

Attachment E: Booklet of Priority State-level Conservation Goals and Strategies

It is important to note that the following booklet was prepared in a format for professional printing. Therefore, a standard printer will result in pages that are out of order. Please be sure to refer to page numbers when collating a printed version.

Global Climate Change...everyone's concern

Threats to our planet, such as global warming and reduced air and water quality, continue to jeopardize the future of our natural systems and quality of life in New Jersey. Global climate changes **will** affect our wildlife, their habitats, and our citizens' quality of life...at this point it is simply a matter of time. Some of these effects include:

- Increase in the frequency and intensity of flooding within our state.
- Changes in New Jersey's coastline.
- Declining air quality.
- Local or global extinction of rare species and coldwater fish, which are sensitive to environmental changes and increased temperatures.
- Declines in amphibians and waterfowl related to coastal and inland waters.
- Changes in bird migration schedules, insect emergence, and fruit/ seed availability that may result in a lack of food resources for NJ's migrating birds.

Stakeholders and partners attending the Wildlife Action Plan Implementation meetings held on February 23 and April 6, 2006, recognized global warming and air quality as very important issues. However, the consensus was that the magnitude of these threats is too great for one state to address effectively. NJ's partners in conservation did acknowledge that in order to determine the effects of global warming on our wildlife and their habitats, long-term research and monitoring efforts would be required. Therefore future research will include the collection of data that may help to document changes and increase our understanding of global warming threats. These threats may include changes such as increased water temperatures, rising sea level, detrimental changes in vegetation composition, decreasing food resource availability (e.g., insects), disadvantageous changes in bird migration routes and timing, and the appearance and disappearance of climate sensitive species.

The NJ Department of Environmental Protection (DEP) has been recognized as a national leader in protecting the state's environment and natural resources through progressive, innovative regulation and strict enforcement. This will ultimately result in improved water and habitat quality that support sensitive species and our own quality of life in NJ.

New Jersey, in cooperation with other Mid-Atlantic and Northeastern states, is a member of the Regional Greenhouse Gas Initiative (RGGI), www.RGGI.org. RGGI is developing a regional strategy for controlling greenhouse gas emissions. However, there is still much work to do and our public officials need to be informed that this issue IS a priority for the citizens of NJ and our nation.

To learn more about global climate change and what you can do to help, please visit:

The National Wildlife Federation:

www.targetglobalwarming.org/new/files/NewJersey_GlobalWarmingFactSheet.pdf

The Climate Action Plan: A Plan to Save Energy and Reduce Greenhouse Gas Emissions developed by the Burlington Climate Protection Task Force in Burlington, Vermont, 2000, page 7:

www.burlingtonelectric.com/SpecialTopics/Household.pdf

New Jersey's Wildlife Action Plan Creating a Network for Conservation

New Jersey is home to diverse and fascinating populations of wildlife. From the Delaware Bay to the Highlands, from the Pinelands to the shore, and from the greenways that parallel our highways to the bridges that span our rivers, wildlife lives and breeds in, and migrates through, the Garden State.

New Jersey's wildlife and the places that host them are under threat. As development increases fragmentation, invasive plants alter the landscape, and people continue to impact natural systems. As a result, the populations of birds, insects, fish, snakes, turtles, and bats and other mammals that live in our state find themselves clinging to smaller and smaller pieces of wild, clean lands. These lands are not used just by wildlife but by many of the state's residents for hiking, hunting, biking, and fishing.

To enumerate and address the pressures on our wildlife, New Jersey has, as part of an innovative national effort, developed a state Wildlife Action Plan (Plan). The Plan seeks to list the threats to wildlife and the actions we can all take to address them.

Written by staff at the Division of Fish and Wildlife, other state and federal agencies, and many partners in conservation, the Plan is not just for biologists and wildlife experts. It is for municipal leaders, land stewards, non-profit organizations, educators, planners, researchers, outdoor recreation enthusiasts, and all the people who know the wild places of our state and realize that a healthy biodiversity is another good reason to live and play in New Jersey.

This document is a snapshot of New Jersey's Wildlife Action Plan, listing a selection of priority conservation goals from the full Plan and a selection of conservation strategies (actions) that could be used to achieve these goals in the tables on pages 17 - 23. From this list, we have highlighted some of the strategies (pages 4 -16) and revised the wording for a more general audience. The priority goals and strategies were chosen over two meetings held in late winter/early spring of 2006 with input from nearly 100 individuals representing groups with an interest in New Jersey's wildlife. For the complete list of state-level goals and strategies, please visit the NJ Wildlife Action Plan: www.njfishandwildlife.com/ensp/waphome.htm

Acknowledgments

The NJ Wildlife Action Plan is a blueprint for the future conservation of our state's species of greatest conservation need. The Plan was developed through multiple stages, but began with the assistance of a contract planner, Gideon Lachman. We thank Gideon for helping us get the ball rolling and acknowledge the staff of the Endangered and Nongame Species Program (ENSP) within the Department of the Environmental Protection's Division of Fish and Wildlife and the scientific and technical staff of the Conserve Wildlife Foundation (CWF) whose dedicated work over many months shaped the Plan. ENSP and CWF staff include David Jenkins, Acting Chief, Kris Schantz, Kathy Clark, Michael Valent, Amanda Dey, David Golden, Jeanette Bowers-Altman, Naomi Avissar, Melissa Craddock, Michael Davenport, Gretchen Fowles, MacKenzie Hall, Brian Henderson, Chris Kisiel, Kim Korth, Sharon (DeFalco) Petzinger, Todd Pover, Larissa Smith, Peter Winkler, Patrick Woerner, Brian Zarate, Terry Terry, and Linda Watson. Numerous programs and staff from the Department of Environmental Protection and the various Bureaus within the Division of Fish and Wildlife provided valuable review and input. Special thanks to Director David Chanda and James Sciascia, Chief of the Bureau of Information and Education, for their continued support and assistance during the development and review of the Plan. We also appreciate significant input from Deputy Commissioner John Watson, as well as the Director of the Division of Policy and Planning, Jeanne Herb, and Marjorie Kaplan; and for continued support from Commissioner Lisa Jackson and Assistant Commissioner Amy Cradic as we begin implementing the Plan statewide.

A special debt of gratitude is owed to the New Jersey Endangered and Nongame Species Advisory Committee, chaired by Jane Morton Galetto. Their expertise and guidance over the years and during the development of the Plan have helped New Jersey become a national leader in rare species conservation. The NJ Fish and Game Council also provided input.

We are also grateful to the Conserve Wildlife Foundation of New Jersey for their support of this project and thank Executive Director Margaret O'Gorman and staff, Patricia Shapella, Pola Galie, and Maria Dubois-Grace for assistance in reviewing, editing, and pursuing implementation of the Plan. Special thanks to Kevin Frey for his assistance in reviewing and editing this brochure. Other agencies and New Jersey conservation organizations that were major contributors to the Plan through the development and the review process that deserve special

Topic & Goal No.	Priority State-level Conservation Goals and Strategies as written within the NJ Wildlife Action Plan, February 16, 2007
Addressing National, Interstate, and Statewide Threats	
Goal 12: Identify and actively protect public natural lands and water with wildlife species of conservation concern from off-road vehicle and personal watercraft use.	
*	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.
*	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.
*	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.
*	Enact legislation to require registration of all all-terrain vehicles (ATVs) at time of purchase and annually thereafter.
	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.
Review of Wildlife Action Plan	
Goal 13: 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.	
*	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.
*	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 ENSAC, and a wildlife summit in which adaptive management will be built into the revision.
*	DFW will work with federal, state, county, municipal, and private land managers to incorporate the goals and strategies of the Plan into current management plans by the first formal review in 2011.
*	Dedicate one meeting per year to reviewing the progress and soliciting input on the Plan, participants to include representatives of the Endangered and Nongame Species Advisory Committee (ENSAC), the Fish and Game Council, and the Marine Fisheries Council.

Topic & Goal No.	<p style="text-align: center;">Priority State-level Conservation Goals and Strategies as written within the NJ Wildlife Action Plan, February 16, 2007</p>
(continued) Addressing National, Interstate, and Statewide Threats	
*	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.
*	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: <ul style="list-style-type: none"> 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 of TNR on native wildlife. c. A model ordinance for regulating feeding of wildlife. d. A model pet-licensing ordinance.
*	Identify areas where predation is significantly diminishing reproductive success of wildlife species of conservation concern and apply appropriate integrated predation management techniques.
*	Create and implement a system for reporting and qualifying new locations of priority invasive species.
	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.
	Develop and support research to provide better information on the impacts of feral and free-roaming cats on native wildlife populations.
	Create implementation plan for Invasive Species Task Force recommendations when completed.
Addressing National, Interstate, and Statewide Threats	
Goal 11: Restore and maintain wildlife and fish populations and critical habitats by eliminating or reducing exposure to point and nonpoint source contamination.	
*	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.
*	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.
	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.

recognition include NJ Audubon Society, NJ Conservation Foundation, The Nature Conservancy-NJ Chapter, NJ Future, the Pinelands Commission, D&R Greenway Land Trust, the US Fish and Wildlife Service-NJ Field Office, National Wildlife Refuges (NWR), especially the Edwin B. Forsythe NWR, Cape May NWR, Supawna Meadows NWR, Great Swamp NWR, Wallkill River NWR, the National Park Service (Gateway National Recreation Area-Sandy Hook Unit and Delaware Water Gap National Recreation Area-Millbrook), US Department of Defense, and USDA Natural Resource Conservation Service (NRCS).

A special thank you to the Environmental Law Institute and NJ Future for helping us organize the Wildlife Summit and to the representatives of over 60 federal, state, county, and private agencies and organizations who attended and participated to foster discussion and provide recommendations regarding New Jersey wildlife conservation issues. Duke Farms Foundation and the Doris Duke Charitable Foundation graciously hosted and sponsored the Wildlife Summit and we appreciate their support on the Plan and other conservation initiatives.

We would also like to thank Martin J. McHugh, former Director of the Division of Fish and Wildlife, and Linda Tesauro, former Executive Director and founder of the Conserve Wildlife Foundation, for their support and assistance during the development of the Plan. We would especially like to thank Larry Niles, Ph.D., former Bureau Chief of the Endangered and Nongame Species Program, for his tireless efforts, innovative thinking, and endless support during the development and planning phase for implementation of the Wildlife Action Plan.

The inherent danger in writing an acknowledgment is not mentioning all the individuals and organizations that contributed. This is especially true for the New Jersey Wildlife Action Plan since so many people and organizations played key roles in its development. We encourage readers to carefully review Appendix V within the Plan that we hope includes all who participated in the development of the Wildlife Action Plan.



1 Restore Populations of Listed Species

Goal: Restore populations of rare species to levels that allow their delisting.

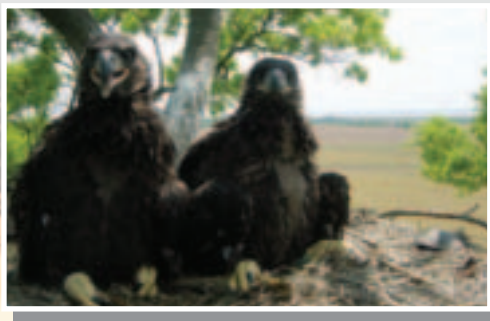
Threat: It is more costly to protect an imperiled species than to prevent a species from becoming imperiled. New Jersey is home to over 70 species listed by the state or federal government as threatened or in danger of extinction or extirpation.

Strategies:

Develop species recovery plans for species of greatest priority. These plans should establish clear and specific strategies for reducing threats and improving habitat conditions.



Implement species recovery plans that lead to viable populations that complement functioning ecosystems.



Reevaluate the status of listed species every five years.

Conduct research to identify migratory corridors for bats, marine mammals, fish, butterflies and moths, and dragonflies and damselflies.



Topic & Goal No.	Priority State-level Conservation Goals and Strategies as written within the NJ Wildlife Action Plan, February 16, 2007
(continued) Addressing National, Interstate, and Statewide Threats	
*	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.
	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.
	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.
Addressing National, Interstate, and Statewide Threats	
Goal 9: 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.	
*	Reduce regulatory impediments to restoration and enhancement activities.
*	Develop management techniques that can safely be used to mimic the historic role of fire in shaping ecosystems.
*	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.
*	Reduce the area of phragmites and maintain native vegetation by restoring natural tidal flow in coastal wetlands.
*	Develop species- and habitat- specific "Best Management Practices" (BMPs) for management of various communities dependent upon disturbance.
	Increase the area of habitat enhanced by controlled burning techniques that mimic natural wildfires and support legislation to facilitate increased prescribed burning where appropriate.
	Develop techniques to mimic or replace natural coastal sediment transport processes and integrate into implementation of beach replenishment and other shore protection projects.
	Increase area and seral-stage range of successional habitats on managed lands where appropriate as indicated by the Landscape Project map.
	Develop and recommend BMPs for use of biological control agents to reduce non-native or overabundant pests.
Addressing National, Interstate, and Statewide Threats	
Goal 10: Reduce the adverse impacts of non-native invasive species, subsidized predators, and over-abundant native species on critical wildlife, natural communities, and habitat quality.	
*	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.

Topic & Goal No.	Priority State-level Conservation Goals and Strategies as written within the NJ Wildlife Action Plan, February 16, 2007
(continued) Addressing National, Interstate, and Statewide Threats & Long-term Monitoring	
*	Measure the enrollment acreage and effectiveness of backyard habitat management.
*	Complete the Coordinated Bird Monitoring Plan to increase the efficiency and effectiveness of regional and national bird surveys.
*	Develop GIS measures to evaluate the effectiveness of habitat conservation programs including acquisition, restoration, and connectivity.
	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.
	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.
Addressing National, Interstate, and Statewide Threats	
Goal 7: Identify, protect, and minimize human disturbance at sensitive locations (nests, hibernacula, breeding pools, critical concentration or feeding areas, etc.).	
*	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.
*	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.
*	Investigate impacts of controlled water releases on aquatic organisms (e.g., freshwater mussels) through current and future research.
	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.
Addressing National, Interstate, and Statewide Threats	
Goal 8: Identify, maintain, and restore natural vegetative communities through sustainable, area-specific deer densities.	
*	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.
*	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.
*	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.

2 Conserve Key Migratory Bird Corridors

Goal: Conserve key migratory corridors and stopover locations for migratory birds.

Threat: Each spring and fall, large numbers of migratory birds depend on access to high quality and abundant habitats now compromised by fragmentation and habitat loss or destruction.

Strategies:

Conduct surveys of migrating songbirds and raptors every five years at major stopover areas, primarily the Cape May Peninsula.

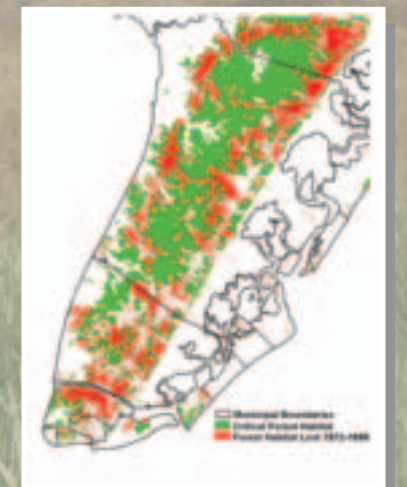


Monitor shorebird populations along the Delaware Bayshore each year.



Prioritize private land incentives to conserve migratory stopover habitat.

Protect a network of locations that help sustain migratory bird populations by producing a set of conservation recommendations for Important Bird Areas statewide.



3 *Develop a Unified Approach to Land Management*

Goal: Encourage all land stewards to incorporate habitat management in their work plans and manage their lands to maintain or improve ecological integrity.

Threat: Management of private and public lands impacts habitat and significantly influences which species can exist there. Forestry practices, agricultural activities, utility projects, and other land use practices can hurt wildlife if their needs are not considered in the project plan.

Strategies:



Strengthen the New Jersey Habitat Incentive Team (NJ HIT), a program that provides technical expertise and assistance to landowners seeking to manage their lands for wildlife.

Increase enrollment in the Landowner Incentive Program (LIP) and the number of landowners involved with NJ HIT so that more grassland is managed for ground-nesting birds.

Develop “Best Management Practices” to reduce the impacts of land practices that negatively affect species of conservation concern.



Develop site-based management plans with wildlife and habitat production goals by using the Landscape Project as a guide.

Strengthen and implement protection for biodiversity on all public lands and aquatic systems.



Topic & Goal No.	Priority State-level Conservation Goals and Strategies as written within the NJ Wildlife Action Plan, February 16, 2007
(continued) Addressing National, Interstate, and Statewide Threats & The Landscape Project	
	Increase the effective size and connectivity of public lands through the Landowner Incentive Program and targeted land acquisition.
	Refine existing Landscape Project species occurrence areas through research and, where lacking, develop new species occurrence areas as data on species become available. Develop, review, and improve species-habitat associations as new land use/land cover data become available.
	Work with Division of Land Use Regulation to strengthen and enforce existing regulations to prevent illegal stream cleaning or snag removal activities.
Addressing National, Interstate, and Statewide Threats	
Goal 5: Maintain connectivity of habitats at the landscape scale.	
*	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.
*	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.
*	Counties and municipalities should collaborate in developing master planning documents and ordinances that implement Habitat Conservation Plans.
*	Identify and prioritize, for Green Acres, the habitat corridors for acquisition or other preservation to decrease isolation of public natural lands.
Addressing National, Interstate, and Statewide Threats & Long-term Monitoring	
Goal 6: 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.	
*	Maintain monitoring programs that collect data on species, suites of species, and habitats statewide, including but not limited to the following: <ul style="list-style-type: none"> • Breeding Bird Atlas • Breeding Bird Survey • Delaware Bay Migratory Shorebird Survey • Bald Eagle Midwinter Survey • Herptile Atlas • Calling Amphibian Monitoring Program • Fish Monitoring-Streams and Ponds • Freshwater Mussel Atlas • Mid-Winter Waterfowl Survey • Atlantic Flyway Breeding Waterfowl Survey • DFW Bobwhite Call-Count Survey • Woodcock Call-Count Survey • DFW Beaver-Otter Survey • Migratory Game Bird Banding Programs • Colonial Waterbird Survey • Beach Nesting Bird Survey • Site-specific Fish Monitoring Programs

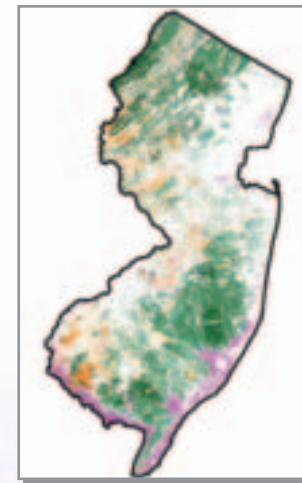
Topic & Goal No.	Priority State-level Conservation Goals and Strategies as written within the NJ Wildlife Action Plan, February 16, 2007
Addressing National, Interstate, and Statewide Threats	
Goal 3: Encourage farmers, foresters, and land stewards of private, local, state, and federal lands to develop habitat management plans that enhance habitats for species of conservation concern and maintain or improve the ecological integrity of the natural community.	
*	Increase staff in the NJ Habitat Incentive Team (N J HIT) to educate and provide technical assistance for landowners enrolling in Landowner Incentive Programs.
*	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.
*	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.
*	Dedicate staff in DFW to provide technical assistance to develop site-based management plans with forestry or wildlife production goals using the Landscape Project and principles of landscape ecology as the foundation.
	Increase the number of Category 1 streams justified by endangered and threatened species data.
Addressing National, Interstate, and Statewide Threats & The Landscape Project	
Goal 4: 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.	
*	NJ Division of Fish and Wildlife (DFW) will lead in the training of municipal and county planners to use the Landscape Map to identify critical wildlife habitats for sensitive species and natural systems within their borders.
*	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.
*	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.
*	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).
	Require that all lands purchased with Green Acres funds develop management plans consistent with the NJ Wildlife Action Plan.
	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.

4 Minimize Habitat Loss

Goal: Protect essential breeding, wintering, and migration habitat for wildlife of conservation concern.

Threat: The greatest threat to New Jersey's wildlife is loss of habitat. To exist and thrive in New Jersey, wildlife species require habitat to live, grow, and reproduce.

Strategies:



Train municipal and county representatives, using programs implemented by the Division of Fish and Wildlife, to use the Landscape Project to identify critical habitat within their borders.

Encourage municipal and county planners and non-governmental agencies to include wildlife conservation into the planning process using the Landscape Project and other Geographic Information System (GIS) products.

Encourage towns and counties to develop, as part of their master plan, Habitat Conservation Plans that consider the larger landscape region.



Implement programs and initiatives to create and enhance habitat in developed areas.

Guide management of all lands purchased with Green Acres funds through coordination of the conservation goals, strategies, and actions outlined in the NJ Wildlife Action Plan and the Landscape Project Map.



5 Minimize Habitat Fragmentation

Goal: Maintain connected habitats.

Threat: Following habitat loss, habitat fragmentation is the second most serious threat to wildlife in New Jersey. Habitat fragmentation increases susceptibility to predation, disease, and parasitism, and creates genetic weaknesses by isolating populations. Fragmentation can also create barriers that prevent animals from moving between essential habitats.

Strategies:



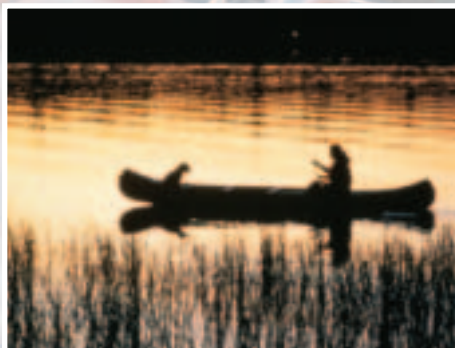
Advance smart growth planning as a tool to minimize habitat loss and optimize regional approaches to land use planning.

Prioritize open space land acquisition with habitat connectivity as a primary focus.



Promote Habitat Conservation Plans to inform local and regional government master plans and land use ordinances.

Encourage towns and counties to develop their own Habitat Conservation Plans with assistance from the NJ DEP.



NJ Wildlife Action Plan State-level Conservation Goals and Strategies

This table provides a list of all the priority state-level conservation goals and strategies (actions) for New Jersey as written within the NJ Wildlife Action Plan, February 16, 2007. This brochure contains highlighted conservation strategies, pages 4 - 16, that have been reworded for a more general audience. These strategies have been identified below by the asterisk (*) and are shown here in their original format as written within the Plan. All other strategies shown below are considered priorities, but were not highlighted in the previous pages. In addition, the goals and associated strategies are arranged in categories with key words and concepts appearing in bold to provide focus for the array of New Jersey's partners in the conservation of our native wildlife and their habitats. These categories are also identified within the Plan. It is important to note, the category *Addressing National, Interstate, and Statewide Threats*, contains sub-categories such as *Development, Road Mortality to Wildlife*, and many more. As such, goals and strategies identified below may be a compilation of strategies taken from multiple sub-categories.

To review all of the state-level conservation goals and strategies, please visit the NJ Wildlife Action Plan Web site: www.njfishandwildlife.com/ensp/waphome.htm

Topic & Goal No.	Priority State-level Conservation Goals and Strategies as written within the NJ Wildlife Action Plan, February 16, 2007
Endangered, Threatened and Rare Wildlife	
Goal 1: 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.	
*	Develop and implement 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.
*	Reevaluate the status of listed and non-listed nongame wildlife every five years using the Delphi review process.
*	Conduct surveys to identify migratory corridors for bats, marine mammals, anadromous fish, Lepidoptera, and Odonata.
Migratory Stopover and Important Bird Areas Planning	
Goal 2: Identify, monitor, and conserve key migratory corridors and stopover locations for migratory birds.	
*	Conduct surveys of migrating passerines and raptors at major stopover areas, primarily the Cape May Peninsula, every five years.
*	Annually monitor shorebird populations along the Delaware Bayshore stopover.
*	Prioritize land acquisition, conservation easements, private landowner incentive programs, and mitigation funding, and develop management plans to conserve stopover habitat.
*	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.
	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.
	Conduct baseline surveys of other stopover areas such as Sandy Hook, Island Beach and inland habitats important to migrating birds.

13 *Coordinate Conservation Activities*

Goal: Ensure that conservation activities carried out across the state are consistent with the Wildlife Action Plan.

Threat: Lack of coordination between the multiple agencies and organizations engaged in wildlife conservation work can result in the inefficient use of resources. The Wildlife Action Plan is a comprehensive blueprint for the conservation of wildlife statewide. Integration of the Plan into other management plans will greatly enhance the success of the Wildlife Action Plan as a whole as well as the future of NJ's wildlife and their critical habitats.

Strategies:

Post the most current version of the Wildlife Action Plan on the Division of Fish and Wildlife's Web site so it is accessible to everyone.



Incorporate the goals and strategies of the Wildlife Action Plan into new and existing management plans through a partnership between the Division of Fish and Wildlife and other public (federal, state, regional, and local) and private agencies.

Convene annual meetings of representatives from the Endangered and Nongame Species Advisory Committee, the Fish and Game Council, and the Marine Fisheries Council to review the progress of the Wildlife Action Plan.



Review the Wildlife Action Plan every five years with a process that includes adaptive management techniques.



6 *Continue Long-term Monitoring*

Goal: Continue long-term monitoring to evaluate the effectiveness of protection and restoration efforts on wildlife and their habitats.

Threat: Many threats to wildlife and their habitats occur subtly over long periods of time and can have broad-ranging or localized effects. These threats are often insidious and by the time their effects are recognized they are difficult to remedy.

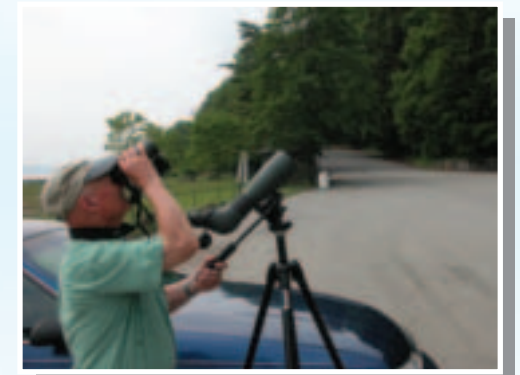
Strategies:



Maintain existing monitoring programs that collect data on species and habitats statewide.

Measure the enrollment acreage in habitat enhancement and conservation programs and monitor each site to evaluate the effectiveness of management techniques.

Complete the Coordinated Bird Monitoring Plan that, when implemented, will help populate the database developed through regional and national bird surveys.



Develop Geographic Information System (GIS) measures to evaluate the effectiveness of habitat conservation programs.

7 *Minimize Human Disturbance*

Goal: Minimize human disturbance at locations with sensitive wildlife species.

Threat: Some wildlife species are highly sensitive to human disturbance. While many common species can tolerate a high level of human disturbance and encroachment into their habitat, others simply abandon habitats as disturbance increases.

Strategies:

Design and implement protective measures at sites containing species most susceptible to disturbance from human activities.



Sign posting at bird colony



Gate at bat hibernaculum

Apply restrictions on acoustic disturbances and other activities that impair aquatic wildlife.



Research the impacts of water releases on aquatic organisms using new and existing data.

Maintain a regular review of data on water releases from power plants and stream encroachment permits to develop recommendations to minimize impacts on aquatic life.

12 *Protect Public Natural Lands and Waterways*

Goal: Protect public natural lands and waterways from off-road vehicle and personal watercraft use where wildlife species of conservation concern are located.

Threat: Off-road vehicles (ORVs) and personal watercraft can have a serious negative impact on species of conservation concern. These vehicles are able to access remote areas inhabited by protected species and species of concern. ORVs and personal watercraft can physically damage habitats, directly harm slow-moving animals, and create noise disturbances that can cause reproductive failures, site abandonment, and failures of entire populations.

Strategies:

Enforce restrictions on off-road vehicles and personal watercraft use in areas where critical wildlife habitats occur.

Fund additional law enforcement officers to assist in enforcing restrictions on off-road vehicle and personal watercraft use.



Research and disseminate information about the economic impacts of off-road vehicles and personal watercraft on those wildlife species most vulnerable to injury, mortality, or disturbance.



Enact legislation to require registration of all off-road vehicles.



11 *Eliminate Contamination*

Goal: Eliminate or reduce exposure of wildlife to all sources of contamination.

Threat: Historically, pollution has led to the near extinction of many species of wildlife and fish. Today, pollution is heavily regulated but contaminants such as petroleum, DDT, and PCB's still pose a threat to New Jersey's wildlife.

Strategies:



Reduce contaminants to levels that have no adverse effects on wildlife in areas where contamination is currently impacting wildlife populations, such as the lower Delaware River, the NJ-NY Harbor, and portions of the Atlantic Coast.

Assess contaminant exposure

by analyzing tissues of raptors and waterbirds and their prey on a regular basis.



Analyze tissue samples of raptors to assess causes of mortality and nest failure.



8 *Set Deer Density Goals that are Area-specific*

Goal: Develop sustainable deer density goals that are area-specific and support healthy, natural vegetative communities.

Threat: The density of the deer population in parts of New Jersey has a negative impact on natural vegetative communities and therefore can have detrimental impacts on native wildlife populations.

Strategies:

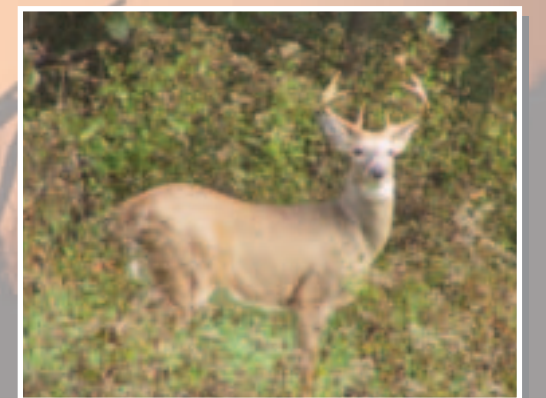
Develop deer management plans, including harvest quotas, focused on meeting forest health goals by measuring the status of vegetation in important habitats across the state.



Develop and implement legislative and incentive-based programs to support increased hunting opportunities.

Fully fund and promote programs like Hunters Helping the Hungry that allow hunters to donate venison to food kitchens.

Achieve deer densities compatible with the Wildlife Action Plan's management goals through community-based deer management programs and the participation of private landowners and public land stewards.



9 *Protect Unique Ecosystem Processes*

Goal: Identify and protect unique ecosystem processes.

Threat: Human intervention in natural processes can adversely impact ecosystems. Suppressing forest fires, restricting tidal flow, and introducing invasive species of plants and animals can alter the balance of an ecosystem to the detriment of native wildlife.

Strategies:



Develop techniques that can be used to safely mimic the historic role of fire in shaping certain ecosystems.

Identify and prioritize the threats to ecosystem processes.

Restore natural tidal flow to coastal wetlands to reduce non-native and/or invasive vegetation like common reed (*Phragmites australis*).



Develop and use "Best Management Practices" for species, habitat, and ecosystem management.

10 *Reduce Impacts from Subsidized Predators and Invasive Species*

Goal: Reduce adverse impacts on critical wildlife and natural communities and habitat from subsidized predators and invasive species, both native and non-native.

Threat: A subsidized predator is an animal that benefits from resources provided by human activities such as bird feeders, accessible pet food, accessible garbage, etc. These subsidies can create high predator densities that pose a significant threat to local wildlife populations. Invasive non-native species and overabundant native species also present a significant threat to wildlife populations.

Strategies:

Create aggressive outreach programs that reduce or eliminate the introduction and spread of invasive plants and animals.



Anti-predator fencing at a nest.

Use integrated predator management techniques to increase the reproductive success of wildlife species of greatest concern.

Establish guidelines so land managers can effectively deal with cat colonies and other subsidized predators when they pose a threat to vulnerable wildlife, especially endangered and threatened species.

Educate the public about the impacts of feral and free-roaming house cats on New Jersey's native wildlife and encourage responsible cat ownership.

Implement a system to report new locations of priority invasive species.

