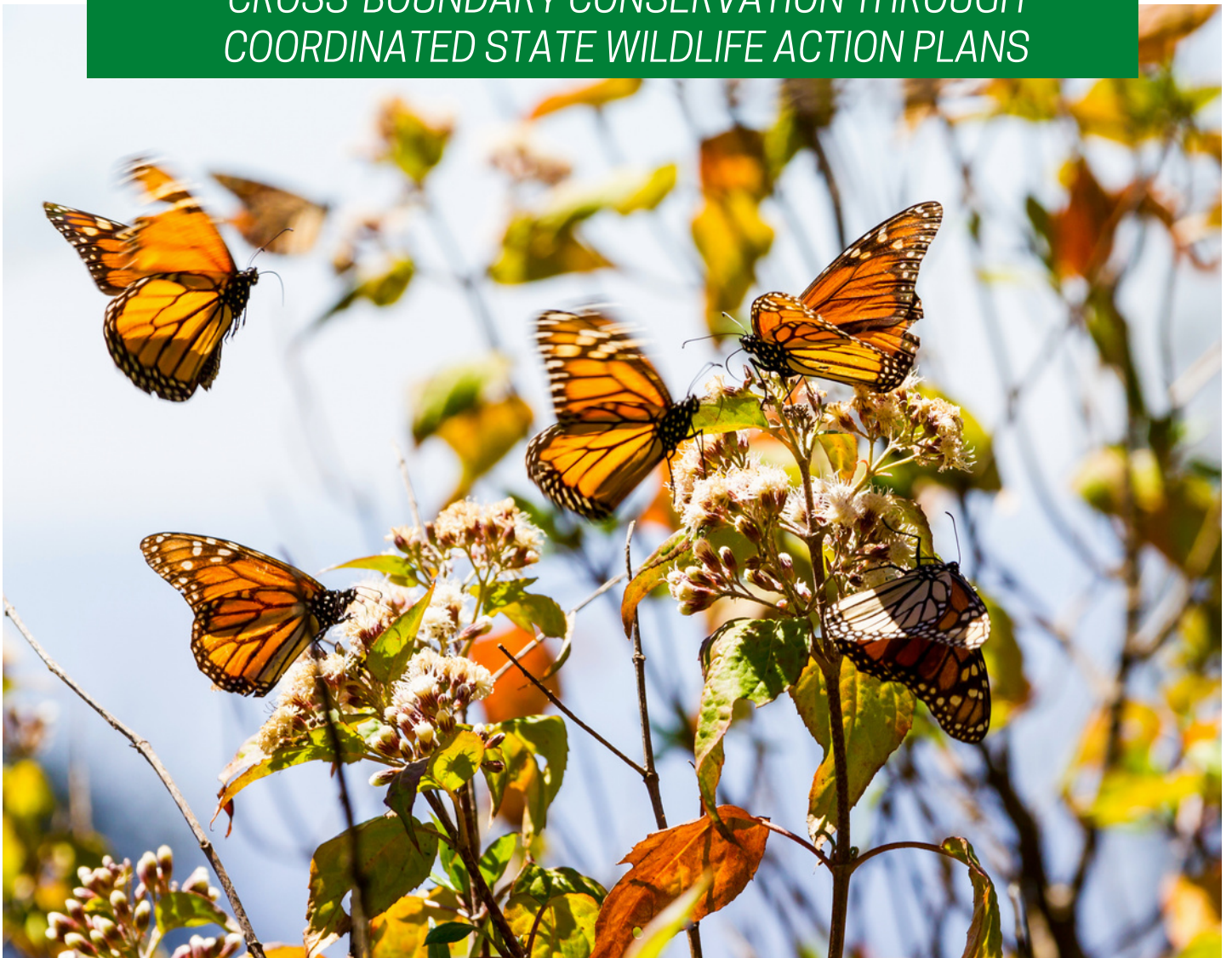




ASSOCIATION of
FISH & WILDLIFE
AGENCIES

LEADING AT-RISK FISH & WILDLIFE CONSERVATION

*A FRAMEWORK TO ENHANCE LANDSCAPE-SCALE AND
CROSS-BOUNDARY CONSERVATION THROUGH
COORDINATED STATE WILDLIFE ACTION PLANS*



A report from the AFWA State Wildlife Action Plan &
Landscape Conservation Work Group

September 2021

TABLE OF CONTENTS

01.	Work Group Members.....	3
02.	Executive Summary.....	4
03.	Introduction.....	7
04.	Vision, Guiding Principles, and Recommended Actions.....	12
05.	A Focus on Implementation: Building a Framework for Success.....	18
06.	Conclusion.....	22
07.	Literature Cited.....	23
08.	Appendix.....	24

WORK GROUP MEMBERS

Executive Leadership: Sara Parker Pauley, Missouri Department of Conservation; Dr. Deb Rocque, U.S. Fish and Wildlife Service

Coordinating Team: Jon Regosin, Massachusetts Division of Fisheries and Wildlife (Chair); Norman Murray, Missouri Department of Conservation (Vice Chair); Elsa Haubold, U.S. Fish and Wildlife Service; Mark Humpert, Association of Fish and Wildlife Agencies

Members: Jenny Dickson, Connecticut Department of Energy and Environmental Protection; Cathy Haffner, Pennsylvania Game Commission; Jon Ambrose, Georgia Wildlife Resources Division, Greg Wathen, Tennessee Wildlife Resource Agency (Retired); Kate Parsons, Ohio Department of Natural Resources; Katy Reeder, Iowa Department of Natural Resources; Jen Newmark, Nevada Department of Wildlife; Rex Sallabanks, Idaho Department of Fish and Game; Paul VanRyzin, U.S. Fish and Wildlife Service; Melanie Steinkamp, U.S. Geological Survey; Janet Cushing, U.S. Geological Survey; Emily Weidner, U.S. Forest Service; Sherri Wormstead, U.S. Forest Service; John Kanter, National Wildlife Federation; Mark Anderson, The Nature Conservancy; Healy Hamilton, NatureServe

Work Group Charge: Review the eight required elements and best practices for State Wildlife Action Plans and make recommendations on how the plans can better guide and/or contribute to regional and/or national landscape conservation to help ensure future generations of plans are even more effective, accessible, and relevant to agencies to partners.

Acknowledgments: We extend our appreciation to the following who reviewed an earlier draft of this report: Michael Adams; Owen Boyle, Wisconsin DNR; Jillian Cohen, USFWS; Ernest Cook, Network for Landscape Conservation; Diana Day, Pennsylvania Fish and Boat Commission; Rita Dixon, Idaho Department of Fish and Game; Ken Elowe, Private Consultant; Bob Ford, USFWS; Rafael Gonzalez; Kathy Hollar, USFWS; Kurt Kuklinski, Oklahoma Department of Wildlife Conservation; Mallory Martin, USFWS; Russ Mason, Michigan DNR; John Morse; Ginny Seamster, New Mexico Department of Fish and Game; Anna Smith, South Carolina DNR; Leona Svancara, Idaho Department of Fish and Game; Stephanie Potter, USFWS. Jake Glass from the Office of Management and Budget also provided helpful feedback.

Layout and Design: Patricia Allen, AFWA

Photo Credits: Missouri Department of Conservation (pg 3, 19); Utah Department of Wildlife (pg 5, 12); Florida Fish & Wildlife Commission (pg 6, 9); Kerry Wixted (pg 7); Nebraska Game & Parks Commission (pg 11); Pennsylvania Fish & Boat Commission (pg 14); Vermont Fish & Wildlife Department (pg 20); Texas Parks & Wildlife Department (pg 21)

Suggested Citation: Association of Fish and Wildlife Agencies. 2021. Leading At-risk Fish and Wildlife Conservation: A Framework to Enhance Landscape-Scale and Cross-Boundary Conservation through Coordinated State Wildlife Action Plans. A report from the AFWA State Wildlife Action Plan and Landscape Conservation Work Group to the AFWA Wildlife Diversity Conservation and Funding Committee. Washington, D.C. 29 pages.



EXECUTIVE SUMMARY

Effective conservation of fish and wildlife and the habitats upon which they depend, requires a bold vision and landscape-centered approach. At-risk fish and wildlife populations, and the natural processes and life cycles that sustain them, span political subdivisions, requiring coordinated conservation and science to address threats and prevent endangerment. Coordination and collaboration with partners across jurisdictions and over entire landscapes is imperative for effective conservation and is essential to efficient use of limited resources.

Twenty years ago, Congress created the State & Tribal Wildlife Grants program that put in motion the development of comprehensive wildlife conservation strategies, otherwise known as State Wildlife Action Plans (SWAPs). When the first generation of these plans was completed in 2005, it marked a historic milestone for state-based fish and wildlife conservation. In 2018, the Association of Fish and Wildlife Agencies (AFWA) adopted a resolution on landscape conservation and in 2020, the AFWA President's Task Force on Shared Science & Landscape Conservation Priorities recommended that a work group be convened to develop recommendations on how SWAPs can become even more effective at improving range-wide conservation of Species of Greatest Conservation Need by leading or contributing to regional and/or national landscape conservation priorities. This report contains recommendations from the SWAP and Landscape Conservation Work Group (Work Group), in fulfillment of the Task Force recommendation.



A core component of these recommendations is the adoption of the following *Guiding Principles* (GPs) for SWAPs and landscape conservation:

1. **Identify and apply regional and shared approaches** for development, implementation and measuring progress of SWAPs, to improve effectiveness, efficiency, cost-savings, and consistency;
2. **Increase consistency and alignment of SWAPs across jurisdictions** so conservation can more readily be implemented at biologically relevant scales;
3. **Provide support and incentives to leverage and build capacity** for cross-jurisdictional and landscape conservation;
4. **Ensure SWAPs are developed and implemented collaboratively and in partnership with a diverse set of partners;** and
5. **Make SWAPs more accessible, understandable, and relevant to broad constituencies.**

Specific *Recommended Actions* and associated outcomes are provided for each GP to guide implementation. These actions are intended to support collaboration on tools and processes to enable agencies and diverse partners to better align around the shared purpose of proactively conserving native species and the habitats and landscapes upon which they depend.

While the recommendations contained within this report are voluntary, and do not alter the criteria that the U.S. Fish and Wildlife Service uses to review and approve SWAPs, the report provides a *recommended implementation framework* with next steps to help foster innovation, build capacity, operationalize recommended actions, and track progress. This includes a recommendation that state fish and wildlife agencies, individually and collectively, commit to working together to fully implement this framework, as reflected in a proposed AFWA resolution (Appendix 1).





The Work Group makes the following recommendations:

- Adopt the Guiding Principles and Work Group Report recommendations through an AFWA resolution on SWAPs and landscape conservation.
- Establish an AFWA SWAP subcommittee under the Wildlife Diversity Conservation and Funding Committee, or similar work group, to support implementation of the recommended actions, track progress, and coordinate with the regional fish and wildlife agency associations.
- Request that regional fish and wildlife agency associations form regional implementation teams, or use existing Committee charges, to build upon ongoing efforts to develop regional tools, support learning, and build capacity to support landscape-scale efforts within and across jurisdictions.
- Request that AFWA staff explore options for incentivizing and supporting cross-jurisdictional and cross-organizational work on SWAPs to support landscape conservation (e.g., improvements to grants, technical assistance) and report back to the AFWA Executive Committee.
- Seek resources to hire a national coordinator to support implementation of the recommendations in this report, serve as a liaison to the states and regional fish and wildlife associations, and develop new partnerships with the governmental and private sectors.

The Recovering America's Wildlife Act (RAWA) would dedicate roughly \$1.4 billion annually to support proactive, voluntary efforts led by the states, territories, and tribal nations to prevent vulnerable wildlife from becoming endangered or extinct. The recommendations in this report are intended to help ensure state and territorial fish and wildlife agencies are ready for RAWA implementation.

INTRODUCTION

Effective conservation planning and implementation takes place at a scale that is appropriate for the conservation goals to be achieved (Trombulak & Baldwin 2010). It has long been recognized that landscape conservation is needed because most fish and wildlife species occur and complete their life requirements in ecological systems that cross administrative boundaries (AFWA 2018). Furthermore, efforts to sustain the ecological processes, ecosystem services, climate resilience, and climate mitigation functions that are important for people and wildlife alike must consider larger geographic scales (Network for Landscape Conservation 2018).

Since 2005, State Wildlife Actions Plans (SWAPs) have guided state, territorial, and District of Columbia fish and wildlife agencies' efforts to identify the species and habitats of greatest conservation need, key threats, and conservation actions needed to prevent and spur recovery of endangered and threatened species. When Congress created the State and Tribal Wildlife Grants Program (STWG) (PL 107-63), it mandated that state fish and wildlife agencies develop a comprehensive wildlife conservation plan – now known as a State Wildlife Action Plan - consistent with criteria described in authorizing language for the Wildlife Conservation and Restoration Program (PL 106-553). A Federal Register notice published by the U.S. Fish and Wildlife Service (FWS) on January 24, 2001 (66 FR 7657) enumerated and formalized the eight required elements of the Plans, which enabled the states, territories, and



District of Columbia to access federal funds under both programs. In 2012, AFWA developed Best Practices for SWAPs to provide additional guidance on plan content and encourage greater consistency across plans (AFWA 2012).

Our biodiversity is in crisis. According to the National Wildlife Federation's 2018 report, Reversing America's Wildlife Crisis, one third of species in the U.S. are vulnerable and one in five species are at high risk of extinction. Furthermore, according to the North American Bird Conservation Initiative's 2019 State of the Birds Report, an estimated 3 billion birds have been lost since 1970. Over 1,600 species are currently on the federal Endangered Species Act List and over 12,000 species of greatest conservation need have been identified in State Wildlife Action Plans. Habitat loss, invasive species and other stressors are being compounded by climate change, painting a bleak future for our nation's fish and wildlife unless urgent action is taken.

A traditional species approach to reverse this crisis would be untenable, so the need for working at landscape scales is greater now than ever. Recognizing that SWAPs have collectively identified over 12,000 species of greatest conservation need, the Blue Ribbon Panel on Sustaining America's Diverse Fish and Wildlife Resources highlighted the critical and urgent need to significantly increase funding for SWAP implementation aimed at proactively preventing fish and wildlife from becoming endangered. The Recovering America's Wildlife Act (RAWA) introduced in both chambers of Congress would meet this need by dedicating roughly \$1.4 billion annually to the states, territories, and tribal nations to support proactive actions to prevent vulnerable wildlife from becoming endangered.

AFWA has recognized that a landscape-scale approach, cross-jurisdictional coordination, and collaboration are essential to meeting the conservation challenges identified by SWAPs and the Blue Ribbon Panel (AFWA 2012, 2018). In 2018, AFWA adopted a resolution (2018-06-07) on landscape conservation that among other things "acknowledged the importance of collaborating at landscape scales to help fish and wildlife agencies meet their statutory and regulatory responsibilities to conserve fish and wildlife and their habitats." Recognizing the conservation imperative for state fish and wildlife agencies and their partners to coordinate conservation actions at the scale required to meet challenges and range-wide needs of species, the Association of Fish and Wildlife Agencies established a "President's Task Force on Shared Science & Landscape Conservation Priorities." The Task Force made the following recommendations, the last of which is the subject of this report:

1. Establish shared national science priorities for fish and wildlife conservation and management
2. Strengthen regional science-based conservation partnerships
3. [Use] State Wildlife Action Plans (SWAPs) as a Framework for Regional Coordination and Collaboration (AFWA 2020).

Acknowledging the critical role SWAPs will play in RAWA implementation and building upon the work of the President's Task Force, the President of AFWA established the SWAP and Landscape Conservation Work Group (Work Group) in September 2020 and charged it with reviewing the eight required elements and best practices for SWAP and developing recommendations that will help SWAPs better lead and contribute to landscape conservation. The full recommendation from the President's task force is shown in Sidebar 1.



Sidebar 1: The full text of recommendation #3 in the AFWA President's Task Force on Science and Landscape Conservation Priorities.

State Wildlife Action Plans as a Framework for Regional Coordination and Collaboration

In recognition of the ever-changing nature of wildlife and habitat conservation, we recommend that AFWA convene a diverse work group to assess and develop recommendations on how SWAPs can improve range-wide conservation of SGCN and contribute to regional and/or national landscape conservation priorities. These recommendations would help ensure the next generation of SWAPs are even more effective, accessible, and relevant to agencies, partners, stakeholders and others involved in conservation of fish and wildlife. Specifically, we recommend that AFWA:

1. Review the eight required elements for SWAPs and Best Practices for State Wildlife Action Plans: Voluntary Guidance to States for Revision and Implementation (November 2012) and make recommendations that would improve their ability to take on regional and landscape conservation challenges.
2. Identify and promote the use of methods or best practices to overcome barriers to multijurisdictional, multi-sectoral landscape collaboration, including inconsistent terminologies, data standards, geospatial products and tools, and organizational barriers.
3. Recommend steps to assure that SWAPs can better meet the needs of partners and are accessible to landscape conservation practitioners so that strategies to conserve SGCN are relevant and integrated into broader conservation efforts.
4. Identify tools or models that foster development of regionally integrated SWAPs, including approaches such as identification of regional priorities, increased consistency, geospatial tools, and grants programs, that might support implementation of integrated plans.

The Work Group developed a vision statement for SWAPs and identified five Guiding Principles (GPs) for development and implementation of SWAPs in a landscape context. A list of Recommended Actions (RA) and expected outcomes were identified for each GP (Tables 1-5 and Appendix 2). For example, under GP1 regarding identifying and applying shared approaches, states within an AFWA region would seek to work together with partners to identify species, habitats, landscapes, threats, and conservation actions that are priorities for regional conservation and that positively contribute to state fish and wildlife conservation goals (RA1.1). Taking this action will facilitate other actions to increase alignment of SWAPs across jurisdictions and enhance the ability to implement SWAPs at biologically relevant scales (GP2). The work of developing shared approaches is a significant undertaking that will benefit from actions to provide support and incentives to leverage and build capacity (GP3).

In keeping with the Work Group charge, the GPs and recommended actions are linked back to the SWAP eight required elements (Appendix 3). The general language of the eight elements is open to broad interpretation and this can result in inconsistencies among SWAPs that make it harder to use the SWAP framework for cross-jurisdictional landscape conservation. GPs 1 and 2 are designed to address this short-coming by calling upon state fish and wildlife agencies and their regional associations to voluntarily commit themselves to working collaboratively and with partners to develop and identify shared tools and shared priorities (GP1), to incorporate these into SWAP revisions, and to implement collaborative, cross-jurisdictional landscape conservation when called for to address specific conservation challenges (GP2). This will lead to greater alignment among SWAPs and more consistent application of the eight elements.

Finally, a recommended implementation framework with tangible next steps is provided to help foster innovation, build capacity, incentivize states and partners to work collaboratively to achieve landscape conservation goals and priorities, operationalize recommended actions, and track progress. Although the recommendations contained in this report are voluntary and do not alter the criteria that the USFWS uses to review and approve SWAPs, the report asks state fish and wildlife agency directors and their staff to commit to working together to implement the report recommendations. The participants in the working group had diverse, sometimes conflicting, ideas about recommendations to put forward. The recommendations herein were shaped around areas where the working group could largely achieve consensus. The remainder of this report describes the four components—vision, guiding principles, recommended actions, and implementation—which collectively provide a framework for strengthening SWAPs and enhancing their ability to guide and contribute to landscape conservation and cross-jurisdictional conservation.

What is Landscape Conservation?

Although the establishment of national parks and other conservation lands during the late 19th and early 20th centuries was an important accomplishment, rapid population growth and technological advances during the 1900's led to expansions of road networks and sprawling patterns of development. This was accompanied by improved scientific understanding of the need for habitat connectivity and intact ecosystems processes to sustain wildlife populations. In this context, conservation planning started to shift from consideration of individual conservation areas or sites to larger landscapes that people, animals, air, and water inhabit and move through (Trombulak & Baldwin 2010). Thus, a landscape is a mosaic of land uses and landforms that is large enough to sustain target wildlife populations. The scale and size of landscape conservation efforts may vary considerably depending on the wildlife species that are prioritized, considerations of ecosystem processes and climate resilience, conservation opportunity, community partners and other factors. Although a precise scale is not defined, this larger landscape approach, by its nature, is likely to cross jurisdictions such as state boundaries, and involve multiple, diverse stakeholders. Therefore, another defining feature of landscape conservation is the collaborative, community-focused nature of the work, involving meaningful multi-sector stakeholder engagement (NLC 2018; AFWA 2018). Because people, associated land uses, and other human influences are often an integral part of the landscapes where conservation is or must take place-collaborative governance, with long-term engagement with diverse stakeholders is essential. Finally, the term landscape conservation can be applied to range-wide conservation planning for specific fish and wildlife species, accounting for the full array of life cycle functions (e.g. breeding, migration) across the range.



VISION, GUIDING PRINCIPLES, AND RECOMMENDED ACTIONS

The Work Group crafted the following vision statement for SWAPs: **Agencies and diverse partners align around a shared purpose and approach to proactively conserve native species and the habitats and landscapes on which they depend** (regional and shared approaches). Although SWAP required element seven addresses the need to coordinate with partners, the vision statement emphasizes the desire to bring diverse partners together to support a shared purpose and common approach to at-risk species conservation.

Guiding Principle 1

Since species ranges, habitats, landscapes, and ecosystem processes occur at large spatial scales, effective conservation planning and implementation requires collaboration across jurisdictions such as state boundaries. Therefore, it is important for state fish and wildlife agencies and their partners to **identify and apply regional or shared approaches** for development, implementation, and measuring progress of SWAPs to improve effectiveness, efficiency, cost-savings, and consistency to make the most of limited resources needed to conserve native species and their habitats (GP 1, Table 1). For example, three regional fish and wildlife associations are already collaborating to identify shared regional species of greatest conservation need that are a priority for regional-scale conservation. States and partners can also work together to identify shared habitat and landscape priorities for regional conservation, and to prioritize threats and conservation actions for coordinated and collaborative conservation implementation. Cross-jurisdictional collaboration to develop shared science is also important and cost-effective. Examples include protocols for the monitoring of specific SGCN, and shared best practices for the management of specific habitat types that have been identified as priorities for regional or national landscape scale conservation (e.g., mid-western prairies). This approach will allow for population trends to be monitored at meaningful spatial scales (i.e., across regions and species ranges) and in time to support species management decisions that keep species from needing additional protection, thereby, saving time and money.

Table 1 provides the list of recommended actions for GP 1. In summary this GP forms the basis for identifying cross-jurisdictional and regional priorities for conservation and shared science, and for developing consistent metrics and reporting tools to evaluate conservation effectiveness. Regional fish and wildlife associations are the recommended “umbrella” for coordinating these efforts, recognizing that the approaches will need to be adapted to meet individual needs of each region (AFWA 2020). Three of the regional associations include Canadian provinces so

transnational coordination on landscape scale tool development and implementation are also important. Although Canada does not have provincial plans akin to SWAPs, its Species at Risk Act is one part of a three-part Government of Canada strategy for the protection of wildlife species that are at-risk. Both the Landscape Conservation Collaboration White Paper (AFWA 2018) and SWAP Best Practices (AFWA 2012) identify success stories for interstate collaboration, often spearheaded through the regional associations (See Ongoing Regional Efforts). The Work Group proposes to support, incentivize, expand upon, and strengthen these types of collaborations, and encourage increased collaboration with partners in the development and implementation of these shared approaches.

Table 1. Guiding Principle 1, Recommended Actions and Expected Outcomes

Guiding Principle 1: Identify and apply regional and shared approaches for development, implementation and measuring progress of SWAPs, to improve effectiveness, efficiency, cost-savings, and consistency (Elements 5, 7)

Recommended Actions	Expected Outcomes
1.1 Using clear and consistent criteria, identify priority species, habitats, landscapes, threats, and conservation actions for regional conservation.	Improved conservation through stronger relationships among conservation practitioners at regional scales.
1.2 Develop and use a common lexicon and classification system for species, habitats, threats, and conservation actions.	Less competition for resources in priority habitats because multiple partners rally around shared goals leading to more success in these priority landscapes.
1.3 Develop and refine best practices for habitat and population restoration and management.	Increased ability to work efficiently across state boundaries to accomplish species conservation.
1.4 Promote the development of shared science, data, research, and monitoring protocols.	
1.5 Use consistent metrics and reporting tools to evaluate conservation effectiveness.	

Vision for SWAPs

Agencies and diverse partners align around a shared purpose and approach to proactively conserve native species and the habitats and landscapes on which they depend

Guiding Principle 2

By incorporating the shared approaches, priorities, and products developed pursuant to GP1 into SWAP revisions and implementation, we will **increase consistency and alignment of SWAPs across jurisdictions** so conservation can more readily be implemented at biologically relevant scales (GP 2, Table 2). The specific recommended actions include incorporating regional priorities into SWAPs, working at landscape and regional scales when necessary to address key threats such as climate change and habitat fragmentation, and using adaptive management, best available science, and shared learning to keep pace with changing conditions and innovations (see footnote 1). A key theme of GP2 is working collaboratively across jurisdictions to identify, conserve and protect the shared species, habitat and landscape priorities identified pursuant to GP1.

Table 2. Guiding Principle 2, Recommended Actions and Expected Outcomes

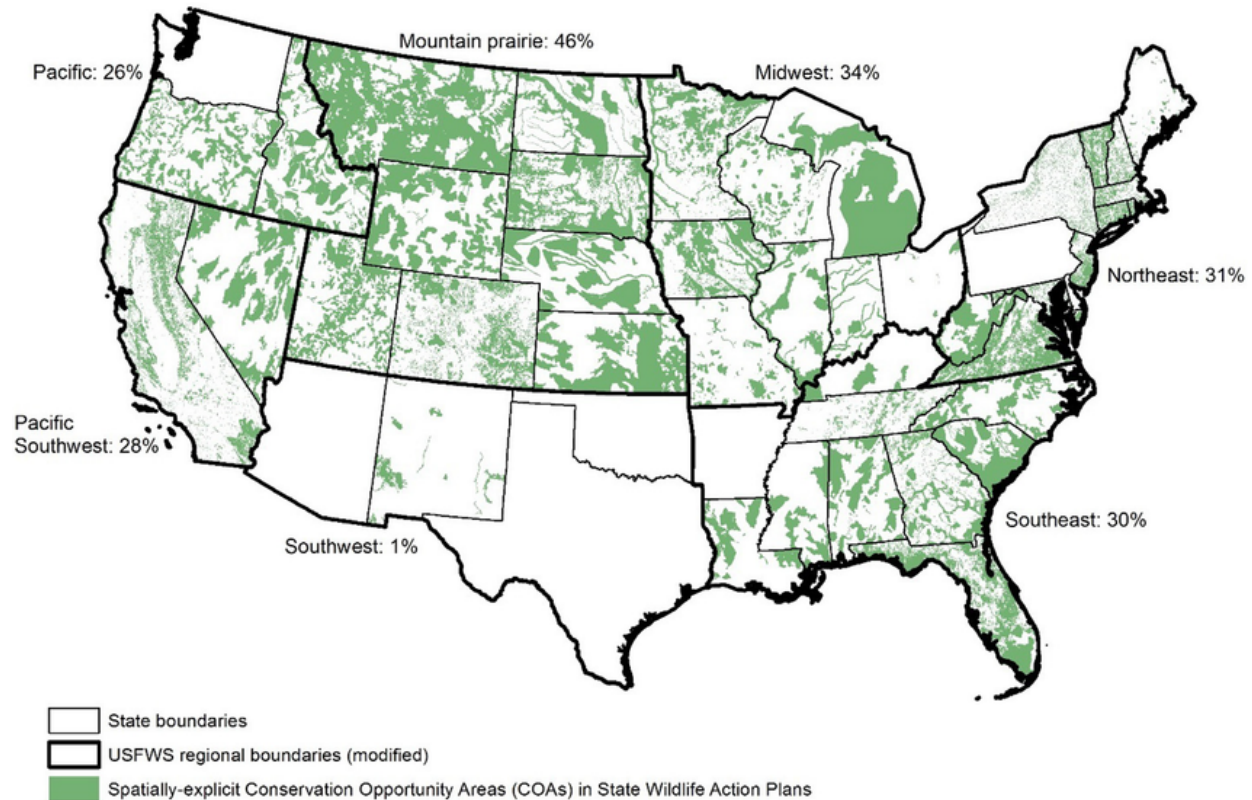
Guiding Principle 2: Increase consistency and alignment of SWAPs across jurisdictions so conservation can more readily be implemented at biologically relevant scales (Elements 1-8)

Recommended Actions	Expected Outcomes
2.1 Incorporate regional priorities and approaches into SWAP development and implementation (see Guiding Principle 1).	Improve the ability of SWAPs to be implemented at multiple scales and be rolled up and used regionally.
2.2 Work at landscape and regional scales to address key threats such as climate change, habitat loss/fragmentation, and invasive species.	Biodiversity conservation is accomplished at ecologically-meaningful scales (rather than fragmented within administrative boundaries).
2.3 Promote the use of adaptive management, best available science, and shared learning so the plans keep pace with changing conditions and innovations.	Fewer imperiled species, more recovered species, and more species are thriving.



¹ The phrase “at biologically relevant scales” is included to acknowledge that sometimes conservation objectives can be accomplished at the site or small landscape scales and that larger landscape initiatives and species-specific range-wide efforts should be undertaken strategically.

Inset: Although most states mapped Conservation Opportunity Areas in their SWAPs, each state used their own criteria to designate these areas. The percent land designated as a priority ranged from 1% in the southwest to 46% in the mountain prairie region. Source Carter, S.K. *Landscape and Urban Planning* 185 (2019) 237–245.



Guiding Principle 3

GP3 focuses on the need to provide support and incentives to leverage and build capacity for cross-jurisdictional and landscape conservation (Table 3). Implementing the guiding principles will require a high level of coordination among states and partners, requiring a significant commitment of time and resources. Although pooling resources to develop shared approaches such as standardized monitoring protocols (GP1) can save time and money, we cannot rely on efficiency gains alone to drive efforts to enhance the ability of SWAPs to advance landscape conservation. Experience has demonstrated the importance of adequate resources when working across jurisdictions. Successful adoption of each guiding principle will require increased support and incentives to build needed capacity.

Specific recommended actions related to increased funding, technical assistance, and grant incentives are shown in Table 3. Examples include lowering grant match requirements for implementation of landscape-level or cross-jurisdictional conservation and providing additional funding to states in regions like the Northeast that pool a portion of their State & Tribe Wildlife Grant (STWG) apportionments for regional efforts. Recommended actions also include creating a subcommittee or work group to facilitate national and regional collaboration on SWAPs and staffing support such as a national coordinator (recommended action 3.4). There are a number of existing efforts already underway that can be enhanced and built upon.

Table 3. Guiding Principle 3, Recommended Actions and Expected Outcomes

Guiding Principle 3: Provide support and incentives to leverage and build capacity for cross-jurisdictional and landscape conservation (Elements 1-8)

Recommended Actions	Expected Outcomes
3.1 Provide funding and support for regional tool development, shared science, and landscape conservation projects.	Needed financial, coordination, and technical resources are available to work across state boundaries and organizations in implementing SWAPs to accomplish landscape-scale conservation.
3.2 Provide consistent training, technical assistance, guidance, meeting management, and other support to facilitate partner engagement.	
3.3 Explore options for sharing resources, leveraging partnership contributions, and engaging non-traditional partners as well as options to lower grant match requirements and develop other incentives to encourage regional collaboration.	
3.4 Create a subcommittee or work group and acquire resources, including a coordinator, to facilitate national and regional collaboration on SWAPs.	

Guiding Principle 4

GPs 4 and 5 recognize that effective landscape conservation is an inherently collaborative process that involves bringing together diverse stakeholders, including conservation professionals, government agencies including inter-agency collaboration with sister state agencies, landowners, communities, and others whose livelihoods are tied to a given landscape. For example, recommended actions include engaging partners early in the SWAP revision process through a participatory process and maintaining involvement during implementation (Table 4). Finally, where practical and appropriate, scalable goals or strategies from other planning efforts should be incorporated into SWAPs and goals in a state’s SWAP can be scaled up to regional goals. Examples might include State Forest Action Plans and State Comprehensive Outdoor Recreation Plans (Table 4).

Table 4. Guiding Principle 4, Recommended Actions and Expected Outcomes

Guiding Principle 4: Ensure SWAPs are developed and implemented collaboratively and in partnership with a diverse set of partners (Element 7)

Recommended Actions	Expected Outcomes
4.1 Increase collaboration and involvement of local, regional and national partners in the development and implementation of SWAPs, including cross-jurisdictional efforts.	Improve how partners participate, perceive, and use the SWAPs.
4.2 Develop partnerships early on and revisit them as often as necessary to promote ownership and buy-in, maintain positive, supportive relationships, and ensure that SWAPs are state plans rather than state agency plans.	Shared priorities allow partners to promote and use SWAPs to guide their conservation work.
4.3 Strive to involve broad constituencies in the development and implementation of SWAPs and engage a diversity of partners so that SWAPs reflect the shared priorities of state, local, and regional partners.	Collaborative implementation of shared priorities leads to more resources and landscape conservation accomplishments.
4.4 Incorporate scalable goals/strategies and priority landscapes from other planning efforts into SWAPs (i.e. State Forest Action Plans, State Comprehensive Outdoor Recreation Plans, National Fish Habitat Plan, North American Waterfowl Management Plan, TNC Ecoregional Plans, etc.).	Improvement in trust and collaboration with partners.

Guiding Principle 5

Finally, the Work Group framework provides recommendations to make SWAPs more accessible and relevant to broad constituencies (GP5). Most SWAPs contain copious amounts of biological information that can limit their use. SWAPs can be made more accessible by making them web-based, easily searchable, and by creating targeted non-technical communication products for specific user groups. As successful implementation of landscape conservation will require community participation and support, it is critical to engage community and organizational leaders in the development and implementation of SWAPs in the landscapes where they live or work. The full list of recommended actions is provided in Table 5.

Table 5. Guiding Principle 5, Recommended Actions and Expected Outcomes

Guiding Principle 5: Make SWAPs more accessible, understandable, and relevant to broad constituencies (Elements 7-8)

Recommended Actions	Expected Outcomes
5.1 Make SWAPs more accessible and user-friendly to both technical and general audiences by making them web-based, easily searchable, and by creating targeted products for specific users.	SWAPs are more widely embraced and used by diverse audiences as the state and regional plan for species and landscape conservation.
5.2 Improve communication and marketing to ensure SWAPs and related landscape conservation efforts are valued as an important tool for conserving biodiversity.	
5.3 Engage community members and organizational leaders in the development and implementation of SWAPs in the landscapes where they live.	

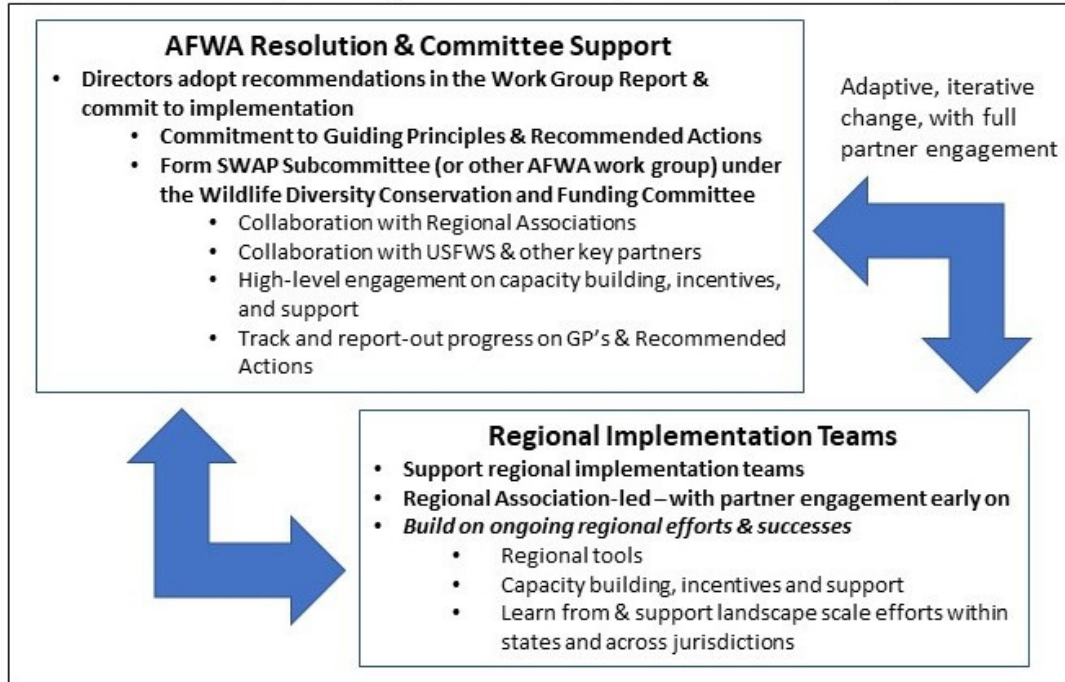
A Focus on Implementation: Building a Framework for Success

Many of the concepts and recommended actions in this report are not new. The AFWA Landscape Conservation Collaboration white paper, the AFWA President's Task Force report, and the SWAP Best Practices document contain similar themes and recommendations. This report distills key content into a relatively concise and actionable format. This section focuses on identifying next steps to support and incentivize implementation of these recommendations, build capacity, and foster collaboration. A key strategy is to support and build upon the work that the regional fish and wildlife associations and their partners are already undertaking to support improvements to SWAP and to work across jurisdictions (see Ongoing Regional Efforts). One mechanism for doing this is to provide capacity at the national level (AFWA) and within the regional fish and wildlife associations to support implementation of the framework and to track progress.

The proposed implementation framework (Figure 1) is below. It will be up to each regional fish and wildlife association to decide whether and how to implement the framework, noting that several regional fish and wildlife associations already have committee structures or processes in place that are facilitating some of this work. Although the recommendations contained in this report are voluntary and do not alter the criteria that the USFWS uses to review and approve SWAPs, the report asks state fish and wildlife agency directors and their agencies to commit to working

together to implement the report recommendations. This will require a long-term commitment to collaborate on development of regional tools and approaches, and to implement landscape scale conservation initiatives at a variety of locations and scales with participation and engagement from a diversity of partners.

Figure 1. Framework for implementing the SWAP and Landscape Conservation Work Group recommendations



The Work Group makes the following recommendations:

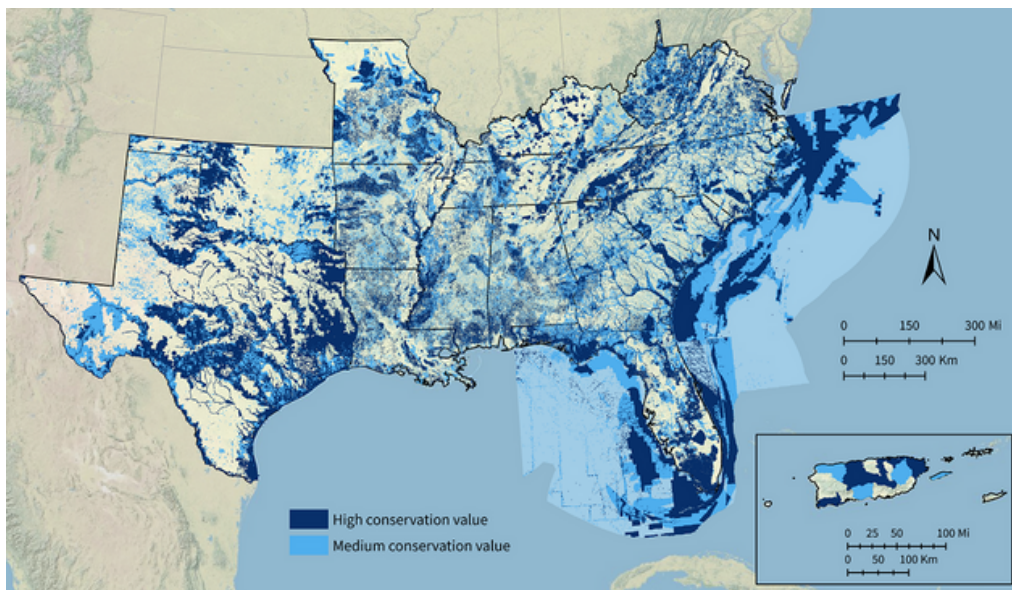
- Adopt the Guiding Principles and Work Group Report recommendations through an AFWA resolution on SWAPs and landscape conservation.
- Establish an AFWA SWAP subcommittee under the Wildlife Diversity Conservation and Funding Committee, or similar work group, to support implementation of the recommended actions, track progress, and coordinate with the regional fish and wildlife agency associations.
- Request that regional fish and wildlife agency associations form regional implementation teams, or use existing Committee charges, to build upon ongoing efforts to develop regional tools, support learning, and build capacity to support landscape-scale efforts within and across jurisdictions.
- Request that AFWA staff explore options for incentivizing and supporting cross-jurisdictional and cross-organizational work on SWAPs to support landscape conservation (e.g., improvements to grants, technical assistance) and report back to the AFWA Executive Committee.
- Seek resources to hire a national coordinator to support implementation of the recommendations in this report, serve as a liaison to the states and regional fish and wildlife associations, and develop new partnerships with the governmental and private sectors.

Ongoing Regional Efforts



Northeast Association of Fish and Wildlife Agencies (NEAFWA)

In 2007, the Regional Conservation Needs program was started by NEAFWA to help states in the Northeast advance conservation priorities of State Wildlife Action Plans that transcend state or political boundaries. Four percent from each state's apportionment from State Wildlife Grants is pooled to fund region-wide conservation projects. The program has mapped priority habitats in the region, developed a common language and completed a condition analysis of habitats, identified regional conservation focus areas, and developed consistent metrics to measure effectiveness. In addition, during the tenure of the North Atlantic LCC, Nature's Network was developed to be a comprehensive suite of information that identifies conservation opportunity areas in the northeast for conserving and connecting intact habitats and ecosystems to support the conservation of over 3,000 species of animals and plants, including those identified as Species of Greatest Conservation Need in State Wildlife Action Plans. NEAFWA is now reorganizing a collaborative structure to guide landscape conservation needs.



The Southeast Conservation Adaptation Strategy developed a blueprint that identifies the most important areas for conservation and restoration across the Southeast.

Ongoing Regional Efforts

Southeast Association of Fish and Wildlife Agencies (SEAFWA)

In 2011, the Southeast Conservation Adaptation Strategy (SECAS) was started by SEAFWA and the federal agencies of the Southeast Natural Resource Leaders Group to bring public and private organizations together around a common vision of creating a network of connected lands and waters that supports thriving fish and wildlife populations. The partnership set a goal of making a 10% or greater improvement in the health, function, and connectivity of Southeastern ecosystems by 2060. The partnership uses a 'living' data-driven blueprint that identifies the most important areas for conservation and restoration across the region. It is intended to inform conservation decisions and uses data from State Wildlife Action Plans.

Midwest Association of Fish and Wildlife Agencies (MAFWA)

In 2018, the Midwest Landscape Initiative was started by MAFWA and the U.S. Fish and Wildlife Service and later joined by the U.S. Geological Survey to identify shared conservation and management priorities that require the development of scalable collaborative solutions. The initiative uses the best available science to conserve natural landscapes and biodiversity. Priorities include landscape-based conservation of at-risk species found in State Wildlife Action Plans, the identification of wildlife impacts and siting and operational guidelines for wind energy, and creation of landscape-wide habitat inventory and assessment tools.

Western Association of Fish and Wildlife Agencies (WAFWA)

In 2013, the Crucial Habitat Assessment Tool (CHAT) was developed by Western states to provide the public with a view of location-based information on a selection of state fish and wildlife agency conservation priorities across the west to avoid impacts due to development and to promote large-scale, cross-boundary planning efforts. The CHAT had its origins in 2008 when Western Governors adopted the wildlife corridor initiative report. It was initially developed to bring greater certainty and predictability to cross-boundary planning by establishing a common starting point for discussing the intersection of development and wildlife. The tool uses comparable data and definitions to display crucial habitats and corridors in the west. One of the data layers that some states supplied was derived from State Wildlife Action Plans. Some WAFWA states could decide to more consistently use the WAFWA-supported CHAT platform to display habitats and conservation opportunity areas important for species priorities from their SWAPs. When combined with other WAFWA conservation priorities such as sage grouse, big game corridors, and western trout for example, this would help provide a more comprehensive picture of important conservation priorities across western landscapes.

CONCLUSION

Effective conservation of at-risk species, and the habitats and landscapes upon which they depend, requires coordinated efforts that transcend state and national boundaries. As recognized by the AFWA President's Task Force on Shared Science & Landscape Conservation Priorities, SWAPs provide an excellent framework for advancing landscape and cross-jurisdictional conservation for at-risk species conservation. The guiding principles, recommended actions and recommendations contained in this report provide a means for building upon the success of SWAPs to ensure they are even more effective in the future, particularly if more funding is available for their implementation.

Development and adoption of regional or shared approaches will facilitate identification of shared landscape and cross-jurisdictional conservation priorities (GP1), greater consistency among SWAPs, and more coordinated implementation (GP2). Efforts to ensure SWAPs reflect the shared priorities of a diversity of partners and are more accessible and relevant to broader constituencies (GPs 4 and 5) will lead to increased "buy-in" and collaboration amongst stakeholders, leading to better outcomes for at-risk fish and wildlife. AFWA, the states, and their partners should redouble efforts to incentivize, provide technical support, and build capacity to promote regional fish and wildlife association efforts to develop and implement SWAPs.

These recommendations build upon the important progress that has already been achieved by the four regional fish and wildlife associations and their regional collaboratives to advance landscape conservation and regional tool development. The intent is to support, strengthen, and build upon these ongoing efforts by implementing this framework. Although it may not be feasible to implement all the recommendations in this report prior to the next round of SWAP revisions, there is much that can be accomplished in the coming years to enhance landscape-scale and cross-boundary conservation through better coordination of SWAPs. By doing so, not only will the relevancy of SWAPs be enhanced but so will the work of state fish and wildlife agencies, consistent with the recommendations of the Fish and Wildlife Relevancy Roadmap (AFWA 2019). Lastly, these recommendations will help ensure SWAPs are more effective at conserving the nation's biodiversity and ready when new funding from sources such as the Recovering America's Wildlife Act become available.

LITERATURE CITED

- Association of Fish and Wildlife Agencies. 2020. *AFWA President's Task Force on Shared Science and Landscape Conservation Priorities: Final Report* (Mawdsley, J. R., D.P. Scott, P.R. Johansen, and J.R. Mason eds.). Association of Fish and Wildlife Agencies, Washington, D.C. 74 pp.
- Association of Fish and Wildlife Agencies. 2019. *Fish and Wildlife Relevancy Roadmap v 1.0*. M. Dunfee, A. Forstchen, E. Haubold, M. Humpert, J. Newmark, J. Sumners, and C. Smith (eds). Association of Fish and Wildlife Agencies, Washington, D.C. 128 pp.
- Association of Fish and Wildlife Agencies. 2018. *Landscape Conservation Collaboration: A White Paper*. Association of Fish and Wildlife Agencies, Washington, D.C. 22 pages.
- Association of Fish and Wildlife Agencies, Teaming With Wildlife Committee, State Wildlife Action Plan (SWAP) Best Practices Working Group. 2012. *Best Practices for State Wildlife Action Plans—Voluntary Guidance to States for Revision and Implementation*. Association of Fish and Wildlife Agencies, Washington D.C. 80 pages.
- Network for Landscape Conservation. 2018. *Pathways Forward: Progress and Priorities in Landscape Conservation*. Network for Landscape Conservation. 53 pages.
- Trombulak, S.C. and R.F. Baldwin. 2010. Introduction: Creating a context for landscape-scale conservation planning. In *Landscape-scale Conservation Planning* (S.C. Trombulak and R.F Baldwin eds.), Springer. 441 pages.

APPENDIX

APPENDIX 1

Proposed draft resolution on State Wildlife Action Plans and Landscape Conservation.

WHEREAS, twenty years ago the creation of the State & Tribal Wildlife Grants Program initiated the historic development of comprehensive fish and wildlife conservation strategies, known as State Wildlife Action Plans (hereafter called SWAPs), in every state, territory, and the District of Columbia; and

WHEREAS, SWAPs identified over 12,000 species of greatest conservation need, their key habitats, threats, and conservation actions; and

WHEREAS, SWAPs have forestalled the need to list and aided in the recovery and delisting of dozens of federally threatened and endangered species; and

WHEREAS, the Blue Ribbon Panel on Sustaining America's Diverse Fish and Wildlife Resources recommended \$1.3 billion in federal funding to implement SWAPs and the U.S. House of Representatives and the U.S. Senate have introduced the Recovering America's Wildlife Act to fulfill that recommendation to help stem the loss of the nation's biodiversity; and

WHEREAS, the AFWA resolution, Fish and Wildlife Conservation at Landscape Scales-2018-06-07, recognizes the importance of collaborating across geographical scales and jurisdictions to assure that fish and wildlife agencies successfully accomplish their statutory responsibilities to conserve fish, wildlife, and their habitats through mutually shared priorities and coordination; and

WHEREAS, at-risk fish and wildlife populations and the natural processes and landscapes that sustain them often span multiple political boundaries requiring coordinated conservation and science to address threats and prevent endangerment; and

WHEREAS, the *AFWA President's Task Force on Shared Science and Landscape Conservation Priorities* recommended that the eight required elements and best practices for SWAPs be reviewed and recommendations be made to improve the ability of SWAPs to take on regional and landscape conservation challenges; and

WHEREAS, the Association of Fish and Wildlife Agencies (Association) recognizes the important role and unique responsibility of state, provincial and territorial fish and wildlife agencies in conserving fish and wildlife and their habitats; and

WHEREAS, state fish and wildlife agencies recognize the importance of using the best available science and collaborative approaches by working with partners, including, but not limited to, federal and other state agencies, NGOs, academia, private landowners, and private industry to advance the conservation priorities of their state; and

WHEREAS, multi-jurisdictional coordination, sharing of tools, data, and resources for SWAP development and implementation can significantly improve the efficiency and effectiveness of at-risk species conservation and serve as a basis for identifying shared priorities and coordinated conservation actions across jurisdictions and broad partnerships; and

WHEREAS, increased support and incentives are needed to help build the capacity of State Fish and Wildlife Agencies and their partners to advance regional SWAP coordination and cross-jurisdictional and landscape conservation efforts;

NOW THEREFORE, BE IT RESOLVED, the Association reaffirms the importance of SWAPs and the need to collaborate at regional and landscape scales to help fish and wildlife agencies meet their statutory and regulatory responsibilities to conserve fish and wildlife, their habitats, and associated biodiversity; and,

BE IT FURTHER RESOLVED, the Association adopts the following guiding principles to strengthen the ability of SWAPs to guide and/or contribute to regional and/or national landscape conservation priorities to help ensure the next generation of SWAPs are even more effective, accessible, and relevant to agencies, partners, and other stakeholders:

1. Identify and apply regional and shared approaches for SWAP development, implementation, and measuring progress to improve effectiveness, efficiency, cost-savings, and consistency.
2. Increase consistency and alignment of SWAPs across jurisdictions so conservation can be implemented more readily at biologically relevant scales.
3. Provide support and incentives to leverage and build capacity for cross-jurisdictional and landscape conservation.
4. Ensure SWAPs are developed and implemented collaboratively and in partnership with a diverse set of partners.
5. Make SWAPs more accessible and relevant to broader constituencies; and

BE IT FURTHER RESOLVED, the Association adopts the recommendations of the SWAP and Landscape Conservation Work Group, *Leading At-Risk Fish and Wildlife Conservation: A framework to enhance landscape-scale and cross-boundary conservation through coordinated State Wildlife Action Plans* and acknowledges the importance of working with the Regional Associations of Fish and Wildlife Agencies, state fish and wildlife agencies, and other partners to implement said recommendations.

APPENDIX 2

Guiding principles, recommended actions, and expected outcomes to enhance landscape-scale and cross-boundary conservation through coordinated State Wildlife Action Plans.

Guiding Principle	Recommended Actions	Expected Outcomes
<p>1. Identify and apply regional and shared approaches development, implementation and measuring progress of SWAPs, to improve effectiveness, efficiency, cost-savings, and consistency.</p>	<p>1.1 Using clear and consistent criteria, identify priority species, habitats, landscapes, threats, and conservation actions for regional conservation.</p> <p>1.2 Develop and use a common lexicon and classification system for species, habitats, threats, and conservation actions.</p> <p>1.3 Develop and refine best practices for habitat and population restoration and management.</p> <p>1.4 Promote the development of shared science, data, research, and monitoring protocols</p> <p>1.5 Use consistent metrics and reporting tools to evaluate conservation effectiveness.</p>	<p>Improved conservation through stronger relationships among conservation practitioners at regional scales.</p> <p>Less competition for resources in priority habitats because multiple partners are rallied around shared goals leading to more success in these priority landscapes.</p> <p>Increased ability to work efficiently across state boundaries to accomplish biodiversity conservation.</p>
<p>2. Increase consistency and alignment of SWAPs across jurisdictions so conservation can more readily be implemented at biologically relevant scales.</p>	<p>2.1 Incorporate regional priorities and approaches into SWAP development and implementation (see Guiding Principle 1).</p> <p>2.2 Work at landscape and regional scales to address key threats such as climate change, habitat loss/fragmentation, and invasive species.</p> <p>2.3 Promote the use of adaptive management, best available science, and shared learning so the plans keep pace with changing conditions and innovations.</p>	<p>Improve the ability of SWAPs to be implemented at multiple scales and be rolled up and used regionally.</p> <p>Biodiversity conservation is accomplished at ecologically meaningful scales (rather than fragmented within administrative boundaries).</p> <p>Fewer imperiled species, more recovered species, and more species are thriving.</p>

Guiding Principle	Recommended Actions	Expected Outcomes
<p>3. Provide support and incentives to leverage and build capacity for cross-jurisdictional and landscape conservation.</p>	<p>3.1 Provide funding and support for regional tool development, shared science, and landscape conservation projects.</p> <p>3.2 Provide consistent training, technical assistance, guidance, meeting management, and other support to facilitate partner engagement.</p> <p>3.3 Explore options for sharing resources, leveraging partnership contributions, and engaging non-traditional partners as well as options to lower grant match requirements and develop other incentives to encourage regional collaboration.</p> <p>3.4 Create a subcommittee or work group and acquire resources, including a coordinator, to facilitate national and regional collaboration on SWAPs.</p>	<p>Needed financial, coordination, and technical resources are available to work across state boundaries and organizations in implementing SWAPs to accomplish landscape-scale conservation.</p>
<p>4. Ensure SWAPs are developed and implemented collaboratively and in partnership with a diverse set of partners.</p>	<p>4.1 Increase collaboration and involvement of local, regional and national partners in the development and implementation of SWAPs, including cross-jurisdictional efforts.</p> <p>4.2 Develop partnerships early on and revisit them as often as necessary to promote ownership and buy-in, maintain positive, supportive relationships, and ensure that SWAPs are state plans rather than state agency plans.</p> <p>4.3 Strive to involve broad constituencies in the development and implementation of SWAPs and engage a diversity of partners so that SWAPs reflect the shared priorities of state, local, and regional partners.</p> <p>4.4 Incorporate scalable goals/ strategies and priority landscapes from other planning efforts into SWAPs (i.e. State Forest Action Plans, State Comprehensive Outdoor Recreation Plans, National Fish Habitat Plan, North American Waterfowl Management Plan, TNC Ecoregional Plans, etc.).</p>	<p>Improve how partners participate, perceive, and use the SWAPs.</p> <p>Shared priorities allow partners to promote and use SWAPs to guide their conservation work.</p> <p>Collaborative implementation of shared priorities leads to more resources and landscape conservation accomplishments.</p> <p>Improvement in trust and collaboration with partners.</p>

Guiding Principle

Recommended Actions

Expected Outcomes

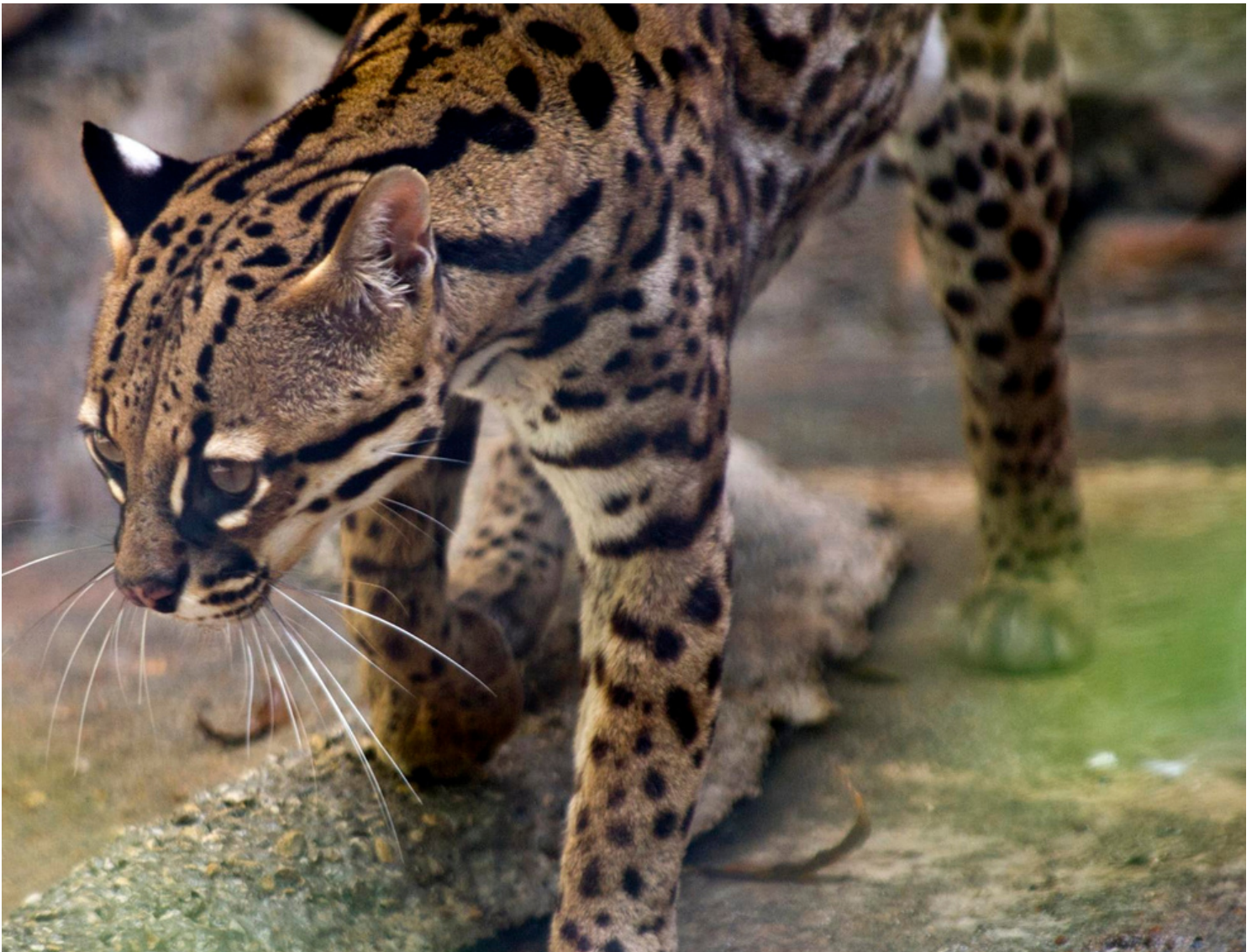
5. Make SWAPs more accessible, understandable, and relevant to broad constituencies.

5.1 Make SWAPs more accessible and user-friendly to both technical and general audiences by making them web-based, easily searchable, and by creating targeted products for specific users.

5.2 Improve communication and marketing to ensure SWAPs and related landscape conservation efforts are valued as an important tool for conserving biodiversity.

5.3 Engage community members and organizational leaders in the development and implementation of SWAPs in the landscapes where they live.

SWAPs are more widely embraced and used by diverse audiences as the state and regional plan for species and landscape conservation.



APPENDIX 3

The eight required elements that must be addressed in State Wildlife Action Plans.

Congress identified eight required elements to be addressed in these wildlife conservation plans (see below). Further, the plan must identify and be focused on the “species in greatest need of conservation,” yet address the “full array of wildlife” and wildlife-related issues. They must provide and make use of:

- (1) Information on the distribution and abundance of species of wildlife, including low and declining populations as the State fish and wildlife agency deems appropriate, that are indicative of the diversity and health of the State’s wildlife; and,
- (2) Descriptions of locations and relative condition of key habitats and community types essential to conservation of species identified in (1); and,
- (3) Descriptions of problems which may adversely affect species identified in (1) or their habitats, and priority research and survey efforts needed to identify factors which may assist in restoration and improved conservation of these species and habitats; and,
- (4) Descriptions of conservation actions proposed to conserve the identified species and habitats and priorities for implementing such actions; and,
- (5) Proposed plans for monitoring species identified in (1) and their habitats, for monitoring the effectiveness of the conservation actions proposed in (4), and for adapting these conservation actions to respond appropriately to new information or changing conditions; and,
- (6) Descriptions of procedures to review the plan at intervals not to exceed ten years; and,
- (7) Plans for coordinating the development, implementation, review, and revision of the plan with Federal, State, and local agencies and Indian tribes that manage significant land and water areas within the State or administer programs that significantly affect the conservation of identified species and habitats.
- (8) Congress also affirmed through this legislation, that broad public participation is an essential element of developing and implementing these plans, the projects that are carried out while these plans are developed, and the Species in Greatest Need of Conservation that Congress has indicated such programs and projects are intended to emphasize.