TABLE OF CONTENTS

3  Charge for the President's Task Force on One Health
4  Executive Summary
5  Introduction
9  One Health Focal Areas and Strategies
14  AFWA’s Success in One Health Engagement
In keeping with recommendations one and two of the white paper, The Association of Fish and Wildlife Agencies and the One Health Approach: Providing the Foundation for a Leadership Role, develop a list of prioritized next steps for the Association’s leadership in the One Health space and identify strategies for the Association to collaborate more effectively with partners on issues relating to One Health. In addition, consider this question: What might success look like for the Association to develop and/or foster a center of excellence for One Health engagement?

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EXECUTIVE SUMMARY

The Centers for Disease Control and Prevention defines One Health as a collaborative, multisectoral, and transdisciplinary approach—working at the local, regional, national, and global levels—with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment. In December 2022, AFWA President Curt Melcher convened a One Health President’s Task Force to review the recommendations from the white paper The Association of Fish and Wildlife Agencies and the One Health Approach: Providing the Foundation for a Leadership Role and propose strategies to implement those recommendations. The Task Force worked in four teams and proposed 24 strategies centered around the themes of 1) legislative affairs, policy, and governance; 2) coordination, collaboration, and engagement; 3) training; and 4) science and indigenous knowledge. Key among these recommendations is the call to develop a vision and position statement that articulates AFWA’s desired engagement in One Health, the need to explore options for establishing a center of excellence for wildlife and ecosystem health that serves as both a center of knowledge and convenor of appropriate entities engaged in One Health, a recommendation to explore opportunities to examine how One Health could be more fully incorporated into the North American Model of Wildlife Conservation (NAM), the need to raise the importance of a One Health approach in sustaining fish, wildlife, and biodiversity, and the desire to engage with the international community on One Health. The Task Force also recommends the establishment of an AFWA One Health Committee to develop the governance structure needed for AFWA to effectively engage in these efforts.
INTRODUCTION

Conservation is an elusive and complex human endeavor. Its earliest appearance in human thought is ancient, as mythologies and global religious expressions confirm. Nevertheless, while the concept is generally accepted and easy to advocate for, it can be manifestly difficult to achieve. The policy and legislative drivers that can bring it forward into mainstream political thought and effective activism are part of a forever changing social and environmental milieu. For this reason, whatever chance conservation has as a social architect, it must be capable of reinvention and relevance renewal.

The COVID-19 pandemic served as a potent reminder that human health is inseparable from that of animals and ecosystems. In this context, we have witnessed a surging emphasis on a conceptual conservation framework called One Health. The Centers for Disease Control and Prevention define One Health as a collaborative, multisectoral, and transdisciplinary approach—working at the local, regional, national, and global levels—with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment. One Health recognizes that “the health of the planet and all natural systems and life-forms are codependent and interconnected, emphasizing that this includes the health of humanity and our systems of economic and social support.”[1] It thus insists that “all components must be addressed in a cohesive, comprehensive manner to support and improve global health security.”[2]

At the 2022 AFWA Annual Meeting in Fort Worth, Texas, the concept of AFWA’s engagement in One Health was explored by way of the white paper entitled The Association of Fish and Wildlife Agencies and the One Health Approach: Providing the Foundation for a Leadership Role. The white paper articulated AFWA’s unique responsibility as a leader in the One Health space and identified the abundant opportunities One Health engagement could offer AFWA members in their roles as managers of fish and wildlife populations, biodiversity, and landscapes. The white paper made 24 recommendations necessary for fulfilling that responsibility and maximizing those opportunities. The white paper was approved during the 2022 AFWA Business Meeting.

Subsequent to this decision, President Curt Melcher established a One Health Task Force charged with developing the next steps and strategies to purposefully guide AFWA and its members' engagement in the One Health Space. This Report builds on key points from the white paper and presents two dozen strategies developed by thematic work groups established within the President’s One Health Task Force. These strategies are designed to assist AFWA in its efforts to effectively engage and assume a leadership role in ongoing One Health.

The term “One Health” may appear to be a relatively recent one, with references to it spiking in association with outbreaks of the SARS and H5N1 viruses during the early 2000s and the recent COVID-19 pandemic, but the One Health concept’s basic elements are anything but new. These elements can be found in the knowledge and practices of Indigenous cultures from around the world; in those of Mediterranean antiquity as well as of European modernity; and in Asian systems of thinking and acting such as Buddhism and Taoism. Aldo Leopold’s “Land Ethic” (1949) powerfully evokes One Health principles in the context of North American conservation where the case was made that people, soil, water, plants, and animals are all part of one community. Embracing One Health means embracing a venerable and universal heritage. One Health is, in this sense, a reunion as much as it is an invention.

But why does AFWA have a special leadership role to play in the One Health space? Principally, AFWA member agencies, bearing constitutional and legal responsibilities for wildlife, are uniquely capable of filling crucial gaps in the existing One Health framework. At the present time, One Health practitioners from the World Health Organization, the UN Food and Agriculture Organization, the US Center for Disease Control and Prevention’s One Health Office, and the Canadian Food Inspection Agency’s Animal Health Risk Analysis and Intelligence Section primarily hail from agricultural, veterinary, and human health sectors. This is unsurprising, as the connections among agriculture, domestic livestock, and human health are immediately obvious. Although biodiversity and ecosystem health are acknowledged as important, if not essential, by these practitioners, these topics have not yet been integrated into these considerations. This represents an important shortcoming, as most zoonoses originate and are sustained in wild, rather than domestic, animal populations. “Wildlife management, which encompasses habitat management to a large degree, and healthy ecosystems that support healthy fish and wildlife populations are, therefore, vital components of public health.”[3]


“Embracing One Health means embracing a venerable and universal heritage. One Health is, in this sense, a reunion as much as it is an invention.
~ Shane Mahoney, Conservation Vision
AFWA must increase its interaction with practitioners in agricultural, human, and environmental health, because the health and wellness of humans are mutually interdependent with the health of wildlife and the environment. Global health security depends on actively and effectively coordinating these overlapping areas of concern. It is here that AFWA’s leadership role becomes clear. AFWA provides expertise and performs functions that no one else can in the One Health space. The tripartite structure that One Health identifies cannot stand unless all three components are optimally managed in practice. AFWA takes the lead in overseeing wild animal and ecosystem health; accordingly, human and agricultural health practitioners need AFWA’s leadership to succeed.

Zoonotic outbreaks and residual zoonotic transmissions inevitably lead to policy recommendations that can impinge directly on AFWA’s responsibilities and, more importantly, the effective delivery of science-based conservation. Without proactive engagement, AFWA’s responsibilities and areas of expertise are placed at risk. Proactive engagement fosters constructive, multi-lateral dialogue with AFWA serving, and being seen to serve, as the One Health wildlife and landscape conservation authority.

Finally, AFWA and its members stand to naturally lead in the One Health space not just because it fills crucial knowledge gaps and associated legal responsibilities, but also because One Health principles dovetail with the North American Model of Wildlife Conservation (NAM), which is a guiding conceptual and philosophical underpinning of AFWA’s work. While the NAM and One Health have different goals, they are tied together through their respective implementation processes. “Both human health and wildlife conservation depend on the health of wild and domestic animals, as well as their various associations across landscapes, and the prevalence of healthy ecosystems,”[4] all of which necessarily entails interagency collaboration on public health security. A One Health approach to wildlife conservation would serve to enhance the NAM by 1) reflecting the inextricable links between the health of wild animals and the health of domestic livestock; and 2) promoting the maintenance of healthy ecosystems to enhance animals and human health. Revealing the natural holism that is latent within the NAM will fortify its seven longstanding tenets without overextending or adding to them.

By establishing the four focal areas listed below (i.e., Legislative Affairs, Policy, and Governance; Coordination, Collaboration, and Engagement; Training; and Science and Indigenous Knowledge) and taking action on their associated strategies, AFWA can assume and realize its indispensable role in meeting the diversifying challenges that we will continue to face in the twenty-first century and beyond. AFWA can be a One Health leader by establishing partnerships “at the international, national, state, provincial, territorial, and tribal levels”[5] with not just human and agriculture health practitioners, but also with “economic and social policy institutions, thinktanks, and corporations.”[6] Among other desirable outcomes, AFWA may in this manner develop a broader funding base upon which to finance its own activities and fulfill its mandate which, in turn, strengthens One Health overall in defense of global public health.

At the same time, all such endeavors will serve to raise state, territorial, and provincial wildlife agency profiles and to reinforce in the public mind the continued relevancy of AFWA and its members within a broader and more inclusive social and political context. This President’s One Health Task Force Report offers a solid basis for moving forward with this agenda.

[5] p. 34.
[6] Ibid.
ONE HEALTH FOCAL AREAS AND STRATEGIES

To facilitate key One Health deliverables, this Report introduces strategies necessary for AFWA to engage in One Health actively and effectively as a leading collaborator. These strategies fall into four broad focal areas, each featuring unique challenges and opportunities. Four work groups identified more than 50 strategies in keeping with the focal area framework. An editorial team combined and synthesized these into 24 strategies.

Focal Area 1. Legislative Affairs, Policy, and Governance
Strategies Designed to Guide AFWA’s Engagement in One Health

AFWA can lead in Legislative Affairs, Policy, and Governance, by establishing its own One Health Committee featuring representatives from state, federal, provincial, tribal, academic, and private institutions, by exploring opportunities for establishing a center of excellence for wildlife and ecosystem health, by providing opportunities for engagement and reflection on the contemporary meaning of the NAM’s seven tenets, by exploring opportunities to build capacity, and by using One Health principles to inform AFWA’s legislative, budget and policy priorities. The Task Force recommends that AFWA embrace the following strategies.

[A] Establish an AFWA One Health Committee.
- Invite representatives from state, federal, provincial, tribal, academic and NGO members to participate on the committee.
- Clearly articulate the roles and responsibilities of the committee and how it will interact and collaborate with the Fish and Wildlife Health Committee, Science and Research Committee, Education, Outreach and Diversity Committee, International Relations Committee, Wildlife Policy Committee, Wildlife Diversity Conservation and Funding Committee, Climate Adaptation Committee, the National Fish and Wildlife Health Initiative and other relevant committees and initiatives.
• Work with the Legislative and Federal Budget Committee and other relevant committees to elevate the need for active and effective engagement in One Health matters within the policy and budgeting arenas.
• Collaborate with the International Relations Committee to identify and implement strategies for more effective and active engagement with the international community.
• Identify and implement strategies for more effective and active engagement with government agencies across North America involved in One Health including those involved in the interplay of wildlife, public, and ecosystem health.
• Encourage the AFWA One Health Committee to engage and collaborate with the One Health Commission, National One Health Framework, and One Health Joint Plan of Action.
• Support efforts that measure the benefits of the One Health approach through an ecosystem-level scorecard.

[B] Explore options for establishing a center of excellence for wildlife and ecosystem health that will mobilize the sharing of knowledge and serve as a convenor and coordinator among state, territorial, provincial, federal, tribal, academic, and NGO partners on One Health matters.

[C] Explore opportunities to build capacity and identify sustainable funding so AFWA and its members can more effectively engage in One Health.

[D] Use One Health principles to inform AFWA’s legislative, budget, and policy priorities.

[E] Beneficially shape the development of wildlife governance and create the collaborative space required for a successful One Health approach by strengthening relationships between agencies and constituents representing the spectrum of wildlife values.
  • Provide opportunities for education, engagement, and reflection on the contemporary meaning of the NAM’s seven tenets.
  • Apply wisdom accrued over the course of North America’s unique conservation history to pursue forward-looking, One Health-oriented strategies.

[F] Incorporate One Health into the current and future AFWA strategic plans.

[G] Encourage regional fish and wildlife agency associations and their fish and wildlife health coordinators to engage in regional and national One Health activities.

[H] Develop guidance and encourage development of One Health frameworks at national, regional, and state levels to build healthy, resilient, and resistant ecosystems.

[I] Review policies, legislation, and laws and propose changes to take into account a One Health approach.
Within the focal area of **Coordination, Collaboration, and Engagement**, AFWA can fully partner with state and federal agencies, and Native American tribes, in developing a national One Health Framework, and develop an AFWA communications strategy to inform One Health practitioners in other sectors about how fish and wildlife agencies figure into the One Health space. The Task Force recommends that AFWA embrace the following strategies.

[A] **Participate** with state and federal agencies and tribes in the development of a National One Health Framework.

[B] **Establish a center of excellence** for wildlife and ecosystem health that serves as a convenor of parties engaged in One Health.

[C] **Develop a communication strategy** designed to inform fish and wildlife professionals, relevant AFWA committees, and other One Health practitioners about the role that fish and wildlife agencies play in the One Health arena.

[D] **Develop and maintain a sustained outreach** on One Health through webinars, virtual town hall meetings, and by other means to facilitate communication and information exchange.

[E] **Collaborate** with The Wildlife Society and the American Fisheries Society in efforts to encourage fish and wildlife professionals to engage in One Health.

[F] **Encourage** the National Fish and Wildlife Health Initiative to expand the Fish and Wildlife Health Toolkit to include specific materials on One Health.
Focal Area 3. Training Strategies Designed to Guide AFWA’s Engagement in One Health

Training offers opportunities to develop training materials and training on One Health for fish and wildlife agency biologists and administrators that will help them connect with practitioners across sectors and disciplines, identify gaps and needs, and collaborate with state, federal, provincial, and tribal partners on a workshop to help define the role of fish and wildlife agencies in One Health. The Task Force recommends the following strategies.

[A] **Conduct a gap analysis** of fish and wildlife agency biologists and administrators to identify One Health needs and develop a catalogue of training opportunities that can build knowledge and expertise.

[B] **Develop One Health training materials** for fish and wildlife agency biologists and administrators that will help them better connect with practitioners outside the fish and wildlife profession.

[C] **Develop and implement workshops** designed to prepare fish and wildlife agencies for their leadership roles in One Health.

[D] **Explore opportunities** for regional fish and wildlife health coordinators to facilitate or provide One Health training for fish and wildlife agency biologists and administrators.
Focal Area 4. Science and Indigenous Knowledge Strategies Designed to Guide AFWA’s Engagement in One Health

Science and indigenous knowledge both play important roles in One Health. To date, most wildlife professionals are largely unaware of the variety and richness of indigenous knowledge, and AFWA can lead in One Health by helping rectify that gap. By supporting the use of indigenous knowledge in mainstream policy and decision making, AFWA can help the conversation on conservation be enriched. The Task Force recommends the following strategies.

[A] **Develop stronger working relationships** and encourage dialogue among AFWA members, tribal fish and wildlife agencies, and other organizations concerned with One Health.

[B] **Conduct a literature review**, develop an annotated bibliography, and produce products and engagement opportunities designed to highlight the role that fish and wildlife management plays in the One Health arena.

[C] **Engage with tribes and indigenous peoples** on common interests for connecting people and wildlife to the environment.

[D] **Identify evidence-based tools** that quantify the role ecosystems and wildlife health play in supporting human health.

[E] **Identify the role that zoonotic diseases** have played throughout human history to reduce and/or mitigate future risks.
AFWA’S SUCCESS IN ONE HEALTH ENGAGEMENT

AFWA will be successful in One Health engagement when it positions itself to be seen as the Center of Excellence on matters relating to fish and wildlife health in the One Health space. AFWA’s success in the One Health arena will be realized when we are equipped to address not only the diversity of challenges that face fish and wildlife resources but also when there is an understanding of the inseparable relationship among fish, wildlife, and ecosystem health and the physical and mental health of the people we serve. This Center of Excellence will ensure we emphasize a systems approach to landscape conservation that sustain all wildlife species and fully functioning ecosystems. It will engage with professionals and administrators from wildlife, agriculture, domestic animal health, human health, environmental management, social science, outdoor recreation, natural resource economics, and other relevant disciplines to improve our understanding and spur collaboration on One Health. The Center of Excellence will ensure that future policies and conservation models include quality of life, mental and physical health for people, and ecosystem health and services.

AFWA will do this by standing up a One Health Committee, by developing a vision for the One Health Center of Excellence, and by convening experts across the various One Health sectors. AFWA will work with policymakers and the public to understand the importance of a One Health approach to sustaining fish, wildlife and functioning ecosystems, as well as explore opportunities to engage with the international community on One Health.

Ultimately, when we see Aldo Leopold’s vision of a land ethic that intertwines the health of people and land become fully adopted, we will have achieved success. Given AFWA’s knowledge and expertise in fish, wildlife and ecosystem health, it is crucial we emerge as a leader in One Health. In an age where the rate of change is ever increasing and our ecosystems are continuously under threat, the urgency of this convergence has never been more real than now.