda

ATTACHMENT C

CONSERVE WILDLIFE
FOUNDATION OF NEW JERSEY

Wildlife Action Plan
Pinelands Regional Landscape Implementation Meeting
Wednesday, June 13, 2007
9:00 a.m. to 4:30 p.m.
Richard Stockton College of New Jersey
Townsend Residential Life Center - TRLC

Meeting Objectives

- Review Pinelands 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
- Dennis Weiss, Dean, Natural Sciences and Mathematics
  Richard Stockton College of New Jersey

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 Pinelands Regional Landscape
- Dave Golden, Senior Zoologist, Endangered and Nongame Species Program
  Division of Fish and Wildlife, Department of Environmental Protection

10:05 a.m. Wildfire Effects on Pinelands Plants and Wildlife
- Walter Bien, Ph.D., Director of Pinelands Research, Drexel University
- Questions and Answers (5 minutes)

10:30 a.m. Break

10:45 a.m. Natural Resource Inventories and Ecological Restoration at the Franklin Parker Preserve
- Emile DeVito, Ph.D., Manager of Science and Stewardship, New Jersey Conservation Foundation
- 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

11:25 a.m. Stockton College Greeting
- Herman Saatkamp, Ph.D., President
  Richard Stockton College of New Jersey

11:40 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)

3:15 p.m. Break

3:30 p.m. Selection of Priority Actions

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: Pinelands Priority Conservation Actions
& Action-related Comments per the Stakeholders' Meeting

Goals (1-8)	Conservation Actions' Numbers	PINELANDS Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on January 10, 2007.
1	**Protect and restore characteristic Pinelands communities**			
	1a	Restore the dynamic nature of this ecosystem by developing management plans for state lands that incorporate the needs of Pinelands plants and animals based on the historic temporal and spatial patch diversity that once existed in the Pinelands.	***PRIORITY***	It was suggested that the word "historic" is not clear; there is a need to establish a reference point in time or otherwise provide clarity to this action. As such, this action was revised to "Restore the dynamic nature of this ecosystem by developing management plans for state lands which incorporate the needs of Pinelands plants and animals and generate the spatial patch diversity needed by species within this community."
	1b	Use GIS measures, other remote sensing tools, and surveys to identify rare and unique Pinelands plant communities and increase protection for these areas areas through acquisition, proper management, or increased enforcement.		The greatest concern regarding this action is whether or not there is a use for geographic information system (GIS)-based data in the homogeneous Pinelands. However, because 1) the Pinelands Commission already uses GIS data on rights-of-way and other areas and 2) the action states "other remote sensing" and the use of "surveys" it was determined that this action should remain in the Pinelands portion of the Wildlife Action Plan (Plan).
	1c	Research and implement the different management techniques (e.g., ecologically-based forestry activities, prescribed burns) that might be used to mimic the historic role of fire and other natural disturbances in shaping this ecosystem.	***PRIORITY***	Discussion of this action focused on the potential need to clarify that "research" should be "long-term research" and that prescribed burns should include growing season burns. Because there is place for both short- and long-term research regarding habitat management, "research" remained as is. The use of the phrase "prescribed burns" does not exclude growing season burns. Those desiring to conduct such burns would need to go through the appropriate channels and the NJ DEP. Therefore, in an effort to refine this action, it has been revised to: "Research different management techniques (e.g., ecologicall based forestry activities, prescribed burns) that might be used to mimic the historic role of fire and other natural disturbances in shaping this ecosystem. Implement appropriate management actions in areas where natural disturbances, such as wildfire, have been precluded."
	1d	Work with the Office of Natural Lands Management and the New Jersey Forest Fire Service to determine the historic and future role of fire in the creation and management of unique Pinelands communities.		This action excluded other bureaus/ offices within the Division of Parks and Forestry. As such, this action was revised to be more inclusive: "Work with the Division of Parks and Forestry including the Office of Natural Lands Management, the Forest Fire Service, and Forest Service to determine the historic and future role of fire in the creation and management of unique Pinelands communities."
	1e	Develop, implement, and evaluate best management practices (BMPs), through wildlife and habitat surveys, for utility rights-of-way (ROWs) that favor the establishment and persistence of native, early-successional Pinelands communities.		
	1f	Identify, enhance, and restore Atlantic white cedar communities within the Pinelands for timber rattlesnakes, Pine Barrens treefrogs, black-throated green warblers, red-shouldered hawks, barred owls, and Cooper's hawks.	***PRIORITY***	Pinelands Commission representative reported that they would not use the Pine Barrens treefrog as a justification since these species use marginal habitats as well. Therefore, Pine Barrens treefrog was eliminated from this action.

Goals (1-8)	Conservation Actions' Numbers		PINELANDS Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on January 10, 2007.
2	**Identify, restore, enhance and/or protect important habitats to maintain viable populations of endangered, threatened, and species**				
	2a	**Forest**			
		2a-1	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.	***PRIORITY***	
		2a-2	Use GIS measures and surveys to identify and assess critical core forests for forest-interior songbirds, forest raptors (red-shouldered hawk, barred owl, long-eared owl), forest-dwelling bats, Pine snakes, corn snakes, timber rattlesnakes, and bald eagles. Take action to minimize habitat loss and maintain large core areas by restoring, enhancing and/or protecting habitat on public and private lands through programs such as fee purchases, conservation easements, landowner incentives, forest management and stewardship plans. Maintain information in the Landscape Project and Biotics database, and provide this information to the Pinelands Commission.	***PRIORITY***	Action was revised to: "Use GIS measures, other remote sensing tools, and surveys to…"
		2a-3	Use GIS measures, other remote-sensing tools, and wildlife surveys to identify forested stopover areas important for migrant forest raptors, passerines and bats during spring and fall migration. Use appropriate measures (e.g. regulations, land acquisition, incentive programs) to protect habitat and develop conservation forestry plans.		
		2a-4	Manage forests on a regional scale to provide a mix of seral (successional) stages for a wide range of forest-dwelling species (e.g., woodland raptors, pine snakes, corn snakes, Pine warbler, black-throated green warbler, ruffed grouse, and woodcock) within large contiguous tracts while maintaining suitability for area-sensitive species per the Forest Management Guidelines for Nongame Species in New Jersey. These seral stages include but are not limited to: mature and near-mature forests with large trees, > 80% canopy cover and an uneven-age structure; mature forests with 65-85% canopy closure and structural diversity; pine-oak savanna with < 25% canopy closure; scrub-oak communities; and regenerating stands of forests (e.g., Atlantic white cedar).	***PRIORITY***	
		NEW	Develop, implement, and evaluate best management practices (BMPs) for maintaining and enhancing healthy Pinelands forests.	***PRIORITY***	In a later discussion, it was determined that a separate action focusing on the development of BMPs for Pinelands forests should be developed. As such, this action was created and since it was not part of the original prioritization process, but was a main topic of discussion among stakeholders, it was identified as a priority action.
	2b	**Early-successional fields**			
		2b-1	Encourage landowners to delay mowing to allow grassland-dependent species to successfully breed; this can be accomplished through public education and incentive programs. Continue to evaluate the effectiveness of delayed mowing for grassland-dependent species including birds, invertebrates, reptiles, and amphibians.		

Goals (1-8)	Conservation Actions' Numbers		PINELANDS Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on January 10, 2007.
		2b-2	Research different management techniques to understand the appropriateness of prescribed burning, mowing, and other methods for maintaining suitable habitat for species dependent on early successional habitats.	***PRIORITY***	Stakeholders asked for this action to include other mechanical means of creating and maintaining early successional habitats. However, the action states "other methods" so the action was revised to the following: "Research different techniques for maintaining suitable habitat for species dependent on early successional habitats (e.g., prescribed burning, mowing, brush-hogging, and other methods)."
		2b-3	Use GIS measures and surveys to identify critical scrub-shrub (areas with >25% woody vegetation <20 feet in height) habitats, assess their condition for nesting birds (golden-winged warbler and woodcock) and other wildlife, and maintain information. Identify protection (e.g., landowner incentives, farmland preservation, and acquisition) and management (e.g., timing restrictions for management, cooperative agreements with utility companies for maintenance of rights-of-ways) strategies to create them.		
		2b-4	Use GIS measures and wildlife surveys to identify grassland habitats (areas with >75 % herbaceous and <25% woody vegetation), assess their condition for nesting grassland birds and other wildlife, and maintain information. Identify protection (e.g., landowner incentives, farmland preservation, and acquisition) and management (timing restrictions for mowing, prescribed burning) strategies to maintain and enhance these habitats in perpetuity. Focus on habitat patches that can be managed at a size and scale that is similar to historic patch size of this habitat type as being researched by the Pinelands Commission as part of their "Right-of-way Project."		Some stakeholders were concerned with the term "grassland" with reference to habitat within the Pinelands Region. However, there are areas within the Pinelands where this action would apply. This action was deliberately developed to address such places.
		2b-5	Develop, implement, and evaluate best management practices (BMPs) for maintaining and enhancing early succession habitats which will improve habitat quality for grassland- and scrub-shrub-dependent species. BMPs will be implemented on large patches such as the grasslands (areas with >75 % herbaceous and <25% woody vegetation) on public lands, the Atlantic City Airport, Fort Dix Military Installation, and at Lakehurst Naval Station, and early succession habitats along utility line rights-of-way (scrub-shrub).	***PRIORITY***	
		2b-6	Maintain existing early succession habitats and work to establish new grassland and scrub-shrub habitats along utility line rights-of-way and in association with fire breaks and fuel breaks where appropriate. Creation of these habitats should be planned so they benefit grassland- and scrub-shrub-dependent species. Manage some rights-of-way for scrub-shrub species with small area requirements.		
	1c	**Aquatic, Wetland, riparian, and floodplain**			
		2c-1	Increase the effective size and connectivity of wetlands 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 wetland habitats and target these areas for acquisition or work with public and private landowners to enhance and restore the corridors.		
		2c-2	Use GIS measures and surveys to identify and assess core forested wetland and riparian/floodplain habitat for forest-dependent breeding species: forest raptors (red-shouldered hawk, long-eared owl, and barred owl), forest-interior songbirds, timber rattlesnakes, and Indiana bats. 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.		

Goals (1-8)	Conservation Actions' Numbers	PINELANDS Conservation Actions		Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on January 10, 2007.
		2c-3	Protect habitat for fish by performing QA/QC of the NJDEP - DFW, Bureau of Freshwater Fisheries' FishTrack Database and plotting distributions of special concern fish species (as identified by the Delphi process), and integrate those data into the Biotics database.		
		2c-4	Locate potential vernal pools through aerial imagery and surveys and integrate certified vernal pool data into the DEP regulations database and Landscape Project.	***PRIORITY***	
		2c-5	Identify threats to vernal pools through systematic monitoring and devise strategies to protect vernal pool dependent species.	***PRIORITY***	
	Broad-based habitat actions				
	2d	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.		***PRIORITY***	
	2e	Develop a species occurrence area of Indiana bat habitat to incorporate into the Biotics database. Identify appropriate protection strategies to maintain and enhance habitat (landowner incentives for protecting summer habitat, public education regarding importance of bat conservation, development of best management practices). As GIS data layers become available, develop a predictable model of Indiana bat summer habitat.			
	2f	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.		***PRIORITY***	
3	**Protect water quality and the availability of wetland habitats.**				
	3a	Maintain optimal biological buffers beyond regulatory requirements around wetlands, riparian, and floodplain areas and minimize destruction per the Wetland Buffer Guidelines for Species of Conservation Concern in New Jersey. Encourage native plantings through public education, volunteer programs, and land managers to stabilize wetland buffers and stream banks and prevent erosion.		***PRIORITY***	Stakeholders agree that ecologically [we] know that wetland encroachment negatively impacts the quality of the wetland and the species that depend on it. In addition, some stakeholders felt the second statement needed refinement or clarification because they did not think it was appropriate for this action as is. As such, the action was revised to: "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."
	3b	Prevent runoff and sedimentation by maintaining riparian areas through stream bank restoration efforts.		***PRIORITY***	
	3c	Protect water quality and aquatic-dependent species by appropriately designating Category 1 waters.			
	3d	Maintain water chemistry/ water quality important for species native to the Pinelands. For example, maintain low pH waters important for breeding populations of Pine Barrens treefrogs and carpenter frogs.			

Goals (1-8)	Conservation Actions' Numbers	PINELANDS Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on January 10, 2007.
4	**Maintain ecological integrity of natural communities and regional biodiversity by controlling invasive species and overabundant**			
	4a	Identify areas where invasive, non-indigenous plants and animals are either already established or are becoming established through GIS, 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.	***PRIORITY***	Revised to: "Identify areas where invasive, non-indigenous plants and animals are either already established or are becoming established through GIS, 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 potential level of impact on the ecosystem and species of conservation concern and the liklihood of success."
	4b	Work with appropriate government agencies to survey for and monitor the spread of invasive insect species that jeopardize forest healt 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.	***PRIORITY***	Some stakeholders would like to see a separate action specifically for Atlantic white cedar if there is an invasive insect targeting this forest type given its rarity. In addition, since action "4b" (the work) can't be done without "4a" (identifying the sites), can these actions be lumped? --- With regards to the first request, there is some concern over singling out Atlantic white cedar over other community types; to do so, we'd need to address each community in a separate action. With regards to the second request, there is sound reason in first identifying and prioritizing sites and then working to resolve the problem. Given some agencies or organizations may begin this process before others, lumping the actions may exclude them from moving forward as one agency may identify sites and another conduct the actual action. This action has been revised to: "Work with appropriate government agencies to survey for and monitor the spread of invasive insect species that jeopardize the health of Pinelands forest types (e.g., Atlantic white cedar, pitch-pine lowlands, oak-pine uplands, and others."
	4c	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 invasive non-indigenous plants.	***PRIORITY***	Revised to: "…non-indigeneous plants and animals…"
	4d	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.		
	4e	Work with the Division of Fish and Wildlife to identify areas (primarily refuge areas where hunting is prohibited) where deer densities exist at unhealthy levels and develop a strategy to reduce deer numbers and maintain them at acceptable levels that encourage natural forest regeneration.		Stakeholders questioned the validity of this action in the Pinelands portion of the Wildlife Action Plan given few could think of an actual "refuge" where deer persist. However, give it does not negatively impact the Plan to have the action, it will remain in this section of the Plan but as you will notice, the stakeholders did not select this as a priority.

Goals (1-8)	Conservation Actions' Numbers	PINELANDS Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on January 10, 2007.
	4f	Where appropriate, continue to develop and expand incentives for harvesting antlerless deer.		Although DFW deer biologist stated that this action has little effect on the Pinelands Region as the Pinelands has the lowest deer density in the state, it was determined that the action would remain in the Plan as it does not negatively impact the Plan.
5	**Prevent, stabilize and/or reverse declines of endangered, threatened, and special concern species.**			
	5a	Evaluate and assess impacts of wind turbines to populations of breeding and migratory bats and birds.	***PRIORITY***	Concerns over this action revolved around 1) the misinformation that no wind turbines are proposed for the Pinelands and 2) that some stakeholders don't want the wind turbines in the Pinelands.--- With regards to the first concern, there are proposals for wind turbines in the Pinelands that are under review by the NJ DEP; the second concern is an opinion and not for debate within the Plan. However, upon further discussion within the Endangered and Nongame Species Program (ENSP), it was determined that the action would be revised as follows: "Evaluate and assess the potential impacts of wind turbines to populations of breeding and migratory birds and bats. Carry out post-construction monitoring of both existing and future wind turbines to assess the actual impacts these structures have on birds and bats."
	5b	Collaborate with DOTs, NGOs, and volunteers to identify areas with known wildlife mortality issues including road crossings for breeding amphibians and roads with high incidences of road mortality (snakes, turtles, large mammals).		
	5c	Work with the Pinelands Commission to investigate terrestrial habitat requirements for the northern pine snake and develop a predictive model to identify pine snake habitat and habitat use at critical life stage sites (e.g., nesting areas) that require additional protection from collection, disturbance, and destruction. Such a model could be a fundamental tool used in the Pinelands Commission's evaluation of development applications.		
	5d	Work with local agencies and stakeholders to develop and implement proactive habitat management/conservation plans for Pine Barrens treefrog. Such a plan should include ongoing surveys for this species to identify healthy populations and a scheme to protect habitats to connect populations and maintain viable metapopulations.		
	5e	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 Division of Parks and Forestry to designate riding areas and BMPs should be developed.	***PRIORITY***	
	5f	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. wildlife underpasses, road closures).	***PRIORITY***	
	5g	Research the intensity and characteristics of threats to wildlife species of conservation concern and their habitats, including the causes and effects of habitat loss, degradation, and alteration, edge, disturbance, impacts of roads, predation, competition by invasive plants and animals, disease, and how water quality degradation and contaminants affect rare species.	***PRIORITY***	

Goals (1-8)	Conservation Actions' Numbers	PINELANDS Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on January 10, 2007.
	5h	Develop and implement habitat conservation goals that will meet and maintain the recovery needs of endangered and threatened wildlife populations, particularly for those restricted to the Pinelands region. These include guidelines for forest silviculture on public and private lands to enhance forest health and habitat diversity. This will include working with regulators to maintain water quality of breeding ponds (low pH) and protect suitable buffers on ponds, ongoing surveys for species of conservation concern to identify healthy populations, and a scheme to protect habitats that connect populations and maintain viable metapopulations.	***PRIORITY***	
	5i	Work with public and private landowners and managers with significant grassland bird and scrub-shrub/open field bird populations, bald eagle, northern pine snake, Pine Barrens treefrog, cavity-nester, freshwater wetland bird, and raptor populations to enhance targeted wildlife habitat through the implementation of best management practices and incentive programs.		
	5J	Develop Indiana bat recovery plan in accordance with federal guidelines and strategies set forth in the USFWS Indiana Bat Recovery Plan (U.S. Fish and Wildlife Service, 1999).		
	5k	Develop and implement management actions to enhance populations of special concern and rare fish.	***PRIORITY***	
	5L	Determine carrying capacity of pinelands wetlands for breeding wood ducks, including available nest cavities and breeding season food resources. Use this data to develop appropriate management strategies (e.g., installation of wood duck boxes or habitat management to enhance and support targeted native invertebrate populations).		
	5m	Research the effects of prescribed burning and habitat fragmentation on corn snakes, northern pine snakes, and timber rattlesnakes and work with foresters to develop effective forest management and stewardship plans to increase or maintain the habitat quality for these species in the Pinelands.	***PRIORITY***	Revised action to: "Research the effects of current prescribed burning practices and habitat fragmentation on corn snakes, northern pine snakes, and timber rattlesnakes and work with foresters to develop and implement effective forest management and stewardship plans to increase or maintain the habitat quality for these species in the Pinelands."
	5n	Manage silver-bordered fritillary habitat for proliferation of host vegetation and to retard succession where appropriate.		
	5o	Prevent declines in wildlife populations by utilizing the Delphi process to determine species that may warrant elevated or listed status among taxa that has not undergone Delphi review (e.g., fish, moths).		
	5p	Use GIS measures, other remote-sensing tools, and surveys to identify critical habitats for breeding, migratory, and wintering waterfowl and assess their condition for maintaining populations. Work with the DFW, Bureau of Wildlife Management to develop protection strategies to maintain and enhance existing waterfowl habitat.		One stakeholder expressed his concern over the ambiguity surrounding beaver activity. Beavers can create/enhance waterfowl habitat but destroy habitat for other species. How do we capture this? --- These comments are correct and difficult to capture within one or two actions. We decided to let the action remain as is and that this issue would need to be addressed on a site by site basis. For example, an area with known bog turtle habitat (a federal listed species), would need to exclude beaver activity from the site. An area considered waterfowl foraging or congregation sites would have a different management approach.
	5Q	Identify and implement best management practices for bald eagle and forest-interior passerine and raptor habitat.		Revised to include migratory stopovers: "Identify and implement best management practices for bald eagle, forest-interior passerine and raptor habitat, and migratory stopover areas "
	5r	DEP to work with partners in conservation to establish a policy to control damage to native wildlife populations resulting from feral and free-ranging domestic cats on public lands.	***PRIORITY***	

Goals (1-8)	Conservation Actions' Numbers	PINELANDS Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on January 10, 2007.
	5s	ENSP biologists will be responsible for notifying the NJ Division of Fish and Wildlife's Bureau of Law Enforcement of critical sites (nesting, basking, gestation, dens), particularly those used by corn snakes, northern pine snakes, and timber rattlesnakes, to implement stringent enforcement of endangered species laws, including protection of wildlife from illegal collection (northern pine snakes, corn snakes, timber rattlesnakes, and Pine Barrens treefrog) and human disturbance (off-road vehicles).	***PRIORITY***	Added Division of Parks and Forestry Bureau of Law Enforcement to list of partners.
	5t	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, bog turtles), persecution (timber rattlesnakes), and human disturbance (off-road vehicles).		
	5u	Protect wildlife species of special concern, 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.	***PRIORITY***	
	5V	Conduct surveys to find more information about species and management requirements for secretive marsh nesting birds.	***PRIORITY***	
	5W	Research the habitat requirements for forest passerines and woodland raptors, timber rattlesnakes, corn snakes, northern pine snakes, a Indiana bats, when appropriate. Research and experimentally implement planned silviculture practices to develop guidance for enhancing forests for these species and species suites.	***PRIORITY***	
6	**Inventory, determine distribution, and monitor all endangered, threatened, special concern wildlife and fish species.**			
	6a	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.	***PRIORITY***	
	6b	Conduct concentrated field sampling for listed or special concern fish species in areas indicated by Fish Track Database queries and incorporate data into the Biotics database.		
	6c	Conduct surveys in appropriate habitats and work with partners in conservation to determine species distributions and identify critical habitats and protection needs for dragonflies and damselflies, timber rattlesnakes, corn snakes, northern pine snakes, Pine Barrens treefrog, silver-bordered fritillary, arogos skipper, and dotted skipper.	***PRIORITY***	
	6d	Conduct surveys in suitable, previously un-surveyed areas to determine if listed or special concern freshwater mussel species are prese Repeat surveys every four years to monitor populations. Incorporate freshwater mussel survey results into the Biotics database and determine critical areas for listed species.		
	6e	Determine baseline abundance and establish long-term monitoring programs for wildlife of greatest conservation need (e.g., develop population estimates for rare Pineland species and conduct range-wide surveys every four years).	***PRIORITY***	
	6f	Conduct breeding waterfowl surveys annually to monitor population trends.		
	6g	Continue volunteer-based summer bat concentration surveys to locate important 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.	***PRIORITY***	

Goals (1-8)	Conservation Actions' Numbers	PINELANDS Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on January 10, 2007.
	6h	Conduct telemetry study during summer months to determine roost characteristics and habitat requirements for Indiana bat maternity colonies and conduct state-wide sampling (e.g., mist netting) to determine distribution, range, and habitat use of summer bats. Long-term sampling of forest dwelling bat species should be conducted to determine population trends and species response to changes in habitats.		
	6i	Research population distribution of northern diamondback terrapin to determine critical areas for protection. Use GIS measures, other remote sensing tools, and surveys to identify northern diamondback terrapin key crossing areas and work with local or state transportation agencies to erect turtle barriers and to develop a model of suitable northern diamondback terrapin nesting areas.		
	6J	Conduct surveys for the eastern mud salamander at historic sites and evaluate its use of wetlands and wetland buffers.		
	6k	Identify and research water quality parameters for endangered, threatened, and native Pinelands species. Assess impacts and incorporate into BMPs.	***PRIORITY***	
	6L	Develop and conduct nighttime surveys to inventory nightjars (whip-poor-wills, common nighthawks), northern saw-whet owls, and eastern screech-owls.	***PRIORITY***	
7	**Assess large-scale habitat change (every five to 10 years).**			
	7a	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.	***PRIORITY***	
8	**Promote public education, awareness, wildlife conservation, and participation in habitat restoration efforts on private land.**			
	8a	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.		
	8b	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.		
	8c	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.	***PRIORITY***	
	8d	Develop and encourage nature tourism opportunities in the Pinelands including wildlife viewing sites, interpretive signage highlighting unique ecosystems/habitats, and wildlife-related recreational opportunities that do not negatively impact species of conservation concern and their habitats.	***PRIORITY***	
	8e	Educate public about the importance of keeping cats indoors through newsletters, press releases, brochures, presentations, 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.	***PRIORITY***	Added "web pages" to list of possible outreach methods.

Goals (1-8)	Conservation Actions' Numbers	PINELANDS Conservation Actions	Status per stakeholders' meeting	Edits made per comments and recommendations received at Stakeholders' meeting on January 10, 2007.
	8f	Develop brochures and posters about management practices for the public and for private landowners with significant grassland bird and scrub-shrub/open field bird populations, bald eagle, northern pine snake, Pine Barrens treefrog, cavity-nester, freshwater wetland bird, and raptor populations.		Stakeholders were interested in incorporating the secondary benefits of management practices. As such, the action has been revised to: "Develop educational brochures and posters describing habitat management practices that can be carried out on both private and pubic lands. These brochures and posters should focus on the management, enhancement, and creation of habitat for early success ional species and include descriptions of various forestry management techniques; the primary and secondary benefits of prescribed burning should be highlighted."
	8g	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.	***PRIORITY***	
	8h	Develop brochures and posters to educate the public and increase awareness of New Jersey's indigenous nongame fish species.		
	8i	Develop a field guide to NJ's freshwater mussel species to assist in promoting public education and increase awareness of New Jersey's native freshwater mussel fauna.		
	8J	Develop educational programs, brochures and posters for the public regarding tolerance and protection of timber rattlesnakes and their habitat.	***PRIORITY***	