

NATIONAL FISH AND WILDLIFE HEALTH INITIATIVE FOR THE UNITED STATES



INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES

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A CASE FOR ACTION

The dramatically growing importance of fish and wildlife health issues in natural resource management ensures that more human, financial, and technological resources will be directed toward them in the future. Responsibility and authority issues, as well as increasing recognition that disease agents in free-ranging animals have implications for fish and wildlife populations, livestock and poultry, and humans warrant state fish and wildlife management agency attention to these issues. In addition to traditional fish and wildlife health issues, state natural resource management agencies must engage in emerging issues, including the threats of bioterrorism and agroterrorism, as well as unintentional introduction of disease agents, such as the highly pathogenic avian influenza virus currently circulating in Asia, Europe and Africa. If state fish and wildlife management agencies do not become engaged, they risk the possibility of other state or federal agencies stepping in to do so, or worse yet, the issues involving fish and wildlife will not be addressed.

Successful fish and wildlife health programs must be centered in the state wildlife management agencies where the responsibility and authority rest for conserving wildlife resources. Due to overarching issues, shared authority, and limited resources, cooperation with local, state, and federal public health, animal health, and natural resources agencies will be essential; however, there is no “one size fits all” approach to wildlife health programs: several states have had strong programs with full-time wildlife health professionals for decades, others have implemented new programs in recent years, and several have pooled resources in regional wildlife health cooperatives such as the Southeastern Cooperative Wildlife Disease Study (SCWDS).

Regardless of the structure of a state’s fish and wildlife health program, the greatest opportunities for addressing significant local health issues will be found in programs in which the state fish and wildlife management agency prioritizes the issues and collaborates with other governmental and nongovernmental organizations to address them. Through this approach, state fish and wildlife management agencies will improve their understanding and management of diseases in fish and wildlife, develop and share data useful to others, and maximize the financial, technological, and human resources that inevitably will be limited.

To accomplish these goals, we propose the implementation of the National Fish and Wildlife Health Initiative by a multi-disciplinary consortium of state, federal, university, tribal, corporate, and nonprofit organizations, dedicated to advancing the science, awareness, and cooperation related to all aspects of fish and wildlife health issues. The initiative will be a policy framework through which all interested parties may seek to minimize the negative impacts of disease issues involving fish and wildlife in the United States. In support of the development and implementation of the National Fish and Wildlife Health Initiative, the International Association of Fish and Wildlife Agencies in September 2005 endorsed the following Guiding Principles for the Initiative.

National Fish and Wildlife Health Initiative Guiding Principles

The importance of maintaining healthy populations has long been recognized by fish and wildlife managers, and several disease issues are of growing concern to fish and wildlife, animal health, and public health professionals and the publics they serve. Significant diseases, such as plague, hemorrhagic disease, pasteurellosis, chronic wasting disease, botulism, West Nile virus, whirling disease, and others have been found in wild and farmed fish or wildlife populations in North America and can have a significant impact on resources. Reservoirs of economically important diseases like bovine brucellosis and bovine tuberculosis have inadvertently become established in native wildlife and threaten livestock industries in some areas. Foreign animal diseases, such as foot and mouth disease, which was eradicated decades ago and highly pathogenic avian influenza, which never has been reported in North American wildlife, also are of concern. The intentional or accidental introduction of these diseases could significantly impact wildlife, domestic animal or human populations and would require a coordinated multi-agency response. In view of the increasing need for fish and wildlife managers to effectively address disease issues, a National Fish and Wildlife Health Initiative will be developed under the leadership of the International Association of Fish and Wildlife Agencies (IAFWA) and in cooperation with appropriate governmental agencies and non-governmental organizations. Although national in scope, the Health Initiative will not mandate programs at the state, tribal, or local level.

The National Fish and Wildlife Health Initiative will:

- Support the IAFWA vision for healthy fish and wildlife resources throughout North America managed by effective, well-funded resource agencies supported by informed and involved citizens;
- Support the IAFWA mission to protect state authority and support provincial and territorial authority for wildlife conservation; promote sound and science-based resource management; and strengthen state, provincial, territorial, federal, and private cooperation in conserving fish and wildlife resources;
- Recognize that free-ranging fish and wildlife and recreational activities associated with these resources have fundamental aesthetic and economic value and contribute significantly to the quality of life and the economy on a local, state, and national basis;
- Recognize that as the front-line managers, state fish and wildlife agencies are responsible for managing diseases in free-ranging fish and wildlife, and several have in place much of the knowledge, personnel, equipment, and local public support to prevent, monitor, detect, and respond to disease issues;
- Foster development and maintenance of additional competencies, management tools, and training in fish and wildlife health management within state fish and wildlife agencies;
- Promote science-based management strategies for health issues that involve free-ranging fish and wildlife and recognize that some disease agents found in fish and wildlife are of significance to domestic animal and human health and vice versa;

- Recognize, articulate, and integrate the abilities and authorities of cooperating state, tribal, territorial, and federal agencies and other partners;
- Foster collaboration, coordination, and communication among fish and wildlife health jurisdictions, as well as with animal health and public health agencies at the state and national level;
- Recognize that animals and disease agents do not observe political boundaries necessitating interstate and international coordination of health management efforts;
- Recognize that state fish and wildlife management agencies are a key component in local response to biosecurity and bioterrorism threats and incidents and emphasize the importance of involvement, support, training, and planning for key agency personnel;
- Recognize fish and wildlife health management as an essential component of any fish and wildlife conservation program and emphasize the importance and efficacy of prevention, as opposed to control or eradication efforts, as a strategy for managing diseases in free-ranging fish and wildlife; and
- Recognize the need to develop and disseminate science-based information to educate the public about the significance of diseases in fish and wildlife populations and the value of integrated prevention and management programs.

National Fish and Wildlife Health Initiative: Goals, Objectives, and Strategies

Goal 1: *Develop and enhance state and territorial fish and wildlife management agency capability to effectively address health issues involving free-ranging fish and wildlife*

Objective 1: *Establish or enhance state fish and wildlife management agency policies and processes to address health issues in fish and wildlife*

Strategies:

- Identify and commit state, federal, and other fiscal and staff resources for state and territorial fish and wildlife health programs.
- Ensure the state fish and wildlife management agency has legally mandated responsibility for fish and wildlife health issues within the state or territory.
- Establish relationships and implement necessary interagency agreements to define the roles of all parties and agencies in fish and wildlife health issues in a particular state or territory.
- Implement necessary protective legislation and regulations to prevent pathogen importation, establishment, and dispersal in fish and wildlife.

Objective 2: *Train state fish and wildlife health specialists and other agency personnel*

Strategies:

- Train fish and wildlife health specialists to build capacity.
- Inform and train agency personnel with primary responsibilities other than fish and wildlife health.

Objective 3: *Build support through communication strategies to inform all agency personnel and policy makers, stakeholders and the public about fish and wildlife health issues*

Strategies:

- Create and implement communication plans appropriate for the audience, which may comprise the public, agency staff and policy makers, state policy makers or others.

- Ensure common, consistent, and science-based messages among state, federal and tribal agencies.
- Develop procedures to notify others in the fish and wildlife management community, the science community, and the general public of significant developments in fish and wildlife health.

Objective 4: *Recognize, articulate, and integrate the abilities and authorities of cooperating state, tribal, territorial, and federal agencies and other partners.*

Strategies:

- Clearly articulate authorities of engaged government entities
- Describe capabilities and capacities of engaged government entities
- Create communication and coordination infrastructure among engaged government entities

Goal 2: *Develop and implement a national strategy to address health issues involving free-ranging fish and wildlife through management, surveillance, and research*

Objective 1: *Prevent introduction and establishment of significant pathogens in fish and wildlife populations*

Strategies:

- Control human activities that increase opportunities for pathogen introduction and establishment in fish and wildlife through identification of risks and collaboration with other agencies and stakeholders.
- Collect, analyze, and manage disease information through regular monitoring of national and international disease occurrences to identify pathogens and their distribution.
- Conduct research to determine why diseases emerge and what the specific factors allow the progression of pathogens to become harmful diseases at the population level in important fish and wildlife populations.

Any agent (microbe, toxin, or other substance) capable of producing illness is termed a **pathogen**. Pathogens do not necessarily cause illness in all cases. **Disease** is illness, an interaction of the affected animal (the host), the pathogen causing illness (the agent), and the environmental factors influencing both of them.

Objective 2: *Early detection of pathogens to maximize the effectiveness of control measures and minimize negative impacts*

Strategies:

- Establish an integrated surveillance and diagnostic laboratory network.
- Investigate fish and wildlife mortality events.
- Conduct vigilant surveillance supported by improved and standardized scientific methods and facilities.
- Implement a standardized reporting system to develop a national fish and wildlife health database, increase availability of information, and effectiveness of limited resources.
- Develop information technology necessary to ensure rapid analysis and distribution of disease surveillance information.
- Conduct research to support surveillance and laboratory methods.

Objective 3: *Rapid response to detection of significant pathogens*

Strategies:

- Develop contingency plans, including decision and communications processes for emergency disease events.
- Integrate emergency planning among jurisdictions, and develop response options, responsibilities, resources, and personnel. (It is critical that emergency response planning be conducted across political and agency administrative lines, because fish and wildlife populations do not understand political and agency boundaries and agencies with differing expertise and resources are necessary for success.)
- Develop and maintain adequate field response capacity.

Objective 4: *Manage fish and wildlife population health through risk assessment and adaptive management*

Strategies:

- Define objectives and methods, and identify limits in disease management.
- Conduct research to close critical knowledge gaps concerning the

Epidemiology is the study of disease in populations, and the factors that determine its occurrence. The emphasis is on *populations*, not any single case of disease viewed individually.

epidemiology of important pathogens in fish and wildlife.

- Evaluate available disease management methods to increase efficiency.
- Develop and improve fish and wildlife health management options.
- Develop and improve risk analysis techniques. Risk assessment support should be in place either with in-house staff or contracted assistance to provide the appropriate management options.
- Conduct human dimension studies and incorporate results to maximize efficiency of management strategies.

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