Chapter 9

Revision Process, Outreach, and Plan Implementation

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Introduction

Although the Maryland Department of Natural Resources (MD DNR) was the lead on the development of the State Wildlife Action Plan (SWAP), this Plan serves as a *statewide* guidance document for use by all agencies and organizations that work to conserve Maryland's wildlife species. Acknowledging the importance of the work performed by organizations outside of MD DNR, the SWAP lays out recommendations for projects and actions for the conservation of wildlife and their habitats. This chapter includes information on collaboration and coordination with conservation partners, stakeholders, and the general public throughout the process of the SWAP revision. Specifically, it provides a description of the coordination with federal, state, and local agencies and Native American tribes that manage significant land and water areas within the state and/or administer programs that affect the conservation of Species of Greatest Conservation Need (SGCN) and their key wildlife habitats (Element #7); and also a description of public participation in the implementation, review, and revision phases of Maryland's SWAP (Element #8). This chapter also discusses the collaborative and strategic implementation plan for the SWAP over the next decade, and provides more information on the process used to develop the 2015 SWAP revision.

Maryland Department of Natural Resource's Partners in Wildlife and Habitat Conservation

The Maryland Department of Natural Resources collaborates with numerous partners in natural resource conservation efforts. Such partnerships are essential to support the research, communication, and action that drive wildlife conservation at local, state, national, and international levels. A summary of government agency partners, including their conservation programs and plans, can be found in Appendix 9a. A brief summary of these partnerships and their functions are described in the following section, followed by a brief discussion of non-governmental conservation partners.

Nearly all Species of Greatest Conservation Need (SGCN) and their habitats extend beyond Maryland's borders, making partnerships a necessity for successful natural resource conservation. Migratory species often move across international boundaries during the different seasons, creating a need for multinational collaboration to achieve conservation goals. At the national level, the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service are the lead agencies for the conservation of federal trust species found in Maryland and elsewhere. The USFWS, National Park Service (NPS), National Oceanic and Atmospheric Administration (NOAA), and the Bureau of Land Management (BLM) are also landowners in Maryland, managing key habitats on the ground to protect fish and wildlife resources. MD DNR regularly collaborates with these and other federal agencies (e.g., Department of Defense installations, U.S. Army Corps of Engineers) to implement restoration projects and manage habitats on their lands (i.e., direct management of natural resources). The U.S. Army Corps of Engineers, for example, is instrumental in assisting the state to restore habitats like Poplar Island in the Chesapeake Bay. The U.S. Environmental Protection Agency (EPA) and U.S. Geological Survey (USGS) are key partners with Maryland in improving the water quality and resources of the Chesapeake Bay, as are the five other states in the Chesapeake Bay watershed and local governments in these states. The USFWS, NOAA, U.S. Department of Agriculture (USDA), and Natural Resource Conservation Service (NRCS) provide technical and financial assistance to the

state, its partners, and its citizens, to manage, enhance, and restore fish and wildlife resources and habitats.

On a regional level, state conservation agencies in the Northeast have established a broad range of partnerships for fish, wildlife, and habitat conservation, including Partners in Flight for birds, Northeast Partners for Amphibian and Reptile Conservation, Northeast Bat Working Group, the Joint Ventures and Atlantic Coast Fish Habitat Partnership for migratory bird and fish conservation, and, most recently, the U.S. Department of the Interior's Landscape Conservation Cooperatives (see below). Regional coordinating bodies, such as the Northeast Association of Fish and Wildlife Agencies (NEAFWA) and its Fish and Wildlife Diversity Technical Committee (NEFWDTC), which operate on a separate and broader level than the individual partnerships, have been a driving force behind these and other wildlife conservation initiatives. Wildlife management agencies from the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia, as well as the District of Columbia participate in NEAFWA. NEAFWA (one of four regional affiliates of the Association of Fish and Wildlife Agencies) is tasked with promoting and coordinating conservation activities across the Northeast United States. The NEFWDTC has led wildlife diversity conservation projects for the NEAFWA and is composed of the Wildlife Diversity representative from each Northeast state and the District of Columbia (Terwilliger Consulting, Inc. & NEFWDTC 2013).

A new forum for regional and cross-jurisdictional conservation science partnerships was created in 2011 through a national network of 22 Landscape Conservation Cooperatives (LCCs). Established by the U.S. Department of the Interior, LCCs are based on successful models of wildlife and habitat conservation pioneered by USFWS. Each LCC provides opportunities for states, tribes, federal agencies, non-governmental organizations, universities, and other groups to address increasing land use pressures and widespread resource threats and uncertainties amplified by a rapidly changing climate by agreeing on common goals for land, water, fish, wildlife, plant, and cultural resources and jointly developing the scientific information and tools needed to prioritize and guide more effective conservation actions by partners toward those goals (Terwilliger Consulting, Inc. & NEFWDTC 2013). Maryland is part of the Appalachian LCC and the North Atlantic LCC (Figure 9.1).

At the state level, MD DNR collaborates with the Maryland Department of the Environment on water quality issues, wetland conservation, and Bay restoration projects. The Maryland Department of Transportation and other state agencies work with MD DNR to protect fish and wildlife resources by avoiding, minimizing, and mitigating impacts during the construction of state-permitted projects. The Maryland Department of Agriculture oversees the state's aquaculture programs, manages pest species and animal health, and collaborates with MD DNR and private landowners in nutrient management, land preservation, invasive species management, habitat restoration, and wildlife enhancement projects.

Although currently no Native American tribes indigenous to Maryland are federally recognized, according to the 2010 U.S. Census, 20,420 persons in Maryland reported American Indian/Alaska Native as their only race, and 58,657 persons reported American Indian/Alaska Native as some part of their racial heritage, constituting 0.4% and 1.0% of the State's population, respectively (United States Department of Commerce 2012). Most of the American Indian/Alaska Native population in Maryland lives in the National Capital Area and the Baltimore Metro Area with a significant Baltimore urban Lumbee community.

In 2012, the state officially recognized the Piscataway Indian Nation and the Piscataway-Conoy Tribe, the latter of which includes three subtribes. The Maryland Commission on Indian Affairs (MCIA) serves all American Indian/Alaska Native people of the state including at least five other groups indigenous to Maryland in addition to the Piscataway tribes (MCIA 2014). As the representative entity for these indigenous stakeholders, MCIA was invited to participate in the SWAP process and review the draft material for the Plan.
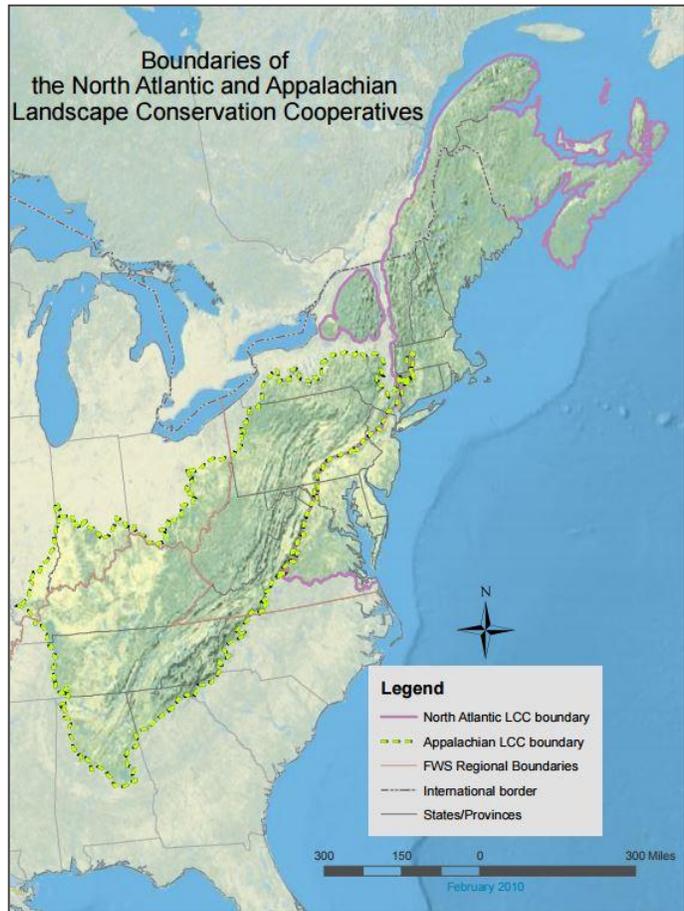
Figure 9.1 Landscape Conservation Cooperative boundaries in the northeast United States.
Source: USFWS

At the local level, MD DNR collaborates with the 23 county agencies and Baltimore City through various planning and zoning efforts, including the development of local Comprehensive Plans, as well as more detailed Land Preservation and Recreation Plans. MD DNR frequently provides technical guidance to assist with the conservation of the state's fish and wildlife resources and the key habitats they depend upon. For instance, the establishment of Habitat Protection Areas provides protection for and information about areas important for conservation within the Critical Area of the Chesapeake Bay and Atlantic Coastal Bays. Coordination at the local level includes communication with county staff in fields related to environmental protection and resource management. The Maryland-National Capital Park and Planning Commission is another partner agency that develops and operates public park systems and provides local land use planning for the great majority of both Montgomery and Prince George's counties. All other Maryland counties and Baltimore City manage open spaces that contribute to wildlife conservation, and over 30 nature centers operated by local governments provide important opportunities for environmental education.

The successful conservation of fish and wildlife resources in Maryland would not be possible without partnerships with non-governmental organizations (NGOs), universities, private industry, academia, and the public. To name a few, The Nature Conservancy, Audubon Maryland-District of Columbia, Audubon Naturalist Society, Maryland Ornithological Society, Natural History Society of Maryland, Chesapeake Bay Foundation, Chesapeake Conservancy, Alliance for the Chesapeake Bay, Sierra Club, Potomac River Fisheries Commission, and other NGOs are not only stakeholders in the protection of the state's natural resources, but also valuable partners in planning, funding, and implementing conservation projects. MD DNR maintains ongoing partnerships with universities, museums, and experts statewide, as well as in surrounding states. For example, MD DNR has worked most recently with University of Maryland Center for Environmental Science Appalachian Lab, Towson University, and Frostburg State University on various research projects involving SGCN and key wildlife habitats. Taxonomic experts from the Smithsonian Institution and private consultants have assisted with projects and conservation planning. Industry representatives from timber companies, the energy sector, and development interests assist the state in conserving fish and wildlife resources on private lands. Perhaps the most important of all partners, the citizens of Maryland provide the state with opportunities to protect natural resources on private property and benefit from grass-roots efforts to monitor threats, assess ecosystem health, enhance key wildlife habitats, and improve species populations.

Coordination with Partners and the Public in the SWAP Development Process

MD DNR's Natural Heritage Program (of the Wildlife and Heritage Service) coordinated Maryland's SWAP revision. The first steps included reviewing suggestions for the 2015 revision that had been collected since the 2005 plan was approved and compiling recent regional resources created to improve SWAPs. Work began on revising Maryland's key wildlife habitats in 2013 soon after the Northeast Terrestrial Wildlife Habitat Classification System was finalized.

In order to work more effectively with external partners, a MD DNR **SWAP Development Team** was formed in August 2014 with key MD DNR Natural Heritage Program and Resource Assessment Service staff (Table 9.1). This Team met in the beginning of the SWAP planning process and regularly thereafter to discuss goals and content for the revision, identify additional informational resources, and determine the framework for the development of the Plan. The SWAP Coordinator led the Team by developing a specific plan including key tasks to be accomplished and a timeline to guide the revision process. New for the 2015 SWAP revision was an increased regional collaborative effort between the Northeast states to create the SWAPs in a transparent and consistent manner, leading to more effective and efficient regional conservation efforts. Maryland (and all Northeast states) agreed to use specific guidance provided by the Association of Fish and Wildlife Agencies (AFWA) Best Practices document (AFWA 2012), and the Northeast Lexicon and Synthesis reports (Crisfield & NEFWDTC 2013; Terwilliger Consulting, Inc. & NEFWDTC 2013). With this guidance in mind, and with the input of a broadening circle of stakeholders and the conservation community, Maryland designed its SWAP development approach, providing for general and technical input throughout the process.

Table 9.1 SWAP Development Team

First Name	Last Name	Position Title	MD DNR Unit
Ingrid	Brofman Sylvester	SWAP Coordinator	Wildlife & Heritage Service
Annalise	Kenney	SWAP Assistant	Wildlife & Heritage Service
Gwen	Brewer	Science Program Manager	Wildlife & Heritage Service
Lynn	Davidson	Conservation Technology Manager	Wildlife & Heritage Service
Jennifer	Selfridge	State Invertebrate Ecologist	Wildlife & Heritage Service
Jason	Harrison	State Community Ecologist	Wildlife & Heritage Service
Jay	Kilian	Natural Resources Biologist	Resource Assessment Service
Dana	Limpert	Biodiversity Analyst	Wildlife & Heritage Service
James	McCann	State Zoologist	Wildlife & Heritage Service
Jonathan	McKnight	Associate Director, Natural Heritage Program	Wildlife & Heritage Service

A series of organizational and input solicitation meetings were held to involve additional staff in Wildlife and Heritage Service first, and the effort to obtain input was then expanded to other divisions and units within MD DNR (Forest Service, Resource Assessment Service, Fisheries Service, and Chesapeake and Coastal Watershed Services) through a series of emails, personal contacts, and meetings. The three major SWAP sections most in need of stakeholder input during the revision process were the Species of Greatest Conservation Need, threats, and conservation actions. The processes undertaken by the SWAP Team to determine the content of these sections are described below.

The Process for Identifying Species of Greatest Conservation Need for the 2015 SWAP
The SWAP development process provided MD DNR and partners the opportunity to identify Species of Greatest Conservation Need (SGCN). By considering all species and their requisite habitats in this assessment, the broader interrelationships of wildlife conservation could be addressed.

Selection of the SGCN in Maryland began with reviewing the previous 2005 SGCN list. Review of these species, using the guidance criteria explained in Chapter 3, provided an introductory understanding of species population changes over the last ten years. Decisions about which species to include on the draft 2015 SGCN list relied heavily on a review of the species current conservation status, based on both state and global conservation ranks (Appendix 3g). The best available quantitative and qualitative data regarding status, abundance, distribution, and habitat associations for many species in the state were considered to confirm species conservation status and preliminary SGCN selection. Further justification for changes (additions and/or deletions) to the 2005 SGCN list, other than changes in conservation or legal status, included new discoveries and research findings since 2005; an increase (or decrease) of existing threats (e.g., illegal trade, spread of disease, increased loss of habitat); new, emerging threats (e.g., white nose syndrome, energy sector changes, loss of host species due to non-native pests). In addition, species on the Northeast regional SGCN list and priority species from taxa-specific groups, conservation partners, and regional conservation plans were evaluated for inclusion on Maryland's 2015 SGCN list.

All of this information enabled the SWAP Development Team to complete a thorough evaluation of the draft SGCN list, and make any additions or deletions of species they thought appropriate. Species from the 2005 SGCN list that fell outside the review guidelines were removed, and species that were deemed to meet the guidelines for listing as SGCN in this revision were added. When the Team had developed a first draft for the 2015 SGCN list, the SWAP Coordinator collected input from partners. Partners included other agency staff as well as external stakeholders and individuals who are recognized as experts in their fields and are affiliated with many of the major universities, institutions, federal government agencies, and conservation organizations active in conserving these species in Maryland and the Northeast region (a complete listing of contacted partners is presented in Appendix 9b). Over 190 individuals and 170 conservation organizations were contacted to assist with revising the SGCN list.

After most interested parties had reviewed and provided recommendations to the early draft 2015 SGCN list, the SWAP Development Team compiled, organized, and carefully reviewed their suggestions. Staff and stakeholder input from surveys helped refine the resulting list of SGCN. In late fall 2014, a more complete draft 2015 SGCN list was developed and posted on the MD DNR SWAP website for public review. Wildlife and Heritage Service (WHS) continued to collect recommendations until late spring of 2015, after the completion of day-long workshops, organized by species taxa groups. The main objective of these workshops was to develop and prioritize conservation actions, but they also provided an additional opportunity for taxa experts to review the SGCN list. The SGCN list was more or less finalized for the 2015 SWAP revision at these workshops. The resulting final draft SGCN list was posted, with a summary of differences from the 2005 SGCN list, on the MD DNR SWAP website for public comment and review in late spring 2015.

The Process for Developing Threats and Conservation Actions for the 2015 SWAP

The Maryland SWAP uses the International Union for Conservation of Nature (IUCN) classification system for categorizing threats to wildlife species and habitats. For consistent and transparent regional conservation, the IUCN threats classification system was recommended by AFWA in their Best Practices for State Wildlife Action Plans document (AFWA 2012) and the Northeast Lexicon and Synthesis reports (Crisfield & NEFWDTC 2013; Terwilliger Consulting, Inc. & NEFWDTC 2013) that provide guidance for the Northeast states. More information about specific threats to Maryland can be found in Chapters 5 & 6, and the complete IUCN threat classification system is presented in Appendix 5a.

For the 2015 SWAP revision process, the SWAP Development Team slightly adjusted the IUCN Threat Classification system in order to relate the threat classification more to Maryland and provide examples without losing the regional, national, and global scales for the classification system. Next, the Development Team evaluated the threats listed in 2005, removing those that were no longer relevant, cross-referencing the remaining current threats to the IUCN classification, and adding new threats as needed to reflect the current situation of SGCN and their habitats.

The SWAP Team contacted conservation partners and stakeholders to assist with developing information for the plan on threats and conservation actions. Threats were collected, cross-referenced to the IUCN system, and associated with key wildlife habitats to facilitate analysis

and conservation action development. Some threats were specific to one habitat or applied to a number of habitats, emerging as broader problems applicable to most, if not all, habitats across Maryland. Taxa- and species-specific threats were separated from those that were related to specific key wildlife habitats.

WHS held a number of day-long, facilitated workshops, organized by species taxa groups, throughout the spring of 2015. Over 165 participants from various federal, state, academic, and local organizations were invited to attend the six workshops. Individual citizens with interest and expertise in particular species groups were also invited to attend. A list of workshop participant organizations can be found below in Table 9.2. The workshops were organized by major species taxa groups: mammals, birds, reptiles and amphibians, insects, freshwater mussels, and fish. The three main objectives of the partnership workshops were to 1) identify threats to SGCN and key wildlife habitats, 2) determine potential

Some participants at the bird taxon workshop
(David Curson, Audubon MD-DC)

conservation actions to address those threats, and 3) prioritize the potential conservation actions. Threats and conservation actions identified for key wildlife habitats were reviewed and revised as needed during a two-day workshop in May 2015 by WHS and Resource Assessment Service staff.

As explained in Chapter 7, conservation actions for species, species groups, and key wildlife habitats were prioritized using seven criteria: urgency, cost, chance of success, benefit, collateral benefit to other species/habitat, feasibility/likelihood of implementation, and public support. These criteria were chosen from the Northeast Lexicon (Crisfield & NEFWDTC 2013) and minor revisions were made for Maryland's SWAP. MD DNR and its partners did not identify priority actions through a quantifiable method, but subjectively, through considering all of these criteria in the implementation of the action itself. More details about the definition and background for each prioritization criterion can be found in Appendix 7a. Both staff and stakeholders were asked to provide input to determine the highest priority conservation actions, according to their effectiveness in addressing specific threats for the species and their habitats, and were given opportunity to provide input at the facilitated workshops, at staff meetings, and later through email and online submission. Workshop participants not only identified and prioritized conservation actions, but also potential partners (either at the workshops or separately) that may be able to assist with implementation. Conservation actions are included at three levels in the SWAP to facilitate implementation: habitat-focused, species-focused, and overarching or broader, statewide actions (Chapter 7).

Numerous state, regional, and national partner conservation plans and assessments were evaluated to gather additional threats and actions. Examples include the 2012 Xerces Guidelines for Creating and Managing Habitat for America's Declining Pollinators, the 2012 Atlantic

Flyway Shorebird Business Strategy, and the Comprehensive Conservation & Management Plan for Maryland's Coastal Bays (2015 – 2025). Although WHS collected additional conservation actions and threats for the SWAP, not all actions from every conservation plan could be included. Instead, WHS compiled an Online Resources document for sources consulted in the threat and action evaluation and also where to look for further information. WHS made a significant effort to include government agency conservation plans and projects that support the conservation and protection of Maryland's SGCN and their habitats in Appendix 9a.

After the workshops, the SWAP Development Team reviewed the identified actions and any other pertinent information collected from the meetings. A list of threats and associated conservation actions was assembled and sent out to all workshop participants for review. This provided another opportunity for stakeholders and staff to provide input into the SWAP revision.

Outreach and Coordination for the 2015 SWAP

As discussed earlier in this Chapter, Maryland Department of Natural Resources (MD DNR) works with a diversity of stakeholders who passionately work to conserve wildlife. The involvement of federal and state agencies, local organizations, academic institutions, citizens, and Native American tribes in the 2005 Maryland State Wildlife Action Plan made the plan successful in terms of having an impact on conservation efforts. MD DNR was determined to build on past successes and bring about an even greater impact with the SWAP 2015 revision. The continued involvement of these organizations and the public in the process encouraged them to provide valuable input (Elements #7 & 8).

Broad public participation is an essential element of developing and implementing the MD SWAP. Outreach and coordination early in the SWAP process focused on informing and engaging partners and the general public, as well as creating an inventory of partners' existing programs. An assortment of outreach techniques and tools were used to maximize coordinated input to the public and to partners in the development of the SWAP Plan; these are summarized below. Examples of some of the tools used in the 2015 SWAP revision can be found in Appendix 9c:

- SWAP website with online comment form and dedicated SWAP email address
- Wide distribution of public participation through email blasts, newsletters, press releases, and social media
- Coverage by local and statewide news media
- Meetings and presentations (outreach materials, fact sheets)
- Personal contact and correspondence
- Stakeholder input workshops.

SWAP website with online comment form and dedicated SWAP email address
A dedicated State Wildlife Action Plan (SWAP) email address and website were created to more effectively disseminate information to a large and diverse audience and to efficiently receive and address public comments. The 2005 SWAP website was updated in January 2015 for use in the revision process. The new site
http://dnr2.maryland.gov/wildlife/Pages/plants_wildlife/SWAP_home.aspx) contains

background information about State Wildlife Action Plans, State Wildlife Grant funding, criteria for SGCN selection, and information about the revision process and public participation. Early on, the first draft SGCN list was placed on the website so stakeholders could be involved early in the review process. An easy-to-use comment form for public input was placed on the site in early February 2015. Portions of the Plan were posted on the website throughout the development process to encourage stakeholders to take the earliest opportunity to review sections, appendices, and required elements. The complete draft of the Plan was posted in mid-February 2016. Written comments were received through the online comment form as well as by email.

Wide distribution of public participation opportunities

To inform and encourage broad public participation, MD DNR widely distributed news and information updates concerning the 2015 SWAP revision. All major updates for Plan revision were posted to the SWAP website so stakeholders could review and understand plan development. These updates were also sent as mass email blasts to numerous outlets, including the list of conservation partners asked to help evaluate SGCN, workshop invitees, Natural Heritage Program *Natural Areas Newsletter* recipients, and the Master Naturalists listserv. The *Natural Areas* newsletter has over 1,650 subscribers, including citizens and conservation partners. The Master Naturalist listserv has over 800 subscribers.

MD DNR issued press releases on SWAP progress throughout the development process. The press releases were sent to a mix of approximately 2,000 opt-in citizen and media subscribers. A monthly MD DNR newsletter is sent to around 25,000 opt-in subscribers (citizens, partners) who also received SWAP development information, including how to provide public comment and contact the SWAP Coordinator. An example press release sent out for Maryland's SWAP is included in Appendix 9c.

MD DNR publishes a quarterly magazine, *The Maryland Natural Resource,* in which an article about the Maryland SWAP was featured in the Spring 2015 edition. The Natural Heritage Program *Natural Areas Newsletter* also featured an article on SWAP in the Spring 2015 edition. The SWAP received coverage across Maryland by local and statewide news media due to the targeted press releases sent to inform the general public about the Plan. The Associated Press ran multiple stories, leading to radio broadcasts and newspapers, such as *The Washington Post*, picking up the information. Examples of public outreach materials are presented in Appendix 9c.

Meetings and presentations

MD DNR and the SWAP Development Team sought out opportunities to present information about the SWAP to a number of audiences. MD DNR presented information about the SWAP, provided information about ways to participate in Plan development and implementation, and handed out factsheets at these opportunities. Some of the meetings and presentations were for citizens with general interests in wildlife conservation (e.g., Maryland/Delaware Chapter of The Wildlife Society, Maryland Commission on Indian Affairs) and some were for current partners wanting to understand more effective ways to manage for wildlife and their habitats (e.g., Quarterly Planners Meeting for the Critical Area Commission, Maryland Ornithological Society Annual Meeting).

Personal contact and correspondence

Throughout the SWAP revision process, the SWAP Development Team engaged in personal contact and correspondence with Wildlife and Heritage Service's many conservation partners, which are described earlier in this Chapter (e.g., Audubon Maryland-District of Columbia, Maryland Bird Conservation Initiative, and National Park Service). These communications included one-on-one meetings, phone calls, and emails regarding input to and implementation of the Plan.

Participants at the stakeholder input workshop for insects
(Lynn Davidson, MD DNR)

Stakeholder input workshops

The six partner workshops, organized by major taxa group, are described in the above section, 'The Process for Developing Threats and Conservation Actions for the 2015 SWAP.' Over 165 partners were invited to these workshops representing over 50 organizations (Table 9.2). These were day-long, facilitated workshops and the SWAP benefitted greatly from the time, energy, and input of the participants.

Table 9.2 Species workshop invitees by organization type

Organization Type	Organization
Mammals	
Academic Institutions	• Frostburg State University • Salisbury University • University of Maryland, College Park • University of Maryland Center for Environmental Science - Appalachian Laboratory
Federal, State, and County Agencies	• MD DNR Cooperative Oxford Laboratory • MD DNR Wildlife and Heritage Service • National Oceanic and Atmospheric Administration • U.S. Fish and Wildlife Service

Organization Type	Organization
Non-Governmental Organizations	• National Aquarium in Baltimore • Susquehannock Wildlife Society
Birds	
Academic Institutions	• Bowie State University • Cornell University, eBird • Frostburg State University • Garrett College • Salisbury University • University of Maryland Center for Environmental Science - Appalachian Laboratory • University of Maryland, College Park • Washington College - Chester River Field Research Station
Federal, State, and County Agencies	• Anne Arundel County Department of Recreation and Parks (Jug Bay Wetlands Sanctuary) • Maryland Department of the Environment • MD DNR Wildlife and Heritage Service • National Oceanic and Atmospheric Administration • Patuxent River Naval Air Station • Smithsonian Migratory Bird Center • U.S. Fish and Wildlife Service • U.S. Fish and Wildlife Service, Blackwater National Wildlife Refuge • U.S. Fish and Wildlife Service, Chesapeake Bay Field Office • U.S. Geological Survey, Patuxent Wildlife Research Center • U.S. Geological Survey, Breeding Bird Survey
Non-Governmental Organizations	• American Bird Conservancy • Audubon Maryland-District of Columbia • Maryland Biodiversity Project • Maryland Bird Conservation Initiative • Maryland Coastal Bays Program • Maryland Ornithological Society • Sierra Club – Maryland Chapter • The Nature Conservancy
Private Industry	• Coastal Resources, Inc. • Delmarva Low Impact Tourism Experiences • Environmental Regulations Consultant, Inc.

Organization Type	Organization
Reptiles and Amphibians	
Academic Institutions	• Salisbury University • Towson University • University of Maryland, College Park • Washington College
Federal, State, and County Agencies	• Calvert County Natural Resources Division • MD DNR Resource Assessment Service • MD DNR Wildlife and Heritage Service • U.S. Geological Survey
Non-Governmental Organizations	• FrogWatch USA • Maryland Herpetological Society • Maryland Coastal Bays Program • Natural History Society of Maryland • Susquehannock Wildlife Society • The National Aquarium in Baltimore
Private Industry	• Coastal Resources, Inc.
Fishes	
Academic Institutions	• Frostburg State University • University of Maryland Center for Environmental Science - Appalachian Laboratory
Federal, State, and County Agencies	• MD DNR Fisheries Service • MD DNR Resources Assessment Service (MD Biological Stream Survey) • Smithsonian Environmental Research Center • U.S. Fish and Wildlife Service
Insects	
Academic Institutions	• Randolph-Macon College • Salisbury University • Towson University • University of Delaware • University of Maryland, College Park
Federal, State, and County Agencies	• MD DNR Resources Assessment Service (MD Biological Stream Survey) • Smithsonian National Museum of Natural History - Entomology • U.S. Department of Energy • U.S. Department of Agriculture, Agricultural Research Service • U.S. Department of Agriculture, Animal and Plant Health Inspection Service

Organization Type	Organization
	• U.S. Geological Survey, Patuxent Wildlife Research Center
Non-Governmental Organizations	• Maryland Biodiversity Project • Maryland Entomological Society • The Natural History Society of Maryland
Private Industry	• Mid-Atlantic Invertebrate Field Studies
Freshwater Mussels	
Federal, State, and County Agencies	• MD DNR Resources Assessment Service (MD Biological Stream Survey) • MD DNR Wildlife and Heritage Service • U.S. Fish and Wildlife Service
Intergovernmental Agencies	• Interstate Commission on the Potomac River Basin

Public Comment Period

Sections and Chapters of Maryland's State Wildlife Action Plan (SWAP) were posted on the MD DNR SWAP webpage throughout the development of the Plan. The entire Maryland SWAP was posted online in mid-February 2016 and the official 30-day public comment period extended from to early April to early May 2016. To announce the public comment period, press releases were sent to the multiple media outlets described above and emails were sent to all conservation partners involved in SWAP development, including workshop participants. For ease of the reviewer, the ten individual chapters were placed in individual PDF documents and the appendices were placed in individual PDFs organized by chapter (i.e., all of the Chapter 3 appendices are in one, single PDF document).

Throughout the process, the SWAP Coordinator reviewed all comments, and those related to specific issues (e.g., individual SGCN, key wildlife habitats) were reviewed by the most suitable SWAP Development Team member to ensure comments were evaluated and assessed fairly and accurately. This SWAP process was designed to include the continued input from all stakeholders (public and partners) and to keep the public informed about State Wildlife Grant projects and results through annual reports, articles, and web site progress reports. During the official 30-day public comment period, an additional 19 comments were received and addressed.

Plan Implementation

Maryland represents an extraordinary ecological crossroads and is unique in its location in the North American landscape. The State Wildlife Action Plan (SWAP) will guide the next 10 years of state-level wildlife conservation to protect these diverse natural resources. Focused and well-planned efforts can lead to healthy animal populations and a healthier environment for Maryland's citizens. Strategic implementation, periodic plan review, and resulting adaptive management make this document a long-term tool for wildlife conservation in Maryland.

Effective implementation of Maryland's SWAP will require many actions, but three basic objectives must be met: 1) participation from partner organizations, 2) prioritization of

conservation actions, and 3) the availability of nongame funding sources over the next decade. The Maryland 2015 SWAP was purposely developed to facilitate the involvement of a broad spectrum of partners, stakeholders, and staff in implementation. Many MD DNR staff were involved in Plan development, including conservation actions that their units, along with partners, will conduct. These staff members and partners also identified and prioritized many of the conservation actions in the SWAP and, therefore, will be more likely to be involved with their implementation.

Not every partner organization could be involved in the action workshops; therefore, '*potential partners for implementation*' were identified for conservation actions by the partners present. Some of the "potential partners" are not currently conducting or leading priority conservation efforts recommended in the MD SWAP. MD DNR will connect with these groups, as appropriate, and discuss possible project implementation. MD DNR will also continue to reach out to current and potential partners of all geographic scales to discuss next steps for implementation of priority actions and plan for future conservation projects. The Wildlife & Heritage Service (WHS), specifically WHS's Natural Heritage Program (NHP), is the entity responsible for coordinating Maryland's SWAP. This program is responsible for the conservation of nongame and endangered species, as well as significant natural communities, and it maintains a statewide database for rare species and natural communities. NHP will be the lead on organizing implementation of the Plan, including meetings and workshops with partners.

An important outcome of this plan will be the integration of SGCN, key wildlife habitats, and priority conservation strategies into MD DNR's plans and those of its many partners as they are being created or revised. This integration effort alone will produce a ripple effect for conservation efforts across the state, providing a consistent and unified approach for conservation of Maryland's wildlife and habitats. Incorporation of SGCN and key wildlife habitats across many MD DNR programs and plans provides a focus for conservation targets for land acquisition and other conservation efforts. Integration of SGCN and key wildlife habitats into the plans and programs of local, state, and federal partner agencies facilitates implementation of these actions by both private and public partners. In accordance with the importance of these partnerships, SWAP revisions will include updates on conservation partners' published wildlife conservation actions and plans, ultimately providing a broad examination of statewide efforts involving Maryland's SGCN and key wildlife habitats.

Conservation partners who helped to review the Plan and who provided input at meetings will have a good understanding of SWAP components and a vested interest in successful implementation. Having adequate funding sources for nongame species management over the next decade will be critical for successful SWAP implementation. Over the last ten years, funding for nongame species conservation in Maryland to MD DNR has declined as annual appropriations of State Wildlife Grants have declined by 21% over the past ten years and by 37.7% since 2002 when MD DNR first started receiving these federal funds. While MD DNR continues to seek out stakeholder support, it will be difficult for NHP to continue to lead wildlife conservation efforts statewide and to adequately implement the SWAP without sufficient funding.

To continue the coordination necessary for the successful implementation of ongoing and new projects related to specific actions within this SWAP, identified partners will be solicited for input and feedback via electronic correspondence and phone conversations, invited to meetings and workshops, and requested to review draft versions of reports and articles, as appropriate. MD DNR will work to re-organize conservation actions so that appropriate audiences can easily understand which are best suited for their organizations (e.g., private land owners, state agencies, NGOs). The actions needing regional participation for implementation will be highlighted for work with other states through existing regional partnerships. Another major task for implementation will be further prioritizing conservation actions for state implementation. For example, prioritization could be completed by assessing collateral benefit and cost of actions, with those actions with high collateral benefit and lower cost given higher priority.

Committing to significant coordination efforts indicates that MD DNR will continue to involve its many conservation partners and interested stakeholders in the SWAP process. The results of performance measures and monitoring described in Chapter 8 will contribute not only to Plan revision, but will provide a focal point for communication about the progress of Plan implementation. Setting up specific, measurable targets to monitor progress toward MD SWAP goals using the adaptive management processes described in Chapter 8 will maintain the SWAP's status as a living, dynamic document, ultimately ensuring that each revision includes the most current scientific and administrative information.

For a regional conservation perspective, a standardized SWAP database developed for the Northeast states will be populated with information from Maryland's SWAP. This will facilitate tracking of existing projects, identification of data gaps, and coordination with regional conservation efforts. Examples of implementing the Maryland SWAP through local and regional partnerships can be found below.

Implementing SWAP through Local Partnerships: Maryland Bird Conservation Initiative
The Maryland Bird Conservation Initiative (MD BCI) was formed in 2014 to better coordinate bird conservation in the state, increase awareness of bird conservation needs, promote and provide access to data on birds in Maryland, and assist with the implementation of SWAP conservation actions for birds. At a meeting of interested partners and taxa experts in April 2015, draft SWAP conservation actions were reviewed, modified as needed, and assigned priorities, in a similar process to that used to review other taxa groups as described in this chapter. Statewide organizations with a focus on birds and their habitats were then asked to submit existing or proposed projects that would address SWAP priority actions. MD BCI also outlined projects that the partnership would work to address. For example, to increase public awareness of bird conservation needs, MD BCI will develop a website with information on SGCN birds and their habitats by working with MD DNR, bird conservation NGOs, and universities. Support for this ongoing effort will largely be through in-kind contributions from these partners. Additional draft projects are listed in Appendix 9d. The process of identifying specific projects, potential partners and their roles, target dates, and funding sources represents an important first step in SWAP implementation.

Implementing SWAP through Regional Partnerships: Atlantic Flyway Shorebird Initiative
For threats and conservation actions that need to be addressed at larger geographic scales, regional partnerships will achieve the most effective and efficient conservation outcomes. The Atlantic Flyway Shorebird Initiative (Initiative) was formed to address the challenging problems that migratory shorebirds face as they move through breeding, migratory stop-over, and wintering areas that can be separated by thousands of miles. Through this partnership, representatives from state and federal agencies, universities, and NGOs from Canada to South America are working together to support the conservation of priority shorebird species. Initially, threats and conservation targets were compiled to identify prioritized, on-the-ground actions that move toward specific, measurable outcomes (Winn et al. 2013). In order to define more specific projects, the Open Standards for the Practice of Conservation process was used to produce a detailed Atlantic Flyway Shorebird Initiative Business Plan. In this process, conceptual models or diagrams relating conservation targets (priority species), threats, and environmental and human factors that affect them were constructed. These models were then used to create results chains, or diagrams that connect desired outcomes to strategies. An example of a results chain relating to the impacts of coastal engineering practices, such as sand mining, dredging, or constructing hardened structures (jetties, seawalls, etc.), is presented in Figure 9.2. Partners in the Initiative have used the results chain approach to identify specific objectives, projects, and measurable goals to address threats to priority temperate and tropical breeding and non-breeding shorebirds, several of which are Maryland SGCN.
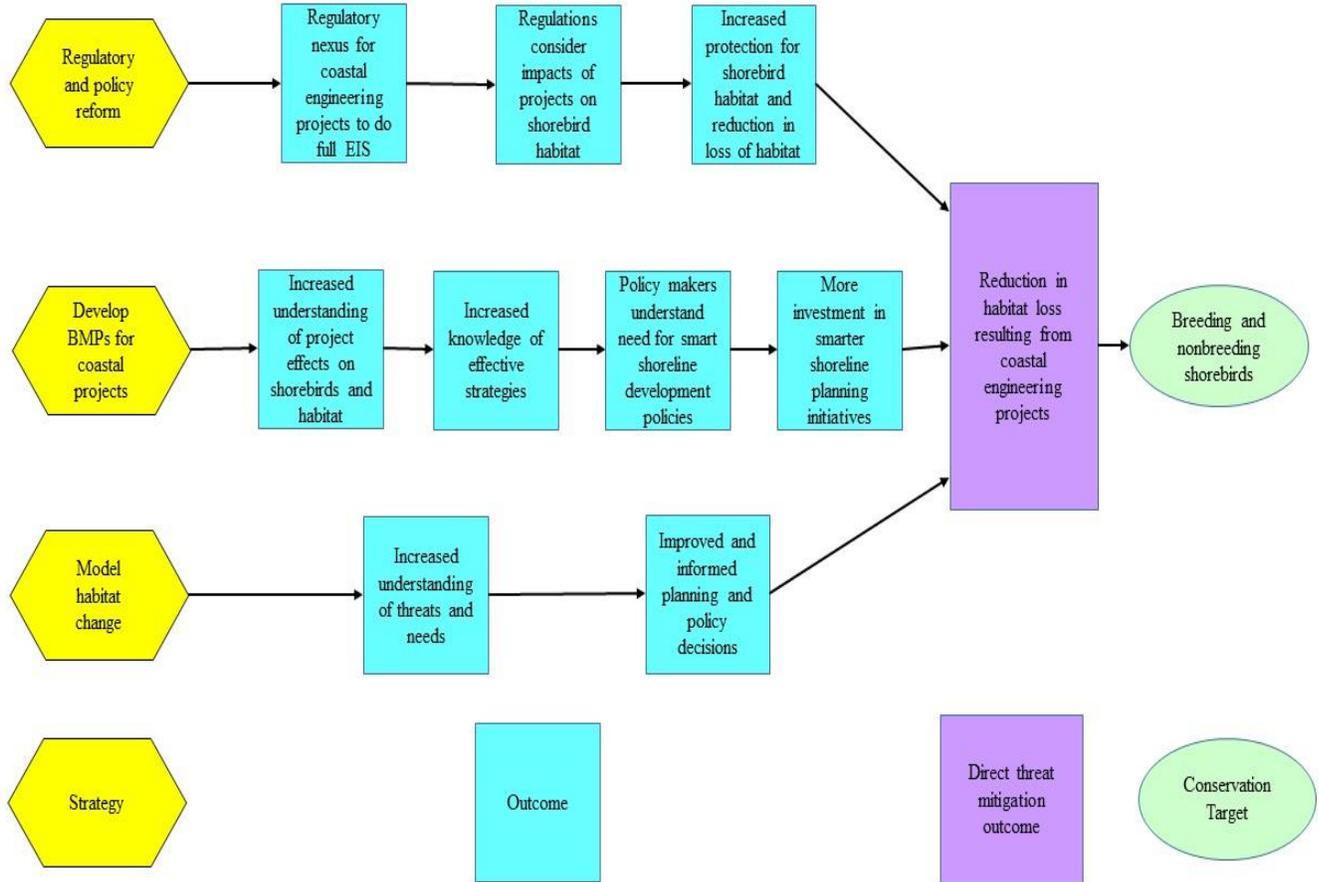
Figure 9.2 Atlantic Flyway Shorebird Initiative diagram (results chain) showing strategies and outcomes to reduce habitat loss for shorebirds from coastal engineering projects.

This chapter provided information pertinent to **Elements #7 and #8** regarding the coordination and participation with partners and the public on SWAP development and implementation. MD DNR's current partners were summarized and more detailed information on the 2015 SWAP development process was presented. Information on plans for implementation of Maryland's SWAP, which heavily relies on partner coordination efforts, was also provided. Chapter 10 covers information on the review and revision of the next State Wildlife Action Plan in 2025 (**Element #6**) and also provides information on the successful implementation of the 2005 SWAP through State Wildlife Grant project summaries.

Citations and Sources

AFWA. 2012. Best Practices for State Wildlife Action Plans: Voluntary Guidance to States for Revision and Implementation. Teaming With Wildlife Committee's State Wildlife Action Plan (SWAP) Best Practices Working Group. November 2012. Available online from http://www.fishwildlife.org/files/SWAPBestPractices.pdf (accessed October 2015).

Terwilliger Consulting, Inc., and the Northeast Fish and Wildlife Diversity Technical Committee. 2013. Taking action together: Northeast regional synthesis for State Wildlife Action Plans. A report submitted to the Northeast Fish and Wildlife Diversity Committee, Locustville, Virginia.

Maryland Commission on Indian Affairs. 2014. Governor's commission on Indian affairs annual report. Baltimore, Maryland.

Crisfield, E., and the Northeast Fish and Wildlife Diversity Technical Committee. 2013. The Northeast lexicon: Terminology conventions and data framework for State Wildlife Action Plans in the Northeast region. A report submitted to the Northeast Fish and Wildlife Diversity Committee. Terwilliger Consulting Inc., Locustville, Virginia.

United States Department of Commerce. 2012. 2010 Census of Population and Housing. Washington, District of Columbia. Available from www.census.gov/prod/www/decennial.html (accessed April 2016).

Winn, B., S. Brown, C. Spiegel, D. Reynolds, and S. Johnston. 2013. Atlantic Flyway shorebird conservation business strategy phase I. Manomet Center for Conservation Sciences, Manomet, Massachusetts and U.S. Fish and Wildlife Service, Hadley, Massachusetts.