

Delaware Wildlife Action Plan

Present Condition

Poor. Most of Delaware was forested at the time of European settlement. The amount of forest loss since then is difficult to determine with much accuracy, but it has been estimated at 50-75% (since some existing forest represents second growth that has occurred on abandoned farmland, especially in the northern part of the state, the loss was probably greater than this at its peak in the 19th century). More recently, calculations of forest loss in the state range from 35,000 acres from 1984-1992 and 20,000 acres from 1986-1999; in 2005 alone, loss was estimated to be as high as 4,500 acres. Historically, this loss stemmed from conversion to agriculture, but is now mostly the result of residential and commercial development and associated infrastructure.

As striking as the overall loss of forest is the fragmentation of that which remains. Mapping of tree cover in the state completed in 2004 delineated about 4,150 separate wooded patches larger than 10 acres. The median size among those patches is only 34 acres, and just 6% are larger than 250 acres. An examination of patch “thickness,” which accounts for size and shape, reveals only a few (<0.1%) that have sufficient interior habitat to sustain area-sensitive species like cerulean warbler, Northern parula and black-and-white warbler for the long term. Additional analysis indicates that the patches are highly isolated from each other, with less than 10% meeting the isolation thresholds for hooded warbler, American redstart, red-shouldered hawk and brown creeper. Finally, calculation of perimeter/area ratio for the forest blocks highlights their very irregular shapes. Almost 90% have a ratio greater than that of a 10:1 rectangle, a configuration that produces major edge effects.

Recent field surveys of nearly 100 Coastal Plain forest blocks found about half of them to be in “Good” or “Very Good” condition, but this rating was based on vegetative characteristics, not on spatial attributes or wildlife habitat.

See the discussion of Present Condition under Coastal Plain Upland Forests (Section 6.1.4) for more information about forest condition.

6.1.20. Wetland Blocks

Description

Wetland Blocks may contain non-tidal wetlands, freshwater tidal wetlands, and/or saltwater and brackish tidal wetlands. These constituent habitats are described above, as are the relevant Associated Species of Greatest Conservation Need and Conservation Issues and Actions. Additional issues and actions that pertain to Wetland Blocks are in Section 6.2.

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Vital Statistics

Wetland Blocks		
Attribute	Total	Protected
Acreage	168,368	71,937 (43%)
Occurrences	127	70 (55%)
Known SGCN Species / Occurrences	107 / 289	81 / 156 (76% / 54%)

Present Condition

Fair. Delaware is estimated to have lost over 50% of its wetlands since the arrival of European colonists. The majority of these were freshwater wetlands that were lost to ditching, stream channelization, conversion to ponds and filling for development. Tidal wetlands were also lost to filling for development, shoreline hardening, conversion to impoundments and ditching for mosquito control. Fortunately, wetland regulations at both the state and federal levels have greatly curtailed these losses in the last several decades – according to the most recent estimate, as little as 10 acres of tidal wetlands are now lost each year – although protection of isolated freshwater wetlands remains insufficient. Problems remain with most wetlands, however, from degradation caused by sedimentation, nutrient enrichment and invasive plant species. These problems are exacerbated by insufficient natural buffer around many wetland blocks. Also, the ultimate fate of tidal wetlands, which constitute the great bulk of wetland blocks, remains uncertain in light of predicted sea level rise, especially given the lack of buffers to accommodate migration. Although it could not be completed in time for inclusion in this plan, a GIS analysis of wetland buffers should be performed to quantify the extent of this issue.

6.2. Conservation Issues and Actions for Multiple Key Habitats

Certain of these issues affect key habitat structure or function, while others cause direct mortality or disturbance of SGCN. These broad issues, the habitats that they impact, and their corresponding actions appear in the tables below.

Habitats of Conservation Concern are again lumped under broader key habitat types for the reasons discussed in Section 6.1.

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6.2.1. Habitat Loss and Fragmentation

Habitat Loss and Fragmentation		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Beach and Dune Habitats • Early Successional Upland Habitats • Coastal Plain Upland Forests • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds • Interdunal Wetlands • Piedmont Stream Valley Wetlands • Peat Wetlands • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Forest Blocks 	Residential and Commercial Structures	Coordinate with partners to acquire title to, or easements on, sites that are critical to the conservation of key habitats and SGCN within the Green Infrastructure Natural Resources Focus Area, for management by public agencies or NGOs.
		Improve federal/state/local coordination of environmental review to ensure that potential impacts to key habitats and SGCN are minimized for all major projects.
		Support rigorous implementation of the State Strategies for Policies and Spending to restrict major development to Levels 1-3.
		Develop state policies to require incorporation of Key Wildlife Habitats into the Green Infrastructure Natural Resources Focus Area. See Figure 19 for a comparison of the GI focus area with key habitats.
		Encourage Kent and Sussex counties to adopt overlay zoning ordinances for the Green Infrastructure Natural Resources Focus Area.
		Encourage all counties to adopt environmental design standards for development projects in order to protect key wildlife habitats and SGCN.
		Work with conservation partners, state and county planning officials, and developers to create certification for environmentally-friendly developments, including an associated media campaign with awards.

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Habitat Loss and Fragmentation		
Key Habitats	Specific Issue	Specific Action
		<p>Work with developers to design BMPs that minimize impacts to key habitats and SGCN by preserving and restoring buffers and by reducing edge effect.</p> <p>Evaluate means of protecting isolated freshwater wetland key habitats on private property, including education and outreach, voluntary guidelines, incentives and regulations, as necessary.</p> <p>Evaluate means of protecting forested key habitats on private property, including education and outreach, voluntary guidelines, incentives and regulations, as necessary.</p>
<ul style="list-style-type: none"> • Early Successional Upland Habitats • Coastal Plain Upland Forests • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Forest Blocks 	Farmland	<p>Coordinate with partners to acquire title to, or easements on, sites that are critical to the conservation of key habitats and SGCN within the Green Infrastructure Natural Resources Focus Area, for management by public agencies or NGOs. See Figure 19 for a comparison of the GI focus area with key habitats.</p> <p>Support the Agricultural Lands Preservation Program to protect land from irreversible conversion to other uses.</p> <p>Work with the Delaware Department of Agriculture, the agriculture industry and the Landowner Incentives Program to develop BMPs, and corresponding incentives, that minimize impacts to key habitats, preserve and restore buffers, and reduce edge effects for area-sensitive SGCN.</p>

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Habitat Loss and Fragmentation		
Key Habitats	Specific Issue	Specific Action
		Evaluate means of protecting isolated freshwater wetland key habitats on private property, including education and outreach, voluntary guidelines, incentives and regulations, as necessary.
		Evaluate means of protecting forested key habitats on private property, including education and outreach, voluntary guidelines, incentives and regulations, as necessary.
<ul style="list-style-type: none"> • Early Successional Upland Habitats • Coastal Plain Upland Forests • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Forest Blocks 	Industrial Facilities	<p>Support rigorous implementation of the State Strategies for Policies and Spending to restrict major development to Levels 1-3.</p> <p>Evaluate the use of education and outreach, incentives, partnerships, and/or regulations, as necessary, for restoring key habitats and SGCN on closed sand and gravel quarries.</p>
<ul style="list-style-type: none"> • Beach and Dune Habitats • Early Successional Upland Habitats • Coastal Plain Upland Forests • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds 	Transportation Infrastructure	<p>Work with the Delaware Department of Transportation to integrate key habitat and SGCN conservation into long-range transportation planning.</p> <p>Work with the Delaware Department of Transportation to integrate key habitat and SGCN conservation into wetland and forest mitigation.</p>

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Habitat Loss and Fragmentation		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Interdunal Wetlands • Piedmont Stream Valley Wetlands • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Non-tidal Coastal Plain Streams • Impoundments • Forest Blocks • Wetland Blocks 		<p>Work with the Delaware Department of Transportation to develop BMPs to integrate key habitat and SGCN conservation into landscaping, mowing, invasive plant control and other road maintenance, including preserving and restoring buffers and reducing edge effects.</p>
<ul style="list-style-type: none"> • Beach and Dune Habitats • Early Successional Upland Habitats • Coastal Plain Upland Forests • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Tidal High Marshes • Tidal Low Marshes • Forest Blocks • Wetland Blocks 	Utility Corridors	<p>Work with utilities and state and local planning officials to integrate key habitat and SGCN conservation into long-range planning for electric, water, sewer, natural gas and petroleum lines.</p> <p>Work with utilities to develop BMPs to integrate key habitat and SGCN conservation into corridor maintenance, including controlling invasive species, preserving and restoring buffers and reducing edge effects.</p>
<ul style="list-style-type: none"> • Early Successional Upland Habitats • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Tidal High Marshes • Tidal Low Marshes • Nearshore Habitats 	Dredge Spoil Disposal	<p>Work with the Division of Soil and Water Conservation and the US Army Corps of Engineers to incorporate key habitat and SGCN conservation into spoil disposal plans.</p> <p>Work with the Division of Soil and Water Conservation and the US Army Corps of Engineers to mitigate contaminant impacts to SGCN.</p>

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Habitat Loss and Fragmentation		
Key Habitats	Specific Issue	Specific Action
		Work with the Division of Soil and Water Conservation and the US Army Corps of Engineers to identify sites for use of dredge spoils to create/restore key habitats.
<ul style="list-style-type: none"> • Early Successional Upland Habitats • Coastal Plain Upland Forests • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Forest Blocks 	Landfill Facilities	Support rigorous implementation of the State Strategies for Policies and Spending to restrict major development to Levels 1-3.

6.2.2. Residential and Commercial Development Practices

Residential and Commercial Development Practices		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds • Interdunal Wetlands • Piedmont Stream Valley Wetlands • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Non-tidal Coastal Plain Streams • Impoundments 	Altered Hydrology	Encourage the counties to strengthen enforcement of stormwater management regulations.
		Work with the Division of Soil and Water Conservation and the Tributary Action Teams to promote the implementation of BMPs for stormwater management.
		Work with the Division of Soil and Water Conservation and the Tributary Action Teams to ensure integration of key habitat and SGCN conservation and monitoring into all Pollution Control Strategies.

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Residential and Commercial Development Practices		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-Tidal Wetlands • Coastal Plain Seasonal Ponds • Interdunal Wetlands • Piedmont Stream Valley Wetlands • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Non-Tidal Coastal Plain Streams • Nearshore Habitats • Impoundments 	Nutrients and Sediments	Encourage the counties to strengthen enforcement of erosion and sediment control regulations.
		Work with the Division of Soil and Water Conservation and the Tributary Action Teams to promote the implementation of BMPs for erosion and sediment control.
		Work with the Division of Soil and Water Conservation and the Tributary Action Teams to ensure integration of key habitat and SGCN conservation and monitoring into all Pollution Control Strategies.
		Work with the Division of Soil and Water Conservation to integrate key habitat and SGCN conservation into state water quality standards for nutrients and sediments.
<ul style="list-style-type: none"> • Coastal Plain Seasonal Ponds • Interdunal Wetlands • Piedmont Stream Valley Wetlands • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes 	Pesticides	Work with Cooperative Extension to promote IPM implementation to minimize impacts of residential and commercial pesticides on SGCN. Work also with the Landowner Incentives Program to develop incentives for IPM implementation on private golf courses, recreational facilities and common areas.
		Work with Cooperative Extension to integrate key habitat and SGCN conservation into pesticide applicator training.

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Residential and Commercial Development Practices		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Tidal High Marshes • Tidal Low Marshes • Non-tidal Coastal Plain Streams • Nearshore Habitats • Impoundments 		Work with Cooperative Extension to develop education and outreach for landowners about the impacts of residential pesticides on SGCN.
<ul style="list-style-type: none"> • Beach and Dune Habitats • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes 	Piers and Docks	Work with developers to create design standards for piers and docks that minimize habitat loss or fragmentation.
		Work with county building officials to encourage developers to construct community piers and docks in subdivisions, in place of individual structures.

6.2.3. Agricultural and Forestry Operations

Agricultural and Forestry Operations		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Non-Tidal Coastal Plain Streams • Impoundments 	Altered Hydrology	Work with the Delaware Department of Agriculture and the Tributary Action Teams to promote the implementation of BMPs for stormwater management.
		Work with the Division of Soil and Water Conservation and the Tributary Action Teams to ensure integration of key habitat and SGCN conservation and monitoring into all Pollution Control Strategies.
<ul style="list-style-type: none"> • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds • Peat Wetlands • Riverine Aquatic and Submerged 	Nutrients and Sediments	Work with the Delaware Department of Agriculture and the Tributary Action Teams to promote the implementation of BMPs for erosion and sediment control.

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Agricultural and Forestry Operations		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Vegetation • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Non-Tidal Coastal Plain Streams • Impoundments 		<p>Work with the Division of Soil and Water Conservation and the Tributary Action Teams to ensure integration of key habitat and SGCN conservation and monitoring into all Pollution Control Strategies.</p>
		<p>Work with the Division of Soil and Water Conservation to integrate key habitat and SGCN conservation into state water quality standards for nutrients and sediments.</p>
<ul style="list-style-type: none"> • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Non-tidal Coastal Plain Streams • Nearshore Habitats • Impoundments 	Pesticides	<p>Work with the Delaware Department of Agriculture and the agricultural community to promote implementation of IPM to minimize impacts of agricultural pesticides on SGCN. Work also with the Landowner Incentives Program to develop incentives for IPM implementation on farmland.</p>
<ul style="list-style-type: none"> • Coastal Plain Upland Forests • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds • Freshwater Tidal Forested and Scrub-Shrub Wetlands 	Clearcutting and Other Forestry Practices	<p>Coordinate with partners to acquire title to, or easements on, sites that are critical to the conservation of key habitats and SGCN within the Green Infrastructure Natural Resources Focus Area, for management by public agencies or NGOs. See Figure 19 for a comparison of the GI focus area with key habitats.</p>

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Agricultural and Forestry Operations		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Freshwater Tidal Marshes • Tidal High Marshes • Forest Blocks • Wetland Blocks 		Work with the Delaware Forest Service to integrate key habitat and SGCN conservation into forest management planning.
		Work with the Delaware Forest Service, the forestry industry and the Landowner Incentives Program to develop BMPs and corresponding incentives to preserve or restore key habitat buffers and reduce edge effects for area-sensitive SGCN.
		Work with the Delaware Forest Service and the forestry industry to implement a Master Logger program to encourage landowners to work with loggers who harvest forests sustainably.

6.2.4. Industrial Operations

Industrial Operations		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Beach and Dune Habitats • Early Successional Upland Habitats 	Air Pollution	Support research to assess and monitor impacts of airborne pollutants on key habitats.

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Industrial Operations		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Coastal Plain Upland Forests • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds • Interdunal Wetlands • Piedmont Stream Valley Wetlands • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Non-tidal Coastal Plain Streams • Nearshore Habitats 		<p>Enforce existing limits on releases of airborne pollutants.</p>
<ul style="list-style-type: none"> • Beach and Dune Habitats • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Piedmont Stream Valley Wetlands • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Non-tidal Coastal Plain Streams • Nearshore Habitats 	<p>Accidental Spills of Toxins and Sewage</p>	<p>Work with the Emergency Response Branch to integrate key habitat and SGCN protection into emergency response planning.</p> <hr/> <p>Provide training for DFW staff, such as incident management, hazardous materials handling and wildlife rescue, to facilitate involvement in emergency response actions.</p> <hr/> <p>Maintain DFW involvement in the Natural Resource Damage Assessment process.</p>

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Industrial Operations		
Key Habitats	Specific Issue	Specific Action
		Develop/enhance partnerships with Tri-State Bird Rescue and other wildlife rehabilitators to improve emergency response.
<ul style="list-style-type: none"> • Piedmont Stream Valley Wetlands • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Non-tidal Coastal Plain Streams • Nearshore Habitats 	Chronic Water Pollution	Assess and monitor the impacts of water pollution on key habitats and SGCN.
		Support the Division of Water Resources enforcement of existing limits on releases of water pollution.
<ul style="list-style-type: none"> • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Non-tidal Coastal Plain Streams • Nearshore Habitats 	Sediments from Sand and Gravel Quarrying	Work with the Division of Soil and Water Conservation and the Landowner Incentives Program to develop BMPs, and corresponding incentives, for quarries to minimize impacts of sediments on key habitats.

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6.2.5. Transportation and Utility Operations and Maintenance

Transportation and Utility Operations and Maintenance		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Coastal Plain Forested Floodplains and Riparian Swamps • Piedmont Stream Valley Wetlands • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Non-tidal Coastal Plain Streams • Impoundments 	Altered Hydrology	Work with the Delaware Department of Transportation to integrate key habitat and SGCN conservation into stormwater management design.

6.2.6. Invasive Species, Nuisance Animals and Wildlife Diseases

Invasive Species, Nuisance Animals and Wildlife Diseases		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Beach and Dune Habitats • Early Successional Upland Habitats • Coastal Plain Upland Forests • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds • Interdunal Wetlands • Piedmont Stream Valley Wetlands • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Freshwater Tidal Forested and Scrub-Shrub Wetlands 	Invasive Plants	Work with the Delaware Invasive Species Council to establish an interagency early detection and rapid response system to react to new invasions.
		Work with the Delaware Invasive Species Council and conservation land managers to assess and monitor impacts of invasive plants using the Delaware Alien Plant Invasiveness Risk Assessment protocol, and prioritize control efforts based on degree of risk.
		Work with the Delaware Invasive Species Council and conservation land managers to conduct quantitative invasive plant surveys of key habitats.

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Invasive Species, Nuisance Animals and Wildlife Diseases		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Non-tidal Coastal Plain Streams • Impoundments 		<p>Work with the Delaware Invasive Species Council and conservation land managers to develop and implement adaptive management plans for control of invasive species.</p>
		<p>Develop education and outreach, partnerships, voluntary guidelines, incentives, and/or regulations, as necessary, for controlling invasive plants on private property and in private commerce, to minimize impacts to key habitats.</p>
		<p>Require use of native species for new plantings or replantings on lands managed by the state, similar to the Native Plants Policy of the Division of Parks and Recreation.</p>
		<p>Work with the Delaware Department of Transportation, Delaware Center for Horticulture and Cooperative Extension to enhance transportation construction and maintenance practices such as requiring the planting of native species, and limiting mowing during breeding, migration or other critical times for SGCN.</p>
		<p>Support implementation of the Delaware Invasive Species Management Plan, as appropriate, to reduce the impacts of invasive species on key habitats and SGCN.</p>

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Invasive Species, Nuisance Animals and Wildlife Diseases		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Early Successional Upland Habitats • Coastal Plain Upland Forests • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds • Interdunal Wetlands • Piedmont Stream Valley Wetlands • Peat Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Impoundments 	Control of Invasive Plants	Partner with the Delaware Invasive Species Council and land management agencies to integrate key habitat and SGCN conservation into invasives control practices.

6.2.7. Climate Change

Climate Change		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Beach and Dune Habitats • Coastal Plain Upland Forests • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Impoundments • Forest Blocks • Wetland Blocks 	Sea Level Rise	Work with the Division of Soil and Water Conservation to integrate key habitat and SGCN conservation into long-range planning for sea level rise.
		Incorporate sea level rise scenarios in all relevant area, habitat and species management plans.
		Support implementation of the Delaware Climate Change Action Plan, as appropriate, to reduce greenhouse gas emissions and increase carbon sequestration.

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6.2.8. Recreational Activities

Recreational Activities		
Key Habitats	Specific Issue	Specific Action
<ul style="list-style-type: none"> • Beach and Dune Habitats • Early Successional Upland Habitats • Coastal Plain Upland Forests • Coastal Plain Forested Floodplains and Riparian Swamps • Coastal Plain Seasonal Ponds • Riverine Aquatic and Submerged Vegetation • Tidal High Marshes • Tidal Low Marshes • Non-tidal Coastal Plain Streams • Nearshore Habitats • Impoundments 	Recreational Use on Foot and with Boats, Personal Watercraft and Off-Road Vehicles	Assess the impacts of ORVs on beach and dune, early successional and forested habitats, and use this assessment and long-term monitoring to adapt management as necessary.
		Work with manufacturers and retailers to develop education and outreach for beach users, boaters, and PWC and ORV users about minimizing impacts to SGCN.
		Post and/or fence nesting sites, breeding concentrations or other critical areas on public property to protect SGCN, and enforce restrictions.
		Strengthen enforcement of regulations for off-road vehicles on managed areas to protect key habitats and SGCN.
		Strengthen enforcement of surf fishing permit regulations on public property to protect SGCN.
		Work with private landowners to limit access to nesting sites, breeding concentrations or other critical areas to protect SGCN.
		Post "no wake" zones to protect key habitats and enforce them.
		Support expansion of the Division of Soil and Water Conservation's Clean Marinas Program to reduce pollution impacts to key habitats and SGCN.

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6.2.9. Resource Management

Resource Management			
Key Habitats	Specific Issue	Specific Action	
<ul style="list-style-type: none"> • Beach and Dune Habitats • Early Successional Upland Habitats • Coastal Plain Upland Forests • Coastal Plain Forested Floodplains and Riparian Swamps • Atlantic White Cedar Non-tidal Wetlands • Coastal Plain Seasonal Ponds • Interdunal Wetlands • Piedmont Stream Valley Wetlands • Peat Wetlands • Riverine Aquatic and Submerged Vegetation • Freshwater Tidal Forested and Scrub-Shrub Wetlands • Freshwater Tidal Marshes • Tidal High Marshes • Tidal Low Marshes • Non-tidal Coastal Plain Streams • Nearshore Habitats • Impoundments • Forest Blocks • Wetland Blocks 	<p>Habitat/Wildlife Management</p>	Analyze species and habitat management on state conservation lands – Wildlife Areas, Parks, and Forests – and adapt management as necessary to increase key habitat patch size and reduce edge effects on SGCN.	
		Encourage Federal and NGO conservation lands managers to adapt species and habitat management to increase key habitat patch size and reduce edge effects on SGCN.	
		Evaluate means of managing for SGCN and key habitats on private property, including education and outreach, voluntary guidelines, incentives and regulations, as necessary.	
		<p>Facility and Program Operations</p>	Review facility and program operations on state conservation lands – Wildlife Areas, Parks, and Forests – and develop state policies for minimizing impacts to key habitats and SGCN. Establish MOUs with DPR and the State Forest Service about consultation with DFW on issues impacting key habitats and SGCN in State Parks and State Forests.
			Encourage Federal and NGO conservation lands managers to develop policies for minimizing impacts from facility and program operations to key habitats and SGCN.