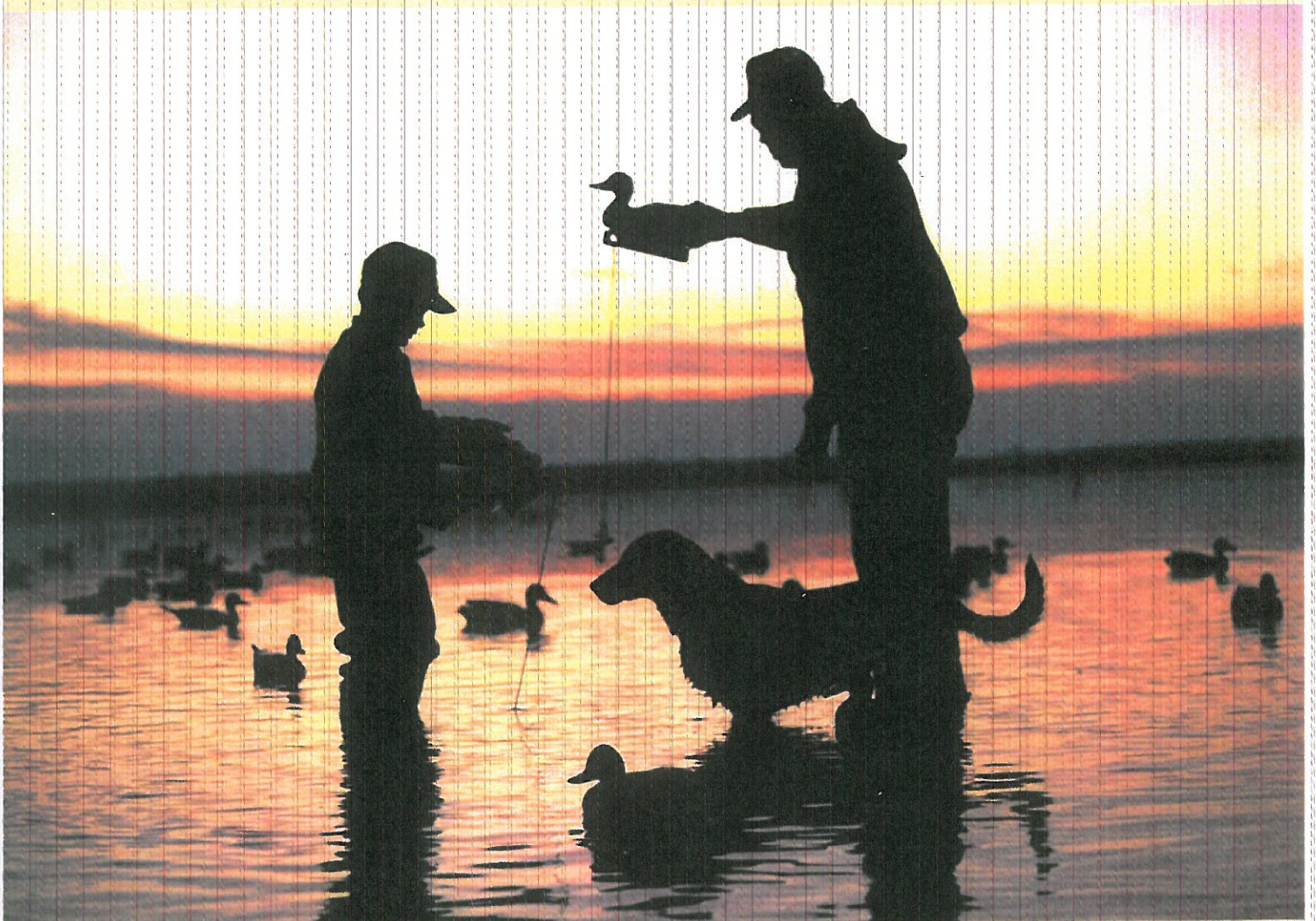


Strengthening America's Hunting Heritage and Wildlife Conservation in the 21st Century: Challenges and Opportunities



Sporting Conservation Council

The North American Model of Wildlife Conservation: Enduring Achievement and Legacy

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Introduction

European discoverers of the New World set few limits on their use and taking of wildlife. As a result, by the end of the 19th century, many wildlife species, especially in the United States, were in serious decline. This unregulated exploitation eventually gave way to widespread public outrage and ultimately set up a conservation reaction in the late 1800s—a movement to conserve and manage wildlife through regulated hunting. The well-publicized slaughter of the American bison helped to instill a notional view that there were limits to America's wildlife and other resources. This circumstance, perhaps more than any other, helped to launch a collective sense of citizen stewardship and responsibility for wildlife and their habitat.

Initially slow to take root, this wildlife conservation movement was led in both the United States and Canada by hunters who were committed to the sustainable use of wildlife for personal rather than market purposes, democratic access to nature, and a standard of fair chase hunting. In hindsight, these concepts can be viewed as the first North American conservation ethic.

While unrestrained killing of wildlife for market purposes was the main force that endangered North America's wildlife, regulated hunting became the founding influence and remains the backbone of the world's longest standing movement for wildlife protection, use, and enhancement. This social and political movement eventually coalesced into a systematic arrangement of conventions, policies, laws, and institutions that we recognize today as the North American Model of Wildlife Conservation.

Wildlife abundance in America today is often taken for granted. Citizens of the United States and Canada have come to expect wildlife diversity as part of their cultural heritage, yet remain largely uninformed of the heroic efforts that led to our priceless access to the wild. Nor do they understand the complex infrastructure that ensures the continued presence of wildlife in our lives. Consequently, an impression has taken hold that wildlife exists free of human influence and that only in the absence of human contact can wildlife thrive. For many, wildlife, it seems, exists by accident! The reality, however, is that the wildlife we enjoy today exists because of human endeavor.

Much is threatened by this general lack of understanding, including wildlife diversity and abundance as well as our cherished tradition of open access to it. In an increasingly populous world

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and an ever expanding demand for energy and other resources, we now face enormous challenges in conservation. We cannot hope to succeed in our efforts to safeguard wildlife if we do not understand the policies, laws, and principles that collectively contribute to its continued existence.

Problem Summary

The North American Model of Wildlife Conservation consists of seven key principles:

1. The Public Trust Doctrine
2. Democratic Rule of Law
3. Opportunity for All
4. Commercial Use
5. Legitimate Use
6. Science and Wildlife Policy
7. International Wildlife Migratory Resources

Hunting has been critical to the success of the North American Model. Hunters have been the main proponents of wildlife* as a public trust, and they have, by and large, paid the bills for wildlife conservation through purchases of licenses and hunting equipment. Societal, economic, and political changes have occurred that may present serious challenges to the North American Model:

- Very little information has been provided to the public about the Model and its contribution to North American wildlife conservation. Without that information, public acceptance and support of the North American Model cannot be expected, further jeopardizing wildlife conservation and our hunting heritage.
- Wildlife-related ballot measures based not on science but on emotion and that exclude traditional uses of wildlife undercut the Public Trust Doctrine.
- Illegal commerce in dead animal parts damages proven conservation principles.
- Maintaining public acceptance of regulated hunting as a legitimate use of wildlife is a continuing challenge as society becomes more detached from the outdoors and outdoor activities.
- Investment in and integration of both ecological and social science in wildlife agency decision making is a continuing and increasing challenge.
- Managing and conserving migratory species is increasingly complex in the presence of globalization, climate change, and changing economic alliances.
- Actual and projected declines in hunter participation for social, demographic, and lifestyle reasons indicate that America's hunting heritage may be at risk, and along with it the successful practice of American wildlife management.

*In this paper, the term "wildlife" refers to public wildlife, including all game animals except those typically defined in state and provincial statutes as livestock, domestic, game farm animals, or other privately owned animals. See, for example, provincial and state statutes in Saskatchewan, Alberta, Manitoba, Idaho, Montana, and North Dakota (Meschishnick, Reiger, & Behiel, 2003). In addition, migratory birds are covered by specific treaties and laws in the United States, Canada, and Mexico and are managed under the federal governments in cooperation with state and other local governments.

- State management of wildlife appears at risk as the historic hunter-supported financial base declines.

In recent years, state agencies have taken on a greater role in conserving all wildlife species (in keeping with the North American Model). Because most states provide little or no general fund support for wildlife, there is a growing need for increased state government financial support for these programs. The continued effectiveness of state management of all wildlife becomes a serious question.

The Model has been extremely successful and effective in North America. However, today it faces increasingly complex challenges, and there has been no organized effort to assess and summarize these challenges and attempt to resolve them. The consequences of inaction could include serious weakening or even collapse of the Model, with a resulting decline in the quality of North American wildlife populations, habitat, and hunting that we have enjoyed since the mid-20th century.

Seven Core Principles of the North American Model

The North American Model's two basic tenets – that harvest of wildlife is reserved for the noncommercial use of individual hunters and is to be managed in such a way that wildlife populations will be sustained at optimal levels forever – are elaborated by seven principles first articulated in the mid to late 1800s. Refined and modified over time, these principles of the Model may best be remembered as the Seven Pillars for Wildlife Conservation:

1. **The Public Trust Doctrine.** An 1842 U.S. Supreme Court opinion, in *Martin v. Waddell*, established the legal precedent that it was the government's responsibility to hold wild nature in trust for all citizens. The next three pillars reflect this fundamental doctrine.
2. **Democratic Rule of Law.** Wildlife is allocated for use by citizens through laws. This protects against the rise of elites who would appropriate wildlife to themselves (as occurred in Europe). All citizens can participate, if necessary through the courts, in developing systems of wildlife conservation and use.
3. **Opportunity for All.** In Canada and the United States, every man and woman has a fair and equitable opportunity under the law to participate in hunting and fishing. No one group, hunters or nonhunters, can legally exclude others from access to game within the limitations of private property rights.
4. **Commercial Use.** Hunters and anglers led the effort to eliminate markets and commercial traffic in dead animal parts, which was a huge business in the latter half of the 1800s and the early 1900s. The market killing of birds and animals decimated many species and brought some to near extinction or extinction.
5. **Legitimate Use.** Although laws could govern access to wildlife and ensure that all citizens had a say in its protection, there had to be guidelines as to appropriate use. This is defined as killing for food and fur, self-defense, and property protection, categories that are broadly interpreted.
6. **Science and Wildlife Policy.** Interest in science and natural history was deeply ingrained in North American society, a fact reflected in the emphasis placed on recording wildlife habits and diversity by almost every major expedition charged with mapping the continent, along with the enormous popularity of amateur natural history collections. Hunters and anglers are, by habit and inclination, naturalists. Science is identified as a crucial requirement of

wildlife management. For this Aldo Leopold, in his 1930 American Game Policy, credited Theodore Roosevelt, explicitly stating that science should be the underpinning of wildlife policies.

7. **International Wildlife Migratory Resources.** The boundaries of states and nations are of little relevance to migratory wildlife and fish, and policies and laws for wildlife conservation have to address this reality. The Migratory Bird Treaty Act of 1918 is an excellent example of successful international cooperation.

Goals, Challenges, Consequences of Inaction, and Opportunities for Each of the Core Principles

The Public Trust Doctrine: State and Provincial Governments Hold Wildlife in Trust for the Public

Problem Summary

The keystone of the North American Model is that wildlife is managed as a public trust resource. The public is generally unaware of the historical foundations and ongoing relevance of the Public Trust Doctrine. Furthermore, the legal framework that supports the Doctrine is insufficient with respect to wildlife uses and the habitats on which they depend. As a consequence, many of the challenges to wildlife and its management, and special interest advocacy against consumptive use of wildlife, are difficult to effectively address.

Goals

The Public Must Understand and Value the Doctrine. The public needs to understand that wildlife, regardless of location, is a public asset, with the government acting as trustee. The people must hold the government as trustee accountable for that trust.

Strengthen the Legal Foundations. Constitutions, laws, and administrative rules that govern the use of fish and wildlife should be explicit in defining these resources as property of the states and provinces to be held in public trust and conserved, managed, and utilized for the benefit of present and future generations.

Challenges

Decreasing Participation in Hunting and Other Outdoor Activities. Hunting participation in the United States has declined in recent years in absolute numbers of hunters and in licenses sold. Hunters as a percentage of the U.S. population have also declined (Responsive Management/National Shooting Sports Foundation, 2008). In addition, the number of participants in other outdoor activities (visits to national parks, state parks, and national forests, as well as fishing and camping) has declined. These trends in hunting participation reflect an overall trend in declining participation in outdoor activities. All of this suggests a growing public "detachment" from the natural world and related functions, including state/provincial wildlife management. It also strongly suggests an increasing lack of public knowledge about the role of wildlife conservation, including the Public Trust Doctrine and the resurgence of North American wildlife. This all conspires to increase the vulnerability of the North American Model.

Identification and Mitigation of Conditions that “Privatize” Wildlife. Protecting public wildlife from “privatization” or conditions that can dilute the public trust status of public wildlife is a key priority in sustaining and protecting the North American Model. Even though many wildlife professionals have concerns about the impact of game farming/ranching on the integrity of the Model, the fact remains that these facilities exist in some jurisdictions of North America, and there is no clear consensus on how to manage or deal with them, including fair chase, disease transmission, and other social or biological considerations. The absence of a clear consensus is understandable due to the American system of government, in which there is embedded a body of rights that citizens hold with respect to their property. While a core principle of the Model is that wildlife is held in trust for the public good and cannot be privately owned, public wildlife resides on private land as well as federal and state lands. Balancing the body of law that maintains the rights of property owners with the successful and enduring legacy of the Public Trust Doctrine is a continuing challenge. The best outcomes will be enduring bonds between wildlife managers and private property owners that sustain the Model, and effective and timely processes for the hunting/conservation community to develop consensus on appropriate responses to examples or conditions of “privatization” and potential mitigation measures.

Unsustainable Land Use Practices. The U.S. population is projected to increase to nearly 400 million by the year 2050, from the 2000 census count of about 281 million. Current trends in human impacts on the land, including habitat loss and fragmentation, pose the greatest long-term threat to wildlife. Unless major changes in social values and corresponding political ideology occur, past and present wildlife conservation successes will be at significant risk.

Animal Rights. North American wildlife conservation programs have largely adhered to three fundamental principles regarding use of wildlife: (1) the use must not threaten or endanger the species, (2) the techniques used to kill animals must be fair and acceptable to society, and (3) the use must serve a legitimate purpose. These principles are grounded in the concept of wildlife as a public trust resource that must be perpetuated for the benefit of present and future generations. However, this runs counter to the animal rights doctrine that forbids the use of sentient beings for any purpose. Policies that would eliminate traditional human uses (hunting) of wildlife would denigrate wildlife’s value as a public trust resource.

Consequences of Inaction

Government trusteeship of wildlife as a public resource arose in North America during a time when the stakeholder base was narrower than it is today. Primary stakeholders in that time were consumptive users and those with agricultural interests. Contemporary society has a base of stakeholders with more diverse interests, ranging from people whose interests are tangential and appreciative of the existence of wildlife to those who want to avoid interactions with wildlife altogether. Moreover, the “digitization” of American culture and society and the concomitant loss of outdoor experiences and values will likely mean that future generations will value wildlife and natural resources even less so than today. To ensure that future wildlife conservation policy makers have the tools they need to conserve wildlife, the Public Trust Doctrine must be strengthened. Absent this, the North American Model will not be sustainable and will fail future generations.

Opportunities

1. Develop ways and means to effectively create and distribute appropriate information on the North American Model/Public Trust Doctrine for dissemination to a wide target audience,

including the general public; academic programs; and state, provincial, and federal programs.

2. Develop and implement processes for members of the hunting/conservation community to reach consensus on specific prioritized examples or conditions of “privatization” that can dilute the public trust status of public wildlife, and develop associated mitigation measures.
3. Develop specific programs to protect the exclusive authority of states and provinces, through state and provincial wildlife agencies, to conserve, regulate, and manage public wildlife.
4. Implement a review of impediments to hunt internationally, such as prohibitive firearm or importation laws that would undermine incentives for cooperating countries to contribute to shared wildlife management programs, and recommend solutions to minimize or eliminate impediments.

Democratic Rule of Law: Access to and Use of Wildlife Is Best Managed Through Laws and Regulations That Reflect Inclusive Citizen Engagement as Implied by the Public Trust

Problem Summary

The imposition of values that exclude traditional uses of wildlife resources through access to the courts and ballot measures not only excludes a specific use, but undercuts the principles and discharge of the Public Trust Doctrine and therefore puts at risk the public’s trust in government stewardship of wildlife resources.

Goal

Develop Better Decision-Making Processes. Improve wildlife decision-making processes to make them more cooperative, open, and constructive and to maintain the principles and enhance the discharge of the public trust. Such processes will lead to decisions that are sustainable and uphold traditional wildlife uses enshrined through the Public Trust Doctrine.

Challenges

Public Perceptions About the Mindset of Government Wildlife Managers. Public perceptions about the mindset of government wildlife managers sometimes contribute to irreconcilable differences, often leading to judicial intervention. There are groups and segments of society that do not trust government agencies to make decisions. Sometimes this distrust is based on perceptions that all government wildlife managers cater only to hunters. Others believe that government wildlife managers are losing (or have lost) their connection to hunters and that regulations are created simply to make it more difficult, if not impossible, to hunt.

Consequences of Inaction

Decisions based on sound science should promote maintenance of healthy wildlife populations and habitats. Conversely, decisions based on politics, emotion, and special interests may not serve wildlife and often result in loss of recreational opportunity. One example is the consequences of not hunting whitetail deer where overpopulation causes starvation, stress to the animals, and damage to personal and public property. A more complex example is dove hunting, where science

may support recreational hunting, and social or emotional forces are opposed, and hunting is not needed to maintain sustainable populations. Failure to improve wildlife decision-making processes will gradually weaken professional wildlife management and our hunting heritage and will further jeopardize the North American Model.

Opportunities

1. Develop decision-making mechanisms that have two simultaneous objectives:
 - a. more effectively communicate the rationale, results, and recommendations of science to the general public; and
 - b. ensure that stakeholder perspectives are used in conjunction with science.
2. Improve communication to and participation by the public in decision-making processes that impact wildlife management.

Opportunity for All: The Democracy of Hunting

Problem Summary

Because hunting in North America has not been reserved or perceived as a privilege of the wealthy or well-connected, it has enjoyed widespread popular support. Increased efforts by wildlife managers and the hunting/conservation community are needed to ensure that hunting retains public support and that public hunting opportunity is fair and equitable within the limitation of laws and regulations.

Goals

Ensure Fair and Equitable Opportunity for Becoming a Hunter. Making sure that all citizens have the opportunity to become hunters, and retaining and enhancing the popular support of hunting among the nonhunting public, are fundamental to North American wildlife conservation.

Ensure Fair and Equitable Access to Hunting Opportunity. Ensure that all hunters have fair and equitable lawful opportunity to participate in hunting and promote hunter access to wildlife resources on public and private lands, without respect to income or group affiliation.

Recognize the Societal Value of Fair-Chase Hunting. While the conservation impact of fair-chase hunting extends benefits to all members of society, it is also true that for hunting participants the experience leads to a strong commitment to sustainable wildlife use and wildlife conservation. This commitment to wildlife conservation arises from the unique spiritual connection to the land and the rhythms of nature that many hunters experience while hunting.

Challenges

Access to Wildlife. As stated in the goals above, we must “ensure that all hunters have fair and equitable lawful opportunity to participate in hunting and promote hunter access to wildlife resources on public and private lands” Accordingly, the long-term integrity of hunting programs requires that all hunters have access to high-quality habitats that provide a rewarding hunting experience. For many Americans, access to public hunting areas is a critical component of hunting opportunity. Access to private hunting areas remains vitally important to many American hunters as well. Enhancing the public’s ability to access property for hunting free-ranging wildlife

remains a key priority for sustaining and protecting the Model. Federal and state agencies, along with owners of private lands, should be strongly encouraged to adopt policies and practices that support an enduring system of land management that assures access by hunters in perpetuity. In addition, a compelling challenge is to develop consensus-based lists of prioritized examples or conditions that limit hunting opportunity and to develop associated response options.

Consequences of Inaction

Actions that create an inequitable, tiered, or class-conscious structure to hunting opportunity will undermine the stability of the North American Model, which is based in part on fair and equitable access. Real or perceived inequities in opportunities to access game populations lead to resentment among those hunters who feel excluded and skew the historic alignment of interests among hunters. Such inequities can also reduce the acceptance that nonhunters have of hunting.

Opportunities

1. Develop ways and means to effectively create and distribute appropriate information on the North American Model/Public Trust Doctrine for dissemination to a wide target audience, including the general public; academic programs; and state, provincial, and federal agencies.
2. Encourage the creation of incentive-based landowner programs to maintain and increase habitat and to encourage public access for hunting opportunity.
3. Communicate the practical applications of hunting as management tools and develop ways and means to effectively create and implement outreach efforts that convey to the public the deeper philosophical, emotional, and spiritual aspects of hunting and the influence these forces have on developing a conservation ethic and commitment.
4. Develop and implement processes that assist members of the hunting/conservation community to reach consensus on specific prioritized examples or conditions that may limit public hunting opportunity, and develop appropriate response options.
5. Encourage federal and state agencies, along with private landowners, to support management plans that assure hunter access in perpetuity.

Commercial Use: Prohibitions on Illegal Commercial Uses Deleterious to Wildlife Conservation

Problem Summary

Historically, wide-scale legal and illegal commercial slaughter and marketing of wildlife led to severe depletions, and in some cases extinction, of a range of wildlife species. Today, illegal commerce in dead wildlife destroys proven conservation principles, increases policing costs to the public, fosters genetic pollution and the spread of diseases to wildlife populations and livestock, and threatens public health. It also leads to loss of wildlife habitats and public lands, as well as loss of public trust rights and freedoms.

Goals

Ensure That Wildlife Remains Wild. Public wildlife must remain a resource managed by state wildlife agencies, and federal agencies where appropriate, in congruence with the Public Trust Doctrine.

Ensure That Private Wildlife in Captivity Is Not Mixed With Domestic Livestock. The emergence of legal game farming, which is the application of accepted livestock management practices to species that are considered “domestic wildlife,” has led to a confusion of laws regarding regulatory oversight, acceptable management practices and precautions, and even our notion of “wildness.” Currently, regulatory oversight has been mixed in state governance between agricultural and natural resource agencies, while federal authorities have struggled with the interstate movement of animals raised under game farm conditions. Because private game farm animals have been subjected to different environmental conditions, breeding programs, and health management than have free-ranging public wildlife, it is imperative that private game farm and public free-ranging wildlife be separated at all times. This is not only to ensure the health of wildlife populations but also to safeguard public health.

Ensure That Management Agencies and the Public Understand the Dangers That Illegal Commercial Use of Dead Wildlife Presents to Conservation Efforts. It is imperative that agencies charged with the responsibility of managing wildlife understand and communicate the historical arguments for and continued relevance of the principles against illegal wildlife commercialization enshrined in the North American Model.

Challenges

Mixed Governmental Agency Jurisdiction Oversight of Private Captive Wildlife. Policies by state and provincial agricultural agencies that support the domestication of private wildlife can weaken the North American Model. State and provincial wildlife management agencies should have the oversight responsibility of the “taking for sport” of private captive wildlife.

A Market in Game Farms Enables the Possible Spread of Disease. There is currently a market in breeding and exporting private trophy game species animals to private “game farms.” This could have serious consequences for wildlife in view of an inadequate body of science pertaining to wildlife disease and parasites.

Other Threats to Wildlife Conservation. Large markets in exotic wildlife (e.g., reptiles and amphibians, both for food and pets) and deeply held ethnic beliefs in the healing properties of dead wildlife stimulate illegal wildlife markets. We need to ensure that all harvests are conducted by legal, enforceable allocations to individuals so as to counter markets in dead wildlife.

Consequences of Inaction

Failure to maintain vigilance on illegal commerce in dead wildlife can lead to a rapid depletion of wildlife via illegal markets. Trying to police markets in dead wildlife is not only very costly but leads to calls for severe policing practices, the abolition or severe control of firearms, and restrictions on civil liberties. Failure to deal with illegal markets in wildlife can lead to the spread of diseases to livestock and humans and back again into unaffected wildlife populations.

Opportunities

1. Develop ways and means to effectively create and distribute appropriate information on the dangers inherent in illegal markets for wildlife products for dissemination to a wide target audience, including the general public; academic programs; and state, provincial, and federal agencies.
2. Develop specific programs to protect the exclusive authority of states and provinces, through state and provincial wildlife agencies, to conserve, regulate, and manage public wildlife.

3. Develop specific programs to guide implementation of laws and regulations that ensure that public wildlife remains the jurisdiction and responsibility of states/provinces, and, where appropriate, federal fish and wildlife management agencies.

Legitimate Use: Ensure That Wildlife Is Used for Legitimate Purposes: Food, Fur, Self-Defense, and Protection of Property

Problem Summary

While the traditional understanding of legitimate wildlife use has included fur, food, self-defense, and the protection of property, there are contemporary perspectives that would imply otherwise. While historically, frivolous killing of wildlife threatened the sustainability of many species, regulated hunting and trapping today pose no threat to species sustainability and are legitimate uses of wildlife. How to maintain public acceptance of regulated hunting as a legitimate use of wildlife is a crucial question. This not only relates to the future of hunting, but also to the continued participation of hunters in the conservation of wildlife.

Goals

Rearticulate What Constitutes Legitimate Use of Wildlife. The broad understanding of the legitimate uses of wildlife should be reinforced through broad public dialogue led by the hunting and trapping community.

Promote the Conservation Value of All Wildlife. In addition to developing clear definitions of legitimate use, this dialogue must recognize the conservation value of all wildlife species and also recognize that nonconsumptive uses of wildlife are also legitimate.

Challenges

Hunters and Nonhunters Need to See Themselves and Each Other as Stewards of Wildlife. Public support for hunting is most likely to prevail when the public sees the hunter in the best possible light—as a wildlife steward and conservationist in the fullest sense of the terms. To the extent that hunters deviate from that heritage, one could expect the concomitant appreciation of hunting by the general public to diminish.

Consequences of Inaction

Hunters may be branded as not caring about the natural world and about all wildlife, especially before a nonhunting public.

Opportunities

1. Develop ways and means to effectively create and distribute appropriate information on the North American Model/Public Trust Doctrine for dissemination to a wide target audience, including the general public; academic programs; and state, provincial, and federal agencies.
2. Improve communication to and participation by the public in decision-making processes that impact wildlife management.
3. Communicate the practical applications of hunting as management tools and develop ways and means to effectively create and implement outreach efforts that convey to the public the

deeper philosophical, emotional, and spiritual aspects of hunting and the influence these forces have on developing conservation ethics and commitment.

Science and Wildlife Policy: Science Is the Primary Basis for Wildlife Policy

Problem Summary

Investment in and integration of both ecological and social science by management agencies is inadequate for making many wildlife policy decisions at the landscape level. In addition, the politicization of wildlife management decisions can result in policies that alienate hunters and other stakeholders and cause nonhunters to question the claim of "science-informed management." Also, ballot measures have resulted in mandates that, in many cases, are contrary to the prevailing science.

Goals

Strengthen Science-Based Decision Making. Wildlife policy development should be informed by appropriate science. To be effective, relevant science must be utilized and integrated into decision making. Furthermore, science must be represented accurately and not modified to suit preconceived positions.

Maintain Adequately Funded Wildlife Science Programs. Effective science is a continuous process, the need for which is not necessarily determined by the abundance of a species. Long-term commitments to science are essential for adaptive management. They require stable, enduring funding commitments.

Ensure Stakeholder Involvement in the Decision-Making Process. Broader societal input must be incorporated into the science base of the decision-making process. This should be approached with no fewer rigors than the ecological aspects. Public input and participation should be structured and strategic to best inform policy development.

Ensure That Human Dimensions Studies Are Available and Integrated Into the Science Base. Scientific understanding of the social context should be considered important to effective decision making, just like empirical ecological research. Furthermore, social concerns should help to inform and establish science priorities.

Challenges

The following are challenges specific to governmental agencies that manage wildlife populations:

- There is inadequate funding and prioritization of science, a lack of social science expertise, and inadequate integration of biological and social science.
- Public mistrust and lack of understanding of science hinders its use in policy development.
- Politicization of boards, commissions, and superagency leadership (e.g., a wildlife management agency subsumed within a larger resource management agency with a political appointee as head), resulting in policies that do not reflect the greater good or public trust mandates.
- There is lack of rigor and discipline in the process of policy/management decision making, which leads to oversimplification of decision frames, a neglect of available science,

overlooking needs for critical information, and inadequate anticipation of collateral and subsequent effects of policy decisions and management actions.

Consequences of Inaction

Wildlife management programs and directives are not sustainable. Public support for wildlife conservation and management is lost. Overall biodiversity, including game species, declines. Wildlife management policy is increasingly dictated through direct democracy (i.e., ballot initiatives), without adequate dialogue and investigation, resulting in oversimplification and polarization of issues and ultimately an overall devaluing of wildlife and conversion to a pest management model. Traditional management approaches and traditional uses of wildlife, while biologically sound and socially acceptable, may decline through lack of political support.

Excessive use of resources by agencies mitigating unanticipated consequences of decisions and actions that were not thoroughly analyzed likely undermines agency credibility in future actions. The leadership role of fish and wildlife agencies in conservation is diminished.

Opportunities

1. Develop decision-making mechanisms that have two simultaneous objectives:
 - a. more effectively communicate the rationale, results, and recommendations of science to the general public; and
 - b. ensure that stakeholder perspectives are used in conjunction with science.
2. Improve communication with and participation by the public in decision-making processes that impact wildlife management.

International Migratory Wildlife Resources: Recognize and Manage International Migratory Wildlife as a Shared Resource

Problem Summary

Migratory species require coordinated management by different political jurisdictions. Globalization, changing politics, economic forces, cultural change from immigration, landscape modification, and climate change all make the normally complex issue of managing and conserving migratory species even more challenging. The robust and highly effective approaches to migratory species management enshrined early in the North American Model must be assiduously attended to in this changing context, but also utilized as effective models for application to other wildlife conservation challenges.

Goals

Ensure Continuing Support for Coordinated International Management Approaches. Migratory species management is currently served by a highly complex array of policies, programs, specialist working groups, and funding mechanisms, all of which are deployed to ensure conservation and sustainable use of these species. Ensuring that these coordinated efforts remain in place and are appropriately supported by the relevant political jurisdictions will require constant effort and attention.

Work to Remove Impediments to the Continuing Efforts to Conserve, Manage, and Hunt Migratory Species in North America. Even where species are migratory or transboundary in

distribution, hunting has been the basis of conservation and management programs, a number of which have international treaty designations.

Apply Lessons From International Collaboration to Safeguard Wildlife Conservation in North America. While migratory species were effectively addressed in the early years of the North American Model's formulation, a diverse group of other species has ranges that encompass habitats in more than one country. For such transboundary species, and for other special wildlife conservation challenges, the lessons learned in the cooperative arrangements deployed for migratory species should prove highly relevant and worthy of extension.

Challenges

Differences in People and Cultures Create Diverse Opinions on How to Manage Wildlife. Different cultural values and more diverse publics do not agree on goals for managing many species of wildlife. The proliferation of interest group priorities, from animal rights to energy development, can include those that do not share the main principles of the North American Model or support science-driven management through professionally staffed agencies.

The Model Has Not Been Fully Utilized. The North American Model of user-supported wildlife conservation is not the basis for all conservation needed in North America. Most importantly, the solid funding mechanism of the Model has not been expanded to address all wildlife issues or include financial contributions by all citizens. Furthermore, wildlife ecology issues and their potential solutions, including maintaining habitats, servicing diverse publics, and maintaining a balance between protection and human use of wildlife are not as regularly engaged by North American countries working cooperatively as in the past.

Consequences of Inaction

Separate goals for shared resources combined with cultural change and values that do not support responsible human uses of wildlife can only lead to conflict. Loss of habitat to unfettered economic development will erode the wildlife restoration achievements of the past century. Failure to address issues of the globalization of human activities will leave North American wildlife vulnerable to exotic disease and invasive plants. Continued lack of regular engagement between countries on shared wildlife issues, ranging from protection to managed use, will foster distance rather than collaborative effort. Failure to embrace conservation of all wildlife as a mutual goal and to find ways for all citizens to contribute to conservation will leave countries, hunters, and anglers fragmented as society evolves in complex ways.

Failing to learn from the successes of close cooperation under the North American Waterfowl Management Plan will continue insular efforts to solve wildlife problems rather than working through collaborative strength and partnerships. Dwelling on past achievements without adaptive methods and approaches to a changing North American climate and landscape will not sustain desired traditional activities like hunting.

Opportunities

1. Develop initiatives for the management of transboundary or other wildlife populations of special concern that reflect the effective characteristics of existing programs for the conservation of migratory species.
2. Implement a review of impediments to hunt internationally, such as prohibitive firearm or importation laws that would undermine the incentive for cooperating countries to contribute

to shared wildlife management programs, and recommend solutions to minimize or eliminate impediments.

Priority Opportunities

1. Develop ways and means to effectively create and distribute appropriate information on the North American Model/Public Trust Doctrine for dissemination to a wide target audience, including the general public; academic programs; and state, provincial, and federal agencies.
2. Develop specific programs to protect the exclusive authority of states and provinces, through state and provincial wildlife agencies, to conserve, regulate, and manage public wildlife.
3. Develop specific programs to guide implementation of laws and regulations that ensure that public wildlife remains the jurisdiction and responsibility of states and provinces and, where appropriate, federal fish and wildlife management agencies.
4. Develop and implement processes for members of the hunting/conservation community to reach consensus on specific prioritized examples or conditions of "privatization" that can dilute the public trust status of public wildlife and to construct associated mitigation measures.
5. Develop and implement processes for members of the hunting/conservation community to reach consensus on specific prioritized examples or conditions that may limit public hunting opportunity and to foster appropriate response options.
6. Encourage federal and state agencies, along with private landowners, to support management plans that assure hunter access in perpetuity.
7. Encourage the creation of landowner incentive-based programs to maintain and increase habitat and to encourage public access for hunting opportunity.
8. Develop decision-making mechanisms that have two simultaneous objectives:
 - a. more effectively communicate the rationale, results, and recommendations of science to the general public; and
 - b. ensure that stakeholder perspectives are used in conjunction with science.
9. Improve communication with and participation by the public in decision-making processes that impact wildlife management.
10. Communicate the practical applications of hunting as wildlife management tools and develop ways and means to effectively create and implement outreach efforts that convey to the public the deeper philosophical, emotional, and spiritual aspects of hunting and the influence these forces have on developing conservation ethics and commitment.
11. Implement a review of impediments to hunt internationally, such as prohibitive firearm or importation laws that would undermine the incentive for cooperating countries to contribute to shared wildlife management programs, and recommend solutions to minimize or eliminate the impediments.
12. Develop initiatives for the management of transboundary or other wildlife populations of special concern that reflect the effective characteristics of existing programs for the conservation of migratory species.

Conclusions

To the vast majority of the American public, the unique and improbable history of our conservation achievement remains unknown. Even most hunters remain ignorant of their own conservation legacy. Yet, for more than 100 years, a recognizable protocol has been guiding the stewardship and sustainable use of North America's wildlife and at the same time safeguarding democratic access and traditional activities that are cherished elements of our way of life. The North American Model of Wildlife Conservation has been responsible for a remarkable resurgence in wildlife as well as a staggering and diffuse economy that has enabled wildlife to "pay its way" across a vast and diverse continent.

Despite these achievements, all is not well. Social and economic forces of great magnitude are combining with the normal challenges inherent to conservation, resulting in an organic, evolving and highly complex political and social frontier that is severely testing the principles we once thought inviolable. Changing social realities not only relate to vastly increasing numbers of people, but also include extensive recalibration of ethnic and cultural proportions that bring new and differing attitudes toward wildlife and its use. Urbanization is a relentless force full of profound implications for what we once thought was the obvious relevance of wildlife in people's lives. Globalization is changing the very fabric of life in North America, and energy, security, and finance are riding hard toward an escalating and inevitable collision with some of our most cherished conservation positions and programs.

As the foregoing review of the North American Model's principles and challenges has indicated, we are at a juncture in our history where the future of wildlife and how we interact with it are highly uncertain. An enormous array of factors needs improved definition, and a host of policy and legal institutions requires intensive review and adjustment. To further complicate these realities, the financial foundations of wildlife conservation are themselves in decline while escalating landscape alterations and changing land ownership patterns are casting deep shadows over what we once thought of as ingenious and lasting solutions. The demands for improved science and better decision-making frameworks have emerged as increasingly complex and vibrant challenges.

In short, there has never been a more appropriate time for us to take stock, regroup, and recommit ourselves to wildlife and those founding traditions and values that rescued and restored it some four generations ago. This review of the North American Model of Wildlife Conservation is more than timely: it is critical to our future. Even great things, no matter how hard-won, can be easily lost. Neglect is the rust of progress. It is not surprising that educating the public about our conservation history has surfaced as one of the most critical requirements from this review. Without knowledge we cannot care, and without concern we will not act. The North American Model of Wildlife Conservation will not falter because of the problems it faces. As in the fading days of the bison, it will rise or fall with the tide of citizen commitment.

Literature Citations

- Meschishnick, G.A., K. Reiger, and A. Behiel. 2003. Game farm regulation: Saskatchewan, Alberta, Manitoba, Idaho, Montana, and North Dakota. Saskatoon: Centre for Studies in Agriculture, Law and the Environment, University of Saskatchewan.
- Responsive Management/National Shooting Sports Foundation. 2008. The future of hunting and the shooting sports: Research-based recruitment and retention strategies. Produced for the U.S. Fish and Wildlife Service under Grant Agreement CT-M-6-0. Harrisonburg, VA.

Suggested References

- Duda, M.D., S.J. Bissell, and K.C. Young. 1998. *Wildlife and the American mind*. Harrisonburg, VA: Responsive Management.
- Ehrenfeld, D. (ed.). 1995. *Readings from conservation biology: The social dimension*. Cambridge, MA: Blackwell.
- Geist, V. 1985. Game ranching: Threat to wildlife conservation in North America. *Wildlife Society Bulletin* 13(4):594-98.
- Geist, V. 1987. Three threats to wildlife: Game markets, pay hunting and hunting for "fun." Proceedings of the Privatisation of Wildlife and Public Lands Access Symposium pp. 46-58. Casper: Wyoming Fish & Game Department.
- Geist, V. 1988a. Flourishing public wildlife: The commons controlled. Proceedings of the 52nd Federal Provincial Wildlife Conference, June 14-17, 1988, Victoria, BC pp. 120-34. Ottawa: CWS/Environment Canada.
- Geist, V. 1988b. How markets in meat and parts, and the sale of hunting privileges, jeopardize wildlife conservation. *Conservation Biology* 2(1):1-12.
- Geist, V. 1989. Legal trafficking and paid hunting threatens conservation. Proceedings of the 54th North American Wildlife and Natural Resources Conference pp. 171-78. Washington: Wildlife Management Institute.
- Geist, V. 1991a. Deer ranching for products and paid hunting: Threat to conservation and biodiversity by luxury markets. In Brown, R.D. (ed.), *The biology of deer* pp. 554-61. New York: Springer. (Special presentation at Proceedings of the Biology of Deer Symposium, Mississippi State University, May 28, 1990.)
- Geist, V. 1991b. Some lessons from North American wildlife management. Proceedings of the International Symposium on Wildlife Conservation, INTECOL 1990, Yokahama, Japan, August 21-25, 1990 pp. 7-10.
- Geist, V. 1993. Great achievements, great expectations: Success of North American wildlife management. In Hawley, A.W.L. (ed.), *Commercialization and wildlife management: Dancing with the devil* pp. 47-72. Malabar, FL: Krieger.
- Geist, V. 1994. Wildlife conservation as wealth (commentary). *Nature (London)* 368:491-92.
- Geist, V. 1995a. Noah's Ark II: Rescuing species and ecosystems. In Norton, B.G., M. Hutchins, E. Stevens, and T. Maple (eds.), *Ethics on the Ark: Zoos, animal welfare, and wildlife conservation* pp. 93-101. Proceedings of the American Association of Zoos and Aquaria Bioethics Conference, March 20, 1993, Atlanta, GA. Washington: Smithsonian Institution University Press.
- Geist, V. 1995b. North American policies of wildlife conservation. In Geist, V., and I. McTaggart-Cowan (eds.), *Wildlife conservation policy* pp. 77-129. Calgary: Detselig.
- Geist, V. 1995c. Wildlife management American style creates biodiversity and wealth. In Bissonette, J.A., and P.R. Krausman (eds.), *Integrating people and wildlife for a sustainable future* pp. 279-82. Proceedings of the 1st International Wildlife Management Congress, San Jose, Costa Rica, September 19-25, 1993. Bethesda, MD: The Wildlife Society.

- Geist, V. 1996. Vertebrate biodiversity: Agriculture's conspicuous consumption of wildlife, reintroduction gaffs, and Noah's arc conservation. In Rubec, C.D.A. and G.O. Lee (eds.), *Conserving vitality and diversity* pp. 21-27. Proceedings of the World Conservation Congress on Alien Invasive Species, October 20, 1996, Montreal, Quebec. Ottawa: IUCN/SSC & North American Wetland Conservation Council, Canadian Wildlife Service, Environment Canada.
- Geist, V. 2000a. A century of wildlife conservation successes and how to repeat it. In Mansell, W.D. (ed.), *Proceedings of the 2000 Premier's Symposium on North America's Hunting Heritage* pp. 17-22. Eden Prairie, MN: Wildlife Forever.
- Geist, V. 2000b. Under what system of wildlife management are ungulates least domesticated? In Vrba, E., and G. Schaller (eds.), *Antelopes, deer and their relatives. Fossil record, behavioural ecology, systematics, and conservation* pp. 310-19. A Festschrift in honor of Dr. Allan Gentry. New Haven: Yale University Press.
- Geist, V. 2006. The North American Model of Wildlife Conservation: A means of creating wealth, protecting public health while generating biodiversity. In Lavigne, D.M. (ed.), *Gaining ground: In pursuit of ecological sustainability* pp. 285-93. Guelph, Ontario: International Fund for Animal Welfare and the University of Limerick, Ireland.
- Geist, V., S.P. Mahoney, and J.F. Organ. 2001. Why hunting has defined the North American Model of Wildlife Conservation. *Transactions of the North American Wildlife and Natural Resources Conference* 66:175-85.
- Geist, V., and I. McTaggart Cowan (eds.). 1995. *Wildlife conservation policy*. Calgary: Detselig.
- Geist, V., and J.F. Organ. 2004. The public trust foundation of the North American Model of wildlife conservation. *Northeast Wildlife* 58:49-56.
- Holsman, R.H. 2000. Goodwill hunting? Exploring the role of hunters as ecosystem stewards. *Wildlife Society Bulletin* 28:808-16.
- Mahoney, S.P. 2004. The seven sisters: Pillars of the North American wildlife conservation model. *Bugle: The Journal of the Rocky Mountain Elk Foundation* 21:5 (September/October).
- Mahoney, S.P. 2006. The public trust doctrine of North American conservation: Reality or myth? *Proceedings of the 86th Annual Conference, Western Association of Fish and Wildlife Agencies, Bismarck, North Dakota* pp. 51-57.
- Mahoney, S.P. In press. Recreational hunting and sustainable wildlife use in North America: A review with commentary on the South African approach. Proceedings of the IUCN/Zoological Society of London Conference – Recreational Hunting, Conservation and Rural Livelihoods: Science and Practice, London, UK, October 12-13, 2006.
- Mahoney, S.P., and J. Jackson. In press. A long arc to recognition: Exploring the history of the hunting-conservation movement and recent evidence of its international acceptance. Proceedings of the 73rd North American Wildlife and Natural Resources Conference, Flagstaff, AZ.
- Organ, J., and S.P. Mahoney. 2006. The future of the public trust. *Wildlife Professional* 1:18-22.
- Peterson, M. 2004. An approach for demonstrating the social legitimacy of hunting. *Wildlife Society Bulletin* 32(2):310-21.

Prukop, J., and R.J. Regan. 2005. In my opinion: The value of the North American Model of Wildlife Conservation: An International Association of Fish and Wildlife Agencies position. *Wildlife Society Bulletin* 33:374-77.

Regan, R.J., and J. Prukop. In press. A view from the trenches – Reflections on the North American Model of Fish and Wildlife Conservation from a state agency perspective. Proceedings of the 73rd North American Wildlife and Natural Resources Conference, Flagstaff, AZ.