This is to certify that the
dissertation entitled

ANALYSIS AND EVALUATION OF THE LAURENTIAN GREAT LAKES FISHERY MANAGEMENT LEGAL FRAMEWORK

presented by

JEFFREY W. HENQUINET

has been accepted towards fulfillment
of the requirements for the

Doctoral degree in Fisheries and Wildlife

Major Professor's Signature

August 15, 2007

Date

ANALYSIS AND EVALUATION OF THE LAURENTIAN GREAT LAKES FISHERY MANAGEMENT LEGAL FRAMEWORK

By

Jeffrey W. Henquinet

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Fisheries and Wildlife

2007

ABSTRACT

ANALYSIS AND EVALUATION OF THE LAURENTIAN GREAT LAKES FISHERY MANAGEMENT LEGAL FRAMEWORK

By

Jeffrey W. Henquinet

The Great Lakes fisheries face numerous threats, from over-harvest to pollution to invasive species. Consequently, a large, complex body of law has arisen from the multiple jurisdictions bordering the Great Lakes, which include two nations, eight states, one province and numerous Native American tribes and First Nations. This research analyzes that legal framework based on a review of constitutions, treaties, agreements, statutory law, and judicial opinions. It found a complex legal framework where, through different sets of legal principles, primary harvest management authority in both the U.S. and Canada lies with sub-national governments. This resulting political division of the Great Lakes Basin and management authority has been accommodated through a formal inter-jurisdictional coordination regime.

In-depth interviews with Great Lakes fishery managers were used to identify numerous gaps, overlaps, and conflicts in the framework. First, numerous gaps exist concerning the recognition and implementation of rights for Native American tribes and First Nations with respect to fishing, fishery management, fish habitat protection, and implementation of trust responsibilities by the federal governments. Second, it is unclear what constitutes an action that "significantly influences" the interests of other Great Lakes jurisdictions in determining whether agency actions should be submitted to the inter-jurisdictional decision-making process. Third, to varying degrees, lake committees,

the primary inter-jurisdictional management structure, specifically, lack 1) First Nation involvement, 2) a voting role for federal agencies, and 3) robust public participation. Fourth, the lack of uniformity in fishery regulations signifies an inherent problem with dividing management of a resource amongst multiple jurisdictions, since different people tackling complex problems such as those found in fisheries management will likely arrive at different solutions. Fifth, almost no law guides either intra- or inter-jurisdictional harvest allocation decisions. Sixth, the U.S. recreational fishery legal framework allows an open-access situation that could potentially lead to over-harvest. Seventh, invasive species introductions, global warming, and habitat loss are considered key ecosystem threats, yet large gaps in the law exist in these areas.

Finally, this research provides policy recommendations to fill some of the gaps, overlaps, and conflicts identified, and gives suggestions for future research directions.

I dedicate this to Kari, Mom, Dad, and my family for all their love and support.
Thank you.

ACKNOWLEDGMENTS

This dissertation and my degree would not have been possible without the help of many people, most notably the following:

Professor Tracy Dobson, Committee Chair

Professor Michael Jones, Committee Member

Professor Rebecca Bratspies, Committee Member

GLFC Science Director Charles Krueger, Committee Member

The faculty, staff and students in the MSU Department of Fisheries and Wildlife

The Great Lakes Fishery Commission, which provided funding for this research

All the interviewees who graciously donated their time

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

KEY TO ABBREVIATIONS

AOC	Areas of Concern
CITES	Convention on International Trace in Endangered Species of Wild Fauna and Flora
CORA	Chippewa Ottawa Resource Authority
CPR	Common-Pool Resource
DDT	Dichloro-Diphenyl-Trichloroethane
FWS	United States Fish and Wildlife Service
GLC	Great Lakes Commission
GLFC	Great Lakes Fishery Commission
GLIFWC	Great Lakes Indian Fish and Wildlife Commission
GLWQA	Great Lakes Water Quality Agreement of 1978
IAD	Institutional Analysis and Development
IJC	International Joint Commission
LaMP	Lakewide Management Plan
PCB	Polychlorinated biphenyl
RAP	Remedial Action Plan
SASF	Semi-Autonomous Social Field

Chapter One:
INTRODUCTION AND RESEARCH FRAMEWORK

Fishing has occurred in the Laurentian Great Lakes for at least 3,000 years,[1] and for even longer in many other places around the globe. The Great Lakes have faced many of the problems that have plagued fisheries around the globe throughout history, such as over-harvest, pollution, habitat destruction, introductions of invasive species, and the loss of native species. Addressing these problems will require an understanding of not only biology and ecology, but also human efforts to deal with the problems. As Lee Anderson noted:

> "Just as the bioeconomic approach improved upon the biological approach by changing fishing mortality from an exogenous to an endogenous variable, perhaps the scientific study of fisheries management can be improved by thinking of regulation as an endogenous variable as well."[2]

Following Anderson's recommendation, this study contributes to the body of research that has made regulation an "endogenous variable" in the context of Great Lakes fisheries management.[3]

This chapter provides an overview of the research framework. The Great Lakes are identified as a common-pool resource (CPR). Next, the problems that frequently arise in CPRs and common means of solving those problems are identified. Finally, the role of law in CPR management and means of evaluating those laws is discussed, which

---

[1] Margaret Beattie Bogue, FISHING THE GREAT LAKES: AN ENVIRONMENTAL HISTORY, 1783-1933 5-6 (2000).

[2] Lee G. Anderson, *Expansion of the Fisheries Management Paradigm to Include Institutional Structure and Function*, 116 TRANSACTIONS OF THE AMERICAN FISHERIES SOCIETY 396, 396 (1987).

[3] *See e.g.*, Lynton K. Caldwell, *Disharmony in the Great Lakes Basin: Institutional Jurisdictions Frustrate the Ecosystem Approach*, 20 ALTERNATIVES 26 (1994); Margaret R. Dochoda and Michael L. Jones, *Managing Great Lakes Fisheries Under Multiple and Diverse Authorities*, 5 TOL. GREAT LAKES' L. SCI. & POL'Y 405 (2003); Michael J. Donahue, *Institutional Arrangements for Great Lakes Management*, *in* PERSPECTIVES ON ECOSYSTEM MANAGEMENT FOR THE GREAT LAKES: A READER 115 (Lynton K. Caldwell ed., 1988).

leads to the research question: *What are the gaps, conflicts, and overlaps in the legal framework for Laurentian Great Lakes fisheries management?*

COMMON-POOL RESOURCES AND INSTITUTIONS

The Great Lakes fishery is an example of a common-pool resource (CPR). The two defining characteristics of a CPR are its low degree of excludability and high level of subtractability.[4] Limited excludability refers to the difficulty encountered in trying to exclude potential users from or limit use of a resource.[5] This characteristic depends on the nature of the resource, the exclusion technology that exists, and the ability and will of people to take action. The Great Lakes fishery perfectly embodies limited excludability, as 1) it is difficult to exclude people from participating in the Great Lakes fishery due to its size and numerous points of access, 2) current technology is limited (e.g. you cannot build a fence around the lakes), and 3) there is little political will to increase enforcement much above current levels on the Great Lakes for a number of factors, perhaps due primarily to its prohibitive cost. Of course, rules and institutions can also limit access to a resource. A collection of such rules is referred to as a property regime. CPR scholars are careful to distinguish between the resource and the property regime that governs use of the resource.[6] Scholars Steins and Edwards identified four fundamental types of property regimes: open access (essentially no rules), public property, common property

---

[4] Elinor Ostrom, Roy Gardner and James Walker, RULES, GAMES, AND COMMON-POOL RESOURCES 7 (1994).
[5] Ostrom et al., *supra* note 4, at 7.
[6] Thomas Dietz et al., *The Drama of the Commons*, *in* THE DRAMA OF THE COMMONS 3, 14 (Elinor Ostrom et al. eds., 2002).

(owned jointly by a specific group), and private property.[7] Any of these regimes may be applied to a CPR.

The second characteristic of CPRs, subtractability, refers to the situations where use by one person makes a portion of the resource unavailable to or lessens the benefits gained by another user.[8] The degree of subtractability depends on the resource and the type of use. For example, breathing air from the atmosphere does not limit the ability of others to breath, and therefore exhibits a low degree of subtractability. Yet, drawing a breath when multiple people are enclosed in an airtight chamber would be an instance of high subtractability. Fishing frequently has a high degree of subtractability since a captured fish is not available for anyone else. The degree of subtractability for a particular fishery depends on the number of harvesters and their harvest capability in relation to the number of fish "available" for harvest.

CPR Problems

A large body of research exists on CPR governance,[9] spurred largely by a 1968 article by Garrett Hardin.[10] While Hardin's article focused on the rather controversial topic of reproductive rights and its connection to the Malthusian problem of

---

[7] Nathalie A. Steins and Victoria M. Edwards, *Platforms for Collective Action in Multiple-Use Common Pool Resources*, 16 AGRICULTURE AND HUMAN VALUES 241, 242 (1999).
[8] Ostrom et al., *supra* note 4, at 7-8.
[9] *See e.g.*, Elinor Ostrom, GOVERNING THE COMMONS : THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION (1990)[hereinafter Ostrom, GOVERNING THE COMMONS]; THE DRAMA OF THE COMMONS (Elinor Ostrom et al. eds., 2002); Fikret Berkes, *The Common Property Resource Problem and the Creation of Limited Property Rights*, 13 HUMAN ECOLOGY 187 (1985); Steins and Edwards, *supra* note 7; Sara Singleton, CONSTRUCTING COOPERATION: THE EVOLUTION OF INSTITUTIONS OF COMANAGEMENT (1998); COOPERATIVE MANAGEMENT OF LOCAL FISHERIES: NEW DIRECTIONS FOR IMPROVED MANAGEMENT & COMMUNITY DEVELOPMENT (Evelyn Pinkerton ed., 1989).
[10] Thomas Dietz et al., *supra* note 6, at 3, 6.

overpopulation,[11] it is cited in the CPR literature because of what he termed "the tragedy of the commons."

Hardin depicted this tragedy in an example involving a rational herder that shares a pasture with other herders. When considering whether to add an additional animal to his herd, our herder finds that the entire benefit of doing so would accrue to him, while the negative effects of overgrazing will be divided amongst all of the herders.[12] Thus, the rational herder "concludes that the only sensible course for him is to add another animal to his herd. And another; and another...."[13] This scenario assumes that the benefit of adding one more animal is greater than the divided share of the costs caused by the harm from that addition. If that was not the case, our rational herder would presumably not add an additional animal. This situation arises frequently in natural resources management, and fisheries are frequently cited as a common example of this phenomenon.[14]

Scholars Elinor Ostrom, Roy Gardner, and James Walker identified a typology of problems faced by CPRs. They created two categories: appropriation and provision.[15] In general, appropriation problems occur where the efficient level, timing, location, or separation of appropriation technologies does not occur.[16] Provision problems occur when appropriators need to limit appropriation activities that could damage the renewal capacity of a CPR (demand-side) or a need to commit resources (time, money, etc) to the upkeep or furnishing of a CPR (supply-side).[17] Demand-side provision problems are

---

[11] Garrett Hardin, *Tragedy of the Commons*, 162 SCIENCE 1243 (Dec. 13, 1968).
[12] Hardin, *supra* note 11, at 1243.
[13] Hardin, *supra* note 11, at 1244.
[14] Fikret Berkes, *Fishermen and "The Tragedy of the Commons"*, 12(3) ENVIRON. CONSERV. 199 (1985).
[15] Ostrom et al., *supra* note 4, at 9.
[16] Ostrom et al., *supra* note 4, at 9-10.
[17] Ostrom et al., *supra* note 4, at 12-14.

probably the more common issue in fisheries.[18] The problem arises where fishers have the capacity to fish in excess of the ability of the fishery to renew itself, commonly referred to as over-fishing. Supply-side problems, often referred to as free-riding, also arise in the fisheries context. For example, in a put-and-take fishery where harvesters were expected to contribute to the expense of stocking the fish, those who did not contribute and still harvested would benefit from the efforts of others without bearing any of the costs. The perceived inequities of such free-riding may cause appropriators to opt out of a coordinated effort.

Though broad and encompassing, these typologies do not seem to cover the full range of problems faced in fisheries management. The issue is one of problem definition. Problems for CPRs occur when the actions of multiple individuals lead to less then desirable consequences, or "suboptimal outcomes."[19] Clearly this necessitates a value judgment in order to define what constitutes suboptimal. Thus, problems are not objective things that exist "out there," but are defined subjectively by people.[20] Often consideration of values arises in evaluations, but they also are an inherent part of problem formulation.[21] For example, provision problems, including Hardin's "tragedy", assume that one values continuing appropriation from a renewable CPR over a long or indefinite period of time. If that is not the case, then there is no "problem."

---

[18] James A. Wilson, *The Economical Management of Multispecies Fisheries*, 58 LAND ECON. 417 (1982).
[19] Ostrom et al., *supra* note 4, at 336-37. In a CPR, the existence of one user will not raise a problem. Multiple appropriators will not necessarily raise a problem.
[20] David Dery, PROBLEM DEFINITION IN POLICY ANALYSIS 4 (1984).
[21] Iris Geva-May, AN OPERATIONAL APPROACH TO POLICY ANALYSIS: THE CRAFT: PRESCRIPTIONS FOR BETTER ANALYSIS 11 (1997).

Coordinated Strategies and Institutions

A group or society will inevitably identify problems. However, all individuals of a group may not identify the same problems or define them exactly the same way. And the group as a whole may identify problems or goals that are contradictory. Regardless, once a problem is recognized, some group of people (a society, an organization, etc) may choose to take action to solve that problem. They may devise a "coordinated strategy."

Ostrom et al. define a coordinated strategy as "a feasible strategy adopted by resource appropriators regarding (a) how much, when, where, and with what technology to withdraw resource units and/or (b) how much and/or when to invest in supply or maintenance inputs to the CPR facility or stock."[22] While considering fisheries management in the Great Lakes as something adopted by fishers and anglers may seem odd due to the extensive amount of government regulation, it does constitute a coordinated strategy if one thinks of appropriators more broadly to include the citizenry of a particular jurisdiction.[23]

Coordinated strategies are implemented through institutions, which are defined by Crawford and Ostrom (1995) as "enduring regularities of human action in situations structured by rules, norms, and shared strategies, as well as by the physical world."[24] This is a broad characterization that includes families, companies, agencies, and universities, just to name a few. Additionally, institutions can be "nested" within one

---

[22] Ostrom et al., *supra* note 4, at 16.
[23] This is consistent with the intent of the above definition, since Ostrom analyzed the coordinated strategies adopted by various local and regional governments for aquifer use in Southern California. *See*, Ostrom, GOVERNING THE COMMONS, *supra* note 9.
[24] Sue E.S. Crawford and Elinor Ostrom, *A Grammar of Institutions*, 89 AM. POL. SCI. REV. 582, 582 (1995).

another, for example a fisheries division within a natural resources department within a state government.[25]

Legal anthropologist Sally Falk Moore argues that in studying law in a society one should use the semi-autonomous social field (SASF) as the subject of study, which she defines in the following:

> The semi-autonomous social field has rule-making capacities, and the means to induce or coerce compliance; but it is simultaneously set in a larger social matrix which can, and does, affect and invade it, sometimes at the invitation of persons inside it, sometimes at its own instance.[26]

SASFs are not exactly analogous to institutions, since an SASF could include multiple institutions. Yet, Moore's definition highlights the broader context that influences the rule-making and compliance-inducing capacities of institutions.

Frequently multiple institutions are involved in creating and implementing coordinated strategies aimed at solving problems. In Great Lakes fisheries management, government agencies and other institutions from two federal governments, a number of Native American tribes and First Nations, one province, eight states, environmental and sportsmen's groups, and bi-national treaty organizations all play a role. Furthermore, relationships exist between many of these institutions, which create a decision-making arrangement, or regime.[27]

Hardin identified two possible regimes to address the "tragedy of the commons." One could either create private property interests in the commons or have centralized

---

[25] Elinor Ostrom, *Institutional Analysis, Design Principles, and Threats to Sustainable Community Governance and Management of Commons*, *in* LAW AND THE GOVERNANCE OF RENEWABLE RESOURCES: STUDIES FROM NORTHERN EUROPE AND AFRICA 27, 38-39 (Erling Berge and Nils Christian Stenseth eds., 1998).

[26] Sally Falk Moore, *Law and Social Change: The Semi-Autonomous Social Field as an Appropriate Subject of Study*, 7 LAW & SOC'Y REV. 719, 720 (1973).

[27] Victoria M. Edwards and Nathalie A. Steins, *Developing an Analytical Framework for Multiple-Use Commons*, 10 J. OF THEORETICAL POLITICS 347, 348-349 (1998).

government control over them. Hardin is often criticized for this limited range of institutional arrangements, because it overlooks other feasible structures.[28] For example, Imperial and Yandle divided regimes into three categories: 1) private property in conjunction with a free market, 2) direct government regulation through a bureaucratic arrangement, and 3) community or collective governance.[29] These categories are not as distinct as they may appear. For example, some fisheries use individual transferable quota systems, which have some elements of private property and market arrangement combined with some elements of centralized government regulation.[30] Also, Fikret Berkes identifies numerable types of local and central government linkage, or co-management regimes, which lie along the gradient between centralized government control and local or collective governance.[31]

Great Lakes fishery management uses a bureaucratic governance structure. Imperial and Yandle defined this situation as follows:

> In bureaucracy-based arrangements, property rights to fish are held by government on behalf of the public and the focus is on developing regulations that maintain fish stocks at sustainable levels. However, other social goals may be embedded in these programs.[32]

This roughly portrays the Great Lakes fisheries situation, however, the property right to the resource is divided amongst the multiple jurisdictions with authority over an area of the individual lakes. Furthermore, those harvest rights and management authorities overlap between the nations, tribes, First Nations, states, and provinces. Thus, there

---

[28] Thomas Dietz, Elinor Ostrom, and Paul C. Stern, *The Struggle to Govern the Commons*, 302 SCIENCE 1907, 1907 (2003).
[29] Mark T. Imperial and Tracy Yandle, *Taking Institutions Seriously: Using the IAD Framework to Analyze Fisheries Policy*, 18 SOC'Y AND NAT. RES. 493, 494 (2005).
[30] *See generally*, National Research Council, SHARING THE FISH: TOWARD A NATIONAL POLICY ON INDIVIDUAL FISHING QUOTAS (1999).
[31] Fikret Berkes, *Cross-Scale Institutional Linkages: Perspectives from the Bottom Up*, *in* THE DRAMA OF THE COMMONS, *supra* note 11, at 293, 301-308.
[32] Imperial and Yandle, *supra* note 29, at 495.

exists a slightly modified governance structure. Vincent Ostrom has referred to this as a polycentric governance system, which is "composed of: (1) many autonomous units formally independent of one another, (2) choosing to act in ways that take account of others, (3) through processes of cooperation, competition, conflict, and conflict resolution."[33] Additionally, harvest quotas are at times allocated to certain fishers or groups of fishers and potentially create in effect a quasi-private property interest, which further complicates attempts at categorizing the arrangement.

There is a great deal of debate over which regime is best or how specific arrangements in CPR and natural resource management can be improved. Yet, it is not easy to evaluate these frameworks, and many potential "pitfalls" face researchers in this area.[34] The following section outlines the approach for this research.

[33] Vincent Ostrom, THE MEANING OF AMERICAN FEDERALISM 225 (1991).

[34] These pitfalls include: 1) "bias for case studies", 2) assuming an institutional arrangement will transfer to other situations without accounting for context, 3) unconscious abandonment of "critical evaluation and exaggert[ing] favorable aspects of an institutional arrangement while minimizing or failing to consider unfavorable consequences," 4) ignoring other possible institutional arrangements, 5) ignoring the transaction costs of including increasing numbers of participants and their interactions, 6) using only one or a limited range of evaluation criteria in determining benefits and costs, and 7) "failure to use conceptual frameworks" and focusing on too many variables. Imperial and Yandle, *supra* note 29, at 500-02.

ANALYZING INSTITUTIONAL ARRANGEMENTS

The Institutional Analysis and Development (IAD) framework guides this study. A framework allows one to "identify the broad working parts and their posited relationships that are used in an entire approach to a set of questions [and] to organize diagnostic and prescriptive inquiry."[35] A framework guides research by providing the basic categories, variables, parts, bins, etc. and relationships between them. In the end, a framework is simply a rough map that directs research. The IAD framework was developed for analysis of institutional arrangements that govern common-pool resources,[36] and has been promoted as tool for analyzing fisheries.[37]

Institutional Analysis and Development (IAD) Framework

The following discussion outlines the framework's components as adapted for this research, and its application to this research. Figure 1.1 shows a graphical representation of the modified IAD framework. The IAD framework begins with the identification of an "action arena." An action arena includes "participants in positions who must decide among diverse actions in light of the information they possess about how actions are linked to potential outcomes and the costs and benefits assigned to actions and outcomes."[38] In other words, the IAD framework starts by focusing on actors (individuals or organizations) in decision making situations.[39] The following chapter on research methods sets out the details of the Great Lakes fishery management action arena focused on in this study.

---

[35] Ostrom et al., *supra* note 4, at 25.
[36] Ostrom et al., *id.*
[37] Imperial and Yandle, *supra* note 29.
[38] Ostrom et al., *supra* note 4, at 25.
[39] Mark T. Imperial, *Institutional Analysis and Ecosystem-Based Management: The Institutional Analysis and Development Framework*, 24 ENV'TL. MGMT. 449, 454 (1999)..

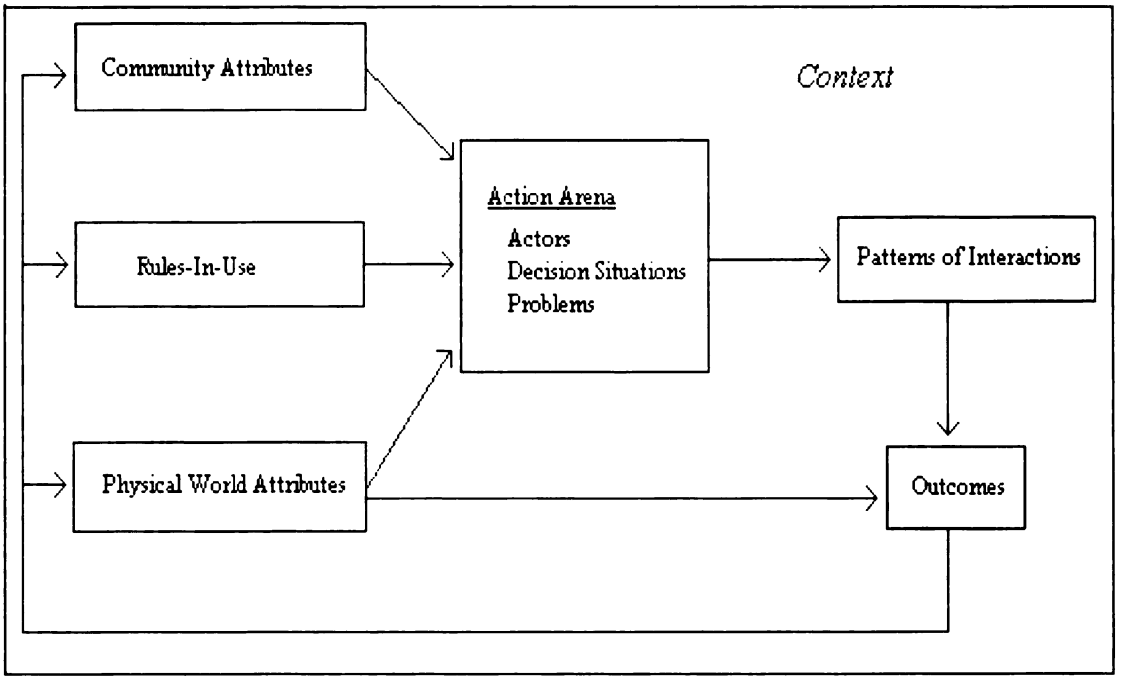

Figure 1.1. Institutional Analysis and Development (IAD) framework.[40]

"Problems" were added to the components of the action arena, because of the aforementioned importance of defining problems. While participants decide between diverse actions, they also define the problem that led to the need for action. The fishery and wildlife management literature identifies the critical importance of determining the goals and objectives before defining problems.[41] Goals are the broadest type of imperative, while objectives are the more concrete steps to achieving a goal, and problems impede attainment of goals.[42] Explicitly accounting for goals and objectives is

[40] Modified from Ostrom et al., *supra* note 4; Edwards and Steins, *supra* note 27; and Imperial, *supra* note 39.
[41] Charles C. Krueger and Daniel J. Decker, *The Process of Fisheries Management*, *in* INLAND FISHERIES MANAGEMENT IN NORTH AMERICA 31, 38 (Christopher C. Kohler and Wayne A. Huber eds., 2nd ed., 1999); Shawn J. Riley et al., *Adaptive Impact Management: An Integrative Approach to Wildlife Management*, 8 HUMAN DIMENSIONS OF WILDLIFE 81, 84-85 (2003).
[42] Krueger and Decker, *supra* note 41, at 40-45.

recommended because focusing solely on problems "can result in management actions that are unfocused and often contradictory in purpose."[43]

Actors continuously face decision making situations, and their choices over time create patterns of interaction[44] that lead to outcomes. Outcomes can take an almost unlimited number of forms, from biological to social. An outcome is a change in the contextual factors.

The context in turn influences the action arena. Contextual factors affect all aspects of a CPR situation. Edwards and Steins define contextual factors as "dynamic forces constituted in the user groups' social, cultural, economic, political, technological and institutional environment."[45] While the context affects all aspects of the coordinated strategy creation and implementation, specific aspects of that context have a more immediate impact on the action arena. These factors, as depicted in Figure 3.1, include the attributes of the community, rules-in-use, and characteristics of the physical world. One can think of these as "local contextual factors" that directly impact on the action arena, as opposed to the "remote contextual factors" that are "exogenous to the management regime."[46] A local contextual factor for fisheries may be the cultural acceptability of illegal fishing practices, whether in respect to season, location, gear or another law. On the other hand, the increase in affluence for many people around the Great Lakes has had numerous impacts on fisheries, and is an example of a remote

---

[43] Krueger and Decker, *supra* note 41, at 45.
[44] "Patterns of interaction" are not well-defined in the CPR literature. *See e.g.*, Edwards and Steins, *supra* note 27, at 355.
[45] Victoria M. Edwards and Nathalie A. Steins, *A Framework for Analyzing Contextual Factors in Common Pool Resource Research*, 1 J. ENVIRON. POLICY PLANN. 205, 207 (1999)[hereinafter Edwards and Steins, Framework].
[46] Edwards and Steins, Framework, *supra* note 45, at 208.

contextual factor. While these examples are relatively clear, in reality there are a range of contextual factors from the remote to the local.

"Attributes of the community" refers to the culture, way of life, practices and beliefs of a group of people. Ostrom et al. list the following as important attributes: "generally accepted norms of behavior, the level of common understanding about action arenas, the extent to which the preferences are homogenous, and distribution of resources among members."[47] A broader set of potentially important attributes includes the economic, political, educational, social, religious, health, and other demographics of a community. The inhabitants of the Great Lakes region are a heterogeneous group of people, and it is perhaps more appropriate to refer to cultures instead of culture. Social stratification in terms of ethnicity, wealth, urbanization, education, access to information, and many other characteristics continue to play a role in fisheries management.

Characteristics of the physical world affect the problems faced and solutions that are available. Fish and fish populations exhibit some characteristics that complicate management decisions, including, renewability, mobility, hiddenness, and placement in an aquatic community. Renewablility refers to the ability to generate replacement resource units for lost units. For example, fish can potentially be replaced through recruitment of other fish in the future as long as sufficient breeding stock and suitable environmental conditions exist. This creates the potential for an infinite duration of appropriation (e.g., harvest of fish). Mobility creates problems in limiting access to fish, since they can cross political boundaries that divide waterbodies. The hiddenness of fish, resulting from their domicile under water, makes difficult determination and quantification of fish population characteristics and ecological processes, essential to

[47] Ostrom et al., *supra* note 4, at 45.

current management practices that rely heavily on science.[48] Finally, while fisheries are renewable, fish lost through harvest or otherwise may potentially be "replaced" by another species, thus permitting a range of possible fish community compositions. This complicates attempts to predict the effects of different harvest rates and creates a question of what constitutes the most desirable fishery. Additional relevant characteristics of the physical world may include the stability of the resource, its resilience to perturbation, and the technology associated with the use of the resource.[49]

Finally, action arenas are affected by the contextual factor rules-in-use. Rules are prescriptions that prohibit, permit, or require an action, and also include the penalties for non-compliance.[50] Rules exist along a continuum of formality. On the formal end lie constitutions, legislatively created law, judicial opinions, and regulations. Less formal rules may include, for example, a rule that determines which child gets to use the newer fishing rod. In between are a range of rules, including policies, contracts, and common practices among others.

This research focuses primarily on the more formal rules, namely, constitutions, inter-jurisdictional agreements, legislatively created laws, and judicial opinions. The formal law of Great Lakes fisheries management was chosen because it forms a "structure" of institutions and rules that restricts the range of available actions.[51] This is not to say that these formal laws completely dictate how decisions are made. As anthropologist Sally Falk Moore points out, social change does not always occur through

---

[48] *See, e.g.*, Michael J. Van Den Avyle and Robert S. Hayward, *Dynamics of Exploited Fish Populations*, *in* INLAND FISHERIES MANAGEMENT IN NORTH AMERICA 127 (Christopher C. Kohler and Wayne A. Hubert eds., 2d. ed. 1999).
[49] Edwards and Steins, *supra* note 27, at 357-58.
[50] Ostrom et al., *supra* note 4, at 38.
[51] C. Jarrell Yarbrough, *Using Political Theory in Fishery Management*, 116 Transactions of the Am. Fisheries Soc'y 532, 534-35 (1987).

central rule making authorities.[52] The rules that actually govern or influence decision making and actions in the action arena may include any along the gradient of formality. Nonetheless, the formal legal framework is intended to provide the starting point for Great Lakes fisheries regulation, and thus, provides a compelling place to begin research into the rules.

The amount of formal law governing fisheries in the Great Lakes has increased dramatically since the first non-native fishers appeared in the region, particularly in the last 150 years. Currently a large and complex body of law exists within the Great Lakes Basin. This research outlines the institutional arrangement and basic legal mandates of those institutions charged with managing the fishery.

EVALUATING LEGAL FRAMEWORKS

The first hurdle for any evaluation is choosing a standard to measure the object of study against. Recall that CPR problems occur when the acts of appropriators lead to suboptimal outcomes, which requires a value judgment in defining suboptimal. Since evaluation is a matter of determining whether a problem was solved, it too relies on a prior normative decision. In the natural resources world, commentators frequently invoke the standards of sustainability, ecosystem integrity, or ecosystem health.[53] Evaluative criteria commonly adopted in the CPR literature include "the concepts of economic efficiency (often referred to as optimal or the optimal solution) and Pareto optimality," a situation where theoretically no one can improve their situation without

---

[52] Moore, *supra* note 26, at 721.

[53] *See e.g.*, Ostrom, GOVVERNING THE COMMONS, *supra* note 9; Edwin P. Pister, *Ethics of Native Species Restoration: The Great Lakes*, 21 J. GREAT LAKES RES. 10 (1995); ECOSYSTEM HEALTH: NEW GOALS FOR ENVIRONMENTAL MANAGEMENT (Robert Costanza et al., 1992).

putting someone else in a worse position.[54] In addition to efficiency, scholar Deborah Stone lists equity, liberty, and security as the most common goals or values referenced in policy debates.[55] Commentators suggest numerous additional goals or values, including justice, democracy, privacy, accountability, adaptability, reduction of transaction costs, property rights protection, and relief from oppression among others.[56]

Not surprisingly, people with differing backgrounds and perspectives will identify a number of different problems, and thus require multiple evaluative criteria. Furthermore, a solution to one problem might create another problem. For example, solving the problem of too much harvest may require limiting the number of harvesters, which in turn creates allocation problems based on values of equity or fairness.

Finally, a major problem with many of the above goals is that they are abstract ideals. Stone details the numerous definitions or interpretations that exist for efficiency, equity, liberty and security.[57] She notes that they are "'motherhood issues': everyone is for them when they are stated abstractly, but the fight begins as soon as we ask what people mean by them."[58] Sustainability and other common natural resource management ethics also face this same problem. As scholars Stephen Crawford and Bruce Morito note:

> Although phrases such as ecosystem integrity and ecosystem health sound appealing, several other authors have warned about problems with such concepts, because they are often ill defined and they may be based on invalid theoretical foundations. [59]

---

[54] Ostrom et al., *supra* note 4, at 9.
[55] Deborah Stone, POLICY PARADOX: THE ART OF POLITICAL DECISION MAKING 12 (2002).
[56] Stone, *supra* note 55, at 12; Imperial, *supra* note 39, at 456-57; Brian Czech and Paul R. Krausman, THE ENDANGERED SPECIES ACT: HISTORY, CONSERVATION BIOLOGY, AND PUBLIC POLICY 37-41 (2001).
[57] Stone, *supra* note 55, at 44, 67, 99, 120.
[58] Stone, *supra* note 55, at 12.
[59] Stephen S. Crawford and Bruce Morito, *Comment: Toward a Definition of Conservation Principles for Fisheries Management*, 54 CAN. J. FISH. AQUAT. SCI. 2720, 2720 (1997)(citations omitted).

The primary problem with this ambiguity for this study is that these ideals are difficult to use as evaluative criteria.

Instead of selecting one or multiple evaluative criteria, a somewhat pragmatic approach was adopted and interviews with Great Lakes fishery managers were used to identify the problems faced in Great Lakes fisheries management. Thus, the research question for this study asks:

- *What are the gaps, conflicts, and overlaps in the legal framework for Laurentian Great Lakes fisheries management?*

The next chapter provides a brief overview of the history of Great Lakes fisheries. Chapter Three details the methods employed in this research. Chapter Four gives the basic outline of the legal framework. In Chapter Five, the results from the interviews are presented and the gaps, conflicts, and overlaps are identified. Finally, Chapter Six, the conclusion, provides the legal, policy, and future research recommendations that arose from this study.

Chapter Two:
HISTORY OF THE GREAT LAKE BASIN AND FISHERY

The history of the Great Lakes Basin and its fishery has been told in many places, by many people, and from many perspectives.[1] Nonetheless, an abbreviated version of this history is important for at least three reasons. First, this research is about ethereal issues in law and policy, but the context in which these issues arises matters greatly. Second, understanding the current state of affairs requires some knowledge of the path leading to the present. Finally, many historical events continue to have an impact today. Much has happened in the region, but the focus here is on a selection of events that have impacted the Great Lakes, its basin, its fishery, and its management.

GEOGRAPHY OF THE LAKES

The Great Lakes Basin has been in a process of formulation for billions of years.[2] Roughly, one million years ago glaciation occurred throughout the basin.[3] These glaciers scoured the earth digging deep into the land. When the glaciers began their final recession around 6000 years ago, they left large cavities that filled in with the melting glacier water. These cavities became the Great Lakes that we see today.[4]

---

[1] Bogue, Margaret Beattie, FISHING THE GREAT LAKES: AN ENVIRONMENTAL HISTORY, 1783-1933 (2000); Wayne H. Tody, A HISTORY OF MICHIGAN FISHERIES 19 (2003); Charles E. Cleland, RITES OF CONQUEST: THE HISTORY AND CULTURE OF MICHIGAN'S NATIVE AMERICANS (1992); A.B. McCullough, THE COMMERCIAL FISHERY OF THE CANADIAN GREAT LAKES (1989); Tom Kuchenberg, REFLECTIONS IN A TARNISHED MIRROR (1978); Howard A.Tanner, Mercer H. Patriarche, and William J. Mullendore, SHAPING THE WORLD'S FINEST FRESHWATER FISHERY (1980); Russell McKee, GREAT LAKES COUNTRY (1966).

[2] U.S. Envtl. Protection Agency, THE GREAT LAKES: AN ENVIRONMENTAL ATLAS AND RESOURCE BOOK, available at http://www.epa.gov/glnpo/atlas/glat-ch1.html#Physical%20Characteristics (last visited Jan. 25, 2006)[hereinafter GREAT LAKES ATLAS].

[3] McKee (1966) *supra* note 1, at 14.

[4] McKee (1966) *supra* note 1, at 9-18; Alfred M.Beeton, Cynthia E. Sellinger and David F. Reid, *An Introduction to the Laurentian Great Lakes Ecosystem, in* Great Lakes Fisheries Policy and Management: A Binational Perspective 3, 45 (C. Paola Ferreri and William W. Taylor eds., 1999).

The lakes contain 5,500 cubic miles of water, nearly one-fifth of the world's fresh surface water.[5] The lakes generally flow from the northwest corner of the basin and Lake Superior to the eastern end of the basin and Lake Ontario. Lake Ontario drains out through the St Lawrence River and Seaway into the North Atlantic. The Great Lakes also empty into the Mississippi River Basin through the Chicago Sanitary canal at the southern end of Lake Michigan.

Figure 2.1. Great Lakes Map[6]

Lake Superior lies at the northwest corner of the basin and is the largest freshwater lake in the world by surface area.[7] It is also the deepest of the Great Lakes

[5] GREAT LAKES ATLAS, *supra* note 2.
[6] Reproduced from Carlos M. Fetterolf Jr., *Why a Great Lakes Fishery Commission and Why a Sea Lamprey International Symposium*, 37 CAN. J. FISH. AQUAT. SCI. 1588, 1589 (1980).
[7] Jacob Kalff, LIMNOLOGY: INLAND WATER ECOSYSTEMS 48 (2002).

with generally steep shorelines and lake floors.[8] Its basin is characterized by its lack of development and relatively low density of human inhabitants.[9] Due to the cold and softness of the waters of Lake Superior, it is highly oligotrophic, meaning its waters are not very biologically productive and the lake does not contain a great deal of life per volume of water.[10]

Lake Superior flows out through the St. Mary's River into Lake Huron which is also fed by Lake Michigan. These two lakes have surface levels at the same height and could almost be considered the same lake, simply pinched in the middle by the two peninsulas of Michigan. Lake Michigan runs roughly North and South for 332 miles.[11] The southern end of the Lake is surrounded by highly productive lands that are populated by many people.[12] Its basin is also notably very small in the southwest corner of the lake near Chicago. In 1871 in order to remedy sewage disposal and drinking water problems, the City of Chicago created the "Chicago diversion" which reversed the flow of the Chicago River, and now instead of draining into Lake Michigan, it draws water from the lake and drains into the Illinois River and out the Mississippi River.[13] The basin at the north end of Lake Michigan contains less developed lands and fewer people.[14] Overall, the Lake is more productive than Lake Superior, but is similarly deep and cold with a lake bottom that drops off steeply.[15]

---

[8] Bogue, *supra* note 1, at 4.
[9] Richard Groop, *Demographic and Economic Patterns in the Great Lakes Region*, *in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 73, 74-75 (C. Paola Ferreri and William W. Taylor eds., 1999).
[10] Beeton et al., *supra* note 4, at 16-17.
[11] Beeton et al., *supra* note 4, at 4.
[12] Groop, *supra* note 9, at 74-75.
[13] Bogue, *supra* note 1, at 139-141.
[14] Groop, *supra* note 9, at 74-75.
[15] Beeton et al., *supra* note 4, at 17.

Besides the diversion in Chicago, the waters of Lake Michigan also flow into Lake Huron. The basin of Lake Huron has a fairly small population of people.[16] A defining characteristic is the large Georgian Bay that forms the northeast side of the lake. Lake Huron is shallower on average than Lakes Superior and Michigan, but is still generally oligotrophic except for Saginaw Bay which is considerably more productive.[17]

Together these three lakes, Superior, Michigan, and Huron, are known as the upper Great Lakes because of their position as headwaters to the lower lakes and because they share some similar characteristics, namely size and biota. The fish assemblages of the upper Great Lakes were generally dominated by the presence of lake trout, burbot, multiple species of ciscoes, whitefish, lake herring and sturgeon.[18] Lake Superior has the fewest number of species in the lakes as it has historically.[19] Lake Michigan has had the highest number of fauna both historically and today.[20]

Lake Huron flows into Lake St. Clair via the St. Clair River, which empties through the Detroit River into Lake Erie. Lake Erie is the shallowest of the Great Lakes, and easily the most productive of the Great Lakes, especially the shallower western and central portions.[21] The lake is surrounded by very productive lands that have been used extensively for agriculture and industry by the many people that reside in Lake Erie's

---

[16] Groop, *supra* note 9, at 74-75.
[17] Beeton et al., *supra* note 4, at 4, 16-17.
[18] Randy L. Eshenroder and Mary K. Burnham-Curtis, *Species Succession and Sustainability of the Great Lakes Fish Community*, *in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 145, 154-157 (C. Paola Ferreri and William W. Taylor eds., 1999).
[19] Thomas, G. Coon, *Ichthyofauna of the Great Lakes Basin* at 63-64, *in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 55, 63-64(C. Paola Ferreri and William W. Taylor eds., 1999).
[20] Coon, *id.* at 61-62.
[21] Beeton et al., *supra* note 4, at 4, 16-17.

basin.[22] The fishery is considered a cool and warm-water fishery and was historically dominated by walleye and yellow perch.[23]

Lake Erie is connected to the final lake in the chain of Great Lakes, Lake Ontario, by the Niagara River. The Niagara flows over the famous Niagara Falls, which at 176 feet made for an impenetrable barrier between Lake Ontario and Lake Erie for fish and boats alike.[24] The Welland Canal was originally built in 1829 to solve the transportation problem for boats, but its 1919 remolding also solved the transportation problem for aquatic organisms.[25] Non-native species introduced through canals, ballast aboard ships that use those canals, and other means continue to wreak havoc on fisheries throughout the Great Lakes.[26]

Lake Ontario sits at the eastern end of the basin where it empties into the St. Lawrence River. Lake Ontario is actually the second deepest lake on average and is thus colder and less productive than Lake Erie.[27] The human population around the lake is fairly high and is concentrated around the western end of the basin.[28] Lake Ontario's biota include some cold-water and warm-water fisheries, but the most notable difference between it and the other Great Lakes was the former presence of the prized Atlantic salmon, which went extinct by the mid-1800s.[29]

---

[22] Groop, *supra* note 9, at 74-75, 84-86.
[23] Bence, James R. and Kelley D. Smith, *An Overview of Recreational Fisheries of the Great Lakes, in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 259, 284 (C. Paola Ferreri and William W. Taylor eds., 1999).
[24] Niagara Falls Live Website, *available at* http://www.niagarafallslive.com/Facts_about_Niagara_Falls.htm (last visited April 20, 2006).
[25] Eshenroder and Burnham-Curtis, *supra* note 18, at 149-150.
[26] Eshenroder and Burnham-Curtis, *supra* note 18, at 148-150.
[27] Beeton et al., *supra* note 4, at 4, 16-17.
[28] Groop, *supra* note 9, at 74-75.
[29] Eshenroder and Burnham-Curtis, *supra* note 18, at 150; Bence and Smith, *supra* note 23, at 291.

HUMANS AND THE LAKES

Humans began to populate the region over 10,000 years ago.[30] As long as 3,000 years ago, Native Americans lived, farmed, hunted and fished along the shores of the Great Lakes.[31]

There is some debate over by whom and when first contact with Europeans occurred both for the Great Lakes region and the Americas in general.[32] The French explorers Samuel de Champlain and Etienne Brule were apparently the first to travel extensively through the Great Lakes region.[33] Early explorers and Christian missionaries from France were the earliest white settlers in the upper Great Lakes region, making their way to Lake Huron and later Lakes Superior and Michigan beginning in the early 1600s.[34] The French, followed soon after by the English, began a burgeoning fur trade in the region.[35] The fur trade has acquired a revered status even though it decimated the beaver population, which in turn led to broader ecological effects.[36]

Much of present day Canada in the area around the Great Lakes was controlled early on by France.[37] The French and English fought in the mid-1700s and England eventually came to control all of France's Canadian holdings by 1760, which were then officially ceded to Britain at the close of the Seven Year's War in 1763.[38] Around this time tensions began to mount between the British and their American colonies which led

---

[30] Cleland, *supra* note 1, at 11.
[31] Bogue, *supra* note 1, at 5-6.
[32] McKee, *supra* note 1, at 59-65; Patrick Huyghe, COLUMBUS WAS LAST (1992).
[33] Cleland, *supra* note 1, at 79-80; McKee, *supra* note 1, at 65-73.
[34] Cleland, *supra* note 1, at 87-90.
[35] McKee, *supra* note 1, at 115-120.
[36] Dave Dempsey, RUIN AND RECOVERY: MICHIGAN'S RISE AS A CONSERVATION LEADER 14-15 (2001).
[37] W.J. Eccles, THE FRENCH IN NORTH AMERICA, 1500-1783 (1998).
[38] McKee, *supra* note 1, at 149; *see generally*, William M. Fowler, THE SEVEN YEARS' WAR AND THE STRUGGLE FOR NORTH AMERICA, 1754-1763 (2005).

to the Declaration of Independence in 1776 and the American Revolutionary War.[39] Following the Treaty of Paris in 1783 which ended the Revolutionary War, the boundary between the U.S. and British Canada was set.[40] Where the border ran through the Great Lakes it was set as halfway between the two countries as was the usual convention.[41] However, in the rivers that connected the Great Lakes the U.S. negotiated for use of the thalweg principle, where the deepest part of the channel is set as the boundary, and the British eventually agreed.[42] Even with this formal agreement, the boundary was not specifically adhered to and the British maintained a presence in U.S. areas.[43] In 1787, the United States created the Northwest Ordinance to guide settlement in a large swath of land on the south side of the Great Lakes, the Northwest Territories, which included Ohio, Michigan, Indiana, Illinois, Wisconsin and parts of Minnesota.[44] Hostilities between the U.S. and Britain and Native Americans, war hawks in the U.S., and the desire to make Canada a part of the U.S. are all considered potential reasons for the War of 1812 between the U.S. and Britain.[45] Some Native Americans in the region also participated in the war and preceding battles due in part to the encroachment of American settlers that led to Indian displacement.[46] Besides coming out on the losing side of the war, they also lost a great leader, Chief Tecumseh, in one of the battles.[47]

---

[39] Howard Zinn, A PEOPLE'S HISTORY OF THE UNITED STATES 59-71 (1999).
[40] McKee, *supra* note 1, at 153.
[41] Bogue, *supra* note 1, at 10-11.
[42] Bogue, *supra* note 1, at 10-11.
[43] McKee, *supra* note 1, at 153.
[44] Walter R. Borneman, 1812: THE WAR THAT FORGED A NATION 26-27 (2004).
[45] Borneman, *supra* note 44, at 28, 45-53.
[46] McKee, *supra* note 1, at 155.
[47] Borneman, *supra* note 44, 160-162.

On both sides of the border European settlers moved into the Great Lakes region driven by agricultural prospects.[48] The settlers were by no means the first to practice agriculture in the region, Native Americans farmed throughout the region, some groups extensively.[49] Much land was cleared to make way for the fields, and mills to process the harvest soon appeared.[50] These mills were built on Great Lakes tributaries and likely caused serious environmental impacts, including to fisheries, at least locally.[51] Increasing pressure for more land to put into agriculture led to the filling of wetlands.[52] The environmental and biological benefits of wetlands were not at the forefront of people's minds at the time, and in Michigan alone roughly 50% of Michigan's wetlands were filled in by 1990.[53] The degradation and destruction of wetlands continues to this day and continues to affect water quality and the biota of the lakes negatively.

Forests were cleared at first to make room for agriculture, but soon the forests themselves became the object of desire.[54] A tremendous logging industry developed. The logs produced were often moved to the mills by floating them down streams and rivers, which effectively scoured the river and stream beds to the point of making them nearly sterile.[55] Once at the mill they were cut into lengths and boards which generated a tremendous amount of sawdust that was often dumped into nearby waterways.[56] Cleared lands were often very susceptible to erosion leading to further water pollution.[57] Overall,

---

[48] Bogue, *supra* note 1, at 1116-120.
[49] McKee, *supra* note 1, at 48; Cleland 47-48.
[50] Bogue, *supra* note 1, at 116.
[51] Bogue, *supra* note 1, at 10.
[52] Dempsey, *supra* note 36, at 188.
[53] Dempsey, *supra* note 36, at 188.
[54] McKee, *supra* note 1, at 186-187.
[55] Bogue, *supra* note 1, at 123-124.
[56] Bogue, *supra* note 1, at 124.
[57] Bogue, *supra* note 1, at 123.

forestry practices were highly detrimental to the lakes and wider ecosystem, and the fires that torched the timbered waste lands caused the deaths of many people.[58]

Like agriculture, mining has a long history in the Great Lakes and it begins with the Native Americans. First signs of copper use appear around 4,000 B.C. on the Keweenaw Peninsula and Isle Royale of current day Michigan, though for some unknown reason use of the metal tapers off by 1000 B.C.[59] American settlers in the region renewed copper mining in the mid-1800s, frequently in the same areas previously used by the Indians.[60] Eventually, iron mining around the western end of Lake Superior grew to enormous proportions.[61] Industrial mining caused considerable degradation to the Great Lakes and inland waters, from the pollution and dumping of stamp sands from copper mining to groundwater pumping and wetland drainage involved in iron mining.[62]

Native Americans in the region fished the Great Lakes and inland waters for thousands of years before Europeans first set eyes on the area.[63] The Indians developed a range of fishing gear at many levels of technological complexity, including seines, spears, hook and line, and gill nets.[64] Furthermore, they demonstrated considerable skill in the harvest of fish.[65] Fishing for subsistence and commercial purposes was a central part of the lives and cultures of Native Americans in the region[66] and remains so to this day.[67]

---

[58] McKee, *supra* note 1, at 192-193.
[59] McKee, *supra* note 1, at 22-31; Cleland 18-19.
[60] McKee, *supra* note 1, at 173-181.
[61] McKee, *supra* note 1, at 181-186.
[62] Bogue, *supra* note 1, at 128-133.
[63] Bogue, *supra* note 1, at 5.
[64] Bogue, *supra* note 1, at 5-7.
[65] Bogue, *supra* note 1, at 6.
[66] Bogue, *supra* note 1, at 8-9.
[67] GREAT LAKES REGIONAL COLLABORATION, TRIBAL NATIONS ISSUES AND PERSPECTIVES (2005), available at http://www.glrc.us/documents/GLRC-Tribal-Briefing-Paper.pdf.

Throughout this time of European settlement, settlers in the region fished the Great Lakes for subsistence, and eventually for local trade.[68] Early fishing methods focused on near-shore and tributary harvest featuring various types of fishing gear including seines, spears, and hook and line for primarily Atlantic salmon in Lake Ontario and whitefish, smallmouth bass and other species in Lake Erie.[69] It appears that what we might consider a real commercial fishery began around 1812.[70] Great Lakes commercial fisheries really began to grow in the mid-1800s and exploded in the late-1800s with demand initially created by the Civil War.[71] Harvesting gear changed tremendously including the adoption of pound nets in the1840s.[72] New technologies like railways and icebox rail cars expanded the distance that fish could be shipped for sale leading to an increased market for regional fish.[73] Steam powered gill-net boats appeared by 1869 and the steam powered gill-net lifter was developed around 1890.[74] Diesel power and steel-hulled boats begin to appear in the 1920s and '30s,[75] nylon gill nets were in wide use by the mid-1940s[76] and trawl nets appear in the 1950s.[77] Needless to say, harvest efficiency increased dramatically due to the technological changes.

Prior to the mid-1960's sport or recreational fishing constituted a small part of the fishing effort on the Great Lakes proper.[78] In 1966, Michigan began planting Pacific salmon to create a sport fishery and provide a predator to deal with the non-native

---

[68] Bogue, *supra* note 1, at 23-25, 28.
[69] Bogue, *supra* note 1, at 24-25; Kuchenberg, *supra* note 1, at 21.
[70] McCullough, *supra* note 1, at 15.
[71] Bogue, *supra* note 1, at 29,34.
[72] McCullough, *supra* note 1, at 27-28; Bogue, *supra* note 1, at 41.
[73] Bogue, *supra* note 1, at 42.
[74] Bogue, *supra* note 1, at 41, 49.
[75] McCullough, *supra* note 1, at 43.
[76] McCullough, *supra* note 1, at 32.
[77] McCullough, *supra* note 1, at 32.
[78] Bence and Smith, *supra* note 23, at 259.

invasive alewive.[79] Michigan also substantially limited the size and harvest of commercial fisheries in the state.[80] Over time and to varying degrees the other states followed this shift to a sport dominated fishery while Native American tribes, First Nations, and Canada retained their commercial fisheries.[81] Stocking efforts for Pacific salmon focused on Lakes Michigan and Ontario due to the existence of a large number of alewive present in those lakes.[82] While initially successful, chinook salmon stocks declined in both lakes in the late 1980's due to overstocking in Lake Ontario, and potentially the same reason in Lake Michigan.[83] Populations of coho, chinook and pink salmon have all become naturalized in Lake Superior and provide the bulk of the salmon fishery in that lake.[84]

The Lake Erie recreational fishery focuses on percids, specifically walleye and yellow perch.[85] Those fisheries collapsed in the mid-1950s and 1960s, with a second collapse of the yellow perch fishery in the early 1990s.[86] Rehabilitation of those stocks

---

[79] Tanner et al, *supra* note 1, at 34-36,44-45.
[80] Tanner et al, *supra* note 1, at 53-56.
[81] Russel W. Brown, Mark Ebener, and Tom Gorenflo, *Great Lakes Commercial Fisheries: Historical Overview and Prognosis for the Future, in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 324, 327 (C. Paola Ferreri and William W. Taylor eds., 1999).
[82] Michael J. Hansen and Mark E. Holey, *Ecological Factors Affecting the Sustainability of Chinook and Coho Salmon Populations in the Great Lakes, Especially Lake Michigan, in* SUSTAINING NORTH AMERICAN SALMON: PERSPECTIVES ACROSS REGIONS AND DISCIPLINES 155, 158-59 (Kristine D. Lynch et al. eds., 2002).
[83] John F. Kocik and Michael L. Jones, *Pacific Salmonines in the Great Lakes Basin, in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 455, 471-73 (C. Paola Ferreri and William W. Taylor eds., 1999).
[84] Charles R. Bronte et al., *Fish Community Change in Lake Superior, 1970-2000*, 60 Can. J. Fish. Aquat. Sci. 1552, 1567-68 (2003).
[85] Bence and Smith, *supra* note 23, at 284.
[86] P.A. Ryan et al., FISH COMMUNITY GOALS AND OBJECTIVES FOR LAKE ERIE 12-14 (2003)(Great Lakes Fishery Commission Spec. Pub. 03-02).

was largely due to successful inter-jurisdictional management efforts, specifically through the setting of quotas.[87]

Lake whitefish provided another important fishery in the Great Lakes. Whitefish were frequently the target of early commercial fishing in the Great Lakes, particularly the upper Great Lakes.[88] Whitefish stocks were significantly harmed by over-fishing and the invasion of sea lamprey.[89] In the upper lakes the fishery has rebounded, due largely to sea lamprey control efforts.[90]

Agriculture, lumber, mining, and fishing all led to an increased demand for shipping in the Great Lakes and the need to build many canals and locks throughout the basin.[91] The Welland Canal, built in 1829, circumvented Niagara Falls and opened up the Great Lakes to shipping, and a species of fish from the Atlantic Ocean known as the sea lamprey.[92] The sea lamprey, a parasite that attaches to fish and sucks out bodily fluids, has had devastating effects on the Great Lakes fishery.[93] The sea lamprey was first observed in Lake Erie in 1921, 3 years after modifications were made to the Welland Canal, and it quickly spread through the rest of the upper lakes by 1938.[94] Plentiful prey and habitat and a lack of predators led to rapid increases in abundance that were particularly devastating to lake trout and lake whitefish.[95]

---

[87] Joseph F. Koonce et al., *Contribution of Fishery Management in Walleye and Yellow Perch Populations of Lake Erie, in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 397, 397-98, 402 (C. Paola Ferreri and William W. Taylor eds., 1999).
[88] Brown et al., *supra* note 81, at 332, 336, 338, 342, 346.
[89] Brown et al., *supra* note 81, at 332, 339.
[90] Brown et al., *supra* note 81, at 332-33, 339.
[91] Bogue, *supra* note 1, at 133, 137-138.
[92] Great Lakes Fishery Commission, SEA LAMPREY: A GREAT LAKES INVADER (Fact Sheet #3)(2000).
[93] Great Lakes Fishery Commission, *supra* note 92.
[94] B.R. Smith, and J.J. Tibbles, *Sea Lamprey (Petromyzon marinus) in Lakes Huron, Michigan, and Superior: History of Invasion and Control, 1936-1978*, 37 CAN. J. OF FISHERIES AND AQUATIC SCIENCES 1780 (1980).
[95] Bogue, *supra* note 1, at 164.

The sea lamprey is one of many non-indigenous species in the Great Lakes. Some have been introduced intentionally as were the aforementioned Pacific salmon. Other invasives have been introduced unintentionally through the canal system, ballast water discharge, and bait dumping to name three of the potential vectors.[96] Besides the sea lamprey, species that have caused the most substantial changes to the Great Lakes ecosystem probably include alewives and zebra mussels, and other species have clearly had an impact.[97]

The sea lamprey precipitated the creation of the Great Lakes Fishery Commission (GLFC), an intergovernmental organization created by a treaty between the U.S. and Canada, called the Convention on Great Lakes Fisheries (Convention).[98] One of the GLFC's primary duties is to eradicate or minimize the number of sea lamprey.[99] The GLFC works with federal agencies from Canada and the U.S. in accomplishing this task.

Due to the multi-jurisdictional nature of Great Lakes fisheries management and a fishery that spans political borders, coordinating bodies were and are needed. Early on fishery managers participated in "informal, management-coordination lake forums" even

---

[96] Edward L. Mills, Joseph H. Leach, James T. Carlton, and Carol L. Secor, *Exotic species in the Great Lakes: A History of Biotic Crises and Anthropogenic Introductions*, 19 J. GREAT LAKES RES. 1, 3-5 (1993).

[97] Joseph H. Leach, Edward L. Mills, and Margaret R. Dochoda, *Non-Indigenous Species in the Great Lakes: Ecosystem Impacts, Binational Policies, and Management*, *in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 185, 192-193 (C. Paola Ferreri and William W. Taylor eds., 1999).

[98] Convention on Great Lakes Fisheries Between the United States of America and Canada, June 6, 1955, U.S.-Can., 6 U.S.T. 2836 [*hereinafter* CGLF]. something which had been attempted multiple times in the past and had previously met a great deal of resistance. Great Lakes Fishery Commission, FACT SHEET #1: THE GREAT LAKES FISHERY COMMISSION – ESTABLISHED BY TREATY TO PROTECT OUR FISHERY (2001); Carlos M. Fetterolf Jr., *Why a Great Lakes Fishery Commission and Why a Sea Lamprey International Symposium*, 37 Can. J. Fish. Aquat. Sci. 1588, 1589-90 (1980).

[99] CGLF art. IV § d. Previous attempts at creating a bi-national commission focused on Great Lakes fishery had previously met a great deal of resistance. Great Lakes Fishery Commission, FACT SHEET #1: THE GREAT LAKES FISHERY COMMISSION – ESTABLISHED BY TREATY TO PROTECT OUR FISHERY (2001); Fetterolf, *supra* note 98, at 1589-90 (1980).

before the creation of the GLFC.[100] These forums were later dropped for more formal "lake committees," which were committees comprised of fishery managers on each lake and established by the GLFC.[101] And in 1981, Ontario, the eight Great Lake states, and two federal agencies (Canadian Department of Fisheries and Oceans and U.S. Fisheries and Wildlife Service), created the Joint Strategic Plan for Management of Great Lakes Fisheries (Strategic Plan) to guide efforts at coordinated fisheries management.[102] The plan was renewed in 1986,[103] and a number of Native American tribes in the U.S., represented by the Chippewa-Ottawa Treaty Fishery Management Authority (now called the Chippewa-Ottawa Resource Authority) and the Great Lakes Indian Fish and Wildlife Commission, signed onto the Strategic Plan in 1989.[104] In 1997 the Strategic Plan was again modified to coordinate fishery management with the broader environmental management activities in the Great Lakes.[105] The U.S. Geological Survey also signed onto the plan in 1997 when the research wing of the U.S. Fisheries and Wildlife Service was placed under the control of the Geological Survey.[106]

Besides the biological pollution of invasives species, other types of pollution have also been problematic in the Great Lakes. Sediment loading from early logging practices was one issue previously mentioned. Chemical pollutants like DDT, PCBs and dieldrin

---

[100] Margaret R. Dochoda, *Authorities, Responsibilities, and Arrangements for Managing Fish and Fisheries in the Great Lakes Ecosystem, in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 93, 103 (William W. Taylor and C Paola Ferreri, eds. 1999).
[101] Dochoda, *supra* note 100, at 103.
[102] A Joint Strategic Plan for Management of Great Lakes Fisheries, June 17, 1981 (as amended 1997), *available at* http://www.glfc.org/fishmgmt/jsp97.htm (last visited June 28, 2006)[hereinafter Joint Strategic Plan]; Dochoda, *supra* note 100, at 103-104
[103] Joint Strategic Plan, *supra* note 102.
[104] Joint Strategic Plan, *supra* note 102.
[105] Joint Strategic Plan, *supra* note 102.
[106] Dochoda, Margaret R., and Michael L. Jones, *Managing Great Lakes Fisheries Under Multiple and Diverse Authorities*, 5 TOL. GREAT LAKES' L. SCI. & POL'Y 405, 412 (2003).

have also caused considerable harm to the Great Lakes.[107] Expansion of urban areas and industry caused environmental problems in general through sewage disposal and the hardening of shorelines.[108] The eutrophication of Lake Erie and throughout the basin and its negative effects has also been documented.[109]

Many issues have arisen since Europeans first came to the Great Lakes region. Many threats to the fisheries of the Great Lakes persist to this day. Some of the more recent history of the region will follow in the discussion of the legal framework that has evolved around the Great Lakes fishery.

[107] Dempsey, *supra* note 36, at 132, 143, 220.
[108] Beeton, *supra* note 4, at 46-47; Dempsey, *supra* note 36, at 67-73.
[109] Beeton, *supra* note 4, at 47-48.

Chapter Three:
METHODOLOGY

This chapter outlines the methodology for this research, beginning with identification of the unit of analysis. Details of the two methods, legal research and semi-structured interviews, used for this research are given, followed by a description of the data analysis performed. Issues of validity are discussed throughout.

UNIT OF ANALYSIS

The importance of defining a unit of analysis cannot be understated. A unit of analysis is the unit "that you want to be able to say something about at the end of the evaluation."[1] Different units of analysis require different sample sizes, data collection methods, analytical focuses, and types of findings.[2]

The unit of analysis for this study is an "implementation structure." Scholars Benny Hjern and David Porter claim that we live in an "'organizational society' in which many important services are provided through multiorganizational programmes."[3] And within those programs exist implementation structures consisting of "interconnected clusters of firms, governments, and associations."[4] Hjern and Porter state that once the program is chosen, "it is possible to define reasonably accurately the *pool of organizations* within the task environment of a programme."[5] Specifically for the Great Lakes fishery management program, the pool of organizations includes the states, province, and tribes with harvest management authority and also the Great Lakes Fishery

---

[1] Michael Quinn Patton, HOW TO USE QUALITATIVE METHODS IN EVALUATION 51 (1987).
[2] *Id.* at 50.
[3] Benny Hjern and David O. Porter, *Implementation Structures: A New Unit of Administrative Analysis*, 2/3 ORG. STUDIES 211, 213 (1981).
[4] *Id.*
[5] *Id.* at 214.

Commission, inter-tribal entities, federal agencies, and inter-jurisdictional coordination structures called lake committees.

LEGAL RESEARCH

Legal research was used to outline the formal legal framework for fisheries management in the Laurentian Great Lakes Basin and to identify gaps in that framework based in part on issues identified by managers. Legal research primarily involves document analysis. The formal law of Great Lakes fishery management resides in a set of documents that includes constitutions, treaties, statutes, and judicial opinions. However, in the legal field all documents are not equal.

Western legal theory generally conceives of the legal arena as a hierarchical structure.[6] Certain documents, actually the rules contained therein, are afforded more importance than rules in other documents. Constitutions generally lie at the top of the hierarchy and trump the treaties, statutes, regulations, etc that make up the lower levels of the legal order.

A court's duty consists of resolving disputes by interpreting the meaning of that entire body of law and applying it to the facts at hand. . The court system is also structured hierarchically, with a highest (or supreme) court at the top, and multiple levels of courts below. Generally, higher courts can overturn or disregard decisions by lower courts, while lower courts are expected to adhere to the decisions of the higher courts.[7] Additionally, courts are often divided by geographical jurisdiction and are free to ignore decisions by courts in different jurisdictions.[8]

---

[6] John Griffiths, *What is Legal Pluralism?* 24 J. LEGAL PLURALISM 1, 3 (1986)
[7] Robert C. Berring and Elizabeth A. Edinger, FINDING THE LAW 20-22 (11th ed., 1999).
[8] David A. Adams, RENEWABLE RESOURCE POLICY: THE LEGAL INSTITUTIONAL FOUNDATIONS 43 (1993).

Additionally, law is constantly changing, whether through amendments to a constitution, the passage of new statutes, or a shift in the interpretation of law. For example, courts follow the doctrine of *stare decisis* where a particular court abides by past decisions of the court. This doctrine arose because of the perceived threat to the credibility and stability of the judicial system if reversals were more common.[9] Yet while rare, they do occur, and it is imperative that a legal researcher find such occurrences.

Thus, legal research requires a dutiful search to attain relevant, authoritative, and current law. Authoritative statements of the law, those relied on in the legal system, are "primary sources," which are the actual text of constitutions, statutes, judicial opinions, etc.[10] However, legal research frequently begins with the review of secondary sources, which describe or comment upon the law.[11] A range of secondary sources exist from law review articles to legal dictionaries to restatements of the law. These sources are used to guide research and shed light on the vast array of law that exists.

Even given the correct sources, "knowing" the law presents some challenges. Litigation involves applying law to a set of facts, and frequently different fact patterns arise. Attorneys and judges attempt to fit the law to the facts, while the legal scholar tries to reason or suggest how this fitting process likely will or should occur. Additionally, the meaning of the law is also frequently contested. Ambiguity and a lack of clarity are not rare in the legal realm. Also, in the context of judicial decisions, only parts of opinions actually contain the law or the holding. Legal practitioners refer to the extra verbiage as dicta, which do not serve as precedent. That is to say, dicta are not binding on future

[9] Berring and Edinger, *supra* note 7, at 12-13.
[10] Berring and Edinger, *supra* note 7, at 16.
[11] Berring and Edinger, *supra* note 7, at 17.

decisions. Thus, one must identify applicable cases, separate the wheat (law) from the chaff (dicta), interpret the law, and apply it to the facts at hand. While it can be more of an art than a science at times, one can create an accurate portrait of the law by piecing together court opinions, looking at the "plain meaning" of the statutes, referencing legislative histories, and reviewing the commentaries of legal scholars.

While this research follows standard legal research protocol, there is one caveat. Legal researchers and practitioners tend to assume that a coherent system of law exists. Max Weber described this as follows:

> The juridical point of view, or, more precisely, that of legal dogmatics aims at the correct meaning of propositions the content of which constitutes an order supposedly determinative for the conduct of a defined group of persons: in other words, it tries to define the facts to which this order applies and the way in which it bears upon them. Toward this end, the jurist, taking for granted the empirical validity of the legal propositions, examines each of them and tries to determine its logically correct meaning in such a way that all of them can be combined in a system which is logically coherent, i.e., free from internal contradictions. This system is the "legal order" in the juridical sense of the word. [12]

This research attempts to avoid reliance on such an assumption. It aims to shed light on the gaps and conflicts in the law instead of forcing the law into a coherent picture.

INTERVIEWS WITH FISHERY MANAGERS

This research relies on qualitative data collection methods, specifically, interviews were conducted with fishery managers to elicit the problems faced in Great Lakes fishery management and identify the gaps, overlaps and conflicts in the legal framework. Miles and Huberman make the following jocular case for qualitative research:

---

[12] Max Weber, ECONOMY AND SOCIETY 311-14 (1978).

> "Qualitative data are sexy. They are a source of well-grounded, rich descriptions and explanations of processes in identifiable local contexts. With qualitative data one can preserve chronological flow, see precisely which events led to which consequences, and derive fruitful explanations. Then, too, good qualitative data are more likely to lead to serendipitous findings and to new integrations; they help researchers to get beyond initial conceptions and to generate or revise conceptual frameworks. Finally, the findings from qualitative studies have a quality of "undeniability." Words, especially organized into incidents or stories, have a concrete, vivid, meaningful flavor that often proves far more convincing to a reader—another researcher, a policymaker, a practitioner—than pages of summarized numbers." [13]

Qualitative research looks at naturally occurring events that are grounded in a local context.[14] The data is rich, meaning deep and vivid, and looks at issues broadly.[15] It provides a sense of the meanings that arise in a lived world.[16] Rich data in this research provides more details on the specific problems faced in fishery management making it easier to identify the gaps, overlaps, and conflicts in the legal framework. The following outline provides details on the sampling procedures, data collection, and data analysis used, and also addresses relevant issues of validity.

Sample

Interviewees were chosen using snowball sampling.[17] The purpose of snowball sampling is to find knowledgeable people to interview. A short list of potential interviewees was produced from suggestions gathered through informal interviews with academics knowledgeable about Great Lakes fisheries. The interviewees were recommended based on their position as fishery managers on the Great Lakes and their familiarity with legal and policy aspects of management. Then interviewees were asked

---

[13] Matthew B. Miles and A. Michael Huberman, QUALITATIVE DATA ANALYSIS: AN EXPANDED SOURCEBOOK 1 (1994).
[14] Miles and Huberman, *supra* note 13, at 10.
[15] Miles and Huberman, *supra* note 13, at 10.
[16] Miles and Huberman, *supra* note 13, at 10.
[17] Patton, *supra* note 1, at 56.

at the end of their interview for the names of additional people with whom to talk given the topic and questions of the interview. Additionally, criterion sampling[18] was used, whereby interviewees appointed as representative for their agency on the lake committees were also solicited even if they were not identified through the snowball sampling procedure. Agency personnel charts were acquired to ensure that interviews included all of the people who held similar positions within their respective agencies. The sample consisted primarily of higher level managers in the fisheries divisions of natural resource departments within the states and provinces, inter-tribal organizations, and federal agencies that are signatories to the Joint Strategic Plan for Management of Great Lakes Fisheries.

Interviews were conducted with managers that work on Lakes Superior and Erie. Lakes Erie and Superior were chosen because they provide a unique comparison. They have considerable biological differences and occupy opposite ends of the spectrum with respect to the degree of environmental threats faced currently and in the past. Lake Superior is the coldest and deepest of the lakes with a cold water fishery that has suffered comparatively minor environmental degradation. On the other hand, Lake Erie is the shallowest lake with cool and warmwater fisheries and has a history fraught with environmental damage. Additionally, both federal governments generally divide management duties between the upper and lower lakes, and thus, the choice of these two lakes allowed for input from these different sets of managers.

Thirty-one fishery managers were sampled. While there are no specific rules that set sample sizes for qualitative research, some suggest saturation of data, or the lack of

---

[18] Patton, *supra* note 1, at 56.

new information, as a stopping point.[19] A saturation point for the most part did occur, although the breadth of the research question led to the occasional piece of new information arising even in the later interviews. Additionally, the snowball sampling procedure established a fairly well delineated list of potential interviewees. That is to say that the thirty one managers interviewed were consistently identified by each other as the people with whom I should speak. This could be considered a saturation of informants.

Two of the thirty-one interviewees were part of an exploratory round of interviews conducted to help formulate interview questions. They were included in the final analysis because aspects of those interviews were pertinent. Interviews were conducted with managers from each of the signatory agencies to the Joint Strategic Plan for Great Lakes Fisheries listed above, with the exception of the Illinōis Department of Natural Resources and Indiana Department of Natural Resources, because they do not have jurisdiction over any portion of Lakes Superior or Erie. Two agencies only had one interviewee, whereas the rest had at least two representatives. In one case, the original snowball sampling failed to provide the name of an interviewee for one federal agency, so one was chosen based on the recommendation of a knowledgeable academic. And in the other case, a second interviewee was contacted, but for legal reasons that person declined to be interviewed.

Data Collection

Semi-structured interviews were conducted using an interview guide. Interview guides list questions and topics to be addressed, but do not require that questions be

[19] Michael Quinn Patton, QUALITATIVE EVALUATION AND RESEARCH METHODS 185 (1990); Yvonna S. Lincoln and Egon G. Guba, NATURALISTIC INQUIRY 202 (1985).

addressed in a particular order nor asked in a specific manner.[20] This method provided the flexibility to address issues as they arose in the interview and led to a more conversational tone. The topic areas were based on the regulatory categories found in the statutes of jurisdictions analyzed for this research. Probe questions, some of which were scripted, were then used to find out more information on particular topics and issues raised by the interviewee. I employed follow-up questions for further clarification. The final interview guide used for this study is located in the appendix.

The specific questions and topics listed in the interview guide were created with the goal of gaining information relevant to the research question, yet were left open-ended in nature to permit interviewees freedom in their answers. The intent was to let interviewees expound on the issues with which they were familiar and that they deemed most relevant. The aim was also to allow them to answer using their own frame of reference, instead of having the form or content of the answer dictated by the question.[21]

The interview process developed iteratively due to the exploratory nature of the research. Later interviews focused on new issues and alternative explanations as much as they looked to confirm issues addressed by previous respondents.

One interview was conducted using an informal conversational method.[22] These types of interviews are generally spontaneous in nature, yet in this instance many of the standard interview guide questions were addressed. This interview method was adopted at the interviewee's request.

---

[20] Kimberly Chung, *Qualitative Data Collection Techniques, in* DESIGNING HOUSEHOLD SURVEY QUESTIONNAIRES FOR DEVELOPING COUNTRIES 337, 343-344 (Margaret Grosth and Paul Glewwe eds., 2000); Patton, *supra* note 1, at 111-112.
[21] Patton, *supra* note 1, at 122-123.
[22] Patton, *supra* note 1, at 110-111.

The author conducted all of the interviews. Interviews generally occurred in the office building of the interviewees. Interviews generally lasted between 45 minutes and 2 hours. Three interviews lasted under 30 minutes due to time conflicts or scheduling errors on the part of interviewees. Interviewees signed consent forms and were informed of their rights of confidentiality.

Validity of Data Collection

Qualitative research has been subject to considerable debate regarding its overall credibility.[23] Detractors question its quality, believability, trustworthiness, goodness, etc. Different researchers have dealt with these in different ways, and this section and the validity of data analysis section describe the strategies used in this research to ensure its credibility. Researchers have recognized numerous standards for judging the quality of research.[24] The two major concerns are the validity (or accuracy) and reliability (or replicability) of a study.[25] It has been noted that "[in] certain respect[s] these issues overlap; what threatens reliability in ethnographic research also may threaten the validity of a study."[26] In that light, the following sections review some of the more specific issues and strategies used in this research as they arose in the different stages of the research, namely data collection and data analysis, instead of dividing them into any of the possible theoretical categorizations for looking at this issue of credibility.

---

[23] Margaret D. LeCompte and Judith Preissle Goetz, *Problems of Reliability and Validity in Ethnographic Research*, 52(1) REVIEW OF EDUCATIONAL RESEARCH 31, 31 (1982) (applying "the tenets of external and internal validity and reliability as they are used in positivistic research traditions to work done by ethnographers and other researchers using qualitative methods"); Patton, *supra* note 1, at 165, 168-169.
[24] See, Miles and Huberman, *supra* note 13, at 277-280. (listing the following five categories that each have multiple names: 1) Objectivity/Confirmability, 2) Reliability/Dependability/Auditability, 3) Internal Validity/Credibility/Authenticity, 4) External Validity/Transferability/Fittingness, 5) Utilization/Application/Action Orientation).
[25] LeCompte and Goetz, *supra* note 23, at 31-32.
[26] LeCompte and Goetz, *supra* note 23, at 35.

One problem faced when conducting interviews is that they exhibit "reactivity."[27] Interviewing is a dynamic situation and the interviewer will have some level of influence on the discussion, and that effect is impossible to eliminate.[28] However, attempts were made to minimize the impact of the interviewer by avoiding leading questions when possible, and through the use of open-ended questions.[29] Overall, attempts were made to remain neutral and not cause undue influence on the interviewee's answers.

Other potential problems include the possibility that interviewees may have faulty memories, will attempt to please interviewer, will give the "company answer" as opposed to their own thoughts, or will try to cover-up contentious issues. The issues addressed in this research were not generally contentious, but full disclosure may not have been provided by informants for various reasons. For example, it appears that interviewees felt some level of distrust or discomfort at the prospect of being interviewed. Some respondents contacted associates to try and identify the people and motives behind this research. Also, there was some concern with interviewees in one jurisdiction over what they could say due to recent elections and the resulting change in leadership. Finally, unease existed in some discussions on Native American and First Nation fishing with multiple respondents. The primary means of overcoming these problems was to guarantee the confidentiality of respondents and their answers. Additionally, it is important for a researcher to be aware of these potential problems and ask pointed questions. Finally, conducting interviews with multiple respondents should help to solve this problem since people often differ in their willingness to speak candidly.

---

[27] Joseph Maxwell, QUALITATIVE RESEARCH DESIGN: AN INTERACTIVE APPROACH 91 (1996).
[28] Maxwell, *supra* note 25, at 91.
[29] Patton, *supra* note 1, at 128-129.

DATA ANALYSIS

Interviews were recorded on audio tapes, except for a few interviewees who declined to give permission to tape record. In those instances, notes were handwritten during the interview and then a detailed transcript was typed up immediately after the interview or by the day's end. Interviews were transcribed by the author. Memos were created after interviews and during transcriptions in order to capture ideas and impressions.

Interviews were read and re-read, and themes identified. The interviews were coded, whereby a term or phrase representing a concept is attached to a section of data, be it a word, phrase, sentence, paragraph or transcript.[30] Codes are the building blocks that allow for clustering, condensing, and drawing of conclusions.[31] Coding was accomplished through the use of a computer program called "Atlas.ti" (Atlas). Atlas is a *code-based theory builder* that allows one to code documents, search and retrieve coded sections of a set of documents, and provides tools for building theories by allowing an analyst to define relationships between codes, classify and organize codes, and perform other actions.[32]

Validity of Data Analysis

Scholar Michael Patton notes that two main issues of validity in qualitative data analysis are subjectivity of the researcher and the supposed inability to make generalizations based on qualitative research.[33] Patton points out that objectivity may be an unachievable goal, at least for policy evaluation, and a researcher should strive for

---

[30] Miles and Huberman, *supra* note 13, at 56-57.
[31] Miles and Huberman, *supra* note 13, at 57.
[32] Eben A. Weitzman, *Software and Qualitative Research*, *in* HANDBOOK OF QUALITATIVE RESEARCH 803, 809 (N. Denzin and Y. Lincoln eds., 2d ed., 2000).
[33] Patton, *supra* note 1, at 166.

neutrality instead.[34] Validity of interpretation is a notable concern, especially in the legal analysis of formal law, but also in analyzing interviewee responses. Validity of interpretation is threatened by the imposition of unfounded meaning by the researcher.[35]

These potential concerns were addressed using three strategies: searching for discrepant evidence and negative cases, receiving feedback, and using rich data.[36] Searching for and reporting discrepant evidence and negative cases was the primary means to increase validity. Multiple people provided feedback, including scholars not familiar with my area of study, on the final product and on analysis of data. Finally, attempts were made to acquire and report "rich" data, or data that retains details of the context in which it arises, that would provide the reader with a complete understanding of a situation or idea. Overall, the goal is transparency and letting the reader decide on the validity of my data and findings, which was effectuated by placing sample quotations in the footnotes of the result section.

While social science research is frequently criticized for the lack of generalized theories, social situations are often highly affected by the context in which they arise, and at best one may want to search for reasonable extrapolations[37] or "working hypotheses" based on the "degree of congruence between sending and receiving contexts."[38] For this case study, the goal was not to create generalizations, but to provide an analysis of the situation faced in Great Lakes fishery management. Yet, it is hoped that this research is

---

[34] Patton, *supra* note 1, at 166. While neutrality is important, this is not meant to denigrate research from a non-neutral standpoint, such as participatory action research. *See*, Stephen Kemmis and Robin McTaggert, *Participatory Action Research*, *in* HANDBOOK OF QUALITATIVE RESEARCH 567 (Norman K. Denzin and Yvonna S. Lincoln eds., 2000).
[35] Maxwell, *supra* note 24, at 89-90.
[36] Maxwell, *supra* note 24, at 92-96.
[37] Patton, *supra* note 1, at 168.
[38] Yvonna S. Lincoln and Egon G. Guba, *The Only Generalization Is: There Is No Generalization*, *in* CASE STUDY METHOD: KEY ISSUES KEY TEXTS 27, 38-40 (Roger Gomm et al. eds., 2000).

useful for "naturalistic generalizations," where others might come to understand the issues they face by looking at the information provided.[39]

[39] Lincoln and Guba, *supra* note 35, at 36-38.

Chapter Four:
JURISDICTIONS AND AUTHORITIES

This section provides an overview of the legal and institutional framework of Great Lakes fisheries management focusing on legislation, case law and treaties. The following sections cover U.S. and the states, Canada and Ontario, treaties and the international context, Native American tribes, and First Nations.

THE U.S. AND THE STATES

The U.S. is a federal constitutional democracy. A federalist system divides power between a federal government and the regional governments. In the U.S. these are referred to as states. This split in authority is structured through the U.S. Constitution. The Constitution grants certain powers to the federal government and leaves the remaining authority in the hands of the states under the 10th Amendment.[1]

In the inland waters of the U.S., including the Great Lakes, fisheries management begins with this remaining authority left to the states. Before outlining the nature and extent of state and federal authorities, the following section provides the historical legal background of fisheries and wildlife, some of which forms the basis of or even constitutes current law.

Historical Foundations

The legal heritage over the issue of ownership of wildlife extends back to Justinian Rome in the mid-sixth century.[2] Things were either owned by people, as in

---

[1] U.S. Const. amend. X. "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." *Id.*
[2] David A. Adams, RENEWABLE RESOURCE POLICY 5-6 (1993).

private property or they were not.[3] Things that were not privately owned could be further distinguished as public property and institutions (*res publicae* and *res institutiones*), property owned by the citizenry and open to their use (*res communes*), and unowned things (*res nullius*).[4] Wild animals, or *ferae naturae*, (as opposed to domesticated animals, or *domitae naturae*) were *res nullius* or unowned.[5] An individual that reduces an animal to possession by capturing or killing it acquires a private right to the animal.[6] In the U.S., this ancient rule still applies. In practice hunters may claim a right to an animal based on their being the first to draw blood, but generally the law requires possession.[7]

Right to Take Fish

Wildlife being unowned, presumably everyone had the right to kill or capture it. However, the right to take animals in Justinian Rome was limited as private landowners could exclude other harvesters from their private lands.[8] Thus, for fisheries, the right to fish depended on who owned the lands under the waters being fished. As mentioned, certain properties in early Rome were owned and open to use by everyone, referred to as *res communes*. As early Roman law stated: "[Some things are] common to mankind - the air, running water, the sea, and consequently the shores of the sea."[9] Thus, it appears that everyone had a right to harvest fish.

---

[3] Adams, *supra* note 2, at 6.
[4] Adams, *supra* note 2, at 6.
[5] Adams, *supra* note 2, at 7.
[6] Michael J. Bean and Melanie J. Rowland, THE EVOLUTION OF NATIONAL WILDLIFE LAW 8 (3rd ed., 1997); Adams, *supra* note 2, at 7-8.
[7] Adams, *supra* note 2, at 8.
[8] Bean and Rowland, *supra* note 6, at 8.
[9] *The Institutes, 535 CE, in* INTERNET MEDIEVAL SOURCEBOOK § II.I.1 (Paul Halsall ed., 1998), http://www.fordham.edu/halsall/basis/535institutes.html [hereinafter *The Institutes*].

Roman law also made a distinction within *res communes* and other public properties between those held by the government as property of the government (*jus privatum*) and that held by the government in a public trust (*jus publicum*).[10] Based on the concepts of *res communes* and *jus publicum* and early English law, a public trust doctrine arose in England and was developed more extensively later in the U.S.[11]

In part, the public trust doctrine names the states as the inheritors of the British Crown's *res communes* lands. In the following passage from *Shively v. Bowlby*, the U.S. Supreme Court outlines the passage of ownership rights of submerged lands from the Crown to the states:

> At common law, the title and the dominion in lands flowed by the tide were in the King for the benefit of the nation. Upon the settlement of the Colonies, like rights passed to the grantees in the royal charters, in trust for the communities to be established. Upon the American Revolution, these rights, charged with a like trust, were vested in the original States within their respective borders, subject to the rights surrendered by the Constitution to the United States . . . . The new States admitted into the Union since the adoption of the Constitution have the same rights as the original States in the tide waters, and in the lands under them, within their respective jurisdictions.[12]

Although, this passage refers to tide waters, it was later determined that states own the lands underlying all *navigable* waters.[13] And in the landmark case *Illinois Central Railroad v. Illinois*, the U.S. Supreme Court specifically noted the existence of a public trust over the Great Lakes.[14]

---

[10] Adams, *supra* note 2, at 6.

[11] *See*, Bonnie J. McCay, THE OYSTER WARS (1998) (outlining the history and development of the public trust doctrine in the U.S.).

[12] Shively v. Bowlby, 152 U.S. 1, 57 (1894).

[13] Arnold v. Mundy, 6 N.J.L. 1, 77-78 (1821).

[14] Illinois Central R.R. Co. v. Illinois, 146 U.S. 387, 437 (1892). The Court found that "the same doctrine as to the dominion and sovereignty over and ownership of lands under the navigable waters of the Great Lakes applies which obtains at the common law as to the dominion and sovereignty over and ownership of lands under tide waters in the borders of the sea, and that the lands are held by the same right in the one case as in the other, and subject to the same trusts and limitations." *Id. Illinois Central* involved a grant of

The public trust doctrine also incorporated the Roman law concept of *jus publicum*. It includes two principle tenets: 1) the public has usufructuary rights to the resource, and 2) the state faces limits on its authority over trust lands. First, members of the public have certain rights to use the trust resource, and historically these have included commerce, navigation, and fishing.[15] Courts have extended these rights in some states to cover additional uses.[16] Second, the state holds these submerged lands for the benefit of the public, thereby creating a trust responsibility that limits the state power in comparison to other pieces of public property which are owned outright. In Justinian Rome this may have prevented the government from selling trust protected resources.[17] In the U.S. the doctrine generally permits conveyance of trust resources, but not the public's rights of navigation and fishing. The Supreme Court in *Illinois Central* stated this as follows:

> It is the settled law of this country that the ownership of and dominion and sovereignty over lands covered by tide waters, within the limits of the several States belong to the respective States within which they are found, with consequent right to use or dispose of any portion thereof, when that can be done without substantial impairment of the interest of the public in the waters.[18]

This is based in part on English law where ownership of submerged lands rested with the Crown, but whose authority was limited by the Magna Carta, which restricted the Crown's ability to limit "the public common of piscary," or the public right to fish.[19]

---

the a large section of the Chicago waterfront to a railroad company, which was later revoked, and litigation ensued. The Court held that the grant was illegal in the first place or at least revocable. *Id.* at 460. This holding has been called the "lodestar" of public trust jurisprudence. Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 Mich. L. Rev. 471, 489-491 (1970).

[15] *Illinois Central*, 146 U.S. at 452.

[16] Jeffrey W. Henquinet and Tracy Dobson, *The Public Trust Doctrine and Sustainable Ecosystems: A Great Lakes Fisheries Case Study*, 14 N.Y.U ENVTL. L. J. 322, 335-347 (2006).

[17] Adams, *supra* note 2, at 6.

[18] *Illinois Central*, 146 U.S. at 435.

[19] Martin v. Waddell, 41 U.S. (16 Pet.) 367, 412 (1842).

As stated, in ancient Rome, the right to take wildlife was based on ownership of the land where animals were found, and consequently everyone had the right to harvest on commonly owned lands. Yet, U.S. law now separates the public right to take fish from ownership of the submerged lands. The right to harvest is a single stick in a bundle of rights and can be separated from ownership of the submerged lands. In cases where the submerged lands of navigable waters were granted to riparian landowners, the public may retain its right to fish depending on the jurisdiction.[20] It depends because, the public trust doctrine is part of the "common law," meaning it arises out of judicial opinions as opposed to statutes or constitutions. Each state has courts that interpret its own common law, and therefore, the public trust doctrine can differ in each state in terms of what waters are navigable, the type of rights the public holds, and the demarcation between private and trust lands.

Authority to Regulate Harvest

Harvest regulation involves the many rules and regulations including, the setting of seasons, gear restrictions, location restrictions, quotas (daily, seasonal, and yearly catch limits), effort limits, size limits, species limits, licensure, and penalties for infractions of those rules. Courts have postulated a number of potential bases for the authority to regulate fisheries, specifically, state ownership of the fish, a duty to protect trust resources for use by the public, and the state's police powers.

Ownership of fish would provide the most direct avenue for state management of fisheries. The 1896 case *Geer v. Connecticut* is famous for its holding that the state owns

[20] *See*, Henquinet and Dobson, *supra* note 16 (outlining the public trust doctrines in the Great Lakes region).

wildlife.[21] In *Geer* a hunter was charged with violating a law that prohibited the transportation of legally hunted game birds. The defendant claimed that the law impeded interstate commerce thus constituting a violation of the Commerce Clause of the U.S. Constitution. The U.S. Supreme Court held that Commerce Clause restrictions were not applicable because states have the authority to manage wildlife for the public, due to the common ownership of those resources.[22] However, in 1979 the U.S. Supreme Court expressly overruled *Geer's* ownership theory in *Hughes v. Oklahoma*, holding that the state does not own wildlife and fish within a state's borders.[23] Further discussion of the *Hughes* case appears in the next section.

The public trust doctrine provides another potential basis for state management authority over fisheries. The dissenting judge in *Hughes* noted that overruling *Geer* was unnecessary because the ownership language was simply "shorthand" for the "view derived from Roman law that the wild fish and game located within the territorial limits of a State are the common property of its citizens and that the State, as a kind of trustee, may exercise this common "ownership" for the benefit of its citizens."[24] Although a dissent is difficult to rely on for statements of law, the National Research Council has argued along these same lines: that the *Hughes* decision to strike down state ownership did not necessarily take with it the trust theory.[25]

---

[21] Geer v. Connecticut, 161 U.S. 519 (1896). Although, the word ownership does appear several times it is not completely clear that the holding in *Geer* actually stated that the state was an owner in the sense that it was private property. *See* Bean and Rowland, *supra* note 6, at 15.
[22] Geer v. Connecticut, 161 U.S. at 529.
[23] Hughes v. Oklahoma, 441 U.S. 322, 335-6 (1979).
[24] *Hughes*, 441 U.S. at 341.
[25] National Research Council, SHARING THE FISH: TOWARD A NATIONAL POLICY ON INDIVIDUAL FISHING QUOTAS 42-43 (1999). However, it is difficult to reconcile that view point with Douglas v. Seacoast Products Inc. where the U.S. Supreme Court held that "it is pure fantasy to talk of 'owning' wild fish, birds, or animals. . . . The 'ownership' language of cases such as those cited by appellant must be understood as no more than a 19th-century legal fiction expressing 'the importance to its people that a State have power

Finally, the state's general "police power" provides a source of authority for fisheries management. The police power refers to the general authority to create laws to guard the health and well being of the public, as retained by the states and explicitly reserved under the 10th Amendment of the U.S. Constitution.[26] The police power allows states to create and enforce laws to protect the health and general welfare of the public. In a 1977 case, the U.S. Supreme Court cited the police power as the only basis for state authority over fisheries or wildlife.[27]

Limits on State Authority

While management authority for fisheries rests with the states, limits do exist. For one, authority is limited geographically; states have harvest management authority only within their state borders.[28] Fisheries management requires regulating the harvest of a population or populations, and an ecosystem management approach may require actions across a watershed. Thus, political borders that divide waterbodies and watersheds presents problems for fisheries management, since fish are a mobile resource and do not observe non-physical, political boundaries.[29]

The U.S. Constitution places certain limits on the powers of state governments. Under the Supremacy Clause of Article IV, the laws of the U.S. Constitution and the

---

to preserve and regulate the exploitation of an important resource.' . . . *Under modern analysis, the question is simply whether the State has exercised its police power* in conformity with the federal laws and Constitution." Douglas v. Seacoast Products, Inc., 431 U.S. 265, 284 (1977) (emphasis added) (citations omitted). But this language also seems to focus simply on the idea of ownership by the state.

[26] U.S. Const. Amend. X (1791).

[27] Douglas v. Seacoast Products, Inc., 431 U.S. 265, 284 (1977). It appears that the U.S. Supreme Court abandoned the theory of state ownership of wildlife primarily so that it could not be used as a defense against the Privileges and Immunities Clause, the Equal Protection Clause, and the Commerce Clause, which are discussed in the following section. *Id.*

[28] Paul v. Virginia, 8 Wall. 168, 180-81 (1869).

[29] Lynton K. Caldwell, *Disharmony in the Great Lakes Basin: Institutional Jurisdictions Frustrate the Ecosystem Approach*, 20 Alternatives 26 (1994).

federal government are supreme to those of the states.[30] Through the Supremacy Clause a number of other Constitutional clauses place limits on state authority. This section provides a basic outline of three clauses commonly used to challenge state fishery and wildlife management regulations, the Privileges and Immunities Clause, the Equal Protection Clause, and the Commerce Clause.[31]

The Privileges and Immunities Clause prohibits a state from discriminating against non-residents on behalf of its residents, but this protection is afforded only for "fundamental" rights. The U.S. Supreme Court stated the rule as follows: "Only with respect to those "privileges" and "immunities" bearing upon the vitality of the Nation as a single entity must the State treat all citizens, resident and nonresident, equally."[32] In the 1978 case *Baldwin v. Montana*, a group of non-resident hunters and their resident hunting guide claimed that Montana's elk-hunting license structure, particularly the higher fees charged to non-residents, discriminated against non-resident hunters in violation of the Privileges and Immunities Clause.[33] The U.S. Supreme Court held that recreational elk hunting was not a "fundamental" right protected under the Privileges and Immunities Clause, and the state could treat resident and non-resident hunters differently.[34] Thus, the practice of setting higher license fees for non-resident sport anglers on the Great Lakes would not violate the Privileges and Immunities Clause under *Baldwin*.

It is important to note that *Baldwin* did not involve disparate fees for resident and non-resident hunting *guides*. A higher fee for a non-resident guiding license would violate the Privileges and Immunities Clause because "a State's interest in its wildlife and

---

[30] U.S. Const. art. VI sec. 2.
[31] U.S. Const. art. IV sec. 2 cl. 1.; U.S. Const. amend. XIV sec. 1; U.S. Const. art. 1. sec. 8.
[32] Baldwin v. Montana, 436 U.S. 371, 383 (1978).
[33] *Baldwin*, 436 U.S. at 373, 374.
[34] *Baldwin*, 436 U.S. at 388.

other resources must yield when, without reason, it interferes with a nonresident's right to pursue a livelihood in a State other than his own."[35] Similarly, disparate fees for resident and non-resident commercial fishers or a ban on non-resident commercial harvest would also violate the clause.

The Equal Protection Clause states that, "No State shall...deny to any person within its jurisdiction the equal protection of the laws."[36] Like the Privileges and Immunities Clause, the Equal Protection Clause also bars discrimination, but more broadly since it precludes any favoritism that is arbitrary or does not rationally further some legitimate government purpose.[37] The defendants in *Baldwin*, discussed above, also claimed that the State of Montana's elk hunting regulations violated the Equal Protection Clause.[38] The Court said,

> We perceive no duty on the State to have its licensing structure parallel or identical for both residents and nonresidents, or to justify to the penny any cost differential it imposes in a purely recreational, noncommercial, nonlivelihood setting.[39]

The Court found that a reasonable connection existed between the licensing structure and a legitimate regulatory interest (conservation), and, therefore, did not violate the Equal Protection Clause.[40]

Finally, the Commerce Clause also limits state authority to regulate fisheries. The limit on state authority arises out of the so-called "dormant" aspect of the Commerce Clause, which prohibits state regulation or action that burdens interstate commerce.[41]

---

[35] *Baldwin*, 436 U.S. at 386.
[36] U.S. Const. amend. XIV sec. 1.
[37] *Baldwin*, 436 U.S. at 389-391.
[38] *Baldwin*, 436 U.S. at 373.
[39] *Baldwin*, 436 U.S. at 391.
[40] *Baldwin*, 436 U.S. at 390.
[41] Christopher N. May and Allan Ides, CONSTITUTIONAL LAW—NATIONAL POWER AND FEDERALISM: EXAMPLES AND EXPLANATIONS 307 (2001).

The doctrine is referred to as dormant because it is not explicitly stated in the Constitution, but is seen as implied in the Commerce Clause, which grants the federal government the power to regulate interstate commerce, discussed later.

Hughes v. Oklahoma, the case that overruled the *Geer* theory of state ownership of wildlife, involved a challenge to state law under the Dormant Commerce Clause. A minnow dealer from Texas was arrested for removing naturally raised minnows from Oklahoma, and he defended his actions by arguing that the Oklahoma statute was in violation of the Commerce Clause.[42] The Oklahoma law, which banned transport of minnows caught in Oklahoma waters for sale outside of Oklahoma, was clearly discriminatory.[43] Such discrimination is only allowed where a legitimate state interest was being met and where there exists no less discriminatory means to achieve the same ends. In *Hughes* there was a legitimate state interest in conserving the states natural resources, but Oklahoma did not prove that they had employed the least discriminatory means.[44]

Since higher non-resident fees are discriminatory on their face, under a Commerce Clause challenge a state would need to show that a legitimate state interest is being met and no less discriminatory measures were available to achieve that goal. As mentioned, conservation is a legitimate goal under *Hughes*.[45] Yet, if we see the goal as trying to limit the number of hunters or fishers to conserve stocks, there are probably less discriminatory means to achieve that goal.[46] However, one could argue that non-resident

---

[42] Hughes v. Oklahoma, 441 U.S. 322, 323-324 (1979).
[43] *Hughes*, 441 U.S. at 336-338.
[44] *Hughes*, 441 U.S. at 336-338.
[45] *Hughes*, 441 U.S. at 337.
[46] *Hughes*, 441 U.S. at 337.

hunting and fishing imposes certain costs for state conservation efforts, and further show that the fees are reasonable in relation to the costs borne.[47]

The above are the main federal limits on state authority, with the exception of the Takings Clause of the U.S. Constitution. Since that clause limits the federal government, as well as the states, it is addressed in the following section on the sources of federal power over fisheries and its limits.

U.S. Federal Authority over Fisheries

Besides the restrictions placed by the Constitution on state actions, it also provides the federal government with a few avenues for involvement in fisheries management. The Commerce Clause, and the federal government's property powers, treaty powers, and funding authority provide this authority.

The Commerce Clause gives the federal government power to regulate interstate commerce. Courts have interpreted the clause as providing incredibly broad authority, and it is the basis for a great deal of federal legislation in many areas including and beyond the natural resource and environmental realms. Under this authority the federal government can regulate any channel or instrumentality of commerce.[48] For example, Congress can ban products from being sold interstate that do not meet federal safety standards (regulating the channel), and it could regulate the trucking industry simply because it is active in commerce (an instrumentality). Furthermore, the Constitution states that Congress can:

> make all Laws which shall be necessary and proper for carrying into Execution the Foregoing Powers, and all other Powers vested by this

---

[47] Michael D. Axline, Note - *Constitutional Law—The End of a Wildlife Era: Hughes v. Oklahoma*, 60 OR. L. REV. 413, 426-428 (1981).
[48] May and Ides, *supra* note 41, at 186-187.

> Constitution in the Government of the United States, or in any Department or Officer thereof.[49]

This so-called Necessary and Proper Clause, which when taken in conjunction with the Commerce Clause allows Congress to regulate any economic activity that "substantially affects" commerce.[50]

The Lacey Act of 1900 was the first notable use of the commerce power by the federal government in the area of fisheries and wildlife management and remains on the books today.[51] The Lacey Act banned the transport of any wildlife or bird killed illegally under the law of the state where the taking occurred.[52] Similar prohibitions were enacted to protect largemouth and smallmouth bass in the Black Bass Act of 1926.[53] This act was later extended to include all game fish, and then in 1981 those provisions were rolled into the Lacey Act.[54] This is an example of regulating the channels of commerce.

The Federal Property Power refers to the authority that the federal government has over property that it owns.[55] For example, like private property owners, the federal government likely has the right to prohibit hunting on its land.[56] This authority may extend to non-federal lands adjacent to or surrounded by federal property. Thus, in one case, the 8th Circuit upheld the federal government's regulation of hunting on state waters that ran through a national park.[57]

---

[49] U.S. Const. art. I sec. 8 cl. 18.
[50] *United States v. Darby*, 312 U.S. 100, 119 (1941).
[51] Act of May 25, 1900, Ch. 553, 31 Stat. 187 (1900) (current version at 16 U.S.C. §§ 3371-3378 and 18 U.S.C. § 42).
[52] Ch. 553, § 3 31 Stat. 187 (1900) (currently at 16 U.S.C. § 3372(a)).
[53] 16 U.S.C. §§ 851-856 (1926).
[54] Bean and Rowland, *supra* note 6, at 42-45.
[55] U.S. Const. art. IV § 3 cl. 2.
[56] Bean and Rowland, *supra* note 6, at 19. However, this issue apparently has not been litigated. *Id.*
[57] United States v. Brown, 552 F.2d 817, 821-22 (1977). Decisions of the 8th Circuit are only binding within the jurisdiction of that circuit, which includes Minnesota, Iowa, Missouri, Arkansas, Nebraska, South Dakota, and North Dakota. These decisions can be used as persuasive precedent in other circuits, but are not binding on them.

The President of the United States has the "Power, by and with the Advice and Consent of the Senate to make Treaties, provided two thirds of the Senators present concur."[58] Under the Supremacy Clause those treaties are the supreme law of the land.[59] In 1920, *Missouri v. Holland* enshrined the federal government's power over wildlife management under the treaty power.[60] In 1916 the U.S. and Great Britain (on behalf of Canada) signed the Convention for the Protection of Migratory Birds and the U.S. passed implementing legislation in 1918.[61] The Convention established closed seasons and restrictions on take for some species of migratory birds, an area of regulation clearly within the traditional ambit of state authority.[62] And while a reasonable interpretation might limit the treaty power to areas with some international component, courts have not recognized such a constraint.

Given the commerce and treaty powers detailed above, it is difficult to identify any limit to the federal government's powers in terms of wildlife management.[63] It seems likely that the federal presence in the Great Lakes will only increase in the future given that the international boundary dividing the lakes makes treaties necessary or highly desirable, and because the fishery involves obvious connections to interstate commerce. In fact, it is perhaps surprising that there is not more of a U.S. federal presence currently.

---

[58] U.S. Const. art. II § 2 cl. 2. "[The President] shall have Power, by and with the Advice and Consent of the Senate to make Treaties, provided two thirds of the Senators present concur." *Id.*

[59] U.S. Const. art VI. § 2. "This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding." *Id.*

[60] Missouri v. Holland, 252 U.S. 416 (1920).

[61] Convention for the Protection of Migratory Birds, Aug. 16, 1916, United State-Great Britain (on behalf of Canada), 39 Stat. 1702; Migratory Bird Treaty Act, ch. 128, 40 Stat. 755 (1918), 16 U.S.C. § 703 et seq.

[62] *Missouri*, 252 U.S. at 434.

[63] *See e.g.*, United States v. Helsley, 615 F.2d 784, 787 (9th Cir. 1979).

Another means for exerting federal influence over state actions is through the federal spending power.[64] In general, Congress has the power to spend money for any public purpose not just in those areas where it has legislative authority.[65] The only limit is that the money be spent for the "general welfare" of the nation.[66] This in effect is no limit at all. Concerns arise over Congress' ability to make funding for state programs conditional on terms that are outside Congress' regulatory authority.[67] The funding could be seen as "weapons of coercion, destroying or impairing the autonomy of the States."[68] However, the Supreme Court "has repeatedly upheld...the use of this technique to induce governments and private parties to cooperate voluntarily with federal policy."[69]

While the federal government has many powers, it also faces constraints. The Takings Clause restricts the actions of the federal government. Specifically, the government cannot take private property "for public use, without just compensation."[70] While the Bill of Rights initially only applied to the federal government, some of the amendments, including the Takings Clause, have been incorporated through the Due Process Clause of the 14th to apply to the states.[71] Thus, if a state were to build a boat launch on someone's private property, they would have to bring a condemnation action and compensate the landowner or face a lawsuit.

---

[64] U.S. Const. art. 1 § 8 cl. 1. The relevant part states: "The Congress shall have Power To lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defence and general Welfare of the United States." *Id. See generally*, Ben Canada, *Federal Grants to State and Local Governments: A Brief History*, *in* STATE AND LOCAL GOVERNMENT IN THE UNITED STATES 57-63 (M.H. Timm ed., 2001).

[65] United States v. Butler, 297 U.S. 1, 66 (1936).

[66] South Dakota v. Dole, 483 U.S. 203, 207 (1987).

[67] Other non-legal concerns arise as well, for example, do grants in aid impede local governance efforts by changing priorities? *See, e.g.*, Dell S. Wright and Chung-Lae Cho, *State Administration and Intergovernmental Interdependency: Do National Impacts on State Agencies Contribute to Organizational Turbulence?*, *in* HANDBOOK OF STATE GOVERNMENT ADMINISTRATION 33-66 (John J. Gargan ed., 2000).

[68] Steward Machine Co. v. Davis, 301 U.S. 548, 586 (1937).

[69] Fullilove v. Klutznick, 448 U.S. 448, 474 (1980).

[70] U.S. Const. amend. V.

[71] Chicago, Burlington & Quincy Railroad Co. v. Chicago, 166 U.S. 226, 241 (1897).

Government regulations may also limit use of land to the point where arguably it deprives landowners of the benefits of their land, in effect taking it from the landowner. These are called regulatory takings. Yet, regulation can almost always be construed as infringing on some property interest and is an unavoidable part of having a government. Thus, only "if regulation goes too far [will it] be recognized as a taking."[72] Additionally, some states have passed "takings" legislation that lowers the level of burden necessary to trigger a regulatory taking, meaning that states have to compensate landowners more frequently or alternately not adopt regulations that limit use of private property.[73]

The public trust doctrine may insulate state actions from takings claims.[74] Actions affecting only submerged lands owned by the state would not require compensation. For example, adding fish habitat structures into a body of water where the state owns the submerged land would not require compensation to a riparian landowner. This would likely remain true even if the addition were to infringe on a landowner's rights, for example, access to the water body.[75] The doctrine may also provide protection where use of private lands are restricted, for example, limiting non-point pollution sources which would involve regulating actions that occur on land.[76] This immunity from suit exists because private rights are limited by the public's rights, which existed prior to acquisition of any private interest by riparian landowners. However, the extent of

---

[72] Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 415 (1922).
[73] Center for Wildlife Law and Defenders of Wildlife, SAVING BIODIVERSITY: A STATUS REPORT ON STATE LAWS, POLICIES AND PROGRAMS 60-61 (1996).
[74] Michael C. Blumm, *Public Property and the Democratization of Western Water Law: A Modern View of the Public Trust Doctrine*, 19 ENVTL. L. 573, 584–87 (1989).
[75] *E.g.*, R.W. Docks & Slips v. State, 628 N.W.2d 781, 784 (Wis. 2001).
[76] Ralph W. Johnson, *Water Pollution and the Public Trust Doctrine*, 19 ENVTL. L. 485, 488 (1989).

protection provided by the public trust doctrine varies considerably by state, even within the Great Lakes Basin. [77]

In practice it seems unlikely that most fishery regulations would impact any property to the extent that it would rise to the level of a taking. Restrictions on fish and wildlife harvest have generally not required any compensation to landowners,[78] most likely due to the long history of regulating fisheries and the idea that states either owned the wildlife or held them in trust for the public as a whole. The takings issue presents more serious concerns where regulations to protect fisheries or wildlife prohibit use of private property in order to protect habitat. The U.S. Supreme Court has increasingly called for just compensation for a wider range of government regulatory actions.[79] However, Michael Bean and Melanie Rowland argued:

> [There exists] the possibility that because a landowner's property right has never been construed to extend to wildlife, and because under old English law the rights of private landowners were constrained by obligations to protect wildlife and its habitat, restrictions to protect wildlife will not require compensation.[80]

Thus, the public trust doctrine may still provide a defense to Takings Clause challenges of state regulations aimed narrowly at conserving fish and wildlife habitat.

While the states may hold primary management authority, clearly the federal government has ample means to encroach upon that domain. The Takings Clause limits both state and federal governments, yet it raises less of a concern for fisheries management than in other environmental regulation contexts because of the focus on harvest regulation, which generally will not impair a private property right.

---

[77] Henquinet and Dobson, *supra* note 16, at 347-365.
[78] Bean and Rowland, *supra* note 6, at 36.
[79] *See e.g.*, Lucas v. South Carolina Council, 505 U.S. 1003 (1992).
[80] Bean and Rowland, *supra* note 6, at 38.

Government Agencies and Delegation

The general structure of American governance is to have legislative bodies that create laws and executive branch of government that implements those laws. The U.S. Constitution specifies that "All legislative Powers herein granted shall be vested in a Congress,"[81] and "The executive Power shall be vested in a President,"[82] with states operating under similar distributions of power. However, both federal and state governments frequently delegate authorities (not only to execute laws, but also create and adjudicate them) to departments and administrative agencies. There is at least some theoretical debate about the power of the U.S. federal government to give such broad authority to these agencies.[83] However, in practice few constraints on the creation and power of administrative agencies exist. The U.S. Supreme Court only requires that the Congress give an "intelligible guiding principle" to federal agencies, and only two delegations of authority have been held unconstitutional, both in 1935.[84]

The specifics of regulation creation and implementation are generally left to agencies, which is to say that agencies have *discretion*. Additionally, courts frequently give considerable *deference* to federal agencies' interpretation of the laws that they implement.[85] There are multiple reasons given for delegation to agencies and the discretion and deference provided them, including, agency expertise,[86] legislative

[81] U.S. Const. art. I § 1.
[82] U.S. Const. art II § 1.
[83] Michael J. Mortimer, *The Delegation of Law-Making Authority to the United States Forest Service: Implication in the Struggle for National Forest Management*, 54 ADMIN. L. REV. 907, 911 (2002).
[84] EPA v. American Trucking Associations, 531 U.S. 457, 474 (2001)(reviewing delegation cases).
[85] Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 843-44 (1984) *reh'g denied*, 468 U.S. 1227 (1984).
[86] *Chevron*, 467 U.S. at 865.

efficiency,[87] legislative desire to avoid responsibility,[88] legislative desire to avoid conflicts and/or create compromises,[89] and agency desire for delegation and discretion.[90]

In the U.S., fisheries harvest management authority is largely delegated by states to their respective state natural resources agencies. Additionally, a number of federal agencies have environmental and natural resources management responsibilities, although only indirectly over Great Lakes fisheries.

A unique aspect of many state natural resources agencies around the Great Lakes is the existence of natural resources boards that act as the highest authority in the bureaucracy. We see such boards in Wisconsin, Michigan, New York, and Pennsylvania.[91] Generally, agencies are created under the auspices of the executive branch, and the governor supposedly influences if not controls agency discretion. However, where natural resource boards exist, the departments of natural resources operate under the direction and supervision of those boards.[92] These boards often consist of multiple members with staggered terms of fairly lengthy duration, possibly to prevent overt political pressure. Common reasons for the creation of boards include keeping certain specific issues out of politicians' control, allowing for more user group input, and allowing for flexibility and innovation, while opponents argue that boards lack accountability and perform inefficiently.[93]

---

[87] Mortimer, *supra* note 83, at 921.
[88] Mortimer, *supra* note 83, at 921-24.
[89] Mortimer, *supra* note 83, at 924-26.
[90] Mortimer, *supra* note 83, at 926-28.
[91] Wis. Stat. ch. 15 § 34 (2006); Mich. Comp. Laws ch. 324 § 501 (2005); N.Y. Environmental Conservation Law § 5-0101-107 (2005); 30 Pa. Cons. Stat. ch. 3 § 301 (2005).
[92] See, e.g., Wisconsin Statute Chapter 15 § 34 (2006).
[93] Natlie Myhal, *Existing Rationales for Agencies, Boards, and Commissions*, *in* AGENCIES, BOARDS, AND COMMISSIONS IN CANADIAN LOCAL GOVERNMENT 49-70 (Dale Richmond and David Siegel eds., 1994).

CANADA AND ONTARIO

Canada is also a democracy with a federal structure with governance authority split between the federal government and the regional governments, provinces. Canada operates under a constitution although it is not a single document like the U.S. Constitution, and is instead comprised of multiple Constitution Acts, the Bill of Rights, the War Measures Act and the 1988 Emergencies Act, the Statute of Westminster, and the Supreme Court Act to name a few bases of authority.[94] The Constitution is defined in the Constitution Act, 1982 in section 52(2):

> (2) The Constitution of Canada includes
> (a) the Canada Act, 1982, including this Act;
> (b) the Acts and orders referred to in the Schedule; and
> (c) any amendment to any Act or order referred to in paragraph (a) or (b).

Section 52 also includes a supremacy clause constitutionally whereby legitimate federal laws are supreme over those of the provinces.[95]

Although both the U.S. and Canada are federal constitutional democracies, numerous differences exist particularly in aspects relevant to fisheries management. For example, while the U.S. federal government's powers are limited to those enumerated in the U.S. Constitution, the Canadian Federal government holds all powers except those explicitly delegated to the provinces.[96] Additionally, Canada's Constitution Act, 1867 (previously referred to as the British North America Act, 1867) explicitly, though perhaps

---

[94] Att'y Gen. for Canada v. Att'y Gen. for British Columbia, Appeal From Supreme Court Re fisheries Act, 1914, [1930] 1 Dominion Law Reports 194, 196; Peter C. Thompson, *Institutional Constraints in Fisheries Management*, 31 J. FISH. RES. BOARD CAN. 1965, 1970-71 (1974); Ronald G. Landes, THE CANADIAN POLITY: A COMPARATIVE INTRODUCTION 68 (1991).

[95] Constitution Act, 1982 § 52(1); Constitution Act, 1867 § 91; Munro v. National Capital Com'n, [1966] S.C.R. 663, 670; Att'y Gen. for Canada v Att'y Gen. for British Columbia, Appeal From Supreme Court Re fisheries Act, 1914, [1930] 1 D.L.R. 194, 196-97.

[96] Constitution Act, 1867 § 91; L. Davis, CANADIAN CONSTITUTIONAL LAW HANDBOOK 489 (1985); Att'y Gen. for Ontario v. Att'y Gen. for the Dominion [1896] A.C. 348, 360.

not entirely, answers the question of legislative control over fisheries and places that authority in the hands of the federal government. And though the issue of regulatory takings dominates environmental and natural resource regulation debates in the U.S., there is no corresponding constitutional guarantee in Canada of just compensation for property taken by the government.

Canadian Federal Authority over Fisheries

Legislative and executive authority over all fisheries throughout Canada rests with the federal government. The Constitution Act, 1867 states "that (notwithstanding anything in this Act) the exclusive Legislative Authority of the Parliament of Canada extends to all Matters coming within the Classes of Subjects next hereinafter enumerated... 12. Sea Coast and Inland Fisheries."[97]

This legislative authority covers the most common areas of harvest management. At a minimum the "federal government's legislative jurisdiction encompasse[s] the setting of open and closed seasons for fishing, the equipment which can be used to capture fish, and in general the right to pass legislation necessary for the protection and preservation of fish and fisheries within Canada."[98]

The Canadian federal government has the authority to make treaties, but a treaty does not provide for the expansion of federal authority as it does in the U.S.[99] Instead, in Canada, if subject matter of the treaty falls under the auspices of the province then the province must pass legislation for the treaty to be enforced.[100]

---

[97] Constitution Act, 1867 § 91(12).
[98] Thompson, *supra* note 94, at 1976.
[99] *See* Re Resolution to Amend Constitution of Canada, [1981] 1 S.C.R. 753, 845. *But see*, Schneider v. The Queen [1982] 2 S.C.R. 112, 134-5; MacDonald v. Vapor Canada Ltd., [1977] 2 S.C.R. 134, 169, 177.
[100] David Estrin and John Swaigen, ENVIRONMENT ON TRIAL: A GUIDE TO ONTARIO ENVIRONMENTAL LAW AND POLICY 23 (1993).

The Canadian government also has a federal spending power and it raises concerns similar to those in the U.S. Scholars David Estrin and John Swaigen describe the situation as follows:

> The federal spending power has been described as "a genteel form of blackmail," because the federal government can persuade the provinces to implement new programs within provincial jurisdiction or modify how they carry out provincial programs by offering money to support those programs, subject to terms and conditions set by the federal government.[101]

The Canadian Constitution does not explicitly grant a spending power to the provinces, but one is implied from numerous provisions found in both the Constitution Act of 1867 and the Constitution Act of 1982.[102]

The Canadian government seemingly has complete control over fisheries in addition to many similar powers to that of the U.S. federal government. However, in the following section outlining provincial authorities, we shall see that this is not necessarily the situation.

Provincial Authority over Fisheries

Although the federal government clearly has broad power over fisheries, the provinces do not lack in authority, even though, as one scholar argues, the drafters of the Constitution Act of 1867 likely intended complete federal control of Canadian fisheries.[103] The Province of Ontario, like other provinces, has a proprietary interest in its inland fisheries.[104] Ownership of fisheries is part of the ownership of submerged lands,

---

[101] Estrin and Swaigen, *supra* note 100, at 25 (citations omitted).
[102] Bernard W. Funston and Eugene Meehan, Q.C., CANADA'S CONSTITUTIONAL LAW IN A NUTSHELL 91 (2003).
[103] Thompson, *supra* note 94, at 1973.
[104] Constitution Act of 1867 § 92(13); Att'y Gen. for Canada v. Att'y Gen. for Ontario [1898] A.C. 701, 712.

thus the owner of submerged lands has a proprietary interest in allowing access to fish found within the waters over their land.[105]

The owner of submerged lands has an exclusive right to fish in the waters above those lands, but the right of fishing can be separated from the ownership of the underlying land.[106] Thus, an owner of submerged lands could sell or lease the right to fish and retain title to the lands.[107] In the tidal waters of Canada the public holds a right to fish regardless of ownership of the submerged lands.[108] This is similar in application and is based on the same foundations as the U.S. public trust doctrine.[109] However, it is comparatively limited in geographic scope, applying only to tidal waters and not inland waters such as the Great Lakes.

As holder of a proprietary interest, a provincial government has authority to permit the taking of fish and to place limits on persons licensed to participate in a fishery. The province can create harvest regulations similar to the federal government by couching the regulations as license conditions. Scholar Peter Thompson summarized the overall division of authority as follows:

> In summary then, it appears that both federal and provincial governments can 'regulate' the inland fisheries. There is a distinction though between the types of regulation. The federal government is regulating for the conservation and protection of fisheries, while the provinces through their right to legislate on property can regulate the terms and conditions that are to be respected in order to obtain and enjoy the privilege of fishing in provincial crown fisheries. It should be strongly emphasized, however, that provincial legislation must not be repugnant to federal legislation. Therefore, for example, a province could not require the use of a method of fishing that the federal government has disallowed.[110]

---

[105] Thompson, *supra* note 94, at 1972.
[106] Thompson, *supra* note 94, at 1972.
[107] Thompson, *supra* note 94, at 1972.
[108] Att'y Gen. for British Columbia v. Att'y Gen. for Canada, [1914] A.C. 153, 172 (P.C.).
[109] The U.S. Public Trust Doctrine applies to navigable waters, not just those that are influenced by the tides.
[110] Thompson, *supra* note 94, at 1978.

In practice on the Great Lakes, the above discussion is for the time academic, since the federal government currently delegates federal management authority over Great Lakes fisheries to the Province of Ontario through the Fisheries Act.[111] The Ontario Supreme Court upheld that delegation as valid and the Supreme Court of Canada affirmed that decision.[112] However, delegation does not absolve the federal government of its responsibilities. The federal government is still required to provide for the conservation and protection of Canadian fisheries.[113]

Government Agencies and Delegation

Seemingly no law prohibits delegation of authority to government agencies, even where it included legislative-type prerogatives.[114] The U.S. government operates within a system of separation of powers and checks and balances intended to limit the aggregation of authority in a single person or branch of government. Perhaps this was not as great a concern in Canada, and separation of powers in its parliamentary system does not occur in any meaningful way.[115] Thus, the delegations issues found in the U.S. do not arise.

TREATIES, AGREEMENTS, AND THE INTER-JURISDICTIONAL CONTEXT

The international arena divides the world into geopolitical entities, generally referred to as nation-states (not to be confused with the regional political units of the

---

[111] Estrin and Swaigen, *supra* note 100, at 352.
[112] Re Peralta v. Ontario, [1985] 49 O.R.2d 705, 716-17, 729 (C.A.), *aff'd* [1988] 89 N.R. 323 (S.C.C.).
[113] Thompson, *supra* note 94, at 1980.
[114] Prince Edward Island Potato marketing Bd. V. H.B. Willlis Inc, [1952] 2 SCR 392,411 (upholding delegation to a provincial board).
[115] The Canadian Supreme Court held: "There is no general 'separation of powers' in the British North America Act, 1867. Our Constitution does not separate the legislative, executive, and judicial functions and insist that each branch of government exercise only its own function." Reference re Residential Tenancies Act, 1979, [1981] 1 SCR 714, 728. In another case the Court found: "The executive's power derives from the Legislature in our system of government." Reference re Section 16 of Criminal Law Amendment Act, 1968-69, [1970] SCR 777 at 782.

United States) that are sovereign.[116] Sovereignty is generally defined as having two parts: internal and external.[117] The internal aspect refers to the idea that a nation-state government has supreme authority within its geographical boundaries and over its citizens.[118] External sovereignty refers to the role of nation-states as the legitimate actors in world politics, with each sovereign being distinct.[119] Nation-states are geographic entities with borders whether physically delineated or simply noted as existing along a particular route. The recognition of some nation-states instead of others has been described as "based on... accidents of history," and much the same could be said about their specific borders.[120] Concerns about natural resource management have probably never played a role in the delineation of political borders, and the Great Lakes region is no exception.[121]

A number of rules exist to guide relations between nation-states, and these are referred to as international law. For example, sovereign states as actors in world politics are considered legally equal, entitled to freedom from encroachment into their internal affairs by other states, and have the authority to take certain actions with respect to other

---

[116] This has not always been the situation. Other foundations for the structure of global relations have existed in the past. The rise of the concept of sovereignty occurred in the time leading up to the Peace of Westphalia, which marked the end of the Thirty Years War. Daniel Philpott, *Westphalia, Authority, and International Society*, 47 POLITICAL STUDIES 566, 566, 579-581 (1999). For a general overview of pre-Westphalian governance structures, *see*, Robert Jackson, *Sovereignty in World Politics: a Glance at the Conceptual and Historical Landscape*, 47 POLITICAL STUDIES 431 (1999).

[117] Robert Jackson, *Introduction: Sovereignty at the Millennium*, 47 POLITICAL STUDIES 423, 425 (1999). Other scholars may disagree with this "traditional" conception of sovereignty, claiming it is more an issue of power since poor countries do not exhibit the "sovereignty" of the wealthy nations. *Id.* at 424. Others may argue that the traditional notion of sovereignty may have once been accurate, but is now fading away. KAREN T. LIFTIN, *The Greening of Sovereignty: An Introduction* , *In* THE GREENING OF SOVEREIGNTY IN WORLD POLITICS 1, 3 (1998).

[118] Jackson, *supra* note 117, at 425.

[119] Jackson, *supra* note 117, at 425.

[120] Jackson, *supra* note 117, at 425.

[121] Don Courtney Piper, THE INTERNATIONAL LAW OF THE GREAT LAKES: A STUDY OF CANADIAN-UNITED STATES CO-OPERATION 8-17 (1967). Some even argue that these territorial borders either cause or inhibit solutions to environmental problems. Patriche M. Mische, *Ecological Security and the Need to Reconceptualize Sovereignty*, 14 ALTERNATIVES 389, 397-98 (1989).

states, like creating and signing international agreements.[122] Many refer to international law as "soft law," because of its lack of enforcement mechanisms, a world police, and world courts,[123] yet some effect exists in terms of the adoption of environmental policies and practices by nation-states.[124]

There are principles of international law (like the rules of sovereignty) that apply to environmental matters. To some extent these rules make up an international common law as they are not created through negotiation by nation-states, but instead through common practice. For example, the infamous 1949 *Trail Smelter Case* relied on the principle that a sovereign state has the duty to prevent environmental harm and may be responsible for any damage that does occur.[125] The case is particularly relevant in the Great Lakes region since *Trail Smelter* involved pollution from Canada that impacted the lumber industry in the U.S. In the end, the problems of lack of enforcement and adjudication mechanisms that inhibit the use of some international agreements probably hamper the use of international common law to an even greater degree.

Beyond international common law rules, nation-states also create rules through the creation of agreements. One multi-lateral agreement with potential impact on Great Lakes fishery management is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).[126] Under CITES, trade in designated endangered species and threatened species are subject to a multi-level permitting system,

---

[122] Philpot, *supra* note 116, at 570-71, 573.
[123] Bean and Rowland, *supra* note 6, at 468.
[124] David John Frank, Ann Hironaka, and Evan Schofer, *The Nation-State and the Natural Environment over the Twentieth Century*, 65 AM. SOCIOLOGICAL REV. 96 (2000) (arguing that a global polity requires adoption of certain environmental protection measures by nation-states).
[125] United States v. Canada, 3 R.I.A.A. 1911 (1949).
[126] Convention on International Trade in Endangered Species of Wild Fauna and Flora, Mar. 3, 1973, 27 U.S.T. 1087, T.I.A.S. No. 8249, 993 U.N.T.S. 243; *see generally*, John L. Garrison, The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Debate Over Sustainable Use, 12 Pace Envt'l L. Rev. 301 (1994).

which is implemented by the signatory nations.[127] At this point, sturgeon are the only aquatic species listed for protection under CITES found within the Great Lakes.[128]

Treaties are a specific type of international agreement. A treaty is a "formally signed and ratified agreement between... nations or sovereigns."[129] Canada and the U.S. have split sovereignty between the states/provinces and federal governments, which could also be characterized as a lack of absolute sovereignty by the federal governments.[130] However, authority to make treaties basically rests at the federal level.[131] While the U.S. can usurp power from the hands of states through treaties,[132] Canada the provinces retain their authority when the subject matter of the treaty is within the purview of their authority.[133] The following sections outline the treaties and agreements that have had significant effects on Great Lakes fisheries and fish habitat management.

Convention on Great Lakes Fisheries

The primary treaty of interest for Great Lakes fisheries is the Convention on Great Lakes Fisheries (Convention).[134] Signed in 1955, the Convention established the Great Lakes Fishery Commission (GLFC).[135] The Convention lists five duties for the GLFC, which can be grouped together into three basic responsibilities. First, the GLFC must

---

[127] Nancy J. Léonard, William W. Taylor, and Christopher Goddard, *Mult jurisdictional Management of Lake Sturgeon in the Great Lakes and St. Lawrence River, in* STURGEONS AND PADDLEFISH OF NORTH AMERICA 231, 244 (Greg T.O. LeBreton, F William H. Beamish, and R. Scott McKinley eds., 2004).
[128] Léonard et al., *supra* note 127, at 244.
[129] BLACK'S LAW DICTIONARY: POCKET EDITION (Bryan A. Garner ed., 1996).
[130] Philpot, *supra* note 116, at 571-572.
[131] Canada Const. Act 1867 § 132, *cf.*, Gibran van Ert, *The Legal Character of Provincial Agreements with Foreign Governments*, 24 LES. CAHIERS DE DROIT 1093 (2001)(discussing the arguments both for and against a unified dominion power to create treaties); U.S. Const. art. II § 2(2).
[132] *See* footnotes 58-62 and accompanying text.
[133] Estrin and Swaigen, *supra* note 100, at 23.
[134] Convention on Great Lakes Fisheries Between the United States of America and Canada, June 6, 1955, U.S.-Can., 6 U.S.T. 2836 [*hereinafter* Convention].
[135] Convention, *supra* note 134, at art. II.

formulate, coordinate and implement a research program in order to attain the "maximum sustained productivity" of Great Lakes fish stocks and make recommendations to the signatories based on that research.[136] Second, it is charged with the duty to eradicate or minimize the number of sea lamprey.[137] Finally, the GLFC is required to publish information obtained through its research and other activities.[138]

The Convention lists three specific actions that the GLFC can undertake. Art. V says the GLFC may "conduct investigations," take actions to control lamprey, and "hold public hearings."[139] This list does not appear to be all inclusive since the scope of GLFC duties under Art. IV would require more than the three actions listed in Art. V. For example, it does not mention any potential actions associated with its duty to publish findings. Furthermore, in carrying out its duties, the GLFC is instructed to work with other existing public and private organizations.[140] Additionally, the governments of each country are to provide information to the GLFC at its request "as is practicable."[141] Finally, the Convention protects the U.S. states' rights to manage fisheries harvest and any potential Canadian/Provincial institutional structure to do the same.[142] That protection was likely necessary for state acquiescence to the creation of the treaty given that states tend to protect their turf, including their harvest management authority.[143]

---

[136] Convention, *supra* note 134, at art. IV §§ a-c.
[137] Convention, *supra* note 134, at art. IV § d.
[138] Convention, *supra* note 134, at art. IV § e.
[139] Convention, *supra* note 134, at art. V.
[140] Convention, *supra* note 134, at art. VI.
[141] Convention, *supra* note 134, at art. VII.
[142] Convention, *supra* note 134, at art. X. "Nothing in this Convention shall be construed as preventing any of the States of the United States of America bordering on the Great Lakes or, subject to their constitutional arrangements, Canada or the Province of Ontario from making or enforcing laws or regulations within their respective jurisdictions relative to the fisheries of the Great Lakes so far as such laws or regulations do not preclude the carrying out of the Commission's duties." *Id.*
[143] Margaret R. Dochoda and Michael L. Jones, *Managing Great Lakes Fisheries Under Multiple and Diverse Authorities*, 5 TOL. GREAT LAKES' L. SCI. & POL'Y 405, 407 (2003).

Joint Strategic Plan for Management of Great Lakes Fisheries

The Convention's preamble noted that "joint and coordinated efforts by the United States of America and Canada are essential in order to... make possible the maximum sustained productivity in Great Lakes fisheries of common concern."[144] While the GLFC coordinates efforts on sea lamprey control, many other management actions also required harmonization. To meet this need, the previously described lake committees were created by the fishery management agencies with the GLFC facilitating the process.[145] Furthermore, the agencies created a Joint Strategic Plan for Management of Great Lakes Fisheries (Joint Strategic Plan) to guide the lake committees.[146] Table 4.1 lists all the current signatories to the Strategic Plan.

• Chippewa-Ottawa Resource Authority • Great Lakes Indian Fish and Wildlife Commission • Ontario Ministry of Natural Resources • Illinois Department of Natural Resources • Indiana Department of Natural Resources • Michigan Department of Natural Resources • Minnesota Department of Natural Resources • New York Department of Environmental Conservation	• Ohio Department of Natural Resources • Pennsylvania Fish and Boat Commission • Wisconsin Department of Natural Resources • Canada Department of Fisheries and Oceans • U.S. Fish and Wildlife Service • U.S. Geological Survey • U.S. National Marine Fisheries Service (Now called the National Oceanic & Atmospheric Administration's National Marine Fisheries Service)

Table 4.1. Signatories to the Joint Strategic Plan for Management of Great Lakes Fisheries

[144] Convention, *supra* note 134, at pmbl.
[145] Margaret R. Dochoda, *Authorities, Responsibilities, and Arrangements for Managing Fish and Fisheries in the Great Lakes Ecosystem*, *in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 93, 103 (William W. Taylor and C Paola Ferreri, eds. 1999).
[146] A Joint Strategic Plan for Management of Great Lakes Fisheries, June 17, 1981 (as amended 1997), *available at* http://www.glfc.org/fishmgmt/jsp97.htm (last visited June 28, 2006)[hereinafter Joint Strategic Plan]; Dochoda, *supra* note 145, at 103-104

Lake committees exist for each of the five Great Lakes. A representative from each jurisdiction with management authority within a lake sits on that lake's lake committee.[147] These lake committees are "the major action arms for [the Strategic Plan's] implementation."[148] Table 4.2 lists the membership on each of the lake committees.

Lake Committee	**Member Organizations**
Lake Superior Committee	Chippewa-Ottawa Treaty Fishery Mgmt. Authority Great Lakes Indian Fish & Wildlife Commission Michigan Dept. of Natural Resources Minnesota Dept. of Natural Resources Ontario Ministry of Natural Resources Wisconsin Dept. of Natural Resources
Lake Michigan Committee	Chippewa-Ottawa Treaty Fishery Mgmt. Authority Illinois Dept. of Natural Resources Indiana Dept. of Natural Resources Michigan Dept. of Natural Resources Wisconsin Dept. of Natural Resources
Lake Huron Committee	Chippewa-Ottawa Treaty Fishery Mgmt. Authority Michigan Dept. of Natural Resources Ontario Ministry of Natural Resources
Lake Erie Committee	Michigan Dept. of Natural Resources New York State Dept. of Environmental Conservation Ohio Dept. of Natural Resources Ontario Ministry of Natural Resources Pennsylvania Fish and Boat Commission
Lake Ontario Committee	New York State Dept. of Environmental Conservation Ontario Ministry of Natural Resources

Table 4.2. Lake Committees and Member Organizations

[147] Refer to Table 4.2 for the list of members for each Lake Committee.
[148] Joint Strategic Plan, *supra* note 146.

Technical subcommittees comprised primarily of biologists exist for each lake and are charged with conducting scientific investigations into particular issues. The technical subcommittees include biologists from all of the signatory agencies not just those with harvest management authority. There also exists the Council of Lake Committees and its subordinate Fish Health and Law Enforcement committees, and the Council of Great Lakes Fishery Agencies, which is discussed below. Figure 4.1 depicts the organizational framework.

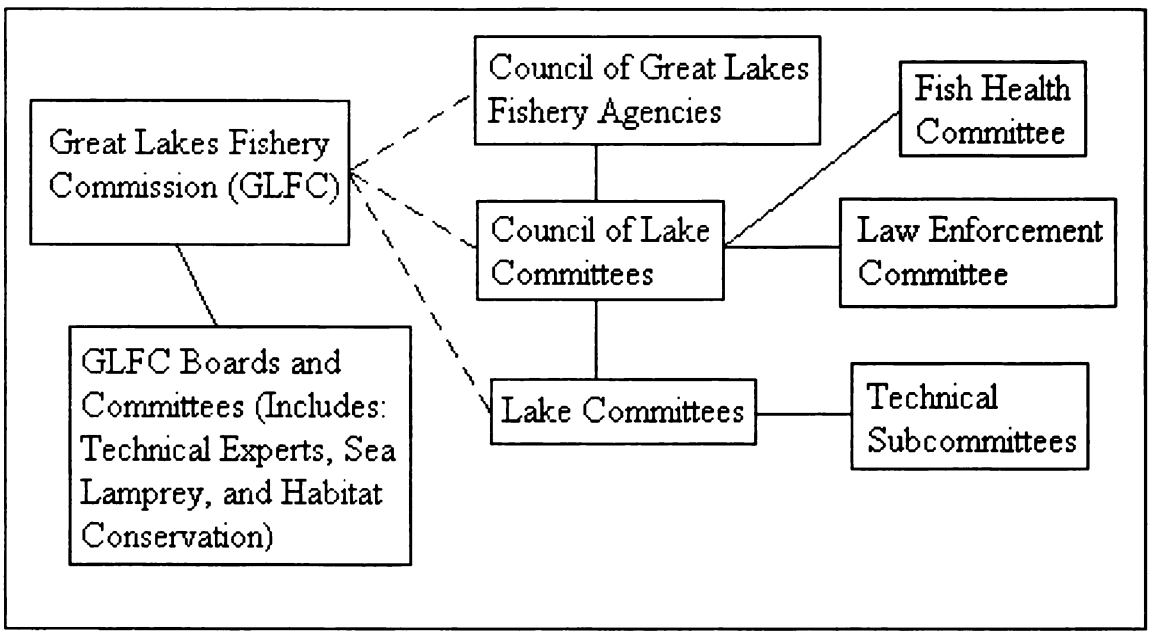

Figure 4.1. The organizational structure under the Joint Strategic Plan for Management of Great Lakes Fisheries (solid lines denote a hierarchical relationship and dashed lines denote a less formal association)

The Joint Strategic Plan first sets out a "Common Goal Statement" based on signatory agency goal statements to guide fishery management. Although the statement is akin to a preamble, it perhaps holds more weight with fishery managers than a preamble does in a court of law due to the importance of goal setting in natural resources

management.[149] In fact, the plan is set up in a manner similar to that prescribed in the natural resource literature: setting goals, identifying problems, listing strategies to overcome problems, and selecting procedures or actions to implement the strategies.[150] This goal identified is:

> To secure fish communities, based on foundations of stable self-sustaining stocks, supplemented by judicious plantings of hatchery-reared fish, and provide from these communities an optimum contribution of fish, fishing opportunities and associated benefits to meet needs identified by society for: wholesome food, recreation, cultural heritage, employment and income, and a healthy aquatic ecosystem.[151]

The Joint Strategic Plan then lists five issues or "impediments to achieving the goal."[152] These impediments include 1) the loss of fishing opportunities due to depletion of many fish stocks, 2) the instability of fish communities from a variety of stresses including invasive species and overharvest, 3) environmental degradation to land, water, and air, 4) "competition and conflicts among users of the fishery resources" including allocation of catch between user groups and jurisdictions, aboriginal people's rights, and access to the fishery, and 5) the emerging issue of climate change.

The strategies suggested to address these issues are consensus-based decision making, accountability for decisions, adoption of an ecosystem approach, and acquisition of management information.[153] The Joint Strategic Plan lists specific procedures for implementing those strategies.[154] Thus, the consensus strategy holds that "Consensus must be achieved when management will significantly influence the interests of more

---

[149] Charles C. Krueger and Daniel J. Decker, *The Process of Fisheries Management*, *in* INLAND FISHERIES MANAGEMENT IN NORTH AMERICA 31, 40-41 (Christopher C. Kohler and Wayne A. Hubert, eds., 2nd ed. 1999)(discussing the importance of goal setting in fisheries management).
[150] Krueger and Decker, *supra* note 149, at 38-51.
[151] Joint Strategic Plan, *supra* note 146.
[152] Joint Strategic Plan, *supra* note 146.
[153] Joint Strategic Plan, *supra* note 146.
[154] Joint Strategic Plan, *supra* note 146.

than one jurisdiction."[155] That strategy is realized through the creation of "Fish Community Objectives" that define the desired biological community structure for each lake, submittal of operational plans and substantive changes by fishery management agencies, consensus on proposed changes by lake committees, and conflict resolution mechanisms when consensus cannot be reached.[156]

The ecosystem management strategy requires signatories to "exercise their full authority and influence in every available arena to meet the biological, chemical, and physical needs of desired fish communities."[157] An initial procedure for implementing this strategy is the identification of "environmental issues which relate to or may impede achievement of... fish community objectives."[158] Furthermore, lake committees are to participate with the Lakewide Management Plan process under the Great Lakes Water Quality Agreement, which is discussed in the following section.[159] Additionally, the lake committees are to refer environmental issues to the GLFC, the Council of Great Lakes Fishery Agencies, or the signatories to the agreement as representatives in other political processes.[160] Finally, the plan instructs agencies to take steps to prevent future introductions of invasive species.[161]

The accountability strategy simply states that "Fishery management agencies must be openly accountable for their performance."[162] This occurs through the maintenance of records on consensus decisions, and various reporting mechanisms.[163]

---

[155] Joint Strategic Plan, *supra* note 146.
[156] Joint Strategic Plan, *supra* note 146.
[157] Joint Strategic Plan, *supra* note 146.
[158] Joint Strategic Plan, *supra* note 146.
[159] Joint Strategic Plan, *supra* note 146.
[160] Joint Strategic Plan, *supra* note 146.
[161] Joint Strategic Plan, *supra* note 146.
[162] Joint Strategic Plan, *supra* note 146.
[163] Joint Strategic Plan, *supra* note 146.

The strategy for management information requires that agencies "cooperatively develop means of measuring and predicting the effects of fishery and environmental management decisions."[164] Procedures under this strategy include the development of data standards and models, maintenance of internet databases, and sharing of data.[165]

Finally, the plan sets out procedures for its implementation.[166] Again, consensus must be reached by signatories to make any changes to the plan, and the Council of Great Lakes Fishery Agencies is created to ensure accountability, review the plan, and provide a place for participation of non-signatories, for example Environment Canada and the U.S. Environmental Protection Agency.[167]

Constitutionality of the Lake Committees Structure

Perhaps due to the lack of a vote for the U.S. Fisheries and Wildlife Service (FWS), former FWS employee Wolf-Dieter N. Busch wrote an article claiming that the lake committee process and the Strategic Plan are illegal under the Compact Clause of the U.S. Constitution.[168] Clearly, this would be a conflict of great concern if true. The U.S. State Department considered this issue and found that Lake Committees and the Strategic Plan were non-binding and therefore not in violation of the Compact Clause.[169] Busch counters that certain actions by the lake committees are binding in nature, and thus they

---

[164] Joint Strategic Plan, *supra* note 146.
[165] Joint Strategic Plan, *supra* note 146.
[166] Joint Strategic Plan, *supra* note 146.
[167] Joint Strategic Plan, *supra* note 146.
[168] Wolf-Dieter N. Busch, *Challenges to the Constitutionality and the Effectiveness of the U.S. Management of Bi-National Great Lakes Fisheries*, 5 TOL. J. GREAT LAKES' L. SCI. & POLICY 395, 400-402 (2003). It is difficult to analyze Busch's arguments since he did not rely on any cases or even secondary sources dealing with the Compact Clause.
[169] Busch, *supra* note 168, at 401-402; *also see*, Dochoda and Jones, *supra* note 143, at 419.

are unconstitutional.[170] However, the question of constitutionality is more complex than either of the above arguments makes clear.

The Compact Clause states: "No State shall, without the Consent of Congress... enter into any agreement or Compact with another State, or with a foreign power."[171] Though the clause apparently creates a straightforward ban on all agreements without Congressional consent the legal test is more complex. Numerous legal scholars have focused on the issue of interstate compacts,[172] but the writers and early commentators of the Constitution provide little evidence of the clause's original meaning.[173]

The first question is whether an agreement or compact exists. In the seminal 1893 case *Virginia v. Tennessee*, the U.S. Supreme Court noted: "The terms 'agreement' or 'compact' taken by themselves are sufficiently comprehensive to embrace all forms of stipulation, written or verbal, and relating to all kinds of subjects."[174] Additionally, in a 1978 decision the Court held that "the mere form of the interstate agreement cannot be dispositive" and that it applies to both formal and informal agreements,[175] and "the number of parties to an agreement is irrelevant."[176] Even delegation of authority to an

---

[170] Busch, *supra* note 168, at 400-402.
[171] U.S. Const. art. 1 § 10 cl. 3.
[172] *See generally*, James M. McGoldrick, LIMITS ON STATES: A REFERENCE GUIDE TO THE UNITED STATES CONSTITUTION 101 et seq. (2005); Suzanne Zazycki, *The Legal Structure of an Interstate Water Compact: Implications for a Great Lakes Interstate Water Compact*, 5 TOL. J. GREAT LAKES' L. SCI. & POL'Y 459 (2003); Marian E. Ridgeway, INTERSTATE COMPACTS: A QUESTION OF FEDERALISM (1971); Paul T. Hardy, INTERSTATE COMPACTS: THE TIES THAT BIND (1982); Frederick Zimmerman, THE LAW AND USE OF INTERSTATE COMPACTS (1976); Caroline N. Broun, Michael L. Buenger, Michael H. McCabe, Richard L. Masters, THE EVOLVING USE AND THE CHANGING ROLE OF INTERSTATE COMPACTS: A PRACTITIONER'S GUIDE (2006); Dale D. Goble, *The Compact Clause and Transboundary Problems: "A Federal Remedy for the Disease Most Incident to a Federal Government"*, 17 ENVTL. L. 785, 789 (1986-1987); L. Mark Eichorn, *Note* – Cuyler v. Adams *and the Characterization of Compact Law*, 77 VA. L. REV. 1387 (1991); Noah Hall, *Toward a New Horizontal Federalism: Interstate Water Management in the Great Lakes Region*, 77 U. COLO. L. REV. 405 (2006).
[173] United States Steel v. Multistate Tax Commission, 434 U.S. 452, 460-463 (1978).
[174] Virginia v. Tennessee, 148 U.S. 517-518 (1893).
[175] *United States Steel*, 434 U.S. at 470-471.
[176] *United States Steel*, 434 U.S. at 472.

administrative body does not create an agreement.[177] While this broad definition of agreements and compacts seemingly includes any and all inter-jurisdictional activity, the Court has also identified "classic indicia" of compacts including the creation of joint regulatory organizations or bodies and restrictions on the ability to modify and repeal state law. [178] Likewise, in *United States Steel v. Multistate Tax Commission*, the Court's finding that a compact regarding interstate business taxes not consented to by Congress was constitutional relied on the fact there was no "delegation of sovereign power to the Commission; each State retains complete freedom to adopt or reject the rules and regulations of the Commission. Moreover, as noted above, each State is free to withdraw at any time."[179]

With respect to the Great Lakes fishery management structure, one could at most argue that one of the classic indicia exists: the existence of a joint regulatory organization. However, even though the lake committees are inter-jurisdictional bodies, they consist of representatives from the respective management agencies and probably do not qualify as the type of independent regulatory organizations that the Court had in mind. Furthermore, since the decisions of the lake committees are not binding on the signatory jurisdictions and they can withdraw at any time,[180] the second indicium is

---

[177] *United States Steel*, 434 U.S. at 472.
[178] Northeast Bancorp v. Board of Governors, 472 U.S. 159, 175 (1985).
[179] *United States Steel*, 434 U.S. at 473.
[180] The non-binding nature is explicitly set out in a reservation to the Joint Strategic Plan. Joint Stategic Plan, *supra* note 146, at app. B. "This Memorandum of Acceptance shall be construed in a manner which recognizes the administrative rulemaking process of the states, nations or provinces signatory to this Memorandum and shall support full compliance with such processes when a course of action of a party in furtherance of the Joint Strategic Plan is interpreted as an administrative rule by their sovereign." *Id.* While it is non-binding, strength of the Joint Strategic Plan and the lake committee structure is that the planning documents and decisions clearly have an influence over agency actions. One manager described this real if only informal pressure paradoxically, noting "It forces a cooperative nature."

clearly missing. This absence likely provides the rationale behind the State Department's finding that there was no violation of the Compact Clause.[181]

While there is a very strong argument that no agreement or compact requiring Congressional consent exists with respect to Great Lakes fisheries, the Court has generally assumed that agreements are present and then addressed the issue of whether a compact requires Congressional consent. A pact becomes a compact in need of consent by Congress when "the prohibition is directed to the formation of any combination tending to the increase of political power in the States, which may encroach upon or interfere with the just supremacy of the United States."[182] But what constitutes an encroachment on Federal authority? In *Virginia v. Tennessee*, the U.S. Supreme Court gave multiple examples of arguably trivial subjects that if covered by a compact would have no impact on federal power, and thus not require Congressional consent.[183] More helpful, in *United States Steel*, the Court looked at whether a compact infringed on federal authority over interstate commerce and foreign affairs.[184] The court saw it as important that the agreements "not purport to authorize the member States to exercise any

---

[181] Busch, *supra* note 168, at 401; *also see*, Dochoda and Jones, *supra* note 143, at 419.
[182] *Virginia v. Tennessee*, 148 U.S. at 519.
[183] *Virginia v. Tennessee*, 148 U.S. at 518. "If, for instance, Virginia should come into possession and ownership of a small parcel of land in New York which the latter State might desire to acquire as a site for a public building, it would hardly be deemed essential for the latter State to obtain the consent of Congress before it could make a valid agreement with Virginia for the purchase of the land. If Massachusetts, in forwarding its exhibits to the World's Fair at Chicago, should desire to transport them a part of the distance over the Erie Canal, it would hardly be deemed essential for that State to obtain the consent of Congress before it could contract with New York for the transportation of the exhibits through that State in that way. If the bordering line of two States should cross some malarious and disease-producing district, there could be no possible reason, on any conceivable public grounds, to obtain the consent of Congress for the bordering States to agree to unite in draining the district, and thus removing the cause of disease. So in case of threatened invasion of cholera, plague, or other causes of sickness and death, it would be the height of absurdity to hold that the threatened States could not unite in providing means to prevent and repel the invasion of the pestilence, without obtaining the consent of Congress, which might not be at the time in session." *Id.*
[184] United States Steel v. Multistate Tax Commission, 434 U.S. 452, 473-477 (1978).

powers they could not exercise in its absence."[185] Given the traditional and current placement of harvest management authority in state hands, it seems highly unlikely that a court would conclude that the inter-jurisdictional fisheries management structure in the Great Lakes infringes on federal authority.

A second test for whether an interstate agreement requires Congressional consent may exist. In the 1985 case *Northeast Bancorp v. Board of Governors*, the U.S. Supreme Court found that the interstate agreement in question did not "either enhance the political power of the New England States at the expense of other States or have an 'impact on our federal structure.'"[186] The original doctrine was concerned with whether there was an enhancement of the political powers vis-à-vis the *federal government*, but *Northeast Bancorp* suggests that an impropriety might arise if an agreement enhances political power in relation to *non-agreement states*. *Northeast Bancorp's* theory appears to be based on the dissent of Justice White in *United States Steel*, where the Justice argues that:

> encroachments upon non-compact States are as seriously to be guarded against as encroachments upon the federal authority, nor is that surprising in view of the Federal Government's pre-eminent purpose to protect the rights of one State against another. If the effect of a compact were to put non-compact States at a serious disadvantage, the federal interest would thereby be affected as well.[187]

It is unclear whether the *United States Steel* majority sees this as a valid statement of law that is inapplicable in the case at bar, or whether they see such an encroachment as an impossibility.[188] Whether this is the law based on *Northeast Bancorp* alone or also

---

[185] *United States Steel*, 434 US at 473.
[186] *Northeast Bancorp*, 472 U.S. at 176.
[187] 434 U.S. at 494-95.
[188] The majority states, "Appellants' final Compact Clause argument charges that the Compact impairs the sovereign rights of nonmember States... [but] it is not explained how any economic pressure that does exist is an affront to the sovereignty of nonmember States. Any time a State adopts a fiscal or administrative policy that affects the programs of a sister State, pressure to modify those programs may result. Unless that pressure transgresses the bounds of the Commerce Clause or the Privileges and Immunities Clause of Art.

United States Steel, it is nonetheless difficult to argue that current Great Lakes fisheries management practices through the lake committee structure and the Joint Strategic Plan increases the power of member states to the "serious disadvantage" of non-member states, since states outside the basin would have no say in Great Lakes fisheries management in the first place.

One remaining issue is whether having a foreign party to the agreement matters. The wording of the Compact Clause would make one think that the rules for interpretation would apply equally to interstate agreements and agreements between states and foreign entities. On the other hand, matters of foreign policy generally rest wholly within the authority of the federal government.[189] It is difficult to predict how this would affect the legal analysis given the current cases. However, the non-binding nature of decisions and the historical presence of state control over fisheries may arguably take the agreement out of the realm of foreign policy. In the end, Congressional consent is most likely not required.

At this point strong arguments exist in support of the constitutionality of the lake committee structure and that it is not an agreement requiring Congressional consent: either it does *not* constitute a compact or, assuming arguendo that a compact exists, it does not increase the power of member states to the detriment of non-member states or in a way that encroaches upon federal authority. Yet, given the foreign policy issue that arises from having Ontario involved, and thus possibly encroaching on federal authority, one might want to assume that an agreement requiring Congressional consent does exist

---

IV, § 2, it is not clear how our federal structure is implicated." 434 U.S. at 477-78 (citations omitted). *But see*, 434 U.S. at 495 (dissent arguing that the majority does recognize the validity of a Compact Clause challenge based on impacts to non-member states).

[189] *See generally*, Michael D. Ramsay, *The Power of the States in Foreign Affairs: The Original Understanding of Foreign Policy Federalism*, 75 NOTRE DAME L. REV. 341 (1999).

and address the next question: Was there congressional approval for lake committees? The courts have not provided a great deal of guidance on what constitutes consent, and it appears that any sign of intent whether implied or explicit will satisfy.[190] It could be argued that the Convention on Great Lakes Fisheries (Convention), which was approved by Congress, gave authority to the Great Lakes Fishery Commission (GLFC) to create or facilitate lake committees. As mentioned, the Convention grants the GLFC power to coordinate and conduct research, to make recommendations based on that research, to manage sea lamprey, and to publish information. Busch seems to feel that the activities of lake committees, namely their role in recommending harvest levels, setting fish community objectives, and "other regulatory activities and policies," does not fit under the authorities granted to the GLFC.[191] Yet Busch overstates the role of lake committees, and in fact management agencies are not bound by the decisions of the lake committees, and one could argue that the committees more or less function as a coordinated effort by fishery agencies to determine the biological capacity of the lakes so that individual jurisdictions can set harvest limits at levels that are in the best interests of the fishery. Such coordination of research efforts would clearly fall within the purview of the GLFC's mandate,[192] and thus constitutes Congressional consent.

Consent may also be given by Congress through acquiescence.[193] Congress has seemingly acquiesced to the arrangement, especially considering that the Great Lakes

---

[190] McGoldrick, *supra* note 172, at 106-07.
[191] Busch, *supra* note 168, at 399.
[192] This addresses another of Busch's arguments against lake committees, that the GLFC involvement with them is beyond its general or funding authority. Busch, *supra* note 168, at 399.
[193] Virginia v. Tennessee, 148 U.S. 503, 521 (1893).

states were allowed to opt out of the interstate commission structure of the Magnusson Fishery Conservation Act of 1976.[194]

In the end, the stronger argument supports the contention that the lake committee and Joint Strategic Plan structure does not violate the Compact Clause. At least many people hope so given the time it took for the current regime to develop and its usefulness in providing inter-jurisdictional coordination of Great Lakes fisheries management.

Additional Great Lakes Treaties and Agreements

Additional inter-jurisdictional treaties and agreements in the Great Lakes region affect fisheries management to varying degrees. The following discussion covers a few of the most relevant, namely the Boundary Waters Treaty of 1909, the Great Lakes Compact, and the Great Lakes Water Quality Agreement.

The Boundary Waters Treaty of 1909 generally governs diversions from the boundary waters between the U.S. and Canada.[195] Boundary waters consist of waterways where the main shores are split by the international boundary.[196] Although it is ultimately concerned with lake water levels, the treaty specifically excludes tributary waters from its purview.[197] The treaty creates the International Joint Commission (IJC) and basically bans diversions from the boundary waters unless given approval by the IJC.[198] IJC decisions are to be guided by a principle of "equal and similar rights" of the parties, and the following "order of preference... (1) Uses for domestic and sanitary purposes; (2) Uses for navigation, including the service of canals for the purposes of

---

[194] Dochoda and Jones, *supra* note 143, at 412.
[195] Treaty Relating to the Boundary Waters and Questions Arising Along the Boundary Between the United States and Canada, Jan. 11, 1909, U.S.-Gr. Brit., 36 Stat. 1702. *See*, Piper, *supra* note 121, at 74-79.
[196] Boundary Waters Treaty, preliminary article, 36 Stat. at 2448-49.
[197] Boundary Waters Treaty art. II, 36 Stat. at 2448-49.
[198] Boundary Waters Treaty arts. III and VII, 36 Stat. at 2449-50. However, this prohibition does not apply to "use of such waters for domestic and sanitary purposes." *Id.* at 2450.

navigation; (3) Uses for power and for irrigation purposes."[199] Finally, the treaty also states that boundary waters "shall not be polluted on either side to the injury of health or property on the other."[200]

The Great Lakes Water Quality Agreement (GLWQA) of 1978 (revised in 1987) between the U.S. and Canada that addresses pollution in the Great Lakes under the auspices of the IJC.[201] GLWQA was the successor to another agreement between the two nations in 1972 meant to address pollution problems in the lower lakes.[202] The GLWQA adopted an ecosystem approach to management of pollution in the Great Lakes.[203] A major focus of the agreement is on remediation of pollution hot spots, called "Areas of Concern" or AOCs.[204] The selection of AOCs depends in part on the existence of impairment to beneficial uses, and the uses specified in the agreement include many related to fisheries.[205] The agreement requires the creation of a Remedial Action Plan

---

[199] Boundary Waters Treaty art. VIII, 36 Stat. at 2451.
[200] Boundary Waters Treaty art. III, 36 Stat. at 2450.
[201] International Joint Commission, REVISED GREAT LAKES WATER QUALITY AGREEMENT OF 1978: AS AMENDED BY PROTOCOL SIGNED NOV. 18, 1987, (1994)[hereinafter GLWQA]; *see generally*, M. Sproule-Jones, RESTORATION OF THE GREAT LAKES : PROMISES, PRACTICES, PERFORMANCES (2002).
[202] Brian T. Schurter, *Great Lakes Water Quality From a Fisheries Perspective*, 26 U. TOL. L. REV. 467, 473-476 (1995).
[203] Schurter, *supra* note 202, at 477-479.
[204] GLWQA, *supra* note 201, at Annex 2.
[205] GLWQA, *supra* note 201, Annex 2. ""Impairment of beneficial use(s)" means a change in the chemical, physical or biological integrity of the Great Lakes System sufficient to cause any of the following:

(i) restrictions on fish and wildlife consumption;
(ii) tainting of fish and wildlife flavour;
(iii) degradation of fish wildlife populations;
(iv) fish tumors or other deformities;
(v) bird or animal deformities or reproduction problems;
(vi) degradation of benthos;
(vii) restrictions on dredging activities;
(viii) eutrophication or undesirable algae;
(ix) restrictions on drinking water consumption, or taste and odour problems
(x) beach closings;
(xi) degradation of aesthetics;
(xii) added costs to agriculture or industry;
(xiii) degradation of phytoplankton and zooplankton populations; and
(xiv) loss of fish and wildlife habitat." *Id.*

(RAP) to address these impairments, and list guidelines that each RAP must meet.[206] GLWQA also requires the parties to designate critical pollutants and devise Lakewide Management Plans (LaMPs) in order to reduce pollutants and protect beneficial uses.[207] Although the IJC plays a role in implementing the agreement, it does not have any enforcement powers, which some commentators argue is problematic.[208]

The Great Lakes Basin Compact was created by the eight Great Lakes states and consented to by the U.S. Congress.[209] It created the Great Lakes Commission (GLC),[210] which has a very narrow set of powers. It is limited to collecting data, considering courses of action, making recommendations on a number of topics, publishing, and cooperating with governments, agencies, and other organizations.[211] Parties to the agreement are supposed to consider the GLC's recommendations related to: "Measures for combating pollution [and] [u]niformity or effective coordinating action in fishing laws and regulations and cooperative action to eradicate destructive and parasitical forces."[212] The lack of authority, the contentious history of the GLC, and the existence of the Great Lakes Fishery Commission has probably limited any potential role for the GLC in Great Lakes fisheries management.[213]

NATIVE AMERICAN TRIBES AND FIRST NATIONS

The following discussion is divided into sections on Native American Tribes in the U.S. and First Nations in Canada. The extent of "conservation law" of the earliest

---

[206] GLWQA, *supra* note 201, Annex 2.
[207] GLWQA, *supra* note 201, Annex 2.
[208] Schurter, *supra* note 202, at 478.
[209] Michael J. Donahue, *Strengthening the Binational Great Lakes Management Effort: The Great Lakes Commission's Provincial Membership Initiative* 1998 Tol. J. Great Lakes' L. Sci. & Pol'y 27, 28 (1998).
[210] Great Lakes Basin Compact, July 24, 1968, 82 Stat. 414 [*Hereinafter* GLB Compact].
[211] GLB Compact, *supra* note 210, art. IV, 82 Stat. at 417-418.
[212] GLB Compact, *supra* note 210, art. VII, 82 Stat. at 418.
[213] *See generally*, Marian E. Ridgeway, INTERSTATE COMPACTS: A QUESTION OF FEDERALISM 137-203 (1971).

indigenous fishers is not well known, though we do know something about the ethics and the practices of fishing for the aboriginal people of the area.[214] Today, Native American tribes and First Nations have a unique role in current Great Lakes fishery management. The following looks at the development of the legal framework for Great Lakes fisheries management first for Native Americans in the U.S. and then Canadian First Nations.

Native American Tribes in the U.S.

U.S. Federal Indian law is a vast, complex area of law. The British and early colonists signed numerous treaties with Native American Tribes and generally accorded the tribes sovereign status.[215] The U.S. Constitution mentions tribes twice, first in giving Congress authority to regulate commerce with the tribes, and, second, in granting the president authority to make treaties with tribes given the consent of the Senate.[216] These at the very least would imply a status equivalent to foreign nations, yet, the loss of tribal independence is a constant theme through the roughly six periods of U.S. Indian law and history: Removal, Reservations, Allotment, Reorganization, Termination, and Self-determination.

The Removal period lasted from 1820 till 1850.[217] U.S. policy during this time aimed at removing Indians east of the Mississippi River to lands west of it.[218] A few of the most famous cases in Indian law occurred during this time, and they set the stage for much of the law that followed. The first case was *Johnson v. McIntosh*, where the U.S.

---

[214] *See generally*, J. Baird Callicott and Michael P. Nelson, AMERICAN INDIAN ENVIRONMENTAL ETHICS: AN OJIBWA CASE STUDY (2004); Charles E. Cleland, RITES OF CONQUEST: THE HISTORY AND CULTURE OF MICHIGAN NATIVE AMERICANS (1992).
[215] William C. Canby, Jr., AMERICAN INDIAN LAW IN A NUTSHELL 11 (3rd ed., 1998).
[216] U.S. Const. art. I § 8 cl. 3; art. II § 2 cl. 2.
[217] Canby, *supra* note 215, at 13.
[218] Canby, *supra* note 215, at 13.

Supreme Court invalidated a grant of land from a tribe to private individuals.[219] Justice Marshall based this decision on the discovery doctrine, which grants the European nation that "discovers" new lands, that is land "unknown to all Christian people," ultimate dominion to those lands with sole right to sell lands.[220] Although, Justice Marshall's opinion found it inappropriate to look into the wider ethical debate over the discovery doctrine, he does find it appropriate to suggest that the Indians themselves are partly to blame, calling them "fierce savages."[221]

Soon after *Johnson v. McIntosh* came the Cherokee Cases. The first, *Cherokee Nation v. Georgia*, involved an action by the Cherokee Nation to a fight Georgia law that divided up Cherokee lands and attempted to end tribal self-governance.[222] The case was thrown out by the U.S. Supreme Court because the Cherokee were deemed to not constitute a foreign nation able to bring such a case under the U.S. Constitution.[223] Again Chief Justice Marshall wrote that instead of foreign nations, tribes "may, more correctly, perhaps, be denominated *domestic dependent nations*... they are in a state of pupilage; their relation to the United States resembles that of a ward to his guardian." (emphasis added)[224] Looking beyond the paternalistic sentiment that passed as legal reasoning,[225]

---

[219] Johnson v. McIntosh, 21 U.S. (8 Wheat.) 543 (1823).
[220] *McIntosh*, 21 U.S. at 573-574, 576.
[221] *McIntosh*, 21 U.S. at 589-590. The relevant portion of this holding states:

> "Although we do not mean to engage in the defence of those principles which Europeans have applied to Indian title, they may, we think, find some excuse, if not justification, in the character and habits of the people whose rights have been wrested from them.
>
> ...
>
> But the tribes of Indians inhabiting this country were fierce savages, whose occupation was war, and whose subsistence was drawn chiefly from the forest. To leave them in possession of their country, was to leave the country a wilderness; to govern them as a distinct people, was impossible, because they were as brave and as high spirited as they were fierce, and were ready to repel by arms every attempt on their independence." *Id.*

[222] Cherokee Nation v. Georgia, 30 U.S. (5 Pet.) 1, 15 (1831).
[223] *Cherokee Nation*, 30 U.S. at 20.
[224] *Cherokee Nation*, 30 U.S. at 17.

this case has had mixed effects. On the one hand, "domestic dependent nations" status has helped protect tribal sovereignty, but it has also given courts room to find numerous limits to that sovereignty.[226]

Cherokee Nation v. Georgia is also the basis for the trust responsibility of the U.S. federal government on behalf of the tribes. A later case defined this responsibility saying that due to the tribes' "weakness and helplessness, so largely due to the course of dealing of the federal government with them, and the treaties in which it has been promised, there arises the duty of protection."[227] However, no cases have identified any legal duty of Congress when passing legislation, and instead this trust relationship between tribes and the U.S. federal government has provided a source of government authority instead of an enforceable duty.[228] In fact, Congress' authority over Indians and Indian territory is referred to as "plenary power", whereby Congress seemingly faces no limit to its regulatory authority other than those found in the Constitution.[229]

On the other hand, more specific trust responsibilities do exist for the executive branch. The nature and extent of the fiduciary responsibility owed depends on the subject matter and frequently the statutes at issue.[230] Numerous cases have created a range of opinions on the trust responsibility, including issues involving natural resources

---

[225] Hope M. Babcock, *A Civic-Republican Vision of "Domestic Dependent Nations" in the Twenty-First Century: Tribal Sovereignty Re-Envisioned, Reinvigorated, and Re-Empowered*, 2005 UTAH L. REV. 443, 478 (2005)(noting that in Justice Marshall's opinion "while declaring tribes to be "*domestic dependent nations*" did not necessarily mean they were inherently inferior... in the same breath, he stated Indians were in a "state of pupilage," and described the relationship between the United States and the tribes as that of a "ward to his guardian.").
[226] Canby, *supra* note 215, at 15-16.
[227] United States v. Kagama, 118 U.S. 375, 384 (1866).
[228] Canby, *supra* note 215, at 36-38.
[229] Canby, *supra* note 215, at 264.
[230] Canby, *supra* note 215, at 34, 38-46.

and sometimes fisheries.[231] However, the holdings are case specific and thus it is difficult to elicit principles with any level of specificity. For example, in *Pyramid Lake Paiute Tribe of Indians v. Morton*, the District Court for D.C. voided regulations by the Secretary of the Interior governing water withdrawals from tributaries that fed into a reservation lake that the Tribe depended on for its fishery. The court said:

> The Secretary's duty was not to determine a basis for allocating water between the District and the Tribe in a manner that hopefully everyone could live with for the year ahead... The burden rested on the Secretary to justify any diversion of water from the Tribe with precision. It was not his function to attempt an accommodation.[232]

In this case, there existed a duty to protect the water rights of the Tribe by all means, including through the prevention of unnecessary waste.[233]

The second Cherokee Case involved the appeals of two missionaries convicted under Georgia law for failure to obtain a license to reside on tribal lands.[234] Justice Marshall's opinion found that the Cherokee Nation "is a distinct community, with boundaries accurately described, *in which the laws of Georgia can have no force.*" (emphasis added).[235] While an outright ban on the application of state law to tribal lands does not exist, this general policy of tribal sovereignty remains an important doctrine in U.S. Indian law.

The initial movement of tribes to western lands lasted until it was realized that those too were desirable. Thus began the Reservation period in 1850, which lasted until

---

[231] *See, e.g.*, Hoopa Valley Indian Tribe v. Ryan, 415 F.3d 986 (9th Cir. 2005); Morongo Band of Mission Indians v. FAA, 161 F.3d 569 (9th Cir., 1998); Klamath Water Users Protective Ass'n v. DOI, 189 F.3d 1034; (9th Cir. 1999).
[232] Pyramid Lake Paiute Tribe of Indians v. Morton, 354 F.Supp. 252, 256 (D.D.C. 1972).
[233] *Pyramid Lake*, 354 F.Supp. at 257.
[234] Worcester v. Georgia, 31 U.S. (6 Pet.) 515, 537 (1832).
[235] *Worcester*, 31 U.S. at 561.

1887.[236] Through at times coercive and underhanded means, the U.S. obtained treaties with tribes ceding certain parts of tribal territory to the U.S. government and reserved particular lands and other rights for them.[237] Then in 1871, Congress banned recognition of any further tribes as independent nations.[238] While it is unclear whether Congress had any authority to take such an action, it was an unmistakable end to treaty-making since any new treaties would not likely receive the required congressional consent.[239]

The Allotment period began in 1887 with the General Allotment Act or "Dawes Act" of that year.[240] The professed goal behind allotment was to assimilate Native Americans into mainstream America. This was accomplished through the allotment or division of tribal lands, with each tribal member receiving a plot of land to cultivate thereby making U.S.-style farmers of them.[241] Remaining lands were put up for sale to non-Indians.[242]

The allotment policy was a tremendous failure and ended with passage of the Indian Reorganization Act of 1934 and the beginning of the correspondingly named Reorganization period.[243] This act prevented further loss of tribal lands (although tribal lands had dropped from 138 million acres to 48 million since 1887) and reinstated some level of tribal self-governance.[244]

---

[236] Canby, *supra* note 215, at 18.
[237] *See, e.g.*, Cleland, *supra* note 215, at 205-230.
[238] 25 U.S.C.A. §71 (1871).
[239] Canby, *supra* note 214, at 18.
[240] 24 Stat. 388 (1887).
[241] 24 Stat. at 388.
[242] 24 Stat. at 389-390.
[243] Indian Reorganization Act or Wheeler-Howard Act, 25 U.S.C.A. § 461 et seq (1934); *see* Canby 1998 at 21-23.
[244] Canby, *supra* note 215, at 22, 24-25.

However, these moves toward self-determination were not to last long, and in 1953 began the Termination period.[245] The policy goal during this time was to end tribes altogether.[246] Land was privatized, tribal status in the eyes of the federal government was terminated, and tribal members were subjected to all state and federal law.[247] The Menominee of Wisconsin was one of the tribes that had their status as a tribe terminated.[248] Also passed during this time was Public Law 280 which allowed the States of Minnesota and Wisconsin, among others, to apply state civil and criminal jurisdiction over tribal lands.[249]

The current period of tribal self-determination began in 1968 with the passage of the Indian Civil Rights Act.[250] Although the act seemed to go against the notion of tribal independence by forcing the rights found under the U.S. Constitutions Bill of Rights onto the tribes, it implicitly assumed that tribal governments would continue on by forcing tribal governments to adhere to those rights.[251] And also in line with the idea of tribal self-governance was an amendment to Public Law 280 requiring tribal consent before a state could impose civil and criminal jurisdiction over the tribes.[252] Since then numerous additional laws have been passed that arguably continue to strengthen tribal sovereignty.[253]

---

[245] Canby, *supra* note 215, at 25.
[246] Canby, *supra* note 215, at 25-26.
[247] Canby, *supra* note 215, at 25-26.
[248] Canby, *supra* note 215, at 26.
[249] Pub. L. No. 280, 67 Stat. 588 (1953), 18 U.S.C.A. § 1162, 28 U.S.C.A. § 1360, *amended by* 82 Stat. 77 (1968)(codified as amended in scattered sections). Public Law 280 did not apply to the Red Lake reservation, nor did it limit hunting or fishing rights of tribes. 18 U.S.C.A. §§ 1162(a)-(b).
[250] Indian Civil Rights Act of 1968, 82 Stat. 77, 25 U.S.C.A. § 1301 et seq.
[251] Canby, *supra* note 215, at 29.
[252] 25 U.S.C.A. §§ 1321, 1326.
[253] Canby, *supra* note 215, at 30-32.

Beyond telling a few of the harrowing tales associated with the history of Indians in the U.S., there are a few take home messages from the preceding overview. First, tribes have retained their sovereignty although it has been significantly diminished in many areas. Second, the U.S. Congress has an all-encompassing, plenary power over tribes limited only by the U.S. Constitution, so states generally lack authority to regulate tribes. Third, the federal government has a fiduciary obligation or trust responsibility to look after the best interests of the tribes. Finally, the history of terminating tribes and attempted assimilation complicates matters related to determining what counts as a tribe and what rights have been retained.

Native American-U.S. Treaties

Many tribes signed treaties prior to the "ban" mentioned above, and the role of tribes in Great Lakes fishery management arose due to fishing rights *retained* in some of those treaties. Common misperceptions have led some to refer to treaty rights as special or granted rights, but they are rights *reserved* to tribes as part of the cession of their lands. The U.S. Supreme Court said that treaties consist of "a grant of rights from [Indians] – a reservation of those not granted."[254] These treaties take precedence over state law under the Supremacy Clause of the Constitution.[255]

Treaties are not always clear and concise documents and have required considerable adjudication to determine their meaning. Currently courts should follow three rules in interpreting treaties: 1) treaties should be construed as tribal negotiators would have understood them,[256] 2) courts must liberally construe treaties in favor of the

[254] United States v. Winans, 198 U.S. 371, 381 (1905).
[255] U.S. Const. art. VI cl. 2.
[256] Tulee v. Washington, 315 U.S. 681, 684-85 (1942).

Indians,[257] and 3) courts should resolve ambiguities in favor of the Indians.[258] These rules of interpretation arise out of the trust responsibility that exists between the federal government and the tribes, and a desire not to perpetuate the wrongs inflicted upon the tribes through colonization and treaty making.[259] There are four relavent treaties, signed in 1836, 1837, 1842, and 1854, (shown in figure 4.2).[260]

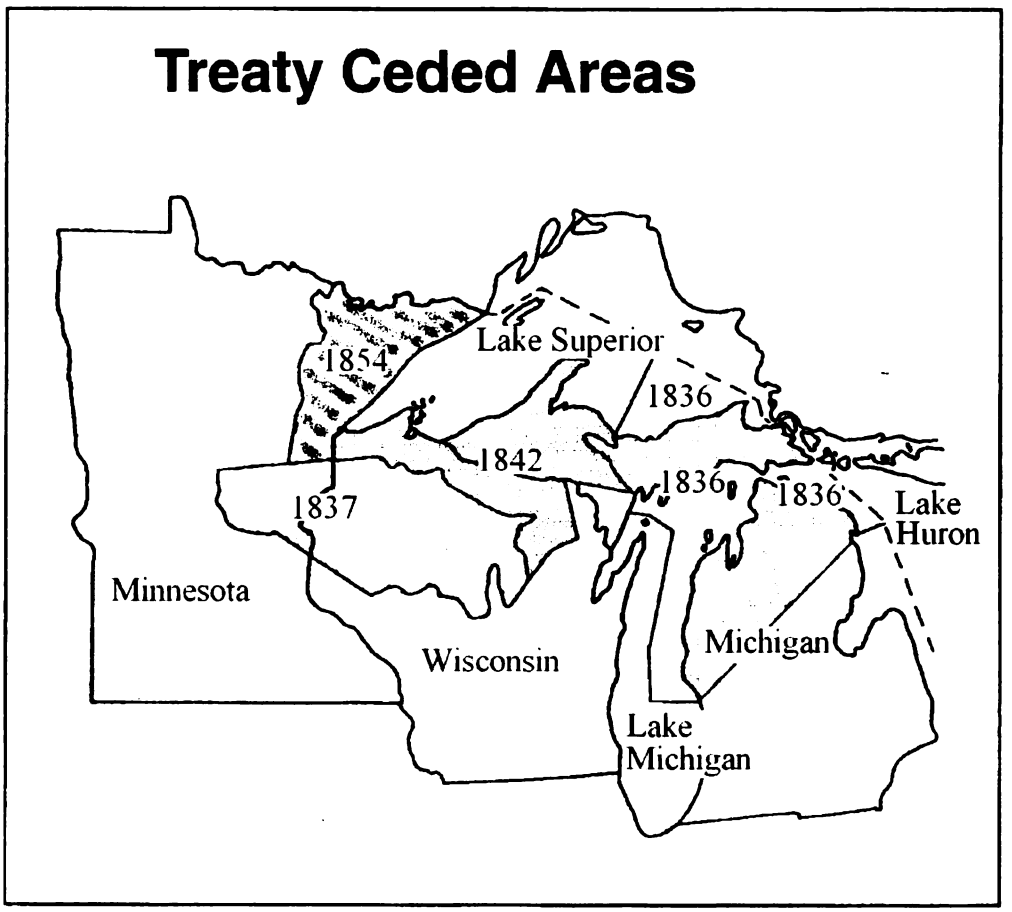

Figure 4.2. Ceded territories for 1836, 1837, 1842, and 1854 Treaties[261]

[257] Carpenter v. Shaw, 280 U.S. 363, 366-67 (1930).
[258] Winters v. United States, 207 U.S. 564, 576 (1908).
[259] See e.g., U.S. v. Mich (Fox Decision), 471 F. Supp. 192, 213-216, 249-253 (W.D. Mich. 1979), *remanded*, 623 F.2d 448 (6th Cir. 1980), *as modified*, 653 F.2d 277 (6th Cir. 1981), *cert. denied*, 454 U.S. 1124 (1981); Diane H. Delekta, *State Regulation of Treaty Indians' Hunting and Fishing Rights in Michigan*, 1980 DET. C.L. REV. 1097, 1103-04 (1980).
[260] Treaty with the Ottawa, etc. March 28, 1836 (Treaty of Washington), 7 Stat. 491; Treaty of October 4, 1842, 7 Stat. 591; Treaty of September 30, 1854, 10 Stat. 1109.
[261] Modified from Great Lakes Indian Fish and Wildlife Commission, TREATY RIGHTS (2003).

Determining the extent and nature of reserved rights, including those around fishing, is difficult. To begin, different rules apply depending on where the fishing occurs, whether on tribal lands, on ceded lands, or elsewhere. Treaties may reserve rights to hunt and fish in ceded areas outside of the reservation, but the nature and extent of those rights depends on the language of the treaty. Next, different rules apply depending on whether harvest is by non-Indians or Indians, and possibly depending on whether the Indians are tribal members or not. In general, the following discusses Indian fishers on ceded waters.

For tribal fishing on ceded waters we face four questions: 1) Do tribes have a right to fish? 2) Can tribes regulate their harvest? 3) Does the state have any ability to regulate tribal harvest? 4) How is harvest to be allocated under the treaty?[262]

Two cases, *People v. LeBlanc*, a Michigan Supreme Court case from 1976, and *United States v. Michigan*, a federal district court case from 1979, addressed the issue of fishing rights in the Great Lakes under the 1836 Treaty and both reached roughly the same conclusions.[263] The issue of fishing rights depended on the meaning of Article 13 of the 1836 Treaty, which read: "The Indians stipulate for the right of hunting on the lands ceded, with the other usual privileges of occupancy, until the land is required for

---

[262] Further discussion of Great Lakes tribal treaty rights and litigation can be found in: TREATY RIGHTS, *supra* note 261; Chippewa Ottawa Treaty Fishery Management Authority (now Chippewa-Ottawa Resource Agency), MICHIGAN'S 1836 TREATY FISHERY GUIDE (1999) [hereinafter 1836 Treaty Guide]; Laura Faitel Cimo, M.A. THESIS - EVALUATION AND COMPARATIVE ANALYSIS OF FISHERY MANAGEMENT POLICIES IN THE 1836 TREATY WATERS OF THE GREAT LAKES 27-62 (Mich. State Univ., 2002).

[263] People v. LeBlanc, 399 Mich. 31 (1976); U.S. v. Mich (Fox Decision), 471 F. Supp. 192 (W.D. Mich. 1979), *remanded*, 623 F.2d 448 (6th Cir. 1980), *as modified*, 653 F.2d 277 (6th Cir. 1981), *cert. denied*, 454 U.S. 1124 (1981). In *People v. LeBlanc*, the defendant "Big Abe" LeBlanc was arrested and charged under Michigan law for fishing without a license and using prohibited fishing gear, a gill net. LeBlanc's defense was that the state is not allowed to regulate the exercise of treaty fishing rights. 399 Mich. at 35. *United States v. Michigan* is also commonly known as the "Fox decision" based on the presiding justice, Judge Fox.

settlement."[264] Both courts determined that "other usual privileges of occupancy" included the right to fish given the tribes dependence on fishing at the time of the Treaty and because tribal negotiators likely understood it as such.[265] This includes the right to fish for subsistence and commercial fishing, and to use new harvest technologies.[266] The right to fish extends throughout the ceded waters of the Great Lakes.[267]

The same rules have been applied to the rest of the U.S. waters of Lake Superior under the 1842 treaty. In *People v. Jondreau*, the Michigan Supreme Court held that a right to fish exists in ceded waters outside of the reservation.[268] The 7th Circuit also found an explicit treaty right to fish in the western U.S. waters of Lake Superior.[269]

Generally, tribes retain the right to regulate their affairs as sovereigns.[270] This is true for the regulation of fishing in the 1836 treaty waters of the Great Lakes,[271] and the 1842 waters.[272]

Initially, it seemed fairly clear that states could not regulate treaty rights.[273] However, a series of cases decided by the U.S. Supreme Court encroached upon tribal

---

[264] 1836 Treaty, art. 13.
[265] *People v. LeBlanc*, 399 Mich. at 41-42; *U.S. v. Mich (Fox Decision)*, 471 F.Supp. at 258.
[266] *U.S. v. Mich (Fox Decision)*, 471 F.Supp. at 213, 258, 260.
[267] *U.S. v. Mich (Fox Decision)*, 471 F.Supp. at 257-259.
[268] 384 Mich. 539, 543-45 (1971). Interestingly, *Jondreau* is seemingly based on the wrong treaty. The *Jondreau* court based its decision on Article 11 which states, "And such of them as reside in the territory hereby ceded shall have the right to hunt and fish therein, until otherwise ordered by the President." 1846 Treaty art. 11. Some language suggests a holding limited to fishing in Keweenaw Bay. *Jondreau*, 384 Mich. at 544-545; *see*, Delekta, *supra* note 259, at 1115. However, the court's decision was based on a tribal right to hunt on ceded lands, and thus seemingly applies to all off-reservation waters of Lake Superior. *Jondreau*, 384 Mich. at 543. Yet, the holding is based on the 1854 Treaty in which the ceded lands discussed occur only in Minnesota. Whereas, the waters of Lake Superior were ceded in the 1842 Treaty, which is still binding. Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. Wisconsin, 700 F.2d 341, 362 (7th Cir. 1983).
[269] Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. Wisconsin, 700 F.2d 341, 351 (7th Cir. 1983).
[270] Canby, *supra* note 215, at 71.
[271] *U.S. v. Mich (Fox Decision)*, 471 F.Supp. at 273-74.
[272] Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. Wisconsin, 668 F.Supp. 1233, 1241 (W.D.Wis. 1987).
[273] Canby, *supra* note 215, at 430.

sovereignty and permitted state regulation for conservation purposes. The *Puyallup* cases dealt with salmon fishing in the Pacific Northwest.[274] The Court found that the State of Washington could regulate certain aspects of Indian fishing "in the interests of conservation, provided the regulation meets appropriate standards and does not discriminate against the Indians."[275] Courts and commentators alike have pointed out that there is no legal rationale for allowing state regulation that impedes treaty rights, yet the case remains.[276]

For 1836 waters, the federal district court in *U.S. v. Michigan* attempted to distinguish its case from the *Puyallup* decisions, but the 6th Circuit Court of Appeals found that the state did have a similar right to regulate for conservation.[277] Nonetheless, state regulation was preempted due to the comprehensive scheme of tribal and federal regulation over treaty fishing.[278] Another decision determined that the state may regulate 1842 waters to protect conservation and public safety, but to do so it must demonstrate substantial need.[279] Paradoxically, in a decision on the 1842 waters, the court recognized

---

[274] Puyallup v. Department of Game of Washington (Puyallup I), 391 U.S. 392 (1968); Puyallup v. Department of Game of Washington (Puyallup II), 414 U.S. 44 (1973); Puyallup v. Department of Game of Washington (Puyallup III), 433 U.S. 175 (1976). *Also see*, Washington v. Washington State Commercial Passenger Fishing Vessel Association, 443 U.S. 658 (1979) (allowing on-reservation state regulation for conservation).

[275] *Puyallup I*, 391 U.S. at 398.

[276] Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. Wisconsin, 668 F.Supp. at 1238-39; Delekta, *supra* note 259, at 1111-12; Jerry L. Bean, *Off-Reservation Hunting and Fishing Rights: Scales Tip in Favor of States and Sportsmen?*, 51 N.D. L. REV. 11, 18-19 (1974); Charles F. Wilkinson, *To Feel the Summer in the Spring: The Treaty Fishing Rights of the Wisconsin Chippewa*, 1991 WIS. L. REV. 375, 401 fn 156 (1991).

[277] *U.S. v. Mich (Fox Decision)*, 471 F.Supp. at 267-70; United States v. Michigan, 623 F.2d 448 (6th Cir. 1980)

[278] *U.S. v. Mich (Fox Decision)*, 471 F.Supp. at 270, 274; 623 F.2d at 450.

[279] Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. Wisconsin, 740 F.Supp. 1400, 1421-22 (W.D. Wis. 1990). The court stated:

> The state must show, first, that a substantial hazard exists; second, that the particular measure sought to be enforced is necessary to the prevention of the safety hazard; third, that application of the particular regulation to the plaintiff tribes is necessary to effectuate the particular safety interest; fourth, that the regulation is the least restrictive alternative available to accomplish the public safety purpose; and

that there was no legal rationale for allowing state regulation for conservation purposes, yet the court found it logical to apply the same non-existent rationale in allowing the state to regulate for the purposes of public health and safety. The court states:

> One criticism of the Puyallup line of cases that developed the reasonable and necessary for conservation standard "is their failure to explain the reason why the state may intrude for the particular purpose of conservation." Here, too, neither party developed a rationale to explain why the state either may or may not regulate for health and safety. However, it appears logical that if the state may intrude upon treaty reserved rights to preserve a species or resource, it may intrude as well to preserve its citizens from certain public health or safety hazards.[280]

Finally, treaties also guide the allocation of fish harvest between the states and tribes. An infamous case involving allocation issues occurred in the State of Washington again over salmon fishing. The "Boldt decision," named after the presiding judge, found that tribes had a right to roughly 50% of harvestable fish.[281] The U.S. Supreme Court later clarified that 50% was the maximum and that tribal rights "[secure] so much as, but no more than, is necessary to provide the Indians with a livelihood – that is to say a moderate living."[282] For the 1842 waters of Lake Superior, courts adopted the same standards of a right to a moderate livelihood with a 50% maximum even though the language of the treaty differs from that in the Boldt decision and does not evidence any reason to limit tribal harvest to a maximum of 50%.[283] And, in 1836 waters courts have

---

fifth, that the regulation does not discriminatorily harm the Indian or discriminatorily favor non-Indian harvesters.

Id. at 1422.

[280] Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. Wisconsin, 668 F.Supp. at 1238-39 (citations omitted).

[281] United States v. State of Washington, 384 F.Supp. 312 (W.D.Wash. 1974), *aff'd*, 520 F.2d. 676 (9th Cir. 1975), *cert. denied*, 423 U.S. 1086 (1976).

[282] Washington v. Washington State Commercial Passenger Fishing Vessel Association, 443 U.S. 658, 687 (1979).

[283] *Lac Courte Oreilles*, 740 F.Supp. at 1416-1418. The court simply states without any support of any kind that the parties did not intend that the right to a moderate livelihood could be used to exclude non-Indian fishing. *Id.* at 1416. Then the court states that "the only reasonable or logical" division of the fishery is 50-50, again without giving any rationale. *Id.* at 1416.

not decided the allocation issue, but it has been addressed through negotiation and a consent decree.[284]

Inter-Tribal Resource Agencies – CORA and GLIFWC

Treaty rights are held by the individual tribes that either signed a treaty or descended from signatories. While the responsibility to manage harvest also rests with the individual tribes, two agencies were created to help with the coordination and management of Great Lakes treaty fishing. The Chippewa Ottawa Resource Authority (CORA) work with tribes under the 1836 Treaty and the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) does the same under the 1842 Treaty.[285] CORA and GLIFWC also sit on the lake committees as representatives for their member tribes.

CORA was established after the "Fox decision" due to continuing conflict between tribal and non-tribal fishing interests.[286] CORA has authority over all off-reservation resource use and any additional responsibilities and powers within the 1836 Treaty area delegated to it by its member tribes.[287] One of CORA's subdivisions, the Great Lakes Resource Committee (GLRC), has primary management authority over Great Lakes fishing under the 1836 Treaty.[288] Tribal disagreements with decisions by CORA or the GLRC are resolved through a process set out in CORA's charter.[289]

CORA is responsible for implementation of the consent decrees (court approved agreements arising from negotiations intended to resolve a litigated dispute) that guide

---

[284] Francis E. McGovern, *Toward a Functional Approach for Complex Litigation*, 53 U. CHI. L. REV. 440, 457-68 (1986); Cimo, *supra* note 262, at 61-65.
[285] GLIFWC also has a role in resource management under the 1837 Treaty (7 Stat. 536) and 1854 Treaty (10 Stat. 1109).
[286] 1836 Treaty Guide, *supra* note 262, at 10. At the time CORA was called the Chippewa Ottawa Treaty Fishery Management Authority (COTFMA).
[287] Chippewa Ottawa Resource Authority (CORA) Charter, art. 5.
[288] CORA Charter, *supra* note 287, at art. VI § B.
[289] CORA Charter, *supra* note 287, at art. VI § C.

treaty fishing in the 1836 waters.[290] The first consent decree was issued in 1985 and was scheduled to last for 15 years.[291] After a year of extensive negotiations between the parties, the consent decree was revised and reissued in 2000.[292] It focuses primarily on lake trout, but also sets some rules for other species. The decree relies on a range of regulation types, namely, allocation of harvest, allocation of fishing locations, gear restrictions, catch limits, setting of seasons, licensure requirements, monitoring, information gathering and sharing, "best science" mandates, conflict resolution mechanisms, hatcheries guidelines, harvestable species, consultation requirements, funding provisions, and penalties for over-harvest.[293]

GLIFWC has relatively broad authority to help its member tribes manage their collective natural resources.[294] Within the realm of natural resources management, the primary limit on the GLIFWC is the explicit statement that rights of member tribes are not abridged by GLIFWC's organic act.[295] Perhaps because of this, GLIFWC does not create harvest regulations as does CORA. Specifically, according to its constitution, the purposes of the GLIFWC are to coordinate communication between member tribes, assist in the "protection, preservation, conservation and prudent use" of resources, administer federal programs, educate, provide expertise and administrative support, and "improve the general welfare of Indian people in the Great Lakes through educational, charitable, and fish and wildlife related activities."[296] In practice GLIFWC also plays a role in

---

[290] CORA Charter, *supra* note 287, at art. VI § B.
[291] United States v. State of Michigan, Consent Order 1985 Agreement, 520 F. Supp. 207 (W.D. Mich. 1981)(May 31, 1985).
[292] United States v. State of Michigan, Case No. 2:73-CV-26 (M26 73)(W.D. Mich. August 7, 2000).
[293] Consent Decree, United States v. State of Michigan, (Case No. 2:73-CV-26, W.D. Mich. August 7, 2000) available at http://www.1836cora.org/pdf/2000consentdecree.pdf (last accessed August 7, 2007).
[294] Constitution of the Great Lakes Indian Fish and Wildlife Commission. [hereinafter GLIFWC Const.]
[295] GLIFWC Const., *supra* note 294, at art. X § 2.
[296] GLIFWC Const., *supra* note 294, at art. I.

enforcement of tribal regulations and helps maintain tribal courts to deal with violations.[297]

First Nations of Canada

There are many different aboriginal groups in Canada, from the Inuit in the far North to the Metis, who have both Indian and European ancestry, to the many Indian bands, both registered and non-registered.[298] It is the Indians, commonly referred to as First Nations, who inhabit parts of the Great Lakes region, and have an interest and potential role in fisheries management.

History

While the history of white colonization and policy in Canada has not been categorized in the same distinct periods as the U.S. history, many of the same themes are found in Canada's past. We see missionaries, encroachment, treaty-making, creation of reservations, assimilation policies, and a slow move toward tribal self-government. [299] Scholar Roger Nichols described the situation in Canada around the beginning of the 19th century as "reflect[ing] a less intense version of what had occurred south of the border."[300] Likewise, we find a struggle throughout history by parliaments and courts in Canada to deal with issues surrounding First Nations' rights.

Federal and Provincial Roles

The Dominion government has a plenary authority over the tribes similar to that of the U.S. government, meaning it may validly restrict tribal rights within constitutional

---

[297] Great Lakes Indian Fish and Wildlife Commission, SEASONS OF THE OJIBWE 6 (2002 Edition).
[298] David W. Elliott, LAW AND ABORIGINAL PEOPLES IN CANADA 13 (4th ed., 2000).
[299] Elliott, *supra* note 298, at 5-8. *See also generally*, Nichols, Roger L., INDIANS IN THE UNITED STATES AND CANADA: A COMPARATIVE HISTORY (1998); Surtees, Robert J., CANADIAN INDIAN POLICY: A CRITICAL BIBLIOGRAPHY (1982).
[300] Nichols, *supra* note 299, at 173; *but see*, Eric Robinson and Henry Bird Quinney, THE INFESTED BLANKET : CANADA'S CONSTITUTION, GENOCIDE OF INDIAN NATIONS (1985).

limits.[301] Canada's Constitution divides authority between the federal government and the provinces, and section 91(24) grants authority to the Dominion to create laws for "Indians, and lands reserved for Indians."[302] But similar to the division of authority over fisheries management, this seemingly clear mandate is complicated by the existence of provincial authority to legislate on matters that might affect aboriginal peoples.[303] Still, given the supremacy of federal law, a provincial law cannot encroach on federal powers by "impair[ing] the status or capacity of Indians as Indians" or their land rights.[304] Provincial law may also apply to First Nations through a blanket application of certain provincial laws to tribes instituted by the Dominion in section 88 of the Indian Act.[305] Section 88 allows application of those provincial laws that affect the status or capacity of Indians (Indianness) but do not do so purposefully, that is to say those laws of general applicability that do not intentionally discriminate against Indians.[306] Section 35(1) of the Constitution Act of 1982 also limits the legislative authority of the provinces over First Nations, but the extent of that protection is unclear.[307]

Trust relationship

Similar to the trust relationship between the U.S. and Native Americans, there exists a fiduciary relationship on the part of the federal government towards Aboriginal peoples of Canada.[308] This duty at least initially appeared limited to situations involving Indian lands and required some type of legislation to create an enforceable duty to allow

---

[301] Elliott, *supra* note 298, at 58.
[302] Constitution Act, 1867 § 91(24).
[303] Constitution Act, 1867 § 92; Elliott, *supra* note 298, at 58.
[304] Elliott, *supra* note 298, at 58-59.
[305] Indian Act § 88. The Indian Act applies only to a registered Indians. Elliott, *supra* note 298, at 59.
[306] Elliott, *supra* note 298, at 59.
[307] R. v. Sparrow [1990] 1 S.C.R. 1075 at 1105.
[308] Guerin v. The Queen, [1984] 2 S.C.R. 335 at 375.

actions for damages.[309] However, in *R. v. Sparrow*, the Canadian Supreme Court created a broader rule whereby the government's fiduciary responsibility creates certain requirements for federal regulation that impair treaty or aboriginal rights.[310] These requirements include a valid purpose for the impairment, priority given to treaty and aboriginal rights, and prior consultation.[311]

Right to Fish

Turning to the specific issues around the Great Lakes fishery, the first question is: Do First Nations have a right to fish? There are three potential sources of fishing rights: aboriginal rights, treaties, and grants from Parliament through statutes. Aboriginal rights arise from the existence of distinctive societies that occupied certain areas of land.[312] These rights were affirmed or protected through section 35(1) of the Constitution Act, 1982.[313] In *R. v. Van der Peet*, the Canadian Supreme Court laid out a three part method to determine whether aboriginal rights exist.[314] First, a court must "identify the nature of the right being claimed."[315] Second, a court must determine whether an activity "was a central and significant part of the society's distinctive culture... [that it] was one of the things which made the culture of the society distinctive."[316] Finally, the court must determine whether the practices and customs have been continually practiced, though

---

[309] Elliott, *supra* note 298, at 78-79, 81.
[310] [1990] 1 S.C.R. 1075, 1107-19.
[311] [1990] 1 S.C.R., at 1107-19.
[312] R. v. Van Der Peet [1996] 2 S.C.R. 507 at paragraph 34; Elliott (2000) at 99-100.
[313] Constitution Act, 1982 § 35(1)(stating "The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed.").
[314] Elliott, *supra* note 298, at 100-101.
[315] [1996] 2 S.C.R. at para 51. In doing this "a court should consider such factors as the nature of the action which the applicant is claiming was done... the nature of the governmental regulation, staute or action being impugned, and the tradition, custom or practice being relied upon to establish the right." *Id.* at para 53.
[316] [1996] 2 S.C.R. at para 55. The court does not explain why only distinct aspects are to be protected, which is odd since there are similarities between cultures around the world that are obviously important aspects of the individual cultures, for example, barter and trade. The court notes that pre-contact practices are to be the benchmark in making this determination. *Id.* at para 60.

evolution of those practices and temporary gaps in their observance will not nullify an aboriginal right.[317]

In *R. v. Sparrow*, the Canadian Supreme Court was called on to decide whether an aboriginal right to fish existed.[318] The case involved a First Nation member, Mr. Sparrow, convicted of fishing with a drift net greater than the allowable length under the Fisheries Act.[319] The court found that an aboriginal right to fish for subsistence, ceremonial and social purposes existed, and that the right had not been extinguished.[320] Again this right was based on fishing being a distinct part of the culture of this particular band and continually practiced in the area.[321] Determination of the existence of rights is made on a case-by-case basis.

Many rights, including some fishing rights, have been preserved through treaties. Treaty rights were also affirmed through section 35(1) of the Constitution Act of 1982, giving them additional protection. Scholars Ross and Sharvit claim:

> Prior to 1982, treaty rights were limited by federal legislation; the latter prevailed where inconsistent with the terms of a treaty. Section 35(1), however, protects treaty rights and accordingly limits governmental powers to the extent that they unjustifiably interfere with the exercise of treaty rights.[322]

---

[317] [1996] 2 S.C.R. at paras 63-64.
[318] [1990] 1 S.C.R. 1075.
[319] [1990] 1 S.C.R. at 1083.
[320] [1990] 1 S.C.R. at 1095, 1099-1101. The government argued that there existed a complete set of regulations which thus extinguished tribal rights, somewhat akin to the idea in U.S. law where the federal government can preempt state legislation by occupying the field without expressly preempting or through directly conflicting laws. The Canadian Supreme Court rejected this argument saying that extinguishment only occurs through "clear and plain" expression of intent to do so. *Id.* at 1097-99.
[321] [1990] 1 S.C.R. at 1094-95, 1099.
[322] Ross, Monique M., and Cheryl Y. Sharvit, *Forest Management in Alberta and the Right to Hunt, Trap and Fish Under Treaty 8*, 36 ALBERTA LAW REVIEW 645-91(1998).

Additionally, rules exist to guide treaty interpretation. Courts must construe treaties liberally, use the meaning as understood by aboriginal signatories, and give authority to oral commitments as well.[323]

Treaties with potential impacts on Lake Erie were part of the Upper Canada treaties in the late 1700s to early 1800s and were generally simple land sales.[324] Though their potential relevance for fishing rights has apparently not been given a great deal of study, one scholar noted that an early treaty with the Saugeen Ojibway in 1836 clearly gave them an exclusive right of fishing in a large portion of Lake Huron and Georgian Bay.[325] Possible remaining rights such as these, even if less extensive, could have considerable impact on Great Lakes fisheries management.

In Lake Superior, another major and more recent treaty, the Robinson Lake Superior Treaty of 1850, ceded the lands of the north shore of Lake Superior in Ontario from the Chippewa to the British Government.[326] Similar to U.S. treaties, it has a clause protecting the hunting and fishing rights of the signatory First Nations in the ceded lands.[327]

An important First Nation-Canadian treaty cases, *R. v. Marshall*, was recently decided by the Canadian Supreme Court in 1999.[328] The case involved a Mi'kmaq Indian

---

[323] Elliott, *supra* note 298, at 46.
[324] Elliott, *supra* note 298, at 45.
[325] Peggy J. Blair, Solemn Promises and *Solum* Rights: the Saugeen Ojibway Fishing Grounds and *R. v. Jones and Nadjiwon*, 28 Ottawa L. Rev. 125, 130 (1997); Mark D. Walters, *Aboriginal Rights, Magna Carta and Exclusive Rights to Fisheries in the Waters of Upper Canada*, 23 QUEEN'S L.J. 301 (1998).
[326] Robinson Lake Superior Treaty of 1850. Interestingly, by the language of the treaty it does not cede the actual lake beds or lake proper, but the legal significance of this is unclear.
[327] Robinson Lake Superior Treaty of 1850, The relevant section states: "Her Majesty and the Government of this Province, hereby promises... to allow the said chiefs and their tribes the full and free privilege to hunt over the territory now ceded by them, and to fish in the waters thereof as they have heretofore been in the habit of doing, saving and excepting only such portions of the said territory as may from time to time be sold or leased to individuals, or companies of individuals, and occupied by them with the consent of the Provincial Government." *Id.*
[328] R. v. Marshall, [1999] 3 S.C.R. 456.

arrested for commercially harvesting and selling eel from the coastal waters around Nova Scotia. The Court acquitted the defendant because he was found to have a treaty right to fish commercially in order to provide a "moderate livelihood."[329] This holding was fairly contentious.[330] For example, based on this holding, the Esgenoôpetitj peoples exercised their right to a moderate livelihood in the lobster fishery and were met with violence and an unresponsive Canadian government.[331] While an important case, the determination of a right to a moderate livelihood is limited to the particular treaty in question; specifically, this case focused on defining what constitutes "necessaries" under a 1760 treaty with the Mi'kmaq.[332] The Court made that clear in an opinion denying a rehearing of the case, when the court said, "Other limitations [to wider applicability of the ruling] apparent in the [original case's] majority judgment include the local nature of the treaties."[333] Thus, it does not directly apply to the Great Lakes fisheries.

First Nation Regulation of Harvest

A right to self-government could be general, as in the federal government's broad law making capabilities, or it could be narrow, as in an authority to create laws around a certain topic. There does not appear to be an aboriginal right to self-government in the broad sense.[334] An aboriginal right to specifically manage First Nation fishing in the Great Lakes would need to be determined on a Nation by Nation basis, but this has not yet occurred. Treaties could also create a right of self-government in general or with regards to specific issues, but again courts have yet to recognize either. Also, rights of

---

[329] R. v. Marshall, [1999] 3 S.C.R. 456 at para. 59.
[330] Elliott, *supra* note 298, at 52.
[331] Comitas Institute for Anthropological Study, *Social Disparity: Introduction*, *available at* http://www.tc.columbia.edu/centers/cifas/socialdisparity/introduction/index.htm (last visited on Aug. 7, 2006).
[332] R. v. Marshall, [1999] 3 S.C.R. 456 at para. 59.
[333] R. v. Marshall, [1999] 3 S.C.R. 533, at para. 38.
[334] Elliott, *supra* note 298, at 169-171.

self-government, somewhat paradoxically, could be created legislatively by Parliament. Limited authority has been granted through these means.[335] For example, the Indian Act allows for some level of First Nation control over fishery management on their reservations, however, this does not apply to the Great Lakes fisheries.[336]

Without a general aboriginal, treaty, or statutory right to self-govern broadly or over narrow interests, the alternative is an implicit right to manage activities with respect to aboriginal or treaty rights. Apparently no cases have found such an implied right at this time. One major consequence of the lack of First Nation management authority, is their absence from the Great Lakes fisheries management decision making structures, namely the lake committees under the Great Lakes Fishery Commission. Exclusion of the First Nations has not sat well with them, most notably the Saugeen Ojibway who have a large fishing presence on Lake Huron.[337] No management agencies on par with GLIFWC or CORA exist, although the Anishnabek/Ontario Fisheries Resource Centre plays a role in producing and coordinating First Nations fisheries science in the region.[338]

Federal and Provincial Regulation

Given the lack of recognized management authority of First Nations, arguments in Canada tend to focus on the extent of allowable regulation and the division of authority between the federal and provincial governments. The discussion above noted the split between federal and provincial authorities with the Dominion government holding the

---

[335] Elliott, *supra* note 298, at 166-168. The main example of such an effort is the Indian Act, but many problems with it have been noted, most notably for the purposes of Great Lakes fisheries management is its narrow scope. *See*, Elliott, *supra* note 298, at 166.
[336] Indian Act R.S.C. 1985 c.I-6 s. 81(1)(o).
[337] Saugeen Ojibway Nation Territories, *Jumping to Conclusions: GLFC, Conflict of Interest and the Problem of Stocking Exotic Salmon in the Great Lakes* (Paper at International Association for Great Lakes Research Conference, May 24-28, 2004).
[338] *See generally*, Anishnabek/Ontario Fisheries Resource Centre website *available at* http://www.aofrc.org (last visited June 4, 2006).

primary right to legislate over the affairs of First Nations, with limited authority for the provinces.[339]

As mentioned, aboriginal and treaty rights were affirmed and protected through the adoption of section 35(1) of the Constitution Act of 1982. The amount of protection afforded to those rights from infringement by the Dominion was addressed by the Canadian Supreme Court in *R. v. Sparrow*.[340] First, one must determine whether *prima facie* infringement of the right occurred. The Court said that determination depends on whether the limitation was unreasonable, imposed any undue hardship, or denies "the holders of the right their preferred means of exercising that right."[341] If *prima facie* infringement occurred, the court must determine whether the regulation was justified, and if not justified, the regulation is invalid. Justification requires a showing that the legislative objective was valid, that the aboriginal right in question was given first priority after that objective was met, and "that there has been minimum possible infringement with respect to the desired result, fair compensation for any expropriation, and consultation with the aboriginal group concerned."[342]

Allocation

Sparrow also has implications for the issue of allocation of harvest between aboriginal and non-aboriginal interests. In *Sparrow*, conservation justified infringement

---

[339] *See*, supra notes 298-307 and accompanying text.
[340] [1990] 1 S.C.R. 1075.
[341] [1990] 1 S.C.R. at 1111-12. Basic licensing and public safety regulations are categorically not prima facie infringement. Elliott, *supra* note 298, at 72.
[342] Elliott, *supra* note 298, at 70 (restating the holding from R. v. Sparrow). However, the court made clear that this list is not exclusive and that the matter of justification may depend on other issues. [1990] 1 S.C.R. at 1119.

of tribal rights, but after those needs are met tribal harvest is given top priority.[343] An exact percentage of fish was not specified in *Sparrow*, but it appears likely that it is a relatively small amount. The Court simply states that "the Indians' food requirements must be met."[344] This does not provide much guidance, and the Court failed to address the issue of First Nation commercial fishing. While First Nations may not benefit from such a rule in times of plenty since their harvest amount would not increase, it would protect their catch in times of shortage since other fisheries would be expected to bear the burden of catch limits.[345]

CONCLUSION

This chapter outlined the legal framework for Great Lakes fisheries management, which is clearly complex. While the rationales and means differ, fishery harvest management authority lies with sub-national governments, including Native American tribes, in both the U.S. and Canada. Inter-jurisdictional coordination occurs through lake committees and through the Joint Strategic Plan, and this chapter argued for the legality of that management structure under the U.S. Constitution. The following chapter identifies gaps, conflicts, and overlaps in this legal framework from their perspective based on interviews with fishery managers.

---

[343] [1990] 1 S.C.R. at 1116. It is questioned whether current practices actually implement a First Nation priority fishery. *See e.g.*, Anna Pugh, *Meeting the Spirit of Sparrow: The Regional Fisheries Committee as a Management Model in Canada*, 12 DALHOUISE J. LEGAL STUD. 267, 273-79 (2003).
[344] [1990] 1 S.C.R. at 1116.
[345] [1990] 1 S.C.R. at 1115-16.

Chapter Five:
GAPS, OVERLAPS, AND CONFLICTS IN THE LEGAL FRAMEWORK FOR GREAT LAKES FISHERY MANAGEMENT

This chapter identifies a number of gaps, overlaps, and conflicts in the Great Lakes fisheries management legal framework based on interviews conducted with fishery managers.[1] This is a slightly non-traditional purpose for interview-based research. The goal was not to catalog or contrast fishery managers' impressions of the legal framework. Instead it aims to identify problems, which does not depend on the number of fishery managers who identified each problem. Fishery managers were chosen because of their expertise and central role in creating and implementing fishery management regulation. Early interviews with fishery managers showed, not surprisingly, that managers' expertise and knowledge lies within the day-to-day operations of fishery management. Thus, at times managers were more focused on the regulations and policies that comprise the bottom of the legal hierarchy as opposed to the upper levels (e.g., constitutions, treaties, inter-jurisdictional agreements, and their judicial interpretations). Nonetheless, managers' discussions of these lower level regulations, frequently implied gaps, overlaps and conflicts in the broader legal framework outlined in the previous chapter. The following presents both the managers' responses and discussion of the patent and latent legal implications, specifically with respect to management authority, inter-jurisdictional

---

[1] In the interests of transparency examples of typical comments from interviewees are placed in the footnotes throughout this chapter. Footnote quotations generally consist of portions of responses from the interviewees. On occasion, the question asked was relevant for context, and in those cases the interviewer's question or comment is preceded by "Q:" while the interviewee's responses are preceded by "I:" to distinguish them. Brackets [ ] are placed around words added to make the sentence coherent or where a question exists about the language used by the interviewee due to difficulty understanding the recording. While attempts were made to keep quotes in their entirety, some required editing for length and thus ellipses "..." mark deletions.

management, inconsistency of harvest regulations, allocation, the public trust doctrine and open access, global climate change and habitat loss, invasive species, and delegation to and oversight of government agencies.

MANAGEMENT AUTHORITY

Balance of State and U.S. Federal Authorities

Turf-protection may constitute the norm in any system where power is divided,[2] and we see some concern over federal encroachment, particularly in the U.S., into Great Lakes fishery management.[3] On the other hand, one manager viewed this turf protection mentality as in the minority and more of a problem between specific individuals, stating:

> [B]y and large in the Great Lakes, my impression is that the vast majority of our interactions... are overwhelmingly positive. There are times where there is tension. Many times in my mind that tension comes specifically from an interpersonal relationship. And somebody either from the [Fish and Wildlife] Service side or from the state side that can't seem to walk away from a disagreement they have had without ascribing it to the whole other agency.

Similarly, it appeared that U.S. federal managers were well aware of their lack of harvest management authority.[4]

---

[2] Albert Weal, Geoffrey Pridham, Andrea Williams, and Martin Porter, *Environmental Administration in Six European States: Secular Convergence or National Distinctiveness?*, 74(2) PUBLIC ADMINISTRATION 255, 257-58 (1996).

[3] Fishery agency manager:

> *"A lot of people ask, particularly people in state governments, what is your authority and what is your management authority? From the fish and wildlife services perspective we do not have harvest management authority. And I think that most state agency people when they ask what is your authority to be involved in the Great Lakes, what they really are asking is why are you mucking around in our area of authority."*

[4] Fishery agency manager:

> *"We don't enforce anything. For the most part it is the states that enforce, because they are more directly responsible for state and recreational fishery."*

Fishery agency manager:

> *"From the Fish and Wildlife Service's perspective we do not have harvest management authority."*

Yet, U.S. federal managers may desire a larger role. One U.S. federal manager noted, "You can't ask the states to police themselves because it is just not going to work." This concern over inadequate state action arises over the U.S. federal government's efforts to restore native species and the state governments' support of non-native fisheries.[5] One manager noted a case where a state in effect vetoed restoration efforts.[6] A federal manager's comment exposes both the nature of the disagreement and the internal conflict that arises for federal managers: "You are helping manage harvest of an animal that you are trying to restore and by all accounts harvest is inconsistent with restoration, especially at the levels where we are stocking."[7]

This conflict arises at least in part from an overlap of authority inherent in the federalist system of government where power is divided between the regional and federal governments. This division creates the opportunity for conflict. While it is important to continue the debate over where decision making authority should rest, current law

---

[5] Federal agency manager:

> *"...the FWS is primarily interested in conserving native fish populations, lake trout, brook trout, lake sturgeon, coregonids, all native species. In the case of states they have that interest too, but they also have an interest in and responsibility to support sport fisheries regardless of whether they depend on native species or introduced species."*

A fishery agency manager referring either to the states or the states and tribes said:

> *"Lake trout is basically tertiary in importance compared to Chinook and coho or even some of the other Pacific salmonids. They are not as motivated to restore lake trout as let's say the federal government is, and that's something that we have to deal with and be diplomatic about."*

Fishery agency manager:

> *"For native species restoration there are tensions between the different policies. For example, rebuilding the coaster brook populations conflicts with the policy of stocking splake and salmon."*

[6] Fishery agency manager:

> *"For example, we try to restore Atlantic salmon in some of the tributaries... [and there are] some feasibility studies that indicate that there may be some habitat there for restoration efforts, and the New York DEC says, 'We don't support it. We don't support it because it would interfere with, compete with the Pacific salmon that are stocked over there.' ...As one [state] biologist put it, 'It would be biological pollution.' So we stopped."*

[7] Additionally, another fishery agency manager stated:

> *"Our agency stocks all of the fish, but we have no control over the harvest."*

suggests that increased federal involvement is constitutionally permissible.[8] For example, the Commerce Clause provides legal authority given the commercial implications of the lake trout fishery and endangered species (to the extent that lake trout could be considered endangered or threatened), even though the states have historically held primary management authority over fisheries. While states have historically managed natural resources within their jurisdiction, the U.S. Constitution provision of multiple avenues for federal government encroachment into harvest management presents an obvious overlap in authority that could lead to conflict if that power is utilized.

Native American Fishing and Management

Native American fishing and fishery management have been and remain conflict-riddled issues for Great Lakes fisheries.[9] Interviewees mentioned issues related to the recognition of rights to fish and manage the fishery, determination of the extent of those rights, and implications for state and federal governments.

One tribal manager commented that the first hurdle to tribal action is recognition of specific rights:

> The obvious threshold issue that one must always face in the realm of ceded territory, reserved treaty rights, is the fundamental question do the rights continue to exist? And if so, who recognizes that they exist? ... Set a net, grab a fish, grab a plant, grab a blueberry, grab a sugar bush, you name it. There is that aspect of recognition.

Still, recognition of Native American tribal rights to manage and harvest fish on the Great Lakes was not identified as a current issue. However, as discussed in the previous chapter, First Nations in Canada are still in the process of attaining recognition of their

---

[8] See Chapter Four pages 56-61.

[9] Perhaps best demonstrated when a lower Great Lakes fishery agency manager noted:
"I thank our lucky stars we don't have to deal with tribal issues."

Great Lakes fishing rights. The lack of a decision for or against recognition of rights for most First Nations clearly presents a gap in the legal framework.

The extent of Native American tribal rights remains legally ambiguous in some areas. While litigation over tribal rights has generally focused on the authority to regulate and harvest allocation, one manager wondered whether those represented the extent of tribal rights:

> Do the tribes [currently] have standing to participate in and have a say in whatever decision some other jurisdiction might make? Like, do we manage this lake for bass or do we manage if for walleye. You know that type of thing. Do we stock salmon or don't we versus lake trout? But then you get to the point, well wait a minute do the tribes have a coequal voice that they have in essence veto authority over the decisions of that other jurisdiction. If the tribes say "No" does that stop the other jurisdiction?

Two other managers commented on the possibility of an implied right to protection of habitat.[10] One manager identified the rationale behind such a right, asking, "What good is the right to fish if... all habitat is destroyed and they don't come back?" Legal scholar O. Yale Lewis III claims that such a right exists under the Steven Treaties that protect fishing rights for some tribes in the U.S. Northwest.[11] However, neither the courts nor Congress have addressed these issues in the Great Lakes context.

---

[10] Fishery agency manager:

> *"And then there's also the habitat part of it. The environmental part of the treaty right or habitat part of it."*

Fishery agency manager:

> *"[Tribes] often use the treaty rights and the consent decree to say hey, our treaty rights are no good if the habitat is destroyed and the fish go with it."*

[11] O. Yale Lewis III, Comment – *Treaty Fishing Rights: A Habitat Right as Part of the Trinity of Rights Implied by the Fishing Clause of the Stevens Treaties*, 27 AM. INDIAN L. REV. 281 (2002). Lewis' argument was case specific to the Stevens Treaties and does not seemingly rely on a broadly applicable principle that any treaty protected fishing right requires an implied habitat right. Lewis, *id.*, at 297. Whether such a right exists for any tribes Great Lakes tribes would require a separate determination based on specific Great Lakes treaties.

The existence and extent of tribal rights impact the authority of the other jurisdictions involved. A fishery agency manager discussing the likely litigation over inland fishing rights said:

> And when it is all said and done, I don't know how different tribal regulations will be from state regulations. Chances are not enough to be worth all the hype that goes with it. But it is a management and a control issue. The [state] is relinquishing some control over managing and it doesn't like that.

Thus, we see an overlap of authority between the states and the tribes similar to that between the states and the U.S. federal government. The legal resolutions of the issues are also similar, as discussed in the previous chapter, the treaties are supreme to state management authority as part of federal law.

Tribal fishing rights and harvest management authority also affect the authority and activity of the U.S. federal government. Managers specifically raised questions about the extent of the federal trust responsibility to the tribes. U.S. federal agency managers felt that their duty was to provide resources and technical support.[12] In the context of the negotiations over the 2000 renewal of the consent decree that governs tribal fishing in ceded waters of the 1836 Treaty in Michigan, one manager said the

---

[12] Fishery agency manager:

> *"[The] Bureau of Indian Affairs' trust responsibility to the tribes is to support their management authority by providing funds and administrative support for fish and wildlife management programs. The Services' trust responsibility to the tribes is to provide technical assistance to the tribes in fielding those programs so that they use the best science."*

Fishery agency manager:

> *"[The federal trust responsibility] basically means that the federal government is basically looking out for the welfare of Native Americans and assisting them in their self-determination activities, to manage resources, provide them with assistance in how to manage resources, provides them with equipment. And anytime there is an assistance request for technical support we fulfill that."*

federal government adopted a mediator-type role where they would side with the states if there was a conservation issue at stake, but would otherwise support the tribes' position.[13]

Tribal managers suggested that tribes view the trust responsibility more broadly, specifically, that it requires proactive action to repair harms inflicted upon the resource. As one manager noted:

> [The] federal government is a party to the consent decree as well, and their primary interest in it should be as the trustee of the tribe, but more often than not it tends to be protector of lake trout rehabilitation in Lake Huron and Michigan.

Other managers characterized the tribes' stance on this issue similarly.[14] One manager noted that the role for U.S. federal managers of providing resource and technical support may become less important as tribes increase their technical expertise and tend to those issues on their own:

> [T]hey want to do it on their own. More so these days, because they are hiring their own biologists, they have been for 25 years. It's a big part of their natural resource identity now to have their own staff.

Under this scenario, if resource and technical support is considered the extent of the federal government's duty to tribes, once tribes attain a sufficient level of expertise the

---

[13] Fishery agency manager:
"If the state would raise a conservation issue or whatever, that had a lot of merit to it and tribes weren't paying attention to it, then we would bring that up with the tribes saying you're not as defensible as the state's position and therefore you should consider modifying your position. And in the same token, if there wasn't much difference between the positions, we might go to the state and say there isn't much difference so the tribes have some prerogative here and we would probably support the Indians."

[14] Fishery agency manager:
"Tribes can look at it as you should provide us a lake trout for harvest because it is your fault that lake trout went extinct. They look at it that way. [We] look at it more as providing technical assistance for them to manage their own resources, because they are the co-managers."

Fishery agency manager:
"All they want to do is build up the lake trout biomass, probably overcome all of these impediments. If you get enough eggs, it doesn't matter if half of them die, eventually something is going to slip through, that kind of philosophy. We are saying that's just ridiculous, to get that size of a lake trout population you are virtually going to have to stop fishing... And that's not why we are here, we are here to manage a commercial fishery."

trust responsibility would apparently end. However, it seems unlikely that the courts would consider that a reasonable interpretation of the trust responsibility even under a highly deferential standard of review. This conflict over the nature of the trust responsibility largely revolves around the U.S. native species policy, particularly lake trout rehabilitation.[15] The federal concern in this situation is the same as for non-tribal harvest; that restoration and harvest do not mix.

The area of tribal fishing rights and management authority abounds with gaps, overlaps and conflicts. This was seen in the range of topics discussed by managers. While managers expressed some qualms about the litigation process[16] and one state manager felt that tribal litigation impeded the ability of tribes and his state to communicate,[17] managers on both sides of the issue felt that litigation will continue to play a role in this area.[18]

---

[15] Fishery agency manager:
"Another conflict we have with lake trout is the fact that, with regard to the treaty fishery, we also have an obligation to provide fishery trust responsibilities to tribes. And so of that, depending on who is interpreting it, could be either providing for harvest or helping them manage a fishery or something like that."

[16] Fishery agency manager:
"[I]f you read the fisheries act it says you shall not add a deleterious substance and you can't destroy habitat [but] when you get into court some of those things become a little bit more nebulous. I acted as an expert witness earlier in my career and the defense lawyer was asking me if a thimbleful of silt was a deleterious substance in a river, meanwhile they had sent a huge plume of silt into a river that had been running gin clear."

[17] Fishery agency manager:
"I think there is a lot of problems dealing with tribal issues, and talking directly to tribal governments. I think there is a huge problem with that, and it will not go away. At least not till the cases are all done... [because] you don't want to expose what your position is until you have too. And you might have multiple positions depending on what is going to happen to you."

[18] Fishery agency manager:
"I will put it this way, if there was a federal decision that we have to honor them as a valid fishing partner, we would bring them to the table and try to get them in the mix so that they are not operating in an unregulated fashion. Shy of any kind of federal decision, we are not going to do that."

Fishery agency manager
"There are just some [tribal fishing] issues that are incapable of resolution without a court case. Or without a strong shadow of the law that clearly indicates that a court case would be useless.

Fishery agency manager:

INTER-JURISDICTIONAL MANAGEMENT

Consensus and the Joint Strategic Plan

As discussed in Chapter Four, decisions at lake committee meetings are made by consensus. However, before a decision is made one must ask what issues the lake committees should address in the first place. The Joint Strategic Plan for Management of Great Lakes Fisheries requires consensus decision-making "when management will *significantly* influence the interests of more than one jurisdiction."[19] What constitutes a "significant influence" in practice has not been readily defined as suggested by the comments of one manager who stated, "It hasn't been discussed very much. It is kind of intuitive; people know when a big issue comes up." Another manager said that everything was decided by consensus.[20] Yet, when asked in a follow-up question whether there are internal rules made by his jurisdiction that are not subject to a lake committee vote, he said: "It's not their business... As long as you are not taking more than your share, it's really not anyone else's, I won't say business, but they don't have a say in the matter." The lack of a specific directive as to which issues require referral to the lake committee presents a clear gap in the legal framework.

"And this is another point of tension since some states don't believe that or they wont operate in that way unless it is dictated through federal courts. It always tends to go into court."

[19] A Joint Strategic Plan for Management of Great Lakes Fisheries, June 17, 1981 (as amended 1997), *available at* http://www.glfc.org/fishmgmt/jsp97.htm (last visited June 28, 2006)[hereinafter Joint Strategic Plan]

[20] Fishery agency manager:

"Well, we really base everything on consensus. I don't recall any discussion over does this qualify as a consensus basis or not. It's always been that we reach a consensus on any decision. That's the way its been. The way it's worded in the strategic plan [I don't know], but the way it's really practiced, if we are sending a meeting date [even], we reach consensus that this works well for everybody. Or if it's a non-quota decision, like if we want to adopt a position statement, we use consensus."

Inclusion on Lake Committees

While lake committee decisions may require consensus amongst the members, it is only a consensus amongst those who have a seat at the table. Lake committee members include Ontario and state fishery or natural resource management agencies, the Chippewa Ottawa Resource Authority (CORA), and the Great Lakes Indian Fish and Wildlife Commission (GLIFWC).

First Nations are conspicuously absent from the lake committees.[21] One manager noted that:

> In the US, the tribes are much better organized and tapped into the system, both of those groups have signed on to the strategic fisheries plan, are part of the Lake Superior technical committee and Lake Superior committee. The First Nations aren't engaged at all.

The Saugeen Ojibway claim that the Ontario Ministry of Natural Resources is behind the exclusion of First Nations from the lake committee process.[22] However, the Ministry claims that it "is willing to agree to more co-operative approaches to fisheries resource management planning and decision making" with First Nations, although the Ministry also notes that the agreement with Saugeen Ojibway was "to an extent, precipitated" by litigation.[23] The lack of a voice for First Nations in the inter-jurisdictional Great Lakes fishery management structure, particularly on the lake committees, is a clear gap.

---

[21] Fishery agency manager:

> *"Yet at the same time, I think you have a number of First Nations around the Great Lakes area [...] that really want to be involved in the [lake committees, etc]"*

[22] Saugeen Ojibway Nation Territories, *Jumping to Conclusions: GLFC, Conflict of Interest and the Problem of Stocking Exotic Salmon in the Great Lakes*, at 10-11 (Paper at International Association for Great Lakes Research Conference, May 24-28, 2004).

[23] Ontario Ministry of Natural Resources, THE REGULATORY ROLE OF THE ONTARIO MINISTRY OF NATURAL RESOURCES AND THE MINISTRY'S RELATIONS WITH ABORIGINAL PEOPLE 17, *available at* http://ipperwashinquiry.ca/policy_part/projects/pdf/mnr_relations.pdf (December, 2005)(last visited August 15, 2007).

Additionally, multiple federal agencies in both the U.S. and Canada, while having a role in the lake committee structure, are not full voting members. One interviewee noted how much this bothered a former Great Lakes U.S. Fish and Wildlife manager, stating, "This is what really ticked [him off]... he didn't feel that we should be observers... We are a federal agency and we don't have a vote on the lake committees." Another federal manager noted similar concern over the situation, stating "That's a huge problem. We probably have as much invested into this as anybody, yet we don't have a seat on it."

Generally, participation by commercial or sport fishers, or other interested members of the public occurs at the state, provincial, and tribal levels. The type and extent of public participation varies widely across jurisdictions and issues, but generally consists of notice and comment periods and public meetings. One manager noted that the standard notice and comment mechanism was not effective for informing the general public, specifically because the mandated means of notice did not actually notify many potentially interested or affected parties.[24] Still, it was noted that additional steps are taken to involve the public, especially on controversial matters.[25] Managers supported

---

[24] Fishery agency manager:

"Well our comment period begins with publication of a notice in the [state's] bulletin, which is I guess from a common persons point of view a fairly obscure legal publication, which is hard to get your hands on unless you have a computer or go to a library. People who become active, activist in dealing with us, do that now... but I would say that the average, ordinary angler is clueless unless we give them special notice."

[25] Fishery agency manager:

"So we know these people, and we can get a pretty good reading with them on whether they are going to react, which way they are going to react on a proposal. If it is a controversial one we will set out open houses, make an effort to educate people, as many as we can. They are open to the public. It's not required by law; we do that if it is a controversial decision."

Fishery agency manager:

"So from October then to the following July of 2005, we have the opportunity to talk with folks about it get their sense as to whether or not it is palatable. Get there sense as to whether or not it is really going to create any great deal of angst... So if there is a lot of opposition or folks really don't like

increased public involvement in order to gain public acquiescence to new regulations.[26] On the other hand, managers noted that public participation can slow down the regulation creation process[27] and could lead to management decisions that are uninformed[28] or based on the desires of that vocal minority who tended to show up at public meetings.[29] While, these comments point to the difficult in implementing a robust public participation mechanism, a clear gap is the limited role for commercial or sport fishers, or other

---

the idea, okay it is not a big deal. But now we have literally about nine months worth to discuss these things with folks and react to them."

And in one instance additional public participation allowed for proposed regulations to pass quickly through the formal notice and comment process. That fishery agency manager said:

"You want to have this set of regulation proposals that are basically going to fly through our formal state process."

[26] Fishery agency manager:

"In that regard we encourage that vested interest and commitment on our stakeholders, so that when a new regulation is imposed they know that the population is in decline, they know what the options were for regulating that problem, they have ownership for the decision; so once it's implemented they will abide by it."

[27] Fishery agency manager discussing changes to the Fisheries Act:

"It takes time to do it. But you have to do all the public consultations, and that takes quite a while anyway... Going through all whole federal process of being listed in the registry. Quite a formula there. Quite a structure... [And] that could be a problem, and in this case, it did create some management issues in the field."

Fishery agency manager:

"The formal process itself, say we started in September if we don't have to substantially change any of the proposals than we are done April 1. So we are looking at about six to seven months anyhow. If we are only using that formal public comment period to really get the comments from folks, than it would be very difficult for us to argue with a straight face that with this bass issue that going from no-kill to one fish over 18 is not a substantive change. Substantive change, now we reset the clock, now we have a new package. We go through the whole process again. Now we have another 45 day comment period. Then based upon what we received during that we have to go again. So now all of a sudden we have just moved to another three months and we can't get it done in a year."

[28] In discussing the effectiveness of the LaMP process, one fishery agency manager said:

"In that particular case I thought it had serious flaws. In the end it bore out too, it's still boring out, because we haven't implemented anything. And it has to do with putting too much emphasis on uninformed stakeholder involvement. You can't ask uninformed people to make decisions or to pick a target."

[29] Fishery agency manager:

"Well, when you are in resource management what you find out is that 90% of the people who are happy don't do anything. They don't show up, they are happy. You hear from people that have a bone to pick on some issue. So then you get a forum that is represented by people with bones to pick. And they all have their own little agendas that they want to fulfill. I would argue that they are not representing the public interest at all. That's what we are supposed to do."

interested members of the public on lake committees. As one state agency manager noted,

> "A lot of the business gets done before it comes to the lake committee meetings... The last thing you want to have is have an unfinished proposal in front of 35 people, because you get nowhere."

This would probably not constitute public involvement under most definitions.

To varying degrees, three gaps exist with respect to inclusion on the lake committees, the primary inter-jurisdictional management structure. Specifically, it lacks 1) First Nation involvement, 2) a voting role for federal agencies, and 3) robust public participation.

INCONSISTENT HARVEST REGULATIONS

Managers pointed out that the lack of uniformity in harvest regulations in some areas can present problems.[30] One manager gave an example where different regulations that applied to the same fish population could potentially nullify the purposes of both, stating:

> And I know again particularly in the border waters like the St. Mary's River just outside [it] is problematic in that you have different approaches. One biologist will put a maximum size limit on trying to achieve one thing and another will put a minimum size limit on to achieve something similar but looking at it from a different perspective and that's one of the tasks for the management agencies [to reduce such conflicts].

That same manager noted that incompatible laws can also complicate enforcement efforts.[31] One respondent discussed how inconsistent seasons may have prompted

---

[30] However, one manager noted that uniform regulations are not as important as uniform objectives:
"The uniformity is in the objective that we want to achieve. How we do it is still the property of each individual agency."

[31] Fishery agency manager:
"And I know on Huron one that we are embarking on this trying to make our regulations consistent across the border so that our enforcement people can do their job more effectively."

Michigan fishers to enter Ohio waters, which in turn created accounting problems since the rules were unclear as to whose quota to count the illegally harvested fish against.[32] In that particular case it did not negatively impact the resource,[33] but in another situation that scenario could potentially lead to over-harvest.

Even with the above problems, managers noted that past efforts to move in the direction of uniformity have generally failed.[34] Tradition and values of stakeholders were commonly given as reasons for the failure to create consistent regulations.[35]

Fishery agency manager.

> *"Some of the enforcement people complain that they might run into an angler who has been fishing in Pennsylvania and has a Pennsylvania license where you can keep one more fish than you can here. And they are a little concerned that the guy wasn't really in Pennsylvania."*

[32] Fishery agency manager:

> *"Last year Michigan [had a closed season] in April/May, that pushed a lot of anglers into our waters. So there was probably an increase in fishing pressure from the Michigan side. We didn't count it on our quota, they didn't count on their quota. It's just there and it didn't get accounted at all. So we have been looking for ways to at least get an idea of how much harvest is coming out. And then you have the issue of how to deal with it from a quota perspective."*

Another fishery agency manager also disapproved of variations in seasons, although his reasons were unclear:

> *"I think that probably the single biggest issue that appears on Lake Superior, that causes the most consternation and concern, are different seasons and different regulations for the same species. As an example, some jurisdictions will allow the harvest of lake sturgeon, other jurisdictions do not... So you have the same species, obviously you are talking about the same fish, [and] depending on which jurisdiction they are in can or cannot be harvested."*

[33] Fishery agency manager:

> *"We are so far under [our quota] that from a resource standpoint it is not an issue. It's just an accounting problem."*

[34] A fishery agency manager in discussing efforts to create uniform regulations said:

> *"The management jurisdictions just cannot get it moved ahead at this time."*

Fishery agency manager:

> *"I know Ontario tried to do this I would say 10 years ago, maybe 8 years ago, they had a big push to try and standardize at least all the regulations on the lake proper, and you know it just didn't seem to get very far."*

Fishery agency manager:

> *"There is just a lack of follow-through in the uniformity of regulation as it relates to let's say a common objective. A restoration objective, a harvest objective, a size limit or anything like that."*

[35] Fishery agency manager:

> *"It's been a longtime tradition in New York to close spawning seasons. And it has been a longtime tradition in Ohio not to close spawning seasons... [For one] we don't have any biological evidence that says we need to do it. So if we do it it's going to hurt some of our fishers... and we don't have any compelling reason to think that it is going to make a bit of difference. Other than it's a human tradition... we just have always done it. Our people wouldn't want it any other way, we have always had seasons. It's like opening deer season, people look forward to opening day. I don't think that they want you to change it by two months every year or something."*

Other concerns may have prevented adoption of uniform regulations between multiple jurisdictions. One manager noted a desire to create uniform regulations within the state rather than throughout a multi-jurisdictional lake. He said:

> [A]s an agency we are also concerned that our Lake Erie regulations, if possible, be the same as the rest of our state, so that someone fishing in the lake 5 miles away has the same regulations as someone in Lake Erie. That can cause law enforcement problems too. You always have this problem, is it better to standardize with your own state, or is it better to standardize with the jurisdiction on the other side of a lake? And that happens in a lot of our boundary waters.

Another manager noted that biological conditions within a lake may necessitate different regulations at different locations around that lake.[36] Finally, one manager noted that lake-wide quotas may potentially prevent adoption of uniform regulations, because some jurisdictions would reach their quotas quicker than others under similar regulations due to differences in the number of anglers per available fish.[37]

There was greater concern expressed over the conflict between restoration efforts and harvest of potentially threatened native species. U.S. federal agency managers admonish nearly everyone for their harvest of species they see as at risk. For instance,

---

A fishery agency manager while talking about the move toward uniform laws said:

> *"And for as rapidly as it has been changing, i.e. not at all, its a difficult nut to crack cause a lot of the regulations have nothing to do with biology. They're social and political."*

[36] Fishery agency manager:

> *"The other thing you have is sometimes just based on the geographical area in the lake and the productivity in that part of the lake, a lake the size of Lake Superior can have hugely different productivities in different parts of the lake. Chequomegon Bay in Wisconsin is almost like a cool water lake within a lake, and along the Minnesota shoreline it is very much an oligotrophic system, very unproductive, steep shoreline drop offs and people don't quite understand why we maybe don't allow as much harvest or we have harvests at different times of the year than they might in Chequomegon Bay. But they just say well it is all Lake Superior how come you guys are different."*

[37] Fishery agency manager:

> *"If commercial fisheries were to go away on Lake Erie I would say that we don't need quotas any more. We would probably work more toward unifying sport fishing regulations. But as it stands now, because everybody has different quotas, and Michigan's walleye quota for example is pretty small, because their service area is small, and there are times when they are literally going over or knocking on the door and have to take a drastic measure like shutting down a prime period of fishing to try to regulate angling effort to stay within the quota. We don't have that issue so it is difficult to standardize regulations."*

they chided the Canadian commercial harvest of American eel and sturgeon.[38] Canadian managers defended their position, at least on the sturgeon, by pointing to the healthy natural reproduction of the fish on their side of the border.[39] And there is continuing debate about the harvest of lake trout as discussed previously.

Another discrepancy in harvest policies exists between the tribes, First Nations, and Canadians which favor commercial fishing and the states which focus on sportfishing.[40] Managers noted that this led to tension between the different stakeholder groups, from commercial fishers not trusting creel surveys[41] to sportfishers expressing a general disdain for commercial harvest.[42] The difference in focus may also complicate

---

[38] Fishery agency manager:
"We say that we shouldn't be fishing for American eel because there are not enough out there, but the Canadians say that we have an industry, this is people's livelihood. These people have been fishing for American eel for generations. We're not going to ask them to stop it. So there's a conflict, and we recognize that and work around it."

A fishery agency manager describing the plight of sturgeon in the Great Lakes:
"Their numbers are low, but they are reproducing in some areas, and actually when you start looking for them there are more animals than you thought, especially in Lake Michigan. And the unfortunate thing is that you have got Canadians who have commercial fishing for sturgeon... It's crazy."

[39] Fishery agency manager:
"On the Canadian side rivers aren't so dammed and maybe we have better spawning habitat. So if we have better spawning habitat we can produce so many sturgeon per year and maybe they are available for harvest."

[40] Fishery agency manager:
"My understanding is that on US side there's charter boat and sport fishing and on the Canadian side it is commercial fishing."

Fishery agency manager:
"Commercial fishing in Ontario is a difficult issue for the state agencies to deal with."

Fishery agency manager:
"I think between the tribes and the states, the state of Michigan, there is a huge policy difference. Back in the 60s Michigan made a conscious shift from managing Great Lakes for commercial use to managing for sportfishing use."

[41] Fishery agency manager:
"From one perspective when you have a commercial fishery that fishes on a tug and he is required to report how many pounds of fish he lands each day... But then you have all these anglers out there so you can only generate an estimate and the estimate is only as good as your sample size and your creel survey design. So you are comparing hard numbers with estimates. That's the perspective I think that our commercial fishermen bring to the table is that we are tightly controlled, now control your anglers."

[42] Fishery agency manager:

quota management because use of indiscriminate gear by commercial fishers does not allow for species by species allocation preferred in sport harvest management.[43] The sport versus commercial divide also leads to conflict in defining what constitutes a desirable community structure. As one manager noted, it basically comes down to large fish versus large *amounts* of fish:

> We, particularly on the state side, are happy to fish relatively conservatively, because recreational anglers want bigger fish. And bigger fish usually means fishing at a relatively lighter exploitation rate to allow escapement to larger size. Whereas if you're looking at the yield in pounds, there are other harvest strategies that are more aggressive.

Other managers echoed similar concerns.[44] This discrepancy is best described as conflict in policy, but it also points to a gap in the broader legal framework in that no law provides guidance on which particular fish community structure should be the goal of management actions.

Multiple jurisdictions with inconsistent regulations may also lead to a more complex enforcement situation. Duplication of enforcement efforts does exist for tribal

---

"So numbers-wise the sport swamp the commercial in terms of numbers. So any public hearing or public vote, you are going to hear a lot of anti-commercial sentiment."

[43] Fishery agency manager:
"That is the heart of the dispute really, when you get right down to it. Because you are splitting up the pie, there are so many fish and so many species, draw up a pie and start dividing it out. And you get this, I get that, but if my gear which is gill nets catches some of your fish, well than that screws up the splitting up of the pie."

[44] Fishery agency manager:
"It all comes down to forage and how it is allocated between the two species. Lake trout are engineered to live long and they don't have to do everything in three or four years like a chinook salmon does, where the [ontogenic] demand is so great, when you have a low forage base, chinook salmon feel it more so than lake trout. Lake trout don't have to eat it as much, and gain their apical size in three years. So it is not that much of a big deal."

Fishery agency manager:
"I am not sure that these fit neatly into any of the categories of regulation, but how are we managing to achieve restoration of native species where we can and also provide a quality sport fishery that is riding on the back of exotic species at this point. Whether it be managing the forage base to ensure that you can have good chinook salmon or how you manage chinook salmon or coho salmon and at the same time try to achieve lake trout rehabilitation and maybe get some of the native corigonids and other native forage fishes restored."

fishing. One respondent provided the following rationale that presumably led to this overlap:

> I suppose the state didn't trust the tribe and the tribe didn't like the state enforcing... on the tribal fisherman. Thought they were being unfair and picking on them, that kind of thing.

This distrust resulted in the use of joint patrols.[45] On the other hand, a Canadian manager noted the lack of federal involvement in fishery regulation enforcement.[46] While it seemed that any additional enforcement efforts would be welcome, that manager said "In fact we have gone the other way. We want to ensure that enforcement agencies don't duplicate services."[47] It is unclear why an overlap would be problematic, especially given that managers recognized a need for more enforcement efforts.[48]

The lack of uniformity also extends to monitoring of harvest and stock status. For monitoring, one manager noted that difficulties arose in attempts to adopt uniform practices.[49] Managers did not mention any specific institutional constraints that impeded

---

[45] Fishery agency manager:
"So they have these joint patrols now. And from what I understand those are going well."

[46] Fishery agency manager:
"Because the responsibility has been delegated to the province, we don't have fisheries officers here enforcing the federal fisheries act, except for the habitat provisions."

[47] Fishery agency manager.

[48] Fishery agency manager:
"The only problem of course is the lack of officers."
Fishery agency manager:
"I would say the resourcing is probably limited. In our case we have officers that are responsible for close to 800 km of shoreline. We don't have one commercial fishermen every kilometer over 800 km, but if you have commercial and recreational fisheries and habitat alterations over 800 km of shoreline, what's the chances that you are going to get an officer unless he is out there flying back and forth."

[49] Fishery agency manager:
"For some data sets like the commercial harvest data sets or the stockings record database that the fishery commission or the USGS maintains, those have worked out okay. But it gets difficult when you try to break it into other types of data or finer scales. That's been our whole problem. Some of it is complexity, some of its because the databases weren't set up for standardized reasons in the first place. We have several interagency surveys that we do with other agencies and there have been issues there with trying to adopt protocols. In some cases we have been very successful in adopting

attempts at uniformity. One respondent, however, felt that data ownership practices by some agencies inhibited data sharing agreements. He stated:

> And another thing we are struggling with is these data management agreements. Like sharing data back and forth. I think all institutions have their own regulations and rules about that. They want to keep ownership of the data they have, but if we are going to operate on a basin wide basis we need to share freely. So that's another issue that has a long way to go before it is completely resolved.

The manager noted that the GLFC has and should continue its efforts at improving data sharing across the Basin.[50]

While not related to harvest *per se*, consumption advisories are another area where inconsistencies exist. For example, incongruous standards occur between commercial and recreational consumption standards. One manager expressed his dissatisfaction:

> The major problem that I had with this was the dichotomy between recreationally caught fish and commercially caught fish in terms of the consumption advice provided with those fish. Whereas the FDA regulation for commercially caught fish is do not eat over 2 ppm of PCBs, but for recreationally caught fish there were gradations under do not eat. Those gradations do not exist for the commercially caught fish. Right or wrong I don't know but it has caused me much anguish in applying this internally within the state. It caused our commercial fishers much anguish when our agency is issuing this multi-stage consumption advice to limit consumption to certain amounts per month or whatever and the commercial fishers are saying, it's okay for you but it doesn't apply to us. Difficult. And from a policy point of view I think seriously misguided, but that's my point of view.

---

a protocol, in other cases we have had agencies change midstream and say we are not going to do it that way anymore. And the interagency system basically goes away."

[50] Fishery agency manager:

"The [Great Lakes Fishery] Commission is leading [development of a GIS program for Lake Huron]. And I think the commission could and should have a leading role in moving those initiatives forward, because they have done it so well with the lamprey... There's no reason why we can't do that with a variety of hope other types of programs."

And other managers with commercial fishing constituents noted that contamination advisories, whether accurate or not, can hurt commercial fishers by scaring away customers.[51]

Concerns were also expressed over possibly inconsistent, inaccurate, and overly general consumption advisories.[52] Tribal fishery managers pointed out that their members eat fish more frequently,[53] which suggests that tribal managers would be more concerned with the topics of fish contamination and consumption advisories in general.

The range of inconsistencies in harvest regulations, monitoring, and consumption advisories seem to signify an inherent problem with dividing management of a resource amongst multiple jurisdictions. Different people tackling complex problems such as those found in fisheries management are unlikely to arrive at the same solution, possibly not even the same problem definition. A jurisdictional map drawn without any reference to the ecological system of the Great Lakes and its encompassing basin makes resolution of these differences more difficult.

---

[51] Fishery agency manager:
"Obviously [consumption advisories] can be damaging, it can chase people away. That's the problem. It could make it very difficult to sell commercially caught fish."
Fishery agency manager:
"The fastest way to put us out of business is through invasive species first or by making a fish inedible. Whether in real life or perception it doesn't matter, if people think they can't eat fish, they don't buy it. So our commercial fishery goes down the tubes."

[52] Fishery agency manager:
"We do the skin off test, not the skin on. The state of Wisconsin is doing the skin on. Why? You're diluting. People eat the filet so why are you testing the skin which the people don't eat? So we're trying to get a better reading... We want to sample particular lakes where we know tribal members harvest. A statewide advisory doesn't help members. It might help us white guys who catch a few fish here and there, and might have a meal here and there. But it doesn't help people who depend on [fish for their diet]."

[53] Fishery agency manager:
"It is an important food source, part of a traditional diet, and we know there is a lot of spearing and netting walleyes, its a part of treaty rights here in Wisconsin and in Minnesota. Its part of an overall healthy diet and is consumed in larger quantities in spring and fall because of the way that fish run."

ALLOCATION

Great Lakes managers face numerous allocation issues. And as one manager noted "Any time that you are divvying up the catch among states of a water body, or are allocating, there is stress there." One interviewee suggested that the contentious nature of allocation debates was due to managers' sense of duty to obtain more fish on behalf of their stakeholders.[54] The allocation issues that managers discussed included allocation between jurisdictions and dividing catch between sport and commercial harvesters.

The Lake Erie Committee determines lake-wide allocation numbers. One manager noted "Basically, after the number of fish available, the estimated abundance of fish or harvest, [is determined] there is basically just a formula to say who gets how many." Interestingly, different allocation schemes exist for different species within Lake Erie.[55] Specifically, the perch quota was split based on the surface area of the lake held by a jurisdiction, while walleye were divided up between jurisdictions based on the amount of habitat available. Also, one fishery manager noted that his jurisdiction wanted one type of allocation lake-wide, but used a different one within state waters.[56] Those formulas have been the subject of ongoing change and heated debate,[57] but why certain

---

[54] Fishery agency manager:
"I think those sorts of issues [conflicts over allocation between jurisdictions] get driven by stakeholders. You have got a responsibility to represent your stakeholders, and I think in both cases that was what it really was all about."

[55] Fishery agency manager:
"It's a little different then perch, it's based on agency boundaries. The walleye example was based on a definition of habitat."

[56] Fishery agency manager:
"So we came back and asked, we want to return to surface area shares [and their reply was] no, we ought to be based on historical connections... For our internal needs to allocate... between sport and commercial users... we use a historical approach... So it's a valid approach, it is used in other fisheries, but that was the point of disagreement."

[57] Fishery agency manager:
"And I know that this transition from historical catches to area related catches has been going on for a long time."

formulas are chosen over others was not entirely clear from the interviews conducted for this research.

Managers also noted a few intra-jurisdictional allocation issues. As discussed in the previous section, one matter is dividing catch between sport and commercial harvesters. Another issue is allocation between anglers in the tributaries and the lake proper, since the desires of fishers in the two locales may require different harvest strategies.[58] This conflict arises over debates of quality versus quantity and fish community composition, which is similar to the disagreement in sport and commercial harvest allocation decisions. Along those lines, jurisdictions with a relatively small portion of Great Lakes waters face the problem of splitting funds between Great Lakes and in-state management activities.[59]

The only allotment determination attributed to any formal law was allocation between tribes and states, and even in that context little guidance is provided.[60] Additionally, the allocation question may drive gear disputes. A tribal manager

---

Fishery agency manager:

> *"We had a dispute over the sharing formula for yellow perch in the late '80s early '90s... We went to the commission to invoke some sort of resolution."*

[58] Fishery agency manager:

> *"Participation in our tributary fishing is actually increasing. And we have always managed the lake for the Lake fishery. And whatever happened in the tributary fisheries there just happened. It was just gravy. I think some of the other Great Lakes are pretty much in the same boat as we are... And [the tributary anglers are] a little different clientele and different crowd... So now we have these trib anglers, a lot of them say one fish would be fine, whereas we have lake anglers now who still want to maintain a box full of fish because that indicates that fishing is great and it's fine... It's a little bit of this allocation now, we have several species out there and the trib anglers really only care about steelhead. For the lake anglers steelhead is really not a big deal. It's primarily Brooks and brown trout. So now once we try and tweak something more along the lines that might be more favorable to trib anglers, the lake anglers get their underwear in a knot."*

[59] Fishery agency manager:

> *"We are probably spending, if you look at an estimate of 50,000 anglers, 3 to 4% of our anglers fish Lake Superior and we are spending 8% of our budget on Lake Superior... So there is a fair amount of energy, relative energy to what we have, going into Lake Superior. Is it adequate for that size of body water? No. You could do so much more, what we are probably doing about as much as is feasible in terms of percentage of budget."*

[60] *See* text accompanying footnotes 277-80 in Chapter Four.

suggested that allocation may be an underlying reason for the discontent over tribal use of somewhat unselective gill nets, which complicates attempts to allocate by species.[61] Beyond allotment between tribal and non-tribal fishers, tribes face allocation issues when dividing treaty waters amongst themselves.[62] As discussed in Chapter Four, tribes hold treaty rights, yet many treaties were signed by multiple tribes. Thus, the question arises whether tribes share treaty rights in common with other tribes throughout the ceded territory or if rights should be divided up, perhaps based on historic use.

Many gaps exist with respect to allocation of Great Lakes fishery harvest in that no law guides these decisions both intra-jurisdictionally and inter-jurisdictionally. This is surprising given the highly controversial nature of the issue. One exception is the few cases that have partially outlined the rights of tribes vis-à-vis the states in terms of allocation of harvest.[63]

THE PUBLIC TRUST DOCTRINE AND OPEN ACCESS

There are a number of types of laws and regulations aimed largely on limiting the harvest of fish, namely, setting of seasons, gear restrictions, location restrictions, effort limits, size limits, species limits, licensure. One means of limiting fish harvest is to simply set a total number of fish available for harvest from a particular body of water or area. Such a limit is referred to as total allowable catch or TAC. TACs are not

---

[61] Fishery agency manager:

> *"That is the heart of the dispute really, when you get right down to it. Because you are splitting up the pie, there are so many fish and so many species, draw up a pie and start dividing it out. And you get this, I get that, but if my gear which is gill nets catches some of your fish, well than that screws up the splitting up of the pie."*

[62] Fishery agency manager:

> *"There are some tribes in the U.S. v. Michigan context as well as in our context that will exert some territoriality. Other tribes will believe no these rights are shared in common and you can't keep us out, and they try to work things out."*

[63] *See* text accompanying footnotes 277-80 in Chapter Four.

universally applied in the Great Lakes. One manager explained that they are not used on Lake Superior because, "The lake is big enough and the areas are confined enough between each other that each state essentially decides what level there is for harvest within their own area." TACs are used on Lake Erie and then the lake-wide limit is divided into TACs for specific species for each jurisdiction. As to why TACs are used versus any of the other available means at limiting catch, one manager suggested that they only exist because of the existence of commercial fishing.[64] Specifically, he felt the economic motive of commercial fishing was to blame:

> One is economically driven, the other is recreationally driven, purely. People will say that sport fisheries are economically driven, no, there is an economic benefit. Other than charter captains which is a minority of any fishery, people are fishing to recreate or to get food. They are not fishing to make money. Commercial guys wish to make money. Those are two incredibly [different] objectives and it drives them differently.

Presumably, he meant that an economic motive for commercial fishers drives them to increase efforts in unregulated activities making limitations other than TACs impracticable. For example, if gear is regulated a fisher might increase the number of hours spent fishing.

Catch limits can be applied not only to jurisdictions, but to individual fishers either in terms of bag limits for the sport fisher or quotas for commercial fishers. One provincial agency manager noted that managers in the 1980s determined that regulations based on gear restrictions were insufficient to prevent over-harvest.[65] Thus, the same

---

[64] Fishery agency manager:
"The only reason we have quota management is because we have sport and commercial interests on Erie... you need quotas to regulate commercial fishing. But you don't need them for sportfishing."

[65] Fishery agency manager:
"We used to use a gear type approach up until the mid-to late 1980s. But at that time recognize that it wasn't working. It was sort of an open type fishery."

rationale behind lake-wide and jurisdictional harvest limits applies to individual commercial fishing operations. Managers in Ontario adopted an individual transferable quota system to directly limit harvest by commercial fishers.[66] Addressing that problem however, created a new problem: enforcing those quotas. As one manager noted:

> [If commercial fishers] feel they are not being watched or scrutinized when they drop the [report] in the drop box when they land their catch they might have 1000 pounds of fish on board, but if there is nobody there they could write down 500 or 800 and put the thing in and then once the fish are off the water... So our officers are challenged with keeping an eye on the fishermen, and that is a cat and mouse game just like speed limits on the highway that enforcement agencies deal with all the time.

A similar concern over the potential for an open access situation was raised with respect to current sport fishery regulations.[67] One manager described it as follows:

> [Our sport] fishery is open-ended, so in that sense even though we say that an angler can only harvest four or six fish of a species we don't regulate the number of anglers that can participate in the fishery. So if there were 10 anglers that can be up to 60 [and if] there are a hundred anglers it could be more.

Here the concern is over the number of anglers, not their effort. However, the likelihood of an influx of anglers is presumably quite small since managers only mentioned the issue in passing and without a great deal of concern.

In the U.S., managers would likely be precluded from limiting the number of anglers under a combination of the public trust doctrine and the U.S. Constitution. The doctrine provides that the public (state residents) shall have the right to access the fishery

---

[66] Fishery agency manager:
"In terms of commercial harvest I think that the system used in Ontario is a good system. It is alternately referred to as individual transferable quotas. It allows us to regulate the amount of fish coming out of the water as opposed to regulating the gear of the type of vessel that the fisherman uses."

[67] Fishery agency manager:
"For example, WI regulates sportfishing by setting bag and slot limits, and not the number of fishers, thus leaving open the potential for over-harvest, even though they haven't been close to having this happen in the past."

on all navigable waters,[68] and the U.S. Constitution prevents states from excluding non-residents.[69] This creates an open access situation unless a state bans fishing altogether or create a lottery system for licenses to limit participants.

While open access is a primary concern of fishery management theorists, it does not seem that managers consider the situation problematic in respect to the Great Lakes sport fishery. This is apparently due to the relatively low or manageable number of fishers. Additionally, the lack of concern may arise from a funding scheme that relies on license fees to support a large portion of the work done by fishery managers, thus, making it in their best interest to have a large number of fishers and use other means to limit catch.

ECOSYSTEM THREATS: GLOBAL CLIMATE CHANGE, HABITAT LOSS AND INVASIVE SPECIES

Managers voiced concerns over a number of threats to the Great Lakes fisheries, including global climate change, habitat loss, and invasive species. These are all notably beyond the traditional scope of fishery management, which focused largely on the problem of overharvest. One state agency manager noted that historically fisheries management had focused on fish and not taken a systemic approach:

> Well I think there are multiple things that you should keep in mind. One is truly taking into consideration what a fishery stands for, which is the habitat, the fish, and the people and integrating between those. Frequently fisheries managers have focused just on the fish and have ignored the other key components, which is by definition what a fishery is. So we have ignored those other components to a great extent, much to our detriment.

---

[68] See discussion in Chapter Four.
[69] See discussion in Chapter Four.

Current management efforts aim to overcome that deficiency through adoption of an ecosystem approach. As one manager noted:

> I think the reality from my perspective is, the key characteristics are understanding the interplay between the habitat, the fish, land use, of course people, and how those all interact to the betterment of the watershed. And if you build the watershed the fish will come.

However, this may be easier said than done, as even the manager above noted, "Nobody knows what ecosystem management is. The first thing you have to recognize is that it is a nice fluffy term but nobody knows what it means." While that manager was likely referring to problems defining "ecosystem," the response of another interviewee also raises questions about what it means to *manage* an ecosystem. That manager recalled that a previous co-worker commented "that you can manage a system like Lake Huron, but you can't steer it." Additionally, ecosystem management takes place on a large scale, and one manager noted that: "We are simply not resourced to function at the ecosystem level."

Global climate change has become an ever greater concern around the world. A report from the Union of Concerned Scientists and Ecological Society of America identify many potential impacts that warming could have on the Great Lakes region, including the lakes themselves.[70] For example, they predict that the temperatures of the lakes will increase, lake levels will decrease, and the length of the summer stratification will increase.[71] All of these could have substantial effects on fish populations, their habitat, and other parts of the aquatic ecosystem.

---

[70] Union of Concerned Scientists and Ecological Society of America, CONFRONTING CLIMATE CHANGE IN THE GREAT LAKES REGION: EXECUTIVE SUMMARY (2005).
[71] Union of Concerned Scientists, *id.* at 4.

Only three managers mentioned climate change. Of concern perhaps, one expressed the following opinion:

> I'm still one of these guys that says prove to me that [global] warming is a real issue. Yeah, what we just took a bubble of air from a 600,000 year old chunk of ice, and it said that the concentration of CO2 was much less... My answer is that we've been coming out of the Ice Age for a million years now. Show me.

The other two managers acknowledged the existence of and threat posed by global climate change. The legal framework for global climate change revolves around the Kyoto Agreement, to which the U.S. has not agreed. In general, few legal mechanisms exist within the Great Lakes region. Perhaps due to that overlying context, it is not an issue that fishery managers deal with in their normal activities.

Global climate change is just one threat to fisheries habitat. Habitat loss was a concern of managers, particularly the issue of water diversions.[72] Other concerns included wetland loss, hardening of shorelines, enforcement problems, and lack of riparian buffer zones.[73] One manager noted a lack of policing for many small projects, and warned of the potential for large cumulative impacts, noting:

---

[72] Fishery agency manager:

> *"The greatest threat? It's not even close its invasive species? If I had to put a list down it would be invasive species and water loss, I guess that is in a way habitat loss, but it is really water diversion. You drop the lakes two feet, you have lost more habitat than you ever will by worrying about some guy developing the shorefront with a condo. But it too gets lost in the shuffle, water diversion. Although, I think that it is the future issue in the Great Lakes."*

[73] Fishery agency manager:

> *"Part of the problem, one of the big problems that we have on Erie is that the human footprint is into coastal margin so far... A coastal wetland needs to vary with water levels, but if you build right up next to the shore it can't migrate in when there is high lake levels. It can migrate out when it is low. There is no problem going out, but to come in it is a problem so to combat that they build armoring devices to keep the water out. Dykes, whatever. That is not good for fish habitat."*

Fishery agency manager:

> *"I think the biggest threat now is the small areas of degradation that are occurring through residential development of lake shores and that kind of thing. Rather than the big-time components, like lumbering and that type of thing."*

A manager noted that small violations frequently occur even on permitted work. Fishery agency manager:

> I don't think there is really adequate policing to ensure compliance and from my perspective habitat loss is a chronic, insidious chipping away of the natural environment. And my sense is the only thing that triggers compliance, is when there is a big hiho working in the water and silt is generated and somebody sees it and complains. But if someone goes in and just manipulates the environment to move the rocks out of the way so that their kids can go swimming, that sort of thing, and there're so many people around the Great Lakes that I think that sort of thing can still have serious consequences.

And another manager bemoaned the lack of land-use planning laws, noting that:

> What we don't have and I think that this might be common throughout the basin is the kind of land-use planning, land-use controls that allows us to deal effectively with broader issues throughout individual watersheds within the basins. And impact of development in those watersheds that aren't in the types of habitats that are particularly and specifically protected by some statutes, like wetlands protection.

While of great concern, habitat loss may be less of an issue for Lake Superior and other areas of the basin with lower population densities. When asked about habitat loss and degradation a fishery agency manager said it was "not that big of a problem around Lake Superior, because of the small population." Still, global climate change and habitat loss are two potentially devastating threats that present clear policy gaps.

> *"[S]o if you wanted to put in a beach or build a dock or dig a slip for a boat, by and large you're doing that work beyond the high watermark into the water and therefore you are in crown land's... and the public lands act required you to get a work permit. So on the work permit you had to say what work you were going to do... so I actually got a student and his job was to take the application from the previous year and go visit the site and see if the person built what they actually said they were going to build and I think the compliance rate was certainly less than 50%. A lot of them were where they built a dock 5 feet longer than they proposed, so not a big deal, but in other cases they added sand or took out some rock or dug a trench or whatever which was not on their permit and in fact that led to some charges."*

One manager pointed to problems proving that actions affecting habitat will have a negative cumulative impact. Fishery agency manager:

> *"We've been arguing a lot on the case for cumulative impacts for these, and every now and then, I think there have been some where biologists from the university system testify for the builder that in fact certain plant diversity or fishing is better next to some sea walls than it is plain. Usually [?] when we lose them, but they have their own experts that testify about the value of some of those structures and what they do, versus what we see as pretty good substantial studies that have demonstrated negative impacts."*

From an ecosystems perspective, managers generally perceived invasive species to be the biggest threat to the Great Lakes.[74] Many potential sources for invasive species exist, including bait release, aquarium trade, passage through canals, and aquaculture. One respondent was particularly concerned with introductions from bait release and noted two specific difficulties, 1) the limited enforcement capabilities, and 2) the inequity of imposing a regulatory burden on small bait shop owners.[75] Another manager said his agency was working on the creation of a "green list" for bait, so that only certain species could be used, instead of having a list of prohibited species.[76] One manager felt that having licenses as the primary funding mechanism diminished the ability of his agency to prevent or control invasive species.[77]

---

[74] Fishery agency manager:

"For threats, certainly I see invasive species as the biggest potential threat."

Fishery agency manager:

"The greatest threat? It's not even close, its invasive species."

[75] Fishery agency manager:

"There really is no reason for someone to be hauling live asian carp through our state. It's still an issue enforcing that. We don't have people out looking for it every day. So it is hard to enforce it...We are also worried about bait bucket transfers. It is a regional problem... The governments down in Arkansas in particular aren't stepping up enough, take some responsibility. That's where a lot of the fathead minnows for bait are raised and that's the vector where you could get carp minnows mixed in with bait, they get sold up here, tackle, it's a difficult proposition to put that on the shoulders of the bait store owner. You're responsible for [searching] through your tank and making sure there's nothing bad in there. In practice that is a hard thing to do. We are concerned that it is probably a more likely vector to have introductions than say the Chicago sanitary Canal and the barrier."

[76] Fishery agency manager:

"We would like to change some of our prohibitive lists into green lists and or at least provide us with the authority to establish green lists. And we want to do it with bait and right now we will have to use that manner of taking and say you can only use these fish for bait. Its weird because we have this list of fish that can be taken and sold for bait, there is no list of what can actually be used for bait."

[77] Fishery agency manager:

"Invasive species, we have a role, an interest in it. It is a difficult area for us to deal with. Difficult for everybody, but it is particularly difficult for us because we don't have a strong mandate to deal with it because of our funding sources... carving money out of license fees to deal with this is almost like a diversion of funds, because that isn't why people buy fishing licenses."

With respect to introductions of exotic species, ballast water is of particular concern.[78] One manager felt efforts should be focused on ballast discharges instead of the other sources: "It's like having a gorilla standing next to you and worrying about the mouse by setting mouse traps and not worrying about the gorilla. If we don't solve the ballast issues the others are kind of small potatoes." Managers suggested an outright ban on discharges,[79] or at least anything that was mandatory as opposed to the voluntary regime currently in place.[80] Ontario, state and tribal managers felt that controlling ballast water is out of their hands.[81] The primary solution proposed was to have the federal government do something.[82] Yet, a federal manager suggested that ballast water

---

[78] Fishery agency manager:
"Well the bigger thing, the bigger threat all throughout the Great Lakes that none of the states really have a good handle on is trying to deal with the ballast water issue."

[79] Fishery agency manager:
"Well, if it's invasives, sure, I mean, we have record numbers of plants and animals and all trophic levels coming in. Basically, the first thing you have to do is shut the door."

[80] Fishery agency manager:
"That's a huge thing, even though there is voluntary compliance now from the shipping industry, nothing is mandatory."

[81] Fishery agency manager:
"In order to slow down the movement of the exotics you are going to have to do something with ballast water to clean it up. And the federal government has not seen fit to do that, and frankly I don't think it is legal for the states to do it."

Fishery agency manager:
"We have a very small staff, but we push it as hard as we can push it. We write as much as we can write. Again we are not regulators. Its the best we can do. We are not regulators of ballast water, we don't have that power. So the best we can do is write letters, lobby and that's what we do."

[82] Fishery agency manager:
"So if zebra mussels are in fact the reason for the diporiea decline. Here you have an example of why the federal government should be more vocal on endangered species with regards to pathways for exotics. If this is zebra mussel effect then the Fish and Wildlife Service should be jumping all over them under the endangered species act, under their authorization of that act and saying where is this going? Is this a trend towards none? And they haven't said anything. They just sit and watch. But I tell you what, if... we could fish these things and we were fishing these things and [this decline in diporiea occurred] five years later, they would be all over us. I'm not kidding they would be all over us. They'd be putting what ever pressures they could saying "hey, you're fishing too hard. Look what you did." But this helpless attitude of we can't stop the shipping industry, that's interstate commerce and blah, blah. They're wimps. And you can put that in your report that their wimps, because I tell them that all of the time."

regulation was unlikely to fall to the U.S. Fish and Wildlife Service and suggested that the Coast Guard may be a more appropriate fit.[83]

In a 1999 report to Michigan Department of Environmental Quality Office of the Great Lakes, former Coast Guard official Eric Reeves conducted an extensive analysis of the U.S. legal framework for preventing new invasive species in the Great Lakes region.[84] Reeves points out that the ballast water control regime arises under the Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990, which mandates ballast water exchange at sea with the aim of pumping out invasives.[85] Reeves noted several problems that limit the law's effectiveness to prevent new species, namely 1) questions over the effectiveness of alternative methods when ships do not conduct an exchange for safety reasons, 2) the effectiveness of the exchanges, 3) a potential loophole for No-Ballast-On-Board ships that do not have to conduct an exchange but may have organism in the residual sediment in "empty" tanks, and 4) concerns over whether the U.S. Coast Guard's salinity standard actually proves that an exchange was conducted.[86] Reeves provides multiple recommendations to address these problems.[87]

The primary legal framework question that arises is: who has authority to manage invasive species? As many managers stated, they thought ballast regulation was a federal matter out of their hands. However, there does exist authority for state regulation and

---

[83] Fishery agency manager:

> *"We have been trying to work with the partners to provide information to allow Congress to regulate the shipping industry. But I think that the regulatory authority will go to the Coast Guard because they are the ones who regulate transportation through the Great Lakes. So it won't be for the Fish and Wildlife Service. Also the Coast Guard is interested in invasive species issues. So that is a better fit for the Coast Guard than the Fish and Wildlife Service."*

[84] Eric Reeves, ANALYSIS OF LAWS & POLICIES CONCERNING EXOTIC INVASIONS OF THE GREAT LAKES (1999)(report to the Michigan Department of Environmental Quality Office of the Great Lakes).

[85] Reeves, *supra* note 84, at 45.

[86] Reeves, *supra* note 84, at 45-58.

[87] Reeves, *supra* note 84, at 45-58.

preemption is likely not a concern as long as "[states stay] away from specifying vessel design or construction requirements" or other standards that discriminate against interstate commerce.[88] States could take numerous steps, including taxes, shore side treatment, and a polluter pays approach.[89] U.S. Fish and Wildlife Service interviewees also shunted responsibility for prevention of invasive species to the Coast Guard. This unclear division of responsibility over ballast water is a gap in the broader legal framework, and the continuing threat of new invasive species and harm from existing species points to a tremendous policy gap.

DELEGATION AND OVERSIGHT

The authority to create laws generally rests in the hands of elected officials in state, provincial and federal legislatures. Governments throughout the basin regulate many of the daily activities of their citizens. In order to accomplish these tasks efficiently, duties and responsibilities are divided amongst different institutions, even though the regulated activities and their impacts are often interconnected.

For example, although pollution has a tremendous impact on fisheries, managers point out that pollution regulation is simply not their job.[90] And tribal managers note that pollution control, at least beyond reservation borders, is completely outside of tribal jurisdiction.[91] Respondents referred to laws within fishery managers' authority that prevent addition of deleterious substances to bodies of water that harm aquatic life, but

---

[88] Reeves, *supra* note 84, at 68, 89.
[89] Reeves, *supra* note 84, at 135-146.
[90] Fishery agency manager:
"Some of this is simply mandate of an organization. Our organization simply doesn't."
Fishery agency manager:
"We do not do pollution control."
[91] Fishery agency manager:
"As tribes we don't have much to say about chemical pollution. We are not regulators of industry, that would have to be left to the state DEQ or the EPA."

opinions on their effectiveness varied. One manager noted that they can be invoked frequently.[92] Another pointed out that it can be rather difficult to prove causation in fish kills involving runoff.[93] A tribal manager noted that his agency has taken steps to notify other governments and comment on pollution issues.[94]

Fish contamination and consumption advisories also involve multiple agencies. One manager outlined a fairly typical institutional structure for fish contamination and consumption, stating,

> The consumption advice is really a [health department] issue. And fish contamination issue is really [an environmental quality department] water quality issue. And we are sucked in because people eating fish is kind of an expectation of our business.

One manager remarked that the number of agencies involved complicates matters, although particular problems were not specified.[95] One state manager complained that health experts tended to set odd or unreasonable advisories.[96] And multiple managers

---

[92] Fishery agency manager:
"Actually, I think that I saw over the last year most of our violations were on pollution, but a lot of it is litter. Litter laws, we get them for that. If they kill anything there are standard fish kill laws I think it is like 10 bucks a fish, for dead fish. So we get that money. If there's a chemical spill, people go out and count fish, there are procedures for that. And they are billed, restitution."

[93] Fishery agency manager:
"Like you go out to some guy who has a farm on the edge of a stream, and you do the upstream and downstream evaluations and say you know runoff from this guy's field is adversely affecting this stream. We would probably have some difficulties sustaining that because proving he is sole cause from a non-point impact or runoff issue would be difficult."

[94] Fishery agency manager:
"We have pushed probably as hard as we can on pollution control, chemical pollution control, through letter writing, talking to legislators, those kinds of things."

[95] Fishery agency manager:
"So one of the problems is that there are just so many players."

Fishery agency manager:
"In most of the jurisdictions the authority [to issue consumption advisories] transcends the natural resource management agency and brings in the public health agency as well, which makes it even more complicated and difficult."

[96] Fishery agency manager:
"Generally when the advisories come out it is some sort of compromise that we work out. We try to keep them from being silly and unnecessarily restrictive in our view. And yet recognize that for some species in some areas there are some issues that you have to be concerned about."

noted that there are things worse for you than fish, and seemed more or less united on the idea that people should be provided information to make choices instead of being told what to eat.[97]

As discussed previously, habitat loss through the hardening of shorelines, loss of wetlands, and other activities is a primary concern of managers, at least those in more populated parts of the Great Lakes Basin. Frequently a separate division or agency will regulate habitat issues. Yet, fishery managers generally have at least an ability to comment on proposals and ask for modifications.[98] That is not to say that their concerns with particular projects are necessarily heeded.

The above examples of pollution, fish consumption advisories, and habitat loss demonstrates the gaps, overlaps and conflicts that can arise from delegation of related regulatory activities to multiple agencies.

Legislators do not have the time nor the expertise to create or make frequent changes to many of the minute regulations needed to manage fisheries. Thus, legislators often pass broad grants of authority that delegate responsibility for the details to fishery management agencies.[99] Still, some regulations are codified in statutes and they elicited

---

[97] Fishery agency manager:

> *"And all you can do is give advice, its advice, that's all it is it is not law. Advice and everybody has to make that decision, if they are going to eat, what they are going to eat and how much."*

Fishery agency manager:

> *"[I]f you are going to give the public consumption advice due to contaminants you have to look at all food stuff or at least all protein sources so they can make a wise choice. If you are not eating fish, what are you going to eat? And is a Big Mac better than a fish from Lake Michigan? How about dairy products, ice cream, known to be high in dioxins, are those better than a fish from Lake Michigan or wherever?"*

[98] Fishery agency manager:

> *"A lot of our habitat protection is done through the division of waters, through the permit process and we then comment on all of the permits. So we see all the permits that go through. And if it has impacts on fisheries we will write what those impacts are. We may give recommendations on how the project could be modified or we may say don't do this project."*

[99] See discussion in Chapter Four, at 60-61.

complaints from managers. For example, an agency manager made the following observation:

> [T]here are minimum size limits in statutes for fish. They are just a big pain in the butt. In reality, legislators don't know anything about it and should stay the hell out of it. They don't know about fisheries management, and if they did they would be fish heads. But they don't. Of course they all like to be armchair fish management experts. And so there are those old laws.

Such regulations occasionally necessitate statutory changes. Only one manager explicitly said that statutory changes were infrequent, [100] but few managers gave more than one or two examples of statutes being changed or needing change. Still, managers felt that political process tends to ruin statutory changes proposed by an agency. One manager put it this way:

> What comes out of the legislature nobody knows. If it doesn't come out pretty close to what we put in there, I think we are going to pull out of it. I can imagine it getting bastardized. But that's the public process. You never know [about] what you put in the hopper, sometimes you get lucky and it comes out the same way that you put it in and other times it comes out looking like "what on earth was that?"

Another said:

> Things that come out of the legislature are a lot of times out of our control and not always intuitive and rational. A lot of times what we do with the legislature is we propose draft language and then they all get to put their fingerprints on it. There comes a point in time when even if it isn't kind of like the way it should be, do you want it the way it is or do not want it at all. And that is the way that it ends up.

---

[100] Fishery agency manager:

> *"[W]e have very broad regulatory powers to deal with most fishery issues in this agency. It doesn't require statutory change often at all. The only caveat I would put on that is that our broad regulatory power is not a permanent authority. It is usually a three or a five year authority and we have to go through the renewal process."*

And another manager noted the specific example where lobbying has effectively prevented any legislative action on invasive species.[101]

Managers found it problematic when a jurisdiction sets license fees through statutes.[102] One proclaimed: "So that's how they keep their hands at our throats by keeping their hands on the purse strings."[103] Particularly distressing is the tendency to not raise license fees (and thus an agency's funding) until the agency starts to show signs of financial stress.[104] Likewise another manager complained that the legislature continually prevents raises in commercial license fees to reasonable levels.[105]

The practice of filling agency positions with political appointments also did not sit well with many managers. A manager explained the problem as follows:

> You cannot get up a head of steam when you have a new guy coming in every three years and changing the flow and the priorities... You are always responding to what the new budget codes are, or what the new management systems are, it's all the change which is the background noise and the day-to-day business of biology and management is actually secondary. So it is kind of frustrating. And that goes down to even lower levels. I came from [another agency] and we had three lab directors in four

---

[101] Fishery agency manager:
"And [when] it comes to invasive species everybody is interested in it, including the shipping industry because this legislation would regulate shipping and they believe it is going to be an extra cost to the industry. So they try as hard as possible to oppose it. So there is a lot of lobbying from that end to make sure that any legislation that is passed is favorable to them."

[102] Fishery agency manager:
"The other thing we don't have a lot of control over is fees, license fees and things like that. A lot of that is done by code, which [is part of dealing] with the funding sources. That's another area that is more difficult on the revenue side."

[103] Fishery agency manager.

[104] Fishery agency manager:
"Our fishing license fees are set in statute. So the legislature has to set our licenses fees. And that's probably the one we spend most time on with the legislature, because every few years our expenses start catching up with our fees and we start arguing with the legislature over raising fees and that becomes very controversial. So that's probably the one that gets the most attention believe it or not, is the statutes that set our fees and license structure."

[105] Fishery agency manager:
"Right now commercial fisheries don't pay anywhere near what they should be paying. For many, many years we tried to implement the 5% catch fee that is in the code right now, with little success in the legislature even though we have the authority to do it. Every time we have tried the legislature has knocked us down."

> years. I mean how do you establish any continuity? How do you establish any institutional memory? You don't. And I think it weakens the organization and weekends the responsiveness of the organization.

Another manager echoed the complaint about the lack of continuity that arises from such hiring practices.[106]

Numerous conflicts arise between agencies and the legislative and executive powers retained by government where delegation has occurred. However, legislative and executive oversight of government agencies is a necessary protection in a democratic society. The real issue then perhaps does not point to a conflict in the legal framework, as much as a difference in opinion over what constitutes acceptable oversight.

SUMMARY

Managers identified numerous problems they face in managing Great Lakes fisheries. The following provides an overview of the key gaps, overlaps, and conflicts identified above:

Management Authority:

> An overlap exists between the historical state authority over natural resources and the U.S. Constitution's allowance of federal encroachment into harvest management. While the federal government has not flexed its jurisdictional authority to anywhere near the outer limits of the constitutional power in this area, intrusions into state management may create tension between state and federal agencies.

> Numerous gaps exist concerning the recognition and implementation of rights for Native American tribes and First Nations with respect to fishing, fishery management,

---

[106] Fishery agency manager:
> *"Early in my career we were going through rotating chiefs right and left. Every time we head a gubernatorial change we head a new director and a new chief and it sucked. It lacks continuity."*

fish habitat protection, trust responsibilities of the federal governments, and participation in inter-jurisdictional management processes.

Inter-Jurisdictional Management:

> It is unclear what constitutes an action that "significantly influences" the interests of other Great Lakes jurisdictions in determining whether actions must be submitted to the consensus decision-making procedures of the lake committees.

> To varying degrees, three gaps exist with respect to inclusion on the lake committees, the primary inter-jurisdictional management structure, specifically, it lacks 1) First Nation involvement, 2) a voting role for federal agencies, and 3) robust public participation.

Inconsistency of Harvest Regulations:

> A lack of uniformity exists in fishery regulations throughout the basin; however, managers disagree on the extent to which this is problematic. Still, it seems to signify an inherent problem with dividing management of a resource amongst multiple jurisdictions, since different people tackling complex problems such as those found in fisheries management will likely arrive at different solutions.

Allocation:

> Outside of a few court decisions, allocating some portion of the harvest to Native American tribes and First Nations, practically no law guides both intra-jurisdictional and inter-jurisdictional allocation of fish harvest.

Public Trust Doctrine and Open Access:

> While there have not been any negative impacts on the fishery, the public trust doctrine combined with the constitutionally based limits on states' ability to discriminate

against non-resident access to fisheries potentially creates an open-access situation in the recreational fishery.

Ecosystem Threats: Global Climate Change, Habitat Loss and Invasive Species:

> Global climate change could cause widespread changes to the Great Lakes that may negatively impact the fishery and the issue is not being adequately dealt with at almost any level.

> Habitat loss presents threats in many areas of the basin, particularly through the cumulated effects of small activities, and may increase as remote areas become more heavily populated. Problems include gaps in the substantive law and a lack of enforcement for existing rules.

> Invasive species are considered the key ecosystem threats, and yet the unclear division of responsibility over ballast water is a gap in the broader legal framework, and a number of policy gaps exist with respect to prevention of future introductions and eradication or control of existing invasives.

Delegation and Oversight:

> Managers identified numerous conflicts that arise from the powers divide amongst multiple agencies and divisions, specifically, in trying to deal with consumption advisories, pollution control, and habitat degradation. Additionally, oversight by non-expert government officials can create conflict, for example, changing regulations through legislative processes can lead to undesirable results and executive branch appointment procedures may leads to frequent changes in agency heads that can be detrimental to an agency.

Chapter Six:
CONCLUSION

This project outlined the legal framework of Great Lakes fisheries management and identified numerous gaps, overlaps, and conflicts within that framework. Some problems beg for resolution and many elicit ideas for future avenues for research. This final chapter details the legal, policy, and future research recommendations drawn from this research.

LEGAL AND POLICY RECOMMENDATIONS:

Recommendation #1: Canada, Ontario, the U.S, the states, tribes and First Nations should continue to support inter-jurisdictional fisheries management efforts on the Great Lakes.

A complex jurisdictional map will continue to make ecosystem management of Great Lake fisheries difficult. The overlap of the natural resource management authority historically held by the states and the powers granted to the U.S. federal government by the U.S. Constitution will remain an issue for Great Lakes fisheries management short of a constitutional amendment or wholesale preemption by the U.S. federal government. Given the interpretations of the Canadian Constitution and the current practice of delegating fisheries management authority to Ontario, the Canadian situation may provide more flexibility to make changes to the division of management authority between Canada and Ontario. Yet, it is difficult if not impossible to project whether large scale reorganization would improve upon the status quo. A unified governance structure would not even guarantee a coherent set of policy goals.

Furthermore, it is debatable whether uniformity is even desirable. On the positive side, adoption of uniform harvest regulations might negate the effects of conflicting harvest strategies, improve enforcement efforts, and possibly increase angler compliance through awareness and understanding. Yet, some managers criticized recommendations for blanket uniformity as not making sense biologically or ecologically due to different bio-physical conditions in different zones within the lakes. Additionally, for enforcement purposes, jurisdictions may prefer intra-jurisdictionally consistent regulations for Great Lakes and inland waters.

It appears that an effective inter-jurisdictional management structure through the lake committees and the Joint Strategic Plan has arisen in the Great Lakes basin. Given, the high likelihood that the multiplicity of jurisdictions will remain, support for bridging institutions is necessary.

Recommendation #2: All jurisdictions should increase funding for Great Lakes fishery and ecosystem management and lessen constraints and overhead on joint funding to better assist agencies to target resources effectively and improve coordination.

Funding was likely the most frequently discussed issue. One manager expressed frustration over a funding structure that seemingly penalized the agency for accomplishing its work:

> Again [our] employees care about the resource and we try to find the resources we need to do them. Even though [funding] did go down we keep on doing the same things. So people are saying wait a minute, he said they need more money, but we didn't give you more money and you are going to same things, so you really don't need that money... So our leaders are telling us guys don't do too much, do less with less because we are very good at doing more with less, don't do that anymore it's hurting us it's not allowing us to get more money. We need to show what is not getting done.

Yet, the bulk of funding comments pointed to inadequate funding for almost all aspects of Great Lakes fishery management, including basic harvest regulation. Managers noted that part of the problem is having license fee amounts set in statutes. Thus, agencies would slowly succumb to budget deficits as inflation increases. Only when they reach a financial breaking point would the legislature increase the fees.

A U.S. agency manager explained that his office began a non-profit as a unique way to raise funds:

> One of the things, we have formed a nonprofit organization called Friends of the Lower Great Lakes Fisheries Office. And we are using this nonprofit to go after funding that federal agencies can't go after... You create the Friends group and then there's a good relationship between the group and federal office. The Park service does it, refuges do it... And my office is the only non-refuge, non-hatchery office in the nation that has the Friends group.

While such schemes may not always be practicable, alternative funding mechanisms should be identified and created where possible and feasible.

However, increased funding, through the usual or creative channels, must be flexible. Legislatures frequently seek to limit funding to fairly specific issues or actions[1] for accountability or other reasons. Yet, the ability to "target resources where they are most effective" is a principal attribute of effective governance.[2] One manager provided the following instructive example of the opposite situation:

> "[T]he previous government in [my jurisdiction] felt that hatcheries were a priority and made a commitment that hatcheries would be operating at full capacity. They had never operated at full capacity so that necessitated a

---

[1] Federal agency manager:

> *"We are guided by what we call it work activity guidance. We receive X amount of money in our budget and we're supposed to do specific things. Some of them are very specific... We have to report on those things, so those are the things we focus on first, the things that are funded because you are given X amount of money to do Y amount of work."*

[2] R. Kent Weaver and Bert A. Rockman, *Assessing the Effects of Institutions*, *in* DO INSTITUTIONS MATTER? GOVERNMENT CAPABILITIES IN THE UNITED STATES AND ABROAD 6 (R. Kent Weaver and Bert A. Rockman eds., 1993).

> reallocation of resources to have staff and more money to buy more food and to ramp up production at hatcheries... normally the process for fish production is that the district offices that manage the inland lakes and streams in the Great Lakes units who manage the Great Lakes put in requests... So all of those numbers are rolled up each year in the fish culture system is responsible for having those fish reared in the hatcheries. And what happened at that time was the hatcheries were told to ramp up to full production but they didn't have a demand, like no one had asked for these fish.... And so managers were getting calls "Well we've got a half a million extra fish can we stock them in Lake X or Lake Huron?"

Additionally, a manager noted impediments to coordination arising from current funding procedures:

> [T]here are legalities around it for one example we've been trying to set out an MOU with the USGS but the federal government will not join into the agreement with the province, only the federal government. So we can't even have an agreement with them to jointly fund a project... And there's also administration fees which are associated with some of these partnerships. [I]f we want to give the USGS $100,000 to co-fund a project using their equipment, their administration will take off 20 to 30% of that and the people that are doing the work will only get $70,000. That doesn't seem right at all considering that we are supposed to be doing this as a partnership. We have the same problems with universities too, administration overhead.

In this way, the current funding policies restrict Ontario-U.S. cooperation and Canada-state cooperation. Additionally, current overhead policies make coordination difficult, particularly in jurisdictions grappling with government funding shortages.

Recommendation #3: Both U.S. and Canada should recognize Native American and First Nation rights and, in particular, their respective federal agencies should fully execute their trust responsibilities.

Numerous gaps appear in the legal framework regarding Native American and First Nation rights to Great Lakes fisheries. Many rights have been recognized for Native Americans, while First Nations rights remain unacknowledged. Additionally, tribal

rights over Great Lakes fisheries are largely indeterminate in terms of allocation, their role in inter-jurisdictional management, and rights to habitat protection.

Moreover, as mentioned in Chapter Four, the relationship between tribes and the federal government in the U.S. has often been viewed as a grant of authority to the federal government to regulate tribal affairs. However, the trust responsibility remains an important legal duty of the entire federal government, not just the Bureau of Indian Affairs. Other agencies are responsible as well, including the U.S. Fish and Wildlife Service (FWS). While the FWS has additional mandates, those trust responsibilities should play a larger role. Similarly, Canada should also take steps to recognize and implement their trust responsibilities. And, the states must recognize tribal rights to freedom from state interference, as has been mandated by a number of state and federal courts.

Recommendation #4: Efforts should be made to create a role for First Nations in formal inter-jurisdictional decision making processes.

Elinor Ostrom recognized a set of design principles that were exhibited in sustainable institutional arrangements of natural resources around the world. One principle is to have "collective-choice arrangements" wherein "most individuals affected by the operational rules can participate in modifying the operational rules."[3] With respect to inclusion of First Nations, this principle is not currently being followed in the Great Lakes. As major stakeholders and political entities, indigenous peoples should be fully engaged in the management process. The exclusion of First Nations from the lake committees is probably the most glaring problem in the current Great Lakes fishery

[3] Elinor Ostrom, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION (1990).

management structure. That Native American tribes have been cooperatively working within the system for a number of years, only serves to highlight the gap. The problem begins with the lack of clear legal recognition of fishing and fishery management rights for the vast majority of First Nations. It also appears that the Ontario Ministry of Natural Resources may be hostile to the inclusion of First Nations,[4] although Ministry assertions disagree with that contention.[5] While practicality may require the creation of a representative agency for First Nations along the lines of the Chippewa-Ottawa Resource Authority or the Great Lakes Indian Fish and Wildlife Commission, the responsibility to build such an organization does not have to be left completely on the First Nations, although one must take precautions against imposing an unwanted structure upon the First Nations.

Recommendation #5: The lake committees should define what constitutes a "significant influence" under the Joint Strategic Plan for Management of Great Lakes Fisheries with respect to determining which issues require consensus decision-making by the lake committees.

Another gap related to the current lake committee structure is the imprecise requirements over what issues should be taken up by the committees. The Joint Strategic Plan requires consensus "when management will *significantly influence* the interests of

---

[4] Saugeen Ojibway Nation Territories, *Jumping to Conclusions: GLFC, Conflict of Interest and the Problem of Stocking Exotic Salmon in the Great Lakes*, at 10-11 (Paper at International Association for Great Lakes Research Conference, May 24-28, 2004).

[5] Ontario Ministry of Natural Resources, THE REGULATORY ROLE OF THE ONTARIO MINISTRY OF NATURAL RESOURCES AND THE MINISTRY'S RELATIONS WITH ABORIGINAL PEOPLE 17, *available at* http://ipperwashinquiry.ca/policy_part/projects/pdf/mnr_relations.pdf (December, 2005)(last visited August 15, 2007).

more than one jurisdiction,"[6] yet does not define what meets this standard. While not frequently a problem, one manager noted two specific instances where questions arose:

> I think that several years back in Lake Erie, Canada was considering cage culture. And some of the state said this is a big issue. It then was agreed that it was a big issue and they didn't do the cage culture. I am not sure if that's the reason, but there are probably other things there as well... In Lake Michigan, stocking of Sturgeon became an issue because of the differences between the strains of sturgeon. Wisconsin didn't think it was a big deal but Michigan did.

Consensus decision making is less than effective if important issues are not brought to the table. A definition of "significant influence" could refer to conflicting policies or consist of a catalog of issues covered, for example.

Recommendation #6: To address many of the most pressing ecosystem threats (e.g. ballast water control, water diversions, habitat loss, pollution, global climate change, etc.), renewed efforts must be made to create platforms, or at least other means of consultation and coordination, given the heterogeneous and numerous interests in any potential collective action.

Perhaps the most serious threats to the Great Lakes and their fisheries, pollution, invasive species, native species rehabilitation, biodiversity loss, habitat degradation, and global climate change, all arise outside of what has been considered the traditional areas of fishery management. Due to their potential impacts, fishery managers have generally sought to address these problems through the implementation of ecosystem management. The Great Lakes ecosystem is a complex, multiple-use common pool resource (CPR), which Steins and Edwards define as "resources that are used for different types of extractive and non-extractive purposes by different stakeholder groups and are managed

---

[6] A Joint Strategic Plan for Management of Great Lakes Fisheries, June 17, 1981 (as amended 1997), *available at* http://www.glfc.org/fishmgmt/jsp97.htm (last visited June 28, 2006)[hereinafter Joint Strategic Plan].

under a mixture of property right regimes."[7] In addition to the complexities mentioned by Steins and Edwards, in the Great Lakes many jurisdictions exist within the basin—two federal governments, multiple states, a province, many tribes, and numerous local governments. And at each jurisdictional level there are multiple agencies that deal with different aspects of the ecosystem threats. One manager found such complexity problematic, stating "we have too many people, too many jurisdictions, too many authorities... There are too many fingers in the watershed." While discussing the difficulties arising from this multiplicity in the creation of Lakewide Management Plans (LaMP), one fishery manager summed up his view of the process: "LaMP is a four letter word."

Steins and Edwards argue that this multiplicity and the subsequent heterogeneous interests require more cooperation and consultation. Specifically, they suggest the use of platforms, defined as:

> [A] negotiating and/or decision-making body (voluntary or statutory), comprising different stakeholders who perceive the same resource management problem, realize their interdependence in solving it, and come together to agree on action strategies for solving the problem.[8]

It appears that new platforms or expansion of existing ones may be needed to address some problems facing the Great Lakes. Based on managers' concerns, a platform to address invasive species, and ballast water in particular, is urgently needed.

Recommendation #7: While fishery managers' scientific expertise is an invaluable component of modern fishery management, they should recognize the political and ethical dimensions of fishery management, particularly for harvest allocation.

---

[7] Nathalie A. Steins and Victoria M. Edwards, *Platforms for Collective Action in Multiple-Use Common-Pool Resources*, 16 AGRICULTURE AND HUMAN VALUES 241, 242 (1999).
[8] Steins and Edwards, (1999) at 244.

Fishery management requires an in-depth understanding of the biological and ecological state of the system. Along these lines a fishery manager made a revealing comment:

> Most of us are biologists so we don't like talking to people, and that's not what we went to school for and things like that. And now even as policymakers or people who are in the policymaking places, you get there because you are a good biologist, you get there because you have been a great researcher or you did something.

While this may not reflect every fishery manager's position, many managers would like define the situation somewhat similarly.[9]

Yet, allocation of fisheries is more than a question of biology and ecology. The issue of allocation is a principal problem for fisheries management and can rear its head in many situations.[10] Allocation "involves some kind and degree of division, separation, bounding, or other segregation of parts of a systemic whole"[11] and the assignment of those parts to people or uses. And it is of concern that fishery managers seem to miss the political and ethical nature of the question of allocation. For example, when one manager was asked how the formula for allocation was derived, he replied:

> It's gone through some iterations and it is not entirely clear to me that it is real well grounded in biology. Ultimately you'd like it to be tied back. The pure scientist in me says tie it back to the habitat that provides for recruitment.

However, there is often no scientific reason for choosing between historical, area, or residential allocation scheme. Science obviously has a role to play. Science can tell us what constitutes a safe level of allowable harvest. But science cannot tell us which time

---

[9] For example, another fishery manager said

> *"And it is our jobs to be informed, to know the science, to base it on science, but to get input on the decisions that we are proposing."*

[10] H.A. Regier and A.P. Grima, *Fishery Resource Allocation: An Exploratory Essay*, 42 CAN. J. FISH. AQUAT. SCI. 845 (1985).

[11] Regier and Grima, *supra* note 10, at 846.

frame is most fair when implementing a historical catch allocation Similarly it cannot tell us whether to choose a historical allocation scheme over an area scheme or a habitat recruitment scheme.

The Joint Strategic Plan itself seems to confuse the allocation issue with that of over-harvest. The plan describes the issue of harvest allocation between jurisdictions as follows:

> Protections of fish stocks from overexploitation by any or all user groups is a paramount responsibility of all fishery agencies. Fishery agencies need to make joint allocation decisions on stocks of common concern. Depletion and loss of important fish stocks will continue regardless of environmental improvements unless acceptable allocation systems are implemented.

Without some explicit allocation of the total allowable catch, it may be that jurisdictions end up over-harvesting. But it is important to understand that they are two conceptually different issues. One issue is how big is the pie, and the other is what size of a slice does everyone get. Awareness of the ethical and political components is particularly important given the existence of tribal fishing rights and the economic implications of all allocation decisions.

Recommendation #8: All jurisdictions across the Great Lakes Basin must renew efforts to create effective policies to control and prevent invasive species given the threat posed to fisheries.

Managers generally considered invasive species as the biggest threat to the Great Lakes. Both the control of existing invasives, and the prevention of new introductions present challenges. As mentioned, the Convention on Great Lakes Fisheries created the bi-national Great Lakes Fishery Commission (GLFC) and charged it with the duty of eradicating or minimizing sea lamprey populations. The sea lamprey control activities of

the GLFC and its partner agencies, the Canadian Department of Fisheries and Oceans, U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers, comprises the most extensive invasive species control effort in the Great Lakes.

Yet, eradication is often impossible and control difficult and expensive. Thus, managers consistently consider introduction of new invasive species as the major threat facing the Great Lakes, particularly through ballast water from commercial ships and live bait. As discussed in the last chapter, many managers saw ballast regulation as a federal matter out of their hands. However, preemption is likely not a concern as long as "[states stay] away from specifying vessel design or construction requirements"[12] or other standards that discriminate against interstate commerce.

RECOMMENDATIONS FOR FUTURE RESEARCH

Great Lakes Fishery Harvest Allocation Decision Making

The Joint Strategic Plan lists three allocation issues of primary concern in the Great Lakes, specifically, allocation 1) amongst the different jurisdictions on a lake, 2) between sport and commercial fishers, and 3) between aboriginal and non-aboriginal harvesters.[13] One interviewee from this research also suggested that allocation of harvest must be made between tributary and lake fishers. Since this research identified a general lack of legal or policy guidance behind allocation decisions on the Great Lakes, it raises the question of how those decisions are resolved in practice. Given that it is apparently an issue bargained over by fishery managers, what are the negotiation dynamics? What are the respective bargaining powers of the jurisdictions? How do managers rationalize

---

[12] Eric Reeves, ANALYSIS OF LAWS & POLICIES CONCERNING EXOTIC INVASIONS OF THE GREAT LAKES at 68 (1999)(report to the Michigan Department of Environmental Quality Office of the Great Lakes)(suggesting numerous options that states could take, including taxes, shore side treatment, and a polluter pays approach).

[13] Joint Strategic Plan, *supra* note 4.

their decisions? Qualitative interviews with fishery managers and participant observation of key decision making meetings would provide an interesting perspective into these decisions.

Allocation between Competing Uses of the Great Lakes

Nearly every use of the Great Lakes is in effect a matter of allocation. For example, to the extent that pollution limits fish recruitment or the ability of fishers to consume fish it is an indirect allocation between those polluting uses of the lakes and fishers. Is it possible to more explicitly account for these fishery impacts when making decisions regarding non-fishery uses of the Great Lakes? One could suggest that decision makers should al least identify the potential consequences of such actions through a National Environmental Policy Act style of environmental assessment program. More effective in terms of protecting the fisheries would be requirements that limit allocation of the fishery to these non-fishery related utilizations of the resource. An analysis could be conducted to ask, does current law provides any such recourse? And an evaluation of legal mechanism in other multi-use resource allocation situations may provide examples for jurisdictions in the Great Lakes to follow.

Future Funding of Great Lakes Fisheries Management

Managers during this research and through other avenues have made clear that the lack of adequate funding has and will continue to produce considerable problems for Great Lakes fishery management. Currently, the system relies on user fees through various types of licensing systems depending on the fishery, but there seems to be a lack of political will to raise fishing fees and perhaps an ethical concern in trying to protect the ability of the poor to access our "public" fisheries. In some cases the public foots a

portion of the bill through use of general tax money provided to management agencies. The public could provide more funding, yet this raises the question of whether the public should pay for use by others of a public resource. Fundraising could be targeted at specific portions of the public. An ideal candidate would be those users that are in effect allocated a portion of the fishery in that they are able to pollute or otherwise harm the fishery. Another idea is to target non-consumptive users of the fishery to pay for its protection, although this may not work outside of the wildlife context where bird (or other animal) watchers exist. Finally, volunteer donors may provide another avenue for acquiring funds. While fisheries management may not be the most glamorous environmental issue, this research identified one management agency-led effort to procure funding through donations. As there are clearly moral and political questions regarding what group of "users" should pay and how much, future research should identify the range of possible funding mechanisms and evaluate them for their appropriateness to Great Lakes fisheries.

Enforcement of Great Lakes Fisheries Laws

Numerous potential areas of research also arise with respect to enforcement of fisheries laws. For example, the legal framework may impede inter-jurisdictional enforcement efforts including between the states, the sub-national governments and their respective federal governments, the U.S. and Canada, and tribes and First Nations and the other governments. Additionally, enforcement is only one means of creating compliance with rules. Thus future research should analyze the effect of enforcement efforts on rule compliance. And of course there are other factors beyond enforcement that can lead to increased rule compliance. For example, managers that I talked to mentioned rule

complexity as a significant obstacle. And rule complexity implies the broader questions regarding the extent of angler understanding and the effect that a lack of awareness can have on compliance.[14]

However, comments by one manager suggested another line of research that may be currently overlooked, stating:

> The court didn't want to keep hearing things. All through the 90s we went down to court for hearings and judge got tired of seeing us quite frankly. He'd say over and over I am not a fish master. He'd put little pressure points on us to get us to work stuff out ourselves. Thought things were better if you guys could work it out. He didn't know, he didn't know how to resolve these things.

If the manager's description is accurate it points to a clear lack of biological expertise in the background of judges and attorneys. This could cause considerable problems for adjudication of fisheries issues. Additionally, some anecdotal evidence suggests that judges dealing with inner-city problems of drugs and murder might consider fisheries violations as unimportant in light of their other cases. These points raise the question of how courts handle violations of Great Lakes fisheries or natural resource law. Do judges and lawyers have the requisite knowledge to effectively prosecute fisheries law violations? Are certain courts more likely to hear and successfully prosecute fisheries law violators, and if so why?

Public Participation in the Management of Great Lakes Fisheries

This research also raises questions about public participation. From a narrow legal standpoint, one might ask whether agency actions comply with current public involvement laws in letter and spirit? Beyond this, future research should ask whether

---

[14] *See e.g.*, Kevin S. Page and Paul Radomski, *Compliance with Sport Fishery Regulations in Minnesota as Related to Regulation Awareness*, 31 FISHERIES 166 (April, 2006).

current participation practices (and legal requirements) are sufficient. As mentioned in the last chapter, one state agency manager noted,

> "A lot of the business gets done before it comes to the lake committee meetings... The last thing you want to have is have an unfinished proposal in front of 35 people, because you get nowhere."

This would probably not constitute public involvement under most definitions. While public participation may not be legally required at lake committee meetings, it would be of concern if the above approach were practiced widely in situations were public involvement was required. One manager noted that the standard notice and comment mechanism was not effective for informing the general public, specifically because the mandated means of notice did not actually notify many potentially interested or affected parties. That manager commented:

> "Well our comment period begins with publication of a notice in the [state] bulletin, which is I guess from a common persons point of view a fairly obscure legal publication, which is hard to get your hands on unless you have a computer or go to a library. People who become active, activist in dealing with us, do that now... but I would say that the average, ordinary angler is clueless unless we give them special notice."

Future research should determine whether current practices meet goals such as legitimizing decisions, improving decisions, dispersing information, and increasing public understanding.

Interestingly, one state agency manager more or less defended the position of limited public involvement in decision making processes arguing that to do otherwise was problematic:

> I still think that if we're doing our jobs appropriately as public servants we are representing the interests of our constituents. And it is our jobs to be informed, to know the science, to base it on science, but to get input on the decisions that we are proposing. I have a real problem, just like the LaMP, when you put uninformed people or people with tremendous

> agendas and a different motivation in charge for having a veto power. I think they are too biased. I think it runs contrary to democratic principles. I don't think it should come down to a vote, and that's what happens. It comes down to votes as opposed to consensus.

Future research could focus on this debate between public participation and representative democracy in the context of natural resources management.[15]

Comparing Lake Committees and Other Inter-jurisdictional Management Efforts

Lake committees provide a much needed and largely effective bridge between the multiple jurisdictions that govern Great Lakes fishery management. Yet, future research should provide a more in depth understanding of their formation, operation, and effectiveness. It would seem particularly useful to compare the lake committee structure to other inter-jurisdictional management efforts of large scale, complex, multi-use common pool resources. For example, the International Joint Commission (IJC) identified "nine core characteristics common to the most successful management regimes."[16] Lake committees provide or include a number of the listed attributes in the Great Lakes fishery context, including a "central coordinating body," a "set of functionally defined committees, subcommittees, or work groups," and "specific goals and timetables at all levels."[17] Further research would aid future attempts to create or modify coordinated management efforts in the Great Lakes and other places. Additionally, it may provide ideas for improving Great Lakes fishery management.

---

[15] *See, e.g.*, Christine Overdevest, *Participatory Democracy, Representative Democracy, and the Nature of Diffuse and Concentrated Interests: A Case Study of Public Involvement on a National Forest District*, 13 SOCIETY & NATURAL RESOURCES 685 (2000)(evaluating public participation under four hypotheses related to whether it is representative of the public's interests).

[16] International Joint Commission, *Priorities 2003-2005: Priorities and Progress under the Great Lakes Water Quality Agreement* (2006).

[17] *Id.* at 26.

APPENDIX: FINAL INTERVIEW GUIDE

I. Statutes are generally grouped together into subject areas that roughly correspond to the powers and responsibilities of an agency, although the exact organization varies by state. I would like to go through each of these areas and have you identify the strengths and weaknesses that you perceive in fisheries management in these areas, and to the best of your ability on the laws of each subject area.

[REFER INTERVIEWEE TO HANDOUT, SECTION A]

A. Legal subject divisions:

- Sport Harvest (incl. charter boats, bait shops, etc)
- Commercial harvest
- Hatcheries
- Funding (incl. license fees, conservation funds, stamp programs, etc.)
- Pollution Control (Why so little involvement of fishery managers on this topic?)
- Invasive Species
- Fish Contamination/Consumption Advisories (Why so little involvement of fishery managers on this topic?)
- Habitat Protection (incl. Conservation easements; Wetland/Shore protection; etc.)
- Endangered Species (sturgeon listing; lack of listing under the US ESA; etc)
- Management of non-target species
- Enforcement
- Environmental Education
- Research and Monitoring

B. Are there any areas of regulation that I should add to this list?

C. Are there things that need to change that can't be done through legal realms?

II. What is your agencies involvement in the creation and passage of new fisheries regulations by your legislature?

A. What problems exists with the overall procedure for creation and passage of new or changed laws?

Any specific problems dealing with legislators?

Do they understand your agencies responsibilities?

Are they any statutes that you wish were regulations, meaning that they would be out of the hands of legislators? Or vice versa?

B. Is there enough flexibility to deal with changes?

Technology changes?

Environmental changes? (For example, how have you handled declines in diporia?)

Changes in values or ethics?

C. How do changes in party control of any of the branches of government affect your work?

III. The general governance structure of your portion of the basin, including the structure of your agency, is set out in statutes created by the legislature. Other jurisdictions have very different structural organizations, Wisconsin has a single waters division, Michigan somewhat recently split into two agencies with the new one focused on pollution control and permitting, tribes work through umbrella organizations like GLIFWC and CORA, and the list goes on.

A. If you could redesign your state's government and/or your agency for the purpose of improving Great Lakes fishery management or natural resources management in general, how would you do it?

(For example, having more control over enforcement, or having multiple agencies under one roof, etc.)

B. Similarly, if you could redesign fishery management in the Great Lakes as a whole, how would you do it?

IV. Law and policy across the basin is clearly not uniform. Are there any discrepancies or overlaps that stand out in particular to you?

[REFER INTERVIEWEE TO HANDOUT, SECTION B]

A. How about specifically on the issues of:

- Harvest
- Pollution
- Invasive Species
- Habitat Loss and Degradation
- Native Species Restoration, Biodiversity, and Ecosystem Integrity

B. Specifically, what problems are created by these discrepancies or overlaps in laws across the basin? (USE EXAMPLES GIVEN BY RESPONDENT IN PREVIOUS QUESTION)

V. Multi-jurisdictional Nature of Great Lakes Fishery Management and Cooperation

A. In a practical, day-to-day operations sense, what does the multi-jurisdictional nature of the Great Lakes management mean for your agency?

What problems arise?

B. How would you describe your interactions with each of the various agencies within your jurisdiction and from other jurisdictions? (GIVE EXAMPLES)

Are any of those interactions legally mandated?

C. Any specific examples where a problem or dispute arose over a political boundary?

V(B). Joint Strategy Plan for Management of Great Lakes Fisheries and the Great Lakes Fishery Commission

What role does the Joint Strategic Plan or the Fish Community Objectives play in Great Lakes fishery management within your jurisdiction?

More specifically, what role does the plan play in the creation and implementation of laws and regulations in your jurisdiction?

What rules govern interactions or decisions in Lake Committees?

VI. Tribal Fishing

A. What is your understanding of the concept of sovereignty?

What does that mean for tribal fishing, where tribal sovereignty is recognized?

B. What issues arise with respect to tribal fishing?

VII. Public Trust Doctrine

How would you define the public trust doctrine?

How does it arise in your work?

VIII. Legal Misc.

A. Litigation:

Are you or your agency involved in it much?

What litigation is helpful, if any?

Are there many laws applicable to Great Lakes fisheries that members of the public can enforce?

Should there be more?

IX. Public Participation

Where is public participation mandated with respect to Great Lakes fisheries management?

Is there any public participation in agency decision-making?

What is your opinion of ballot initiatives as a way for the public to get involved in fisheries management?

What is your opinion on Freedom of Information Act or Sunshine laws as a means of providing the public with information?

X. Jurisdiction specific questions

[Questions about specific statutes or specific cases that vary by jurisdiction]

REFERENCES

WORKS CITED

Adams, David A., RENEWABLE RESOURCE POLICY: THE LEGAL INSTITUTIONAL FOUNDATIONS (1993).

Anderson, Lee G., *Expansion of the Fisheries Management Paradigm to Include Institutional Structure and Function*, 116 TRANSACTIONS OF THE AMERICAN FISHERIES SOCIETY 396 (1987).

Anishnabek/Ontario Fisheries Resource Centre website, *available at* http://www.aofrc.org (last visited June 4, 2006).

Axline, Michael D., Note - *Constitutional Law—The End of a Wildlife Era: Hughes v. Oklahoma*, 60 OR. L. REV. 413 (1981).

Babcock, Hope M., *A Civic-Republican Vision of "Domestic Dependent Nations" in the Twenty-First Century: Tribal Sovereignty Re-Envisioned, Reinvigorated, and Re-Empowered*, 2005 UTAH L. REV. 443 (2005)

Bean, Jerry L., *Off-Reservation Hunting and Fishing Rights: Scales Tip in Favor of States and Sportsmen?*, 51 N.D. L. REV. 11 (1974).

Bean Michael J., and Melanie J. Rowland, THE EVOLUTION OF NATIONAL WILDLIFE LAW 8 (3rd ed., 1997).

Beeton, Alfred M., Cynthia E. Sellinger and David F. Reid, *An Introduction to the Laurentian Great Lakes Ecosystem, in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 3 (C. Paola Ferreri and William W. Taylor eds., 1999).

Bence, James R. and Kelley D. Smith, *An Overview of Recreational Fisheries of the Great Lakes, in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 259 (C. Paola Ferreri and William W. Taylor eds., 1999).

Berkes, Fikret, *The Common Property Resource Problem and the Creation of Limited Property Rights*, 13 HUMAN ECOLOGY 187 (1985).

Berkes, Fikret, *Fishermen and "The Tragedy of the Commons"*, 12(3) ENVIRON. CONSERV. 199 (1985).

Berkes, Fikret, *Cross-Scale Institutional Linkages: Perspectives from the Bottom Up, in* THE DRAMA OF THE COMMONS 293 (Elinor Ostrom et al. eds., 2002).

Berring, Robert C. and Elizabeth A. Edinger, FINDING THE LAW (11th ed., 1999).

BLACK'S LAW DICTIONARY: POCKET EDITION (Bryan A. Garner ed., 1996).

Blair, Peggy J., *Solemn Promises and* Solum *Rights: the Saugeen Ojibway Fishing Grounds and* R. v. Jones and Nadjiwon, 28 OTTAWA L. REV. 125 (1997).

Blumm, Michael C., *Public Property and the Democratization of Western Water Law: A Modern View of the Public Trust Doctrine*, 19 ENVTL. L. 573 (1989).

Bogue, Margaret Beattie, FISHING THE GREAT LAKES: AN ENVIRONMENTAL HISTORY, 1783-1933 (2000).

Borneman, Walter R., 1812: THE WAR THAT FORGED A NATION (2004).

Bronte, Charles R., et al., *Fish Community Change in Lake Superior, 1970-2000*, 60 CAN. J. FISH. AQUAT. SCI. 1552 (2003).

Broun, Caroline N., Michael L. Buenger, Michael H. McCabe, Richard L. Masters, THE EVOLVING USE AND THE CHANGING ROLE OF INTERSTATE COMPACTS: A PRACTITIONER'S GUIDE (2006)

Brown, Russel W., Mark Ebener, and Tom Gorenflo, *Great Lakes Commercial Fisheries: Historical Overview and Prognosis for theFfuture*, *in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 324 (C. Paola Ferreri and William W. Taylor eds., 1999).

Bryan, Todd A., *Tragedy Averted: The Promise of Collaboration*, 17 SOC'Y & NAT. RESOURCES 881 (2004).

Busch, Wolf-Dieter N., *Challenges to the Constitutionality and the Effectiveness of the U.S. Management of Bi-National Great Lakes Fisheries*, 5 TOL. J. GREAT LAKES' L. SCI. & POLICY 395 (2003).

Caldwell, Lynton K., *Disharmony in the Great Lakes Basin: Institutional Jurisdictions Frustrate the Ecosystem Approach*, 20 ALTERNATIVES 26 (1994).

Callicott, J. Baird, and Michael P. Nelson, AMERICAN INDIAN ENVIRONMENTAL ETHICS: AN OJIBWA CASE STUDY (2004).

Canada, Ben, *Federal Grants to State and Local Governments: A Brief History*, *in* STATE AND LOCAL GOVERNMENT IN THE UNITED STATES 57 (M.H. Timm ed., 2001).

Canadian Environmental Law Association, WHY IS THE GREAT LAKES BASIN SUSTAINABLE WATER RESOURCES AGREEMENT IMPORTANT TO ONTARIO? (2004).

Canby, William C. Jr., AMERICAN INDIAN LAW IN A NUTSHELL (3rd ed., 1998).

Center for Wildlife Law and Defenders of Wildlife, SAVING BIODIVERSITY: A STATUS REPORT ON STATE LAWS, POLICIES AND PROGRAMS (1996).

Cleland, Charles E., RITES OF CONQUEST: THE HISTORY AND CULTURE OF MICHIGAN'S NATIVE AMERICANS (1992).

Chippewa Ottawa Treaty Fishery Management Authority (renamed Chippewa-Ottawa Resource Agency), MICHIGAN'S 1836 TREATY FISHERY GUIDE (1999).

Chung, Kimberly, *Qualitative Data Collection Techniques, in* DESIGNING HOUSEHOLD SURVEY QUESTIONNAIRES FOR DEVELOPING COUNTRIES 337 (Margaret Grosth and Paul Glewwe eds., 2000).

Cimo, Laura Faitel, M.A. THESIS - EVALUATION AND COMPARATIVE ANALYSIS OF FISHERY MANAGEMENT POLICIES IN THE 1836 TREATY WATERS OF THE GREAT LAKES (Mich. State Univ., 2002).

Comitas Institute for Anthropological Study, *Social Disparity: Introduction, available at* http://www.tc.columbia.edu/centers/cifas/socialdisparity/introduction/index.htm (last visited on Aug. 7, 2006).

Coon, Thomas, G., *Ichthyofauna of the Great Lakes Basin, in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 55 (C. Paola Ferreri and William W. Taylor eds., 1999).

Costanza, Robert, et al., eds., ECOSYSTEM HEALTH: NEW GOALS FOR ENVIRONMENTAL MANAGEMENT (1992).

Crawford, Stephen S., and Bruce Morito, *Comment: Toward a Definition of Conservation Principles for Fisheries Management*, 54 CAN. J. FISH. AQUAT. SCI. 2720 (1997).

Crawford, Sue E.S., and Elinor Ostrom, *A Grammar of Institutions*, 89 AM. POL. SCI. REV. 582 (1995).

Czech, Brian, and Paul R. Krausman, THE ENDANGERED SPECIES ACT: HISTORY, CONSERVATION BIOLOGY, AND PUBLIC POLICY (2001).

Davis, L., CANADIAN CONSTITUTIONAL LAW HANDBOOK (1985).

Delekta, Diane H., *State Regulation of Treaty Indians' Hunting and Fishing Rights in Michigan*, 1980 DET. C.L. REV. 1097, 1103-04 (1980).

Dempsey, Dave, RUIN AND RECOVERY: MICHIGAN'S RISE AS A CONSERVATION LEADER (2001).

Dery, David, PROBLEM DEFINITION IN POLICY ANALYSIS (1984).

Dietz, Thomas, et al., *The Drama of the Commons*, *in* THE DRAMA OF THE COMMONS 3 (Elinor Ostrom et al. eds., 2002).

Dietz, Thomas, Elinor Ostrom, and Paul C. Stern, *The Struggle to Govern the Commons*, 302 SCIENCE 1907 (2003).

Dochoda, Margaret R., *Authorities, Responsibilities, and Arrangements for Managing Fish and Fisheries in the Great Lakes Ecosystem*, *in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 93 (William W. Taylor and C Paola Ferreri, eds. 1999).

Dochoda, Margaret R., and Michael L. Jones, *Managing Great Lakes Fisheries Under Multiple and Diverse Authorities*, 5 TOL. GREAT LAKES' L. SCI. & POL'Y 405 (2003).

Donahue, Michael J., *Institutional Arrangements for Great Lakes Management*, *in* PERSPECTIVES ON ECOSYSTEM MANAGEMENT FOR THE GREAT LAKES: A READER 115 (Lynton K. Caldwell ed., 1988).

Donahue, Michael J., *Strenghtening the Binational Great Lakes Management Effort: The Great Lakes Commission's Provincial Membership Initiative* 1998 Tol. J. Great Lakes' L. Sci. & Pol'y 27, 28 (1998).

Eccles, W.J., THE FRENCH IN NORTH AMERICA, 1500-1783 (1998).

Edwards, Victoria M. and Nathalie A. Steins, *Developing an Analytical Framework for Multiple-Use Commons*, 10 J. OF THEORETICAL POLITICS 347 (1998).

Edwards, Victoria M. and Nathalie A. Steins, *A Framework for Analyzing Contextual Factors in Common Pool Resource Research*, 1 J. ENVIRON. POLICY PLANN. 205 (1999).

Eichorn, L. Mark, *Note* – Cuyler v. Adams *and the Characterization of Compact Law*, 77 VA. L. REV. 1387 (1991).

Elliott, David W., LAW AND ABORIGINAL PEOPLES IN CANADA (4th ed., 2000).

Eshenroder, Randy L., and Mary K. Burnham-Curtis, *Species Succession and Sustainability of the Great Lakes Fish Community*, *in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 145 (C. Paola Ferreri and William W. Taylor eds., 1999).

Estrin, David, and John Swaigen, ENVIRONMENT ON TRIAL: A GUIDE TO ONTARIO ENVIRONMENTAL LAW AND POLICY (1993).

Fetterolf, Carlos M., Jr., *Why a Great Lakes Fishery Commission and Why a Sea Lamprey International Symposium,* 37 CAN. J. FISH. AQUAT. SCI. 1588 (1980).

Fowler, William M., THE SEVEN YEARS' WAR AND THE STRUGGLE FOR NORTH AMERICA, 1754-1763 (2005).

Frank, David John, Ann Hironaka, and Evan Schofer, *The Nation-State and the Natural Environment over the Twentieth Century*, 65 AM. SOCIOLOGICAL REV. 96 (2000).

Funston, Bernard W., and Eugene Meehan, Q.C., CANADA'S CONSTITUTIONAL LAW IN A NUTSHELL (2003).

Garrison, John L., *The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Debate Over Sustainable Use*, 12 PACE ENVT'L L. REV. 301 (1994).

Geva-May, Iris, AN OPERATIONAL APPROACH TO POLICY ANALYSIS: THE CRAFT: PRESCRIPTIONS FOR BETTER ANALYSIS (1997).

Goble, Dale D., *The Compact Clause and Transboundary Problems: "A Federal Remedy for the Disease Most Incident to a Federal Government"*, 17 ENVTL. L. 785 (1986-1987).

Great Lakes Fishery Commission, FACT SHEET #1: THE GREAT LAKES FISHERY COMMISSION – ESTABLISHED BY TREATY TO PROTECT OUR FISHERY (2001).

Great Lakes Fishery Commission, FACT SHEET #3: SEA LAMPREY – A GREAT LAKES INVADER (2000).

Great Lakes Indian Fish and Wildlife Commission, SEASONS OF THE OJIBWE 6 (2002).

Great Lakes Indian Fish and Wildlife Commission, TREATY RIGHTS (2003).

GREAT LAKES REGIONAL COLLABORATION, TRIBAL NATIONS ISSUES AND PERSPECTIVES, *available at* http://www.glrc.us/documents/GLRC-Tribal-Briefing-Paper.pdf (2005).

Griffiths, John, *What is Legal Pluralism?* 24 J. LEGAL PLURALISM 1 (1986)

Groop, Richard, *Demographic and Economic Patterns in the Great Lakes Region, in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 73 (C. Paola Ferreri and William W. Taylor eds., 1999).

Hall, Noah, *Toward a New Horizontal Federalism: Interstate Water Management in the Great Lakes Region*, 77 U. COLO. L. REV. 405 (2006).

Halsall, Paul, ed., *The Institutes, 535 CE, in* INTERNET MEDIEVAL SOURCEBOOK § II.I.1 (1998), *available at* http://www.fordham.edu/halsall/basis/535institutes.html.

Hansen, Michael J., and Mark E. Holey, *Ecological Factors Affecting the Sustainability of Chinook and Coho Salmon Populations in the Great Lakes, Especially Lake Michigan, in* SUSTAINING NORTH AMERICAN SALMON: PERSPECTIVES ACROSS REGIONS AND DISCIPLINES 155 (Kristine D. Lynch et al. eds., 2002).

Hardin, Garrett, *Tragedy of the Commons*, 162 SCIENCE 1243 (Dec. 13, 1968).

Hardy, Paul T., INTERSTATE COMPACTS: THE TIES THAT BIND (1982)

Henquinet, Jeffrey W. and Tracy Dobson, *The Public Trust Doctrine and Sustainable Ecosystems: A Great Lakes Fisheries Case Study*, 14 N.Y.U ENVTL. L.J. 322 (2006).

Hjern, Benny, and David O. Porter, *Implementation Structures: A New Unit of Administrative Analysis*, 2/3 ORG. STUDIES 211 (1981).

Huyghe, Patrick, COLUMBUS WAS LAST (1992).

International Joint Commission, *Priorities 2003-2005: Priorities and Progress under the Great Lakes Water Quality Agreement* (2006).

Imperial, Mark T., and Tracy Yandle, *Taking Institutions Seriously: Using the IAD Framework to Analyze Fisheries Policy*, 18 SOC'Y AND NAT. RES. 493 (2005).

Jackson, Robert, *Introduction: Sovereignty at the Millennium*, 47 POLITICAL STUDIES 423 (1999).

Jackson, Robert, *Sovereignty in World Politics: a Glance at the Conceptual and Historical Landscape*, 47 POLITICAL STUDIES 431 (1999).

Johnson, Ralph W., *Water Pollution and the Public Trust Doctrine*, 19 ENVTL. L. 485 (1989).

Kalff, Jacob, LIMNOLOGY: INLAND WATER ECOSYSTEMS (2002).

Kemmis, Stephen, and Robin McTaggert, *Participatory Action Research, in* HANDBOOK OF QUALITATIVE RESEARCH 567 (Norman K. Denzin and Yvonna S. Lincoln eds., 2000).

Kocik, John F., and Michael L. Jones, *Pacific Salmonines in the Great Lakes Basin, in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 455 (C. Paola Ferreri and William W. Taylor eds., 1999).

Koonce, Joseph F., et al., *Contribution of Fishery Management in Walleye and Yellow Perch Populations of Lake Erie, in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 397, 397-98, 402 (C. Paola Ferreri and William W. Taylor eds., 1999).

Krueger, Charles C., and Daniel J. Decker, *The Process of Fisheries Management, in* INLAND FISHERIES MANAGEMENT IN NORTH AMERICA 31 (Christopher C. Kohler and Wayne A. Huber eds., 2nd ed., 1999).

Krueger, Charles C., Micael L. Jones, and William W. Taylor, *Restoration of Lake Trout in the Gret Lakes: Challenges and Strategies for Future Management*, 21 J. GREAT LAKES RES. 546 (Supp. 1, 1995).

Kuchenberg, Tom, REFLECTIONS IN A TARNISHED MIRROR (1978).

Landes, Ronald G., THE CANADIAN POLITY: A COMPARATIVE INTRODUCTION (1991).

Leach, Joseph H., Edward L. Mills, and Margaret R. Dochoda, *Non-Indigenous Species in the Great Lakes: Ecosystem Impacts, Binational Policies, and Management, in* GREAT LAKES FISHERIES POLICY AND MANAGEMENT: A BINATIONAL PERSPECTIVE 185 (C. Paola Ferreri and William W. Taylor eds., 1999).

LeCompte, Margaret D., and Judith Preissle Goetz, *Problems of Reliability and Validity in Ethnographic Research*, 52(1) REVIEW OF EDUCATIONAL RESEARCH 31 (1982).

Léonard, Nancy J., William W. Taylor, and Christopher Goddard, *Mult jurisdictional Management of Lake Sturgeon in the Great Lakes and St. Lawrence River, in* STURGEONS AND PADDLEFISH OF NORTH AMERICA 231 (Greg T.O. LeBreton, F William H. Beamish, and R. Scott McKinley eds., 2004)

Lewis, O. Yale, III, Comment – *Treaty Fishing Rights: A Habitat Right as Part of the Trinity of Rights Implied by the Fishingy Clause of the Stevens Treaties*, 27 AM. INDIAN L. REV. 281 (2002).

LIFTIN, KAREN T., *The Greening of Sovereignty: An Introduction , In* THE GREENING OF SOVEREIGNTY IN WORLD POLITICS 1 (1998).

Lincoln, Yvonna S. and Egon G. Guba, NATURALISTIC INQUIRY 202 (1985).

Lincoln, Yvonna S., and Egon G. Guba, *The Only Generalization Is: There Is No Generalization, in* CASE STUDY METHOD: KEY ISSUES KEY TEXTS 27 (Roger Gomm et al. eds., 2000).

Maxwell, Joseph, QUALITATIVE RESEARCH DESIGN: AN INTERACTIVE APPROACH (1996).

May, Christopher N., and Allan Ides, CONSTITUTIONAL LAW—NATIONAL POWER AND FEDERALISM: EXAMPLES AND EXPLANATIONS (2001).

McCay, Bonnie J., THE OYSTER WARS (1998).

McCullough, A.B., THE COMMERCIAL FISHERY OF THE CANADIAN GREAT LAKES (1989).

McGoldrick, James M., LIMITS ON STATES: A REFERENCE GUIDE TO THE UNITED STATES CONSTITUTION (2005).

McGovern, Francis E., *Toward a Functional Approach for Complex Litigation*, 53 U. CHI. L. REV. 440 (1986).

McKee, Russell, GREAT LAKES COUNTRY (1966).

Miles, Matthew B., and A. Michael Huberman, QUALITATIVE DATA ANALYSIS: AN EXPANDED SOURCEBOOK (1994).

Mills, Edward L., Joseph H. Leach, James T. Carlton, and Carol L. Secor, *Exotic species in the Great Lakes: A History of Biotic Crises and Anthropogenic Introductions*, 19 J. GREAT LAKES RES. 1 (1993).

Mische, Patriche M., *Ecological Security and the Need to Reconceptualize Sovereignty*, 14 ALTERNATIVES 389 (1989).

Moore, Sally Falk, *Law and Social Change: The Semi-Autonomous Social Field as an Appropriate Subject of Study*, 7 LAW & SOC'Y REV. 719 (1973).

Mortimer, Michael J., *The Delegation of Law-Making Authority to the United States Forest Service: Implication in the Struggle for National Forest Management*, 54 ADMIN. L. REV. 907 (2002).

Myhal, Natlie, *Existing Rationales for Agencies, Boards, and Commissions*, *in* AGENCIES, BOADS, AND COMMISSIONS IN CANADIAN LOCAL GOVERNMENT 49 (Dale Richmond and David Siegel eds., 1994).

National Research Council, SHARING THE FISH: TOWARD A NATIONAL POLICY ON INDIVIDUAL FISHING QUOTAS (1999).

Nelson, Larry A., *History of Inland Fisheries Management in North America*, *in* INLAND FISHERIES MANAGEMENT IN NORTH AMERICA 3 (Christopher C. Kohler and Wayne A. Hubert eds., 1999).

Niagara Falls Live Website, *available at* http://www.niagarafallslive.com/Facts_about_Niagara_Falls.htm (last visited April 20, 2006).

Nichols, Roger L., INDIANS IN THE UNITED STATES AND CANADA: A COMPARATIVE HISTORY (1998).

[1] Ontario Ministry of Natural Resources, THE REGULATORY ROLE OF THE ONTARIO MINISTRY OF NATURAL RESOURCES AND THE MINISTRY'S RELATIONS WITH ABORIGINAL PEOPLE, *available at* http://ipperwashinquiry.ca/policy_part/projects/pdf/mnr_relations.pdf (December, 2005)(last visited August 15, 2007).

Ostrom, Elinor, *Institutional Analysis, Design Principles, and Threats to Sustainable Community Governance and Management of Commons, in* LAW AND THE GOVERNANCE OF RENEWABLE RESOURCES: STUDIES FROM NORTHERN EUROPE AND AFRICA 27 (Erling Berge and Nils Christian Stenseth eds., 1998).

Ostrom, Elinor, Roy Gardner and James Walker, RULES, GAMES, AND COMMON-POOL RESOURCES (1994).

Ostrom, Elinor, GOVERNING THE COMMONS : THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION (1990).

Ostrom, Elinor, et al. eds., THE DRAMA OF THE COMMONS (2002).

Ostrom, Vincent, THE MEANING OF AMERICAN FEDERALISM (1991).

Overdevest, Christine, *Participatory Democracy, Representative Democracy, and the Nature of Diffuse and Concentrated Interests: A Case Study of Public Involvement on a National Forest District*, 13 SOCIETY & NATURAL RESOURCES 685 (2000)

Page, Kevin S., and Paul Radomski, *Compliance with Sport Fishery Regulations in Minnesota as Related to Regulation Awareness*, 31 FISHERIES 166 (April, 2006).

Patton, Michael Quinn, HOW TO USE QUALITATIVE METHODS IN EVALUATION (1987).

Patton, Michael Quinn, QUALITATIVE EVALUATION AND RESEARCH METHODS (1990).

Pinkerton ed., Evelyn, COOPERATIVE MANAGEMENT OF LOCAL FISHERIES: NEW DIRECTIONS FOR IMPROVED MANAGEMENT & COMMUNITY DEVELOPMENT (1989).

Piper, Don Courtney, THE INTERNATIONAL LAW OF THE GREAT LAKES: A STUDY OF CANADIAN-UNITED STATES CO-OPERATION (1967).

Pister, Edwin P., *Ethics of Native Species Restoration: The Great Lakes*, 21 J. GREAT LAKES RES. 10 (1995).

Philpott, Daniel, *Westphalia, Authority, and International Society*, 47 POLITICAL STUDIES 566, 566, 579-581 (1999).

Pugh, Anna, *Meeting the Spirit of Sparrow: The Regional Fisheries Committee as a Management Model in Canada*, 12 DALHOUISE J. LEGAL STUD. 267 (2003).

Ramsay, Michael D., *The Power of the States in Foreign Affairs: The Original Understanding of Foreign Policy Federalism*, 75 NOTRE DAME L. REV. 341 (1999).

Reeves, Eric, ANALYSIS OF LAWS & POLICIES CONCERNING EXOTIC INVASIONS OF THE GREAT LAKES (1999).

Regier, Henry A. and A.P. Grima, *Fishery Resource Allocation: An Exploratory Essay*, 42 CAN. J. FISH. AQUAT. SCI. 845 (1985).

Ridgeway, Marian E., INTERSTATE COMPACTS: A QUESTION OF FEDERALISM (1971).

Riley, Shawn J., et al., *Adaptive Impact Management: An Integrative Approach to Wildlife Management*, 8 HUMAN DIMENSIONS OF WILDLIFE 81 (2003).

Robinson, Eric, and Henry Bird Quinney, THE INFESTED BLANKET : CANADA'S CONSTITUTION, GENOCIDE OF INDIAN NATIONS (1985).

Ross, Monique M., and Cheryl Y. Sharvit, *Forest Management in Alberta and the Right to Hunt, Trap and Fish Under Treaty 8*, 36 ALBERTA LAW REVIEW 645 (1998).

Ryan, P.A., et al., FISH COMMUNITY GOALS AND OBJECTIVES FOR LAKE ERIE 12-14 (2003)(Great Lakes Fishery Commission Spec. Pub. 03-02).

Saugeen Ojibway Nation Territories, *Jumping to Conclusions: GLFC, Conflict of Interest and the Problem of Stocking Exotic Salmon in the Great Lakes* (Paper at International Association for Great Lakes Research Conference, May 24-28, 2004).

Sax, Joseph L., *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 Mich. L. Rev. 471 (1970).

Schurter, Brian T., *Great Lakes Water Quality From a Fisheries Perspective*, 26 U. TOL. L. REV. 467 (1995).

Singleton, Sara, CONSTRUCTING COOPERATION: THE EVOLUTION OF INSTITUTIONS OF COMANAGEMENT (1998).

Smith, B.R., and J.J. Tibbles, *Sea Lamprey (Petromyzon marinus) in Lakes Huron, Michigan, and Superior: History of Invasion and Control, 1936-1978*, 37 CAN. J. OF FISHERIES AND AQUATIC SCIENCES 1780 (1980).

Sproule-Jones, Marc, RESTORATION OF THE GREAT LAKES : PROMISES, PRACTICES, PERFORMANCES (2002).

Steins, Nathalie A., and Victoria M. Edwards, *Platforms for Collective Action in Multiple-Use Common Pool Resources*, 16 AGRICULTURE AND HUMAN VALUES 241 (1999).

Stone, Deborah, POLICY PARADOX: THE ART OF POLITICAL DECISION MAKING (2002).

Surtees, Robert J., CANADIAN INDIAN POLICY: A CRITICAL BIBLIOGRAPHY (1982).

Tanner, Howard A., Mercer H. Patriarche, and William J. Mullendore, SHAPING THE WORLD'S FINEST FRESHWATER FISHERY (1980).

Thompson, Peter C., *Institutional Constraints in Fisheries Management*, 31 J. FISH. RES. BOARD CAN. 1965 (1974).

Tody, Wayne H., A HISTORY OF MICHIGAN FISHERIES (2003).

Union of Concerned Scientists and Ecological Society of America, CONFRONTING CLIMATE CHANGE IN THE GREAT LAKES REGION: EXECUTIVE SUMMARY (2005).

U.S. Envtl. Protection Agency, THE GREAT LAKES: AN ENVIRONMENTAL ATLAS AND RESOURCE BOOK, available at http://www.epa.gov/glnpo/atlas/glat-ch1.html#Physical%20Characteristics (last visited Jan. 25, 2006).

Van Den Avyle, Michael J., and Robert S. Hayward, *Dynamics of Exploited Fish Populations, in* INLAND FISHERIES MANAGEMENT IN NORTH AMERICA 127 (Christopher C. Kohler and Wayne A. Hubert eds., 2d. ed. 1999).

Van Ert, Gibran, *The Legal Character of Provincial Agreements with Foreign Governments*, 24 LES. CAHIERS DE DROIT 1093 (2001)

Yarbrough, C. Jarrell, *Using Political Theory in Fishery Management*, 116 Transactions of the Am. Fisheries Soc'y 532 (1987).

Walters, Mark D., *Aboriginal Rights, Magna Carta and Exclusive Rights to Fisheries in the Waters of Upper Canada*, 23 QUEEN'S L.J. 301 (1998).

Weal, Albert, Geoffrey Pridham, Andrea Williams, and Martin Porter, *Environmental Administration in Six European States: Secular Convergence or National Distinctiveness?*, 74(2) PUBLIC ADMINISTRATION 255, 257-58 (1996).

WEAVER, R. KENT, AND BERT A. ROCKMAN, *Assessing the Effects of Institutions, in* DO INSTITUTIONS MATTER? GOVERNMENT CAPABILITIES IN THE UNITED STATES AND ABROAD 6 (1993).

Weber, Max, ECONOMY AND SOCIETY (1978).

Weitzman, Eben A., *Software and Qualitative Research, in* HANDBOOK OF QUALITATIVE RESEARCH 803 (N. Denzin and Y. Lincoln eds., 2d ed., 2000).

Wilkinson, Charles F., *To Feel the Summer in the Spring: The Treaty Fishing Rights of the Wisconsin Chippewa*, 1991 WIS. L. REV. 375 (1991).

Wilson, James A., *The Economical Management of Multispecies Fisheries*, 58 LAND ECON. 417 (1982).

Wright, Dell S., and Chung-Lae Cho, *State Administration and Intergovernmental Interdependency: Do National Impacts on State Agencies Contribute to Organizational Turbulence?, in* HANDBOOK OF STATE GOVERNMENT ADMINISTRATION 33 (John J. Gargan ed., 2000).

Zazycki, Suzanne, *The Legal Structure of an Interstate Water Compact: Implications for a Great Lakes Interstate Water Compact*, 5 TOL. J. GREAT LAKES' L. SCI. & POL'Y 459 (2003).

Zimmerman, Frederick, THE LAW AND USE OF INTERSTATE COMPACTS (1976).

Zinn, Howard, A PEOPLE'S HISTORY OF THE UNITED STATES (1999).

CASES CITED

Arnold v. Mundy, 6 N.J.L. 1, 77-78 (1821).

Att'y Gen.for British Columbia v. Att'y Gen. for Canada, [1914] A.C. 153, 172 (P.C.).

Att'y Gen. for Canada v Att'y Gen. for British Columbia, Appeal From Supreme Court Re fisheries Act, 1914, [1930] 1 Dominion Law Reports 194.

Att'y Gen. for Canada v. Att'y Gen. for Ontario [1898] A.C. 701.

Att'y Gen. for Ontario v. Att'y Gen. for the Dominion [1896] A.C. 348.

Baldwin v. Montana, 436 U.S. 371 (1978).

Carpenter v. Shaw, 280 U.S. 363 (1930).

Cherokee Nation v. Georgia, 30 U.S. (5 Pet.) 1 (1831).

Chevron U.S.A., Inc. v. Natural Resources Devense Council, Inc., 467 U.S. 837 (1984) *reh'g denied*, 468 U.S. 1227 (1984).

Chicago, Burlington & Quincy Railroad Co. v. Chicago, 166 U.S. 226 (1897).

Cuyler v. Adams, 449 U.S. 433 (1991).

Douglas v. Seacoast Products, Inc., 431 U.S. 265 (1977).

EPA v. American Trucking Associations, 531 U.S. 457 (2001).

Fullilove v. Klutznick, 448 U.S. 448 (1980).

Geer v. Connecticut, 161 U.S. 519 (1896).

Guerin v. The Queen, [1984] 2 S.C.R. 335.

Hoopa Valley Indian Tribe v. Ryan, 415 F.3d 986 (9th Cir. 2005).

Hughes v. Oklahoma, 441 U.S. 322 (1979).

Illinois Central R.R. Co. v. Illinois, 146 U.S. 387 (1892).

Johnson v. McIntosh, 21 U.S. (8 Wheat.) 543 (1823).

Klamath Water Users Protective Ass'n v. DOI, 189 F.3d 1034 (9th Cir. 1999).

Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. Wisconsin, 700 F.2d 341 (7th Cir. 1983).

Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. Wisconsin, 668 F.Supp. 1233 (W.D.Wis. 1987).

Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. Wisconsin, 740 F.Supp. 1400 (W.D. Wis. 1990).

Lucas v. South Carolina Council, 505 U.S. 1003 (1992).

MacDonald v. Vapor Canada Ltd., [1977] 2 S.C.R. 134.

Martin v. Waddell, 41 U.S. (16 Pet.) 367, 412 (1842).

Missouri v. Holland, 252 U.S. 416 (1920).

Morongo Band of Mission Indians v. FAA, 161 F.3d 569 (9th Cir., 1998).

Munro v. National Capital Com'n, [1966] S.C.R. 663.

Northeast Bancorp v. Board of Governors, 472 U.S. 159 (1985).

Paul v. Virginia, 8 Wall. 168 (1869).

Pennsylvania Coal Co. v. Mahon, 260 U.S. 393 (1922).

People v. Jondreau, 384 Mich. 539 (1971).

People v. LeBlanc, 399 Mich. 31 (1976).

Prince Edward Island Potato marketing Bd. V. H.B. Willlis Inc, [1952] 2 SCR 392.

Puyallup v. Department of Game of Washington (Puyallup I), 391 U.S. 392 (1968).

Puyallup v. Department of Game of Washington (Puyallup II), 414 U.S. 44 (1973).

Puyallup v. Department of Game of Washington (Puyallup III), 433 U.S. 175 (1976).

Pyramid Lake Paiute Tribe of Indians v. Morton, 354 F.Supp. 252 (D.D.C. 1972).

Reference re Residential Tenancies Act, 1979, [1981] 1 SCR 714.

Reference re Section 16 of Criminal Law Amendment Act, 1968-69, [1970] SCR 777.

R. v. Marshall, [1999] 3 S.C.R. 456.

R. v. Marshall, [1999] 3 S.C.R. 533.

R. v. Sparrow [1990] 1 S.C.R. 1075.

R. v. Van Der Peet [1996] 2 S.C.R. 507.

Re Peralta v. Ontario, [1985] 49 O.R.2d 705 (C.A.), *aff'd* [1988] 89 N.R. 323 (S.C.C.).

Re Resolution to Amend Constitution of Canada, [1981] 1 S.C.R. 753.

R.W. Docks & Slips v. State, 628 N.W.2d 781 (Wis. 2001).

Schneider v. The Queen, [1982] 2 S.C.R. 112.

Shively v. Bowlby, 152 U.S. 1 (1894).

South Dakota v. Dole, 483 U.S. 203 (1987).

Steward Machine Co. v. Davis, 301 U.S. 548 (1937).

Tulee v. Washington, 315 U.S. 681, 684-85 (1942).

United States v. Brown, 552 F.2d 817 (1977).

United States v. Butler, 297 U.S. 1 (1936).

United States v. Canada, 3 R.I.A.A. 1911 (1949).

United States v. Darby, 312 U.S. 100 (1941).

United States v. Helsley, 615 F.2d 784 (9th Cir. 1979).

United States v. Kagama, 118 U.S. 375 (1866).

United States v. Mich (Fox Decision), 471 F. Supp. 192, 213-216, 249-253 (W.D. Mich. 1979), *remanded*, 623 F.2d 448 (6th Cir. 1980), *as modified*, 653 F.2d 277 (6th Cir. 1981), *cert. denied*, 454 U.S. 1124 (1981).

United States v. State of Michigan, Consent Order 1985 Agreement, 520 F. Supp. 207 (W.D. Mich. 1981)(May 31, 1985).

United States v. State of Michigan, Case No. 2:73-CV-26 (M26 73)(W.D. Mich. August 7, 2000).

United States Steel v. Multistate Tax Commission, 434 U.S. 452 (1978).

United States v. State of Washington, 384 F.Supp. 312 (W.D.Wash. 1974), *aff'd*, 520 F.2d. 676 (9th Cir. 1975), *cert. denied*, 423 U.S. 1086 (1976).

United States v. Winans, 198 U.S. 371 (1905).

Virginia v. Tennessee, 148 U.S. 503 (1893).

Washington v. Washington State Commercial Passenger Fishing Vessel Association, 443 U.S. 658 (1979).

Winters v. United States, 207 U.S. 564 (1908).

Worcester v. Georgia, 31 U.S. (6 Pet.) 515 (1832).