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ENVIRONMENTAL ORGANIZATIONS WORKING WITH RESPECT TO AQUATIC NUISANCE SPECIES IN THE GREAT LAKES AREA

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I. INTRODUCTION

The Great Lakes hold the largest freshwater system on Earth.[1] Both a highly valuable and vulnerable asset, the United States and Canada have established myriad laws and agencies to protect against environmental degradation in the Great Lakes region. This Article discusses the organizations that preserve this precious resource. These organizations are not an exhaustive list and are limited to principle organizations working with respect to aquatic nuisance species in the Great Lakes. Here, the objective is to define the goals, administrative processes, and relations between all of these organizations. This Article relates these functions, based on prior environmental proceedings, to a pending aquatic nuisance species issue in the Great Lakes: the Asian carp infiltration. Finally, this Article advocates for an overarching governmental organization to manage and control all of the current agencies and organizations.[2]

Part II provides information on the environmental organizations that work to solve the aquatic nuisance species problem in the Great Lakes.[3] Part II discusses how the aquatic nuisance species problem creates a need for cooperation. Further, it summarizes the laws that give power to the organizations in the Great Lakes to aid the ballast water issue, including the Non-Indigenous Aquatic Nuisance Prevention and Control Act, the National Invasive Species Act of 1996, and the Lacey Act. Part II also

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1. *Great Lakes*, U.S. ENVTL. PROT. AGENCY, http://www.epa.gov/greatlakes (last visited Sept. 15, 2013).

2. *See infra* Part IV.E.

3. *See infra* Part II.

provides a discussion of how state law fills in gaps in the federal regulatory framework. Part III supplies a list of the main organizations that serve, protect, and restore the environment in the Great Lakes. These organizations include the National Invasive Species Council, Aquatic Nuisance Species Task Force, the United States Environmental Protection Agency, and the International Joint Commission. Part IV discusses a pending issue regarding Asian carp, an aquatic nuisance species in the Great Lakes, and explains how these organizations are likely to manage the Asian carp and the potential environmental problems it presents. Part IV also proposes an overarching governmental organization to manage and control all of the current agencies and organizations.

II. FACTUAL BACKGROUND INCLUDING THE ENVIRONMENT OF THE GREAT LAKES, THE AQUATIC NUISANCE SPECIES PROBLEM, AND THE LEGAL FRAMEWORK THAT GIVES POWER TO THE ORGANIZATIONS IN THE GREAT LAKES TO AID THE AQUATIC NUISANCE SPECIES ISSUE

A. The Environment of the Great Lakes

The Great Lakes hold the largest freshwater system on Earth and consist of 95,000 square surface miles.[4] The United States and Canada share this vital and capacious resource that serves as a water supply for both countries.[5] The Great Lakes provide water for consumption, transportation, power, recreation, and other uses.[6] The International Joint Commission ("IJC") concluded that the lakes are not renewable as they only replenish themselves at a rate of less than one percent annually.[7]

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4. Exec. Order No. 13340, 69 Fed. Reg. 29043 (May 18, 2004); *see also generally* Julia R. Wilder, *The Great Lakes as a Water Resource: Questions of Ownership and Control*, 59 IND. L.J. 463 (1984).

5. *The Great Lakes Interagency Task Force and Great Lakes Regional Collaboration Building on Success*, U.S. ENVTL. PROT. AGENCY, 1 (Feb. 2009), http://www.epa.gov/greatlakes/iatf/building_on_success.pdf ("The Great Lakes hold 20 percent of the world's fresh water, have a 10,000 mile coastline, and drain about 200,000 square miles of land.").

6. U.S. ENVTL. PROT. AGENCY, BUILDING ON SUCCESS 1 (2009) [hereinafter BUILDING ON SUCCESS]; *see also generally* Noah D. Hall, *Transboundary Pollution: Harmonizing International and Domestic Law*, 40 U. MICH. J.L. REFORM 681, 682 (2007) ("Transnational pollution is an international problem that demands and deserves the attention of international legal mechanisms such as treaties, agreements, arbitration, and international management and governance.").

7. Charles F. Glass, Jr., *Enforcing Great Lakes Water Export Restrictions Under the Water Resources Development Act of 1986*, 103 COLUM. L. REV. 1503, 1504 (2003)

Additionally, these lakes are susceptible to a host of pollutants including toxic and nutrient pollution, invasive species, and habitat degradation.[8]

Specifically, aquatic nuisance invasive species[9] are a pervasive and challenging problem for the Great Lakes environment.[10] Every eight months, environmental organizations identify a new aquatic nuisance invasive species that ocean-going vessels dump into the Great Lakes via ballast water.[11] Once invasive species infiltrate a new habitat, they are almost impossible to remove making them a serious, yet still unappreciated environmental threat.[12] Because the Great Lakes are a limited but desired resource, governmental institutions have initiated environmental agencies to work in the Great Lakes area, established myriad laws and regulations, and purported to establish effective regulation for the preservation and use of the Great Lakes with respect to aquatic nuisance species.[13]

(providing that the governments of the United States and Canada charged the IJC to "manage the lakes pursuant to the Boundary Waters Treaty of 1909").

8. BUILDING ON SUCCESS, *supra* note 6, at 1.

9. "Invasive species is a subcategory of a broader group of organisms often referred to as 'nonnative,' 'nonindigenous,' 'exotic,' or 'alien.'" Jason A. Boothe, *Defending the Homeland: A Call to Action in the War Against Aquatic Invasive Species*, 21 TUL. ENVTL. L.J. 407, 409 (2008) ("Each of these terms refers to an organism that lives in a habitat in which they have not historically resided. These foreign species are classified as 'invasive' because their presence in the new environment 'does or is likely to cause economic or environmental harm or harm to human health.' Thus, AIS are nonnative, water-residing organisms that either do cause or are likely to cause harm to the economy, the environment, or human health.") (internal citations omitted).

10. *See generally* Brian D. Clark, *Will Viral Hemorrhagic Septicemia (VHS) Be the Straw that Breaks the Camel's Back? The Balkanization of Great Lakes Ballast Water Law*, 18 MINN. J. INTL. L. 227 (2009).

11. Ballast water is the water that vessels use to compensate for a change in cargo weight. Clark, *supra* note 10, at 227 n.2. As a ship loads ballast water from a port, it also may load organisms with the water into its ship. *See Great Lakes Restoration Initiative Action Plan*, U.S. ENVTL. PROT. AGENCY, 22-24 (Feb. 21, 2010), http://glri.us/pdfs/glri_actionplan.pdf (providing a timeline of aquatic nuisance species in the Great Lakes); *see also* Clark, *supra* note 10, at 228.

12. Nw. Envtl. Advocates v. U.S. Envtl. Prot. Agency, 537 F.3d 1006, 1031 (9th Cir. 2008).

13. Alejandro E. Camacho, *Climate Change and Regulatory Fragmentation in the Great Lakes Basin*, 17 MICH. ST. J. INT'L L. 139, 139 (2008).

B. The Aquatic Nuisance Species Problem Creates a Need for Cooperation

The history of aquatic nuisance species in the Great Lakes is long and complex.[14] Since 1973, governments have recognized ballast water as an international problem and as a main source of aquatic nuisance species.[15] Historically, ocean-vessel ships could not access the Great Lakes because the Great Lakes did not have proper waterways to endorse heavy travel from foreign seas, so foreign aquatic nuisance species did not pose an environmental threat.[16] But, man-made channels and additional waterways have opened the Great Lakes to foreign aquatic nuisance species.[17] As a ship loads ballast water, usually to compensate for a change in cargo weight, it also loads many of the organisms existing in that port and unloads others from different ports.[18] Shipping boats' ballast water introduces foreign species to outside waters.[19] Although ballast water is necessary, it is the primary method for foreign aquatic nuisance species to travel to foreign waters throughout the world.[20]

For example, in the 1980s, ballast water introduced the European zebra mussel to the Great Lakes.[21] These zebra mussels multiplied and clogged pipes, attached themselves to ships and other marine constructions, harmed native creatures, boosted growth of abnormal algae, and impeded recreational activities.[22] America's yearly-

14. *See* Clark, *supra* note 10, at 230.

15. *Id.* at 232; *see also* Tony George Puthucherril, *Ballast Waters and Aquatic Invasive Species: A Model for India,* 19 COLO. J. INT'L ENVTL. L. & POL'Y 381, 388-90 (2008).

16. Clark, *supra* note 10, at 230-31.

17. *Id.* at 231.

18. Liwen A. Mah, *Sailing By Looking in the Rearview Mirror: EPA's Unreasonable Deferral of Ballast-Water Regulation to a Now Ineffective Coast Guard*, 31 ECOLOGY L.Q. 665, 667 (2004); *Nw. Envtl. Advocates*, 537 F.3d at 1012-13; *see also* Samuel H. Wiest, *Protecting U.S. Waters From Nonindigenous Species Invasion: A Case for Federalism and Strong State Regulation*, 18 PENN ST. ENVTL. L. REV. 71, 71 (2009) ("Shipping vessels take on ballast water to improve their stability and balance under various cargo conditions.").

19. Mah, *supra* note 18, at 667.

20. *Id.*

21. *Id*.

22. *Id.*; *see also* Jason G. Howe, *Fednav, Ltd. v. Chester: Ballast Water and the Battle to Balance State and Federal Regulatory Interests*, 15 OCEAN & COASTAL L.J. 381, 384 (2010) ("In 1990, Congress recognized the zebra mussel as one of several new environmental hazards in the Great Lakes region, passing the [Non-Indigenous Aquatic Nuisance Prevention and Control Act] in response. It recognized that ballast water

attributable costs to all invasive species, both aquatic and terrestrial, exceed $123 billion.[23] Aquatic nuisance species are a large problem for the Great Lakes and continue to wreak havoc on this precious resource. Surprisingly, this costly problem has gone unnoticed. Thus, there is an economic inducement to regulate the ballast water issue—estimates reflect that treating aquatic nuisance species present in the Great Lakes is cost effective as well as environmentally beneficial.[24]

C. Laws That Give Power to the Organizations in the Great Lakes to Aid the Aquatic Nuisance Species Issue

1. The Non-Indigenous Aquatic Nuisance Prevention and Control Act and the National Invasive Species Act of 1996

Because ballast water is the principle means of introducing aquatic nuisance species into foreign waters, ballast water is a significant portion of what the statutes and regulations seek to address.[25] The Coast Guard has the power to apply actions with respect to ballast water discharge.[26]

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discharges caused the ANS hazard, and sought to control ballast water management systems by charging the U.S. Coast Guard-issued regulations requiring ballast-carrying vessels entering the Great Lakes from beyond the exclusive economic zone [] to meet one of three ballast water management practices: (1) exchange ballast water beyond the EEZ; (2) retain ballast water; or (3) use an environmentally sound alternative. Ships were also encouraged to keep records of each ballast water exchange. While compliance was originally voluntary, it became mandatory two years later.").

23. Mah, *supra* note 18, at 667.

24. Clark, *supra* note 10, at 246 ("For example, the payoff for controlling sea lamprey populations offers a staggering thirty dollar savings for each dollar spent. One cannot help but wonder what the savings would be if the ANS were never introduced in the first place.").

25. Boothe, *supra* note 9, at 409-10; *see also* Brief of Amicus Curiae Ocean Tourism Coalition in Support of Petition for Writ of Certiorari, UFO Chuting of Hawaii, Inc. v. Smith, 508 F.3d 1189 (9th Cir. 2007) (No. 07-1427), 2008 WL 2468513, at *5. ("The House of Representatives recently approved the Ballast Water Treatment Act of 2008, a bill requiring certain technology on vessels to prevent invasive species"); Robert A. Noce, *If a Regulation Falls in the Courts, and Nobody's There to Hear it . . . the Limited Impact of Northwest Environmental Advocates v. EPA on Federal Ballast Water Policy*, 16 MO. ENVTL. L. & POL'Y REV. 594, 610 (2009) ("The [Ballast Water Treatment Act] would require ocean vessels coming to any U.S. port to install treatment technology to clean ballast water before its discharge."); *see also* 16 U.S.C.A. § 4714 (West 1996) (discussing ballast water management demonstration program).

26. Clark, *supra* note 10, at 235; *see also* Boothe, *supra* note 9, at 416 (stating "the Coast Guard has yet to approve any alternative methods of ballast water management beyond exchanging the water in the ocean. Thus, ships unable to carry out an exchange

The Non-Indigenous Aquatic Nuisance Prevention and Control Act ("NANPCA") and the National Invasive Species Act of 1996 ("NISA") ordered the Coast Guard to promulgate voluntary guidelines to help prevent the introduction and spread of aquatic nuisance species into the Great Lakes through ballast water exchange.[27] Because of relaxed guidelines, vessels did not comply with these voluntary guidelines.[28] Now, the Coast Guard requires that vessels adhere to the regulations.[29] NISA does not place limitations on the Coast Guard's discretion to enforce its ballast water regulations, and there is no case law to apply to determine if the Coast Guard adequately enforces the regulations.[30] However, NISA instructs the Coast Guard to produce ballast reports for all vessels to complete.[31] These reports dictate how thoroughly the vessels exchange the ballast water and may include anything else that the Secretary deems necessary.[32] Additionally, the Secretary may monitor compliance through ballast sampling.[33] "The Secretary, acting through the Smithsonian Environmental Research Center, then maintains a national clearinghouse of data that includes records of compliance, sampling results, and any supplemental information obtained by the U.S. Coast Guard or the Task Force."[34]

These guidelines aid ships traveling in the Great Lakes to manage ballast water.[35] NISA provides that ships entering the Great Lakes with ballast water traveling from a port beyond the Exclusive Economic Zone ("EEZ")[36] must do one of three tasks: (1) conduct mid-ocean ballast water exchanges; (2) retain ballast water on board; or (3) use a Coast Guard alternative treatment method.[37] The purposes of these tasks are to

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are required to keep their ballast water on board while inside the [exclusive economic zone").

27. Clark, *supra* note 10, at 236; *see also* 16 U.S.C.A. § 4711(a)(1).

28. Clark, *supra* note 10, at 237.

29. *Id.*; *see also* 16 U.S.C.A. § 4711(a)(1).

30. *Save Lake Superior Assoc. v. Napolitano*, No. 08-CV-1173, 2009 WL 690089, at *4 (D. Minn. Mar. 12, 2009).

31. Jason R. Hamilton, *All Together Now: Legal Responses to the Introduction of Aquatic Nuisance Species in Washington Through Ballast Water,* 75 WASH. L. REV. 251, 266 (2000).

32. *Id.*

33. *Id.*

34. *Id.*

35. Clark, *supra* note 10, at 236.

36. Boothe, *supra* note 9, at 416 n.69 ("The EEZ is the area of 200 nautical miles around the shores of the United States.").

37. Clark, *supra* note 10, at 236; Boothe, *supra* note 9, at 416 (stating that the Coast Guard has not offered any alternative measures besides the exchange process); *see also*

ensure that incoming vessels have to remove any organisms in the ballast water tanks and kill any surviving organisms that could pose harm to the Great Lakes.[38] If a ship cannot perform these removals due to a problem such as weather, then it must contact a Coast Guard officer.[39] If a ship fails to comply with these regulations, it may have to pay a fine of up to $27,500 and a felony conviction for knowing violations.[40]

These requirements have two exceptions.[41] First, if following the rules would endanger the ship or crew, then ships may disregard the rules.[42] Second, ships may ignore the rules if, "as a matter of custom," ships declare that they have "no ballast on board."[43] However, even ships that leave a port without any ballast water will hold some residual ballast water along with organisms and eggs that the vessel may release into the waters of a foreign port via ballast water discharge.[44] The fact that these ships can bypass the rule and potentially transfer harmful aquatic nuisance species is a significant problem because of the huge economic and environmental costs that aquatic nuisance species pose.

2. The Lacey Act

The Lacey Act gives the Secretary of the Interior the authority to certify mammals, fish, birds, amphibians, and reptiles as harmful to human beings and to the interests of the environment.[45] When a species is "injurious," the mandate bans that species and its offspring or eggs from entering the Unites States except for "zoological, educational, medical, and scientific purposes."[46] If the species falls under one of the exceptions, then the Lacey Act grants the U.S. Fish & Wildlife Service the authority to grant a permit that allows a person to transport the injurious species between states.[47]

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33 C.F.R. § 151.1515 (2012) (stating that weather, equipment failure, or other extraordinary conditions are conditions that would trigger an alternative treatment).

38. Boothe, *supra* note 9, at 416.

39. *Id.*

40. *Id.*

41. Clark, *supra* note 10, at 236.

42. *Id.*

43. *Id.*; *see also* 33 C.F.R. § 27.3 (setting the maximum penalty for aquatic nuisance species at $35,000).

44. Boothe, *supra* note 9, at 419.

45. *Id*. at 414.

46. *Id.*

47. *Id.*

The U.S. Fish & Wildlife Service or the public can initiate a petition to list a species as injurious under the Lacey Act.[48] Then, the U.S. Fish & Wildlife Service reviews the risks the species poses.[49] If the organization finds that the species is injurious, then it proposes a ruling and conducts a notice and comment proceeding lasting between thirty and sixty days before determining if it will deem the species as injurious.[50] The sanctions for violations under this Act are severe.[51] An individual who violates the Act could face a prison sentence of up to six months and a fine of $5,000, and an organization that violates the Act could face a fine of up to $10,000.[52]

3. Michigan State Law on Preventing Ballast Water from Introducing Aquatic Nuisance Species Fills in Gaps in the Federal Regulatory Scheme[53]

In response to the lack of federal regulation for "no ballast on board" ships, Michigan has passed laws to prevent ballast water from introducing aquatic nuisance species into its waters.[54] In *Fednav, Ltd. v. Chester*, the court struck a balance between federal laws and state laws attempting to manage ballast water problems resulting in aquatic nuisance species issues.[55] The *Fednav* court respected Michigan's "duty to implement legislation that protects its ecological and economic

48. *Id.* at 415.

49. *Id.*

50. *Id.*

51. *Id.*

52. *Id.*; *see also* Suzanne Bostrom, *Halting the Hitchhikers: Challenges and Opportunities for Controlling Ballast Water Discharges and Aquatic Invasive Species*, 39 ENVTL. L. 867, 867 (2009) ("[N]o binding federal or international regime exists that requires the adoption of treatment technologies for ballast water discharges.").

53. The fact that these laws exist shows that the current regulatory scheme is ineffective.

54. Kyle H. Landis-Marinello, Note, *Noontime Dumping: Why States have Broad Discretion to Regulate Onboard Treatments of Ballast Water*, 106 MICH. L. REV. 135, 135 (2007); *see also* Howe, *supra* note 22, at 383 ("While federal laws clearly preempt those of a state when conflicts arise, states may nonetheless contribute to achieving the common goal of protecting the state's environmental and economic interests. Furthermore, states are obligated by a duty to their citizens' health and economic security to enact state-centric legislation when Congress leaves loopholes in its regulatory scheme.") (internal citations omitted).

55. Howe, *supra* note 22, at 381; *see also* Lindsay Voirin, *Federal Law and Legislation*, 24 J. LAND USE & ENVTL. L. 159, 167 (2008) ("[S]hipping companies and shipping associations were unsuccessful in challenging Michigan's Ballast Water Statute.").

interests."[56] The Michigan law requires that, prior to entering a Michigan port, a vessel not planning to exchange ballast water in Michigan must verify that fact with the Michigan Department of Environmental Quality.[57] If the vessel plans to exchange ballast water, then it must utilize one of four state ballast water treatment methods.[58] These methods include: (1) hypochlorite treatment, (2) chlorine dioxide treatment, (3) ultraviolet light radiation treatment, or (4) deoxygenation treatment.[59]

III. ORGANIZATIONS THAT OPERATE IN THE GREAT LAKES TO HELP CONTROL THE AQUATIC NUISANCE SPECIES PROBLEM

A. National Invasive Species Council

In 1999, Executive Order 13112 established the National Invasive Species Council ("NISC"), which is the federal government's first earnest attempt to establish a framework that focuses on the invasive species problem.[60] The administrators of the following agencies make up the NISC: the Department of State, Department of Treasury, Department of Defense, Department of the Interior, Department of Agriculture, Department of Commerce, Department of Transportation, Department of Health and Human Services, Department of Homeland Security, National

56. Howe, *supra* note 22, at 382; *see also* Noah D. Hall, *Michigan's Ballast Water Law Upheld, Allows States to Take Action to Stop the Spread of Invasive Species*, 8 WATER QUALITY & WETLANDS COMMITTEE NEWSL. (ABA Section of Environment, Energy, and Resources, Chicago, Ill.) Jan. 2009 at 10 (discussing the U.S. Court of Appeals for the Sixth Circuit's decision to uphold the Michigan ballast water statute); Fednav, Ltd. v. Chester, 547 F.3d 607, 613 (6th Cir. 2008) ("Pursuant to this provision, the Michigan Department of Environmental Quality ('MDEQ') issued a 'Ballast Water Control General Permit' ('General Permit') in 2006. All oceangoing vessels are required to purchase a General Permit before engaging in port operations in Michigan. To obtain a General Permit, a vessel operator is required to fill out a three-page application and pay a $75 application fee and a $150 annual fee. The General Permit authorizes the vessel to engage in port operations in Michigan through January 1, 2012, so long as the vessel complies with the requirements of the General Permit.").

57. Howe, *supra* note 22, at 386; *see also Dynegy Will Disclose Climate Change Risks in Financial Reports*, 270 CORPORATE COUNSEL'S MONITOR ARTICLE IV (2008) (discussing Michigan's certification requirements).

58. Howe, *supra* note 22, at 386; *see also* Safety Zones, 75 Fed. Reg. 26094 (May 11, 2010) (to be codified at 33 C.F.R. pt. 165) (discussing the Coast Guard's temporary safety zone from Brandon Road Lock and Dam to Lake Michigan).

59. Howe, *supra* note 22, at 386 n.47.

60. Exec. Order No. 13,112, 64 Fed. Reg. 6183, 6814 (Feb. 3, 1999); *see also* Boothe, *supra* note 9, at 417.

Aeronautics and Space Administration, Environmental Protection Agency ("EPA"), Office of the U.S. Trade Representative, and the U.S. Agency for International Development.[61] The NISC seeks to ensure that all members work with each other, states, and other agencies to prevent and respond to the spread of aquatic nuisance species.[62] The NISC also issues the National Invasive Species Management Plan that provides federal agencies with goals and duties to respond to invasive species.[63] Finally, the NISC must recommend and note specific measures that utilize technology and promote education to prevent the introduction of invasive species.[64]

B. Aquatic Nuisance Species Task Force

The Aquatic Nuisance Species Task Force ("ANSTF") "is an intergovernmental organization dedicated to preventing and controlling aquatic nuisance species, and implementing the [NANPCA]."[65] There are thirteen agencies that comprise the ANSTF, as well as several ex officio members.[66] The U.S. Coast Guard ("USCG") is one of the federal members of this organization.[67] The ANSTF includes such agencies as the National Oceanic and Atmospheric Administration, the U.S. Fish & Wildlife Service, the U.S. Geological Survey, and the EPA.[68] The Great Lakes Commission is one of the ex officio members.[69] The Great Lakes

61. Boothe, *supra* note 9, at 417.

62. *Id.*

63. *Id.*

64. Hamilton, *supra* note 31, at 267.

65. AQUATIC NUISANCE SPECIES TASK FORCE, http://www.anstaskforce.gov/default.php (last visited Nov. 9, 2013); *see also* Howe, *supra* note 22, at 397 ("The Task Force was created to develop the USCG's ballast water treatment program in the Great Lakes region, and [to] ensure that both state and federal goals were met. The Task Force represented an attempt to bring all interested parties to the table.").

66. AQUATIC NUISANCE SPECIES TASK FORCE, *supra* note 65; *see also* 16 U.S.C.A. § 4722.

67. *Aquatic Nuisance Species Task Force Strategic Plan (2007–2012)*, AQUATIC NUISANCE SPECIES TASK FORCE, 2 (Mar. 2007), http://www.anstaskforce.gov/Documents/ANSTF_Strategic_Plan_2007_Final.pdf; *see also U.S. Fish & Wildlife Service Employee Pocket Guide*, U.S. FISH & WILDLIFE SERVICE, http://www.fws.gov/info/pocketguide/fundamentals.html (last modified July 16, 2013) (providing the U.S. Fish & Wildlife Service's mission statement: "is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people").

68. *Mich. v. U.S. Army Corps of Eng'rs*, 667 F.3d 765, 797 (7th Cir. 2011).

69. AQUATIC NUISANCE SPECIES TASK FORCE, *supra* note 65.

Basin Compact, an agreement between the Great Lakes states and provinces, established the Great Lakes Commission.[70]

The Great Lakes Commission includes the Department of Natural Resource's Director, the Director of Environmental Protection, a Senate member, and a House of Representative member. [71] These members serve two-year terms along with an additional member that the Governor appoints who serves a term based on the Governor's stipulation.[72] The Commission gathers data and offers recommendations concerning research and cooperative programs regarding water use.[73] The Commission's findings, along with the findings of the Great Lakes Basin Compact, are not binding.[74]

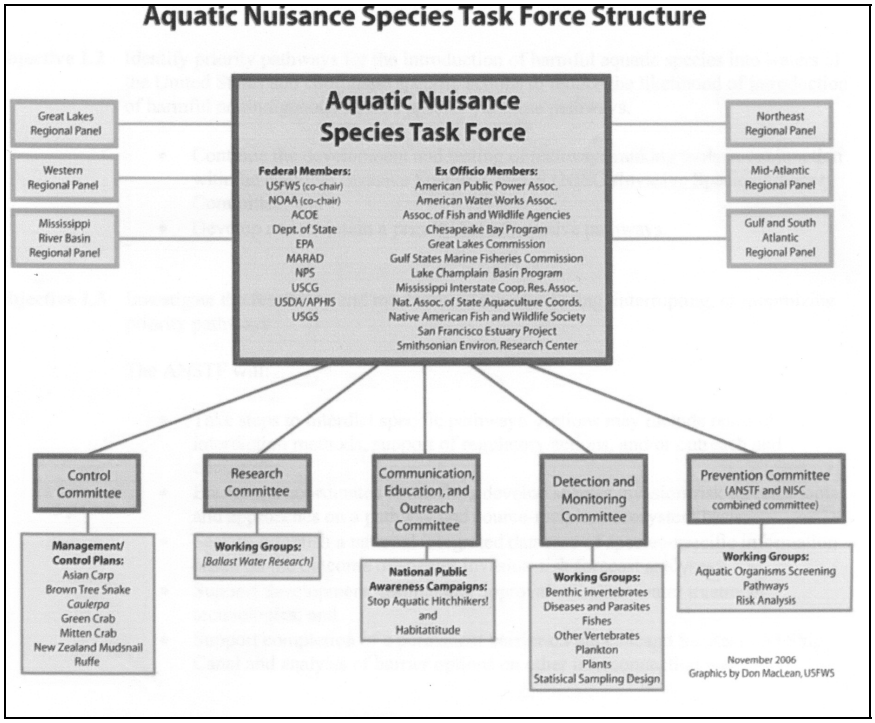

Fig. 1.1 Reprinted from *Aquatic Nuisance Species Task Force Strategic Plan (2013-2017)*, AQUATIC NUISANCE SPECIES TASK FORCE (MAY 3, 2013), http://www.anstaskforce.gov/Documents/ANSTF%20Strategic%20Plan%202013-2017.pdf.

70. Camacho, *supra* note 13, at 147.

71. KATHLEEN M. DORR ET AL., 93 OHIO JUR. 3D *Water* § 133 (West 2011).

72. *Id.* "In addition to the powers of the Great Lakes Commission specified in the Compact, there is granted to the Commission and to the commissioners all of the powers provided for in the Great Lakes Compact set forth in the statute and all of the powers necessary or incidental to the carrying out of the Compact in every particular." *Id.*

73. Camacho, *supra* note 13, at 147.

74. *Id.*

The ANSTF is responsible for coordinating governmental works regarding ANSTF in the United States with those groups of the private sector and with regional panels and issue-specific committees and working groups.[75] ANSTF's mission has five parts. First, ANSTF seeks to prevent aquatic nuisance species from entering waters and dispersing.[76] ANSTF advocates that the most effective method to prevent aquatic nuisance species is to improve, develop, and support "authorities and programs that address intentional and unintentional introductions from all pathways."[77] Second, ANSTF seeks to mitigate aquatic nuisance species' harsh effects that already exist.[78] To accomplish this second mission, ANSTF works to find environmental methods to minimize further harm to the public's interests.[79] Further, ANSTF develops "rapid response capabilities, survey and monitoring efforts, state management plans, and research and education specifically related to monitoring and control."[80] Third, ANSTF assists in the process of performing research related to the danger and damaging effects of ANS.[81] ANSTF accomplishes this third mission through research on "methods to monitor, manage, control and/or eradicate such species."[82] Fourth, ANSTF also works to enhance the public's comprehension of the value of reducing the introduction, spread, and impact of aquatic nuisance species and recommends both national and international actions.[83] Fifth, ANSTF works to increase ANSTF's effectiveness.[84]

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75. AQUATIC NUISANCE SPECIES TASK FORCE, *supra* note 65.

76. *Aquatic Nuisance Species Task Force Strategic Plan*, *supra* note 67 (providing three sub-objectives under this first goal: (1) "[f]acilitate the development and use of science based risk assessments and other decision tools to determine the risks associated with the movements of potentially invasive aquatic species and the methods to prevent or mitigate those risks"; (2) "[i]dentify priority pathways for the introduction of harmful aquatic species into waters of the United States and coordinate specific actions to reduce the likelihood of introduction of harmful non-indigenous aquatic species via these pathways"; and (3) "[i]nvestigate the feasibility and mechanisms for interdicting, interrupting, or minimizing priority pathways.").

77. *Id.*

78. *Id.* at 4-5 (discussing four sub-objectives including: (1) "[f]acilitate survey and monitoring efforts to detect and control ANS"; (2) "[f]acilitate the development of capacities to respond rapidly to invasions"; (3) "[f]acilitate the development of state and interstate ANS managements plans"; and (4) "[c]oordinate the development and implementation of ANS management plans").

79. *Id.* at 4.

80. *Id.*

81. *Id.* at 5 (discussing ways in which the ANSTF will facilitate research).

82. *Id.* at 1.

83. *Id.* at 6 (providing two sub-objectives: (1) "[e]nsure the people of the United States understand the problem and impacts associated with ANS" and (2) "[c]ooperate

The Aquatic Nuisance Species Task Force performs a number of studies on ballast water management.[85] The National Invasive Species Council ("NISC") created the ANSTF to meet state and federal goals and to develop the U.S. Coast Guard's ballast water treatment plan in the Great Lakes area.[86]

C. The Environmental Protection Agency

President George W. Bush gave an Executive Order that stated the Environmental Protection Agency, called the "Great Lakes Interagency Task Force" for administrative purposes, shall serve a series of purposes and promulgate several policies.[87] The EPA's policy states that:

> The EPA has primary responsibility for enforcing many of the environmental statutes and regulations of the United States. As such, the Agency is granted explicit enforcement authority in environmental statutes. Sometimes, however, that authority needs to be further refined or explained. In such cases, EPA may develop and implement policies and write guidance. In addition, EPA sometimes issues policy or guidance to encourage compliance with environmental requirements.[88]

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with nations that share waters and invasion pathways with the United States to prevent, manage and control ANS").

84. *Id.* at 6-7 (providing three sub-objectives: (1) "[s]trengthen the coordination capacity of the ANSTF"; (2) "[e]xplore opportunities to establish statutory and regulatory authorities necessary to implement ANSTF goals and objectives"; and (3) "[c]oordinate federal agency budgets to support ANSTF priorities and establish a clear process that links state and regional needs with the federal budget process").

85. 16 U.S.C.A. § 4712.

86. Howe, *supra* note 22, at 397; *see also* 16 U.S.C. § 4722(c)(2) ("Whenever the Task Force determines that there is a substantial risk of unintentional introduction of an aquatic nuisance species by an identified pathway and that the adverse consequences of such an introduction are likely to be substantial, the Task Force shall, acting through the appropriate Federal agency, and after an opportunity for public comment, carry out cooperative, environmentally sound efforts with regional, State and local entities to minimize the risk of such an introduction.")

87. Exec. Order No. 13,340, 69 Fed. Reg. 29,043, 29,043 (May 18, 2004) ("A number of intergovernmental bodies are providing leadership in the region to address environmental and resource management issues in the Great Lakes system. These activities would benefit substantially from more systematic collaboration and better integration of effort."); *see also* Camacho, *supra* note 13, at 151.

88. *See Policy and Guidance*, U.S. ENVTL. PROT. AGENCY, http://www2.epa.gov/laws-regulations/significant-guidance-documents (last visited Nov. 9, 2013).

This Task Force must help establish a means for collaboration among the members of the Task Force and the other groups in the Great Lakes area and coordinate with Canada and other bi-national entities involved in the Great Lakes concerning "policies, strategies, plans, programs, projects, activities, and priorities for the Great Lakes system."[89] Additionally, the Task Force must collaborate to develop consistent "[f]ederal policies, strategies, projects, and priorities" for restoring and protecting the Great Lakes and assisting in appropriate management for the Great Lakes area.[90]

The Task Force must have goals that seek "cleaner water, sustainable fisheries, and biodiversity of the Great Lakes system and ensure that Federal policies, strategies, projects, and priorities support measurable results." [91] Also, the Task Force must "exchange information regarding policies, strategies, projects, and activities of the agencies represented on the Task Force related to the Great Lakes system."[92] Further, it must coordinate federal scientific and other research in the Great Lakes region.[93] Additionally, the Task Force must assist and support Task Force agencies in their activities in the Great Lakes system.[94] Finally, the Task Force must provide summaries to the President regarding its activities and recommendations to further its policy goals.[95]

The Federal Water Pollution Control Act permits the Environmental Protection Agency Administrator to interpret broad statutory guidelines and goals into specifics and use that interpretation to determine a state's standard. [96] The Administrator may reasonably interpret the Act as allowing him to mandate states to substantiate their standards that do not comply with criteria policy and to disapprove of a state's water quality standard.[97] Additionally, the President instructed the EPA to assemble a regional collaboration effort including relevant states and cities.[98] This

89. Exec. Order No. 13340, 69 Fed. Reg. at 29,043 ("'Great Lakes' means Lake Ontario, Lake Erie, Lake Huron (including Lake Saint Clair), Lake Michigan, and Lake Superior, and the connecting channels (Saint Marys River, Saint Clair River, Detroit River, Niagara River, and Saint Lawrence River to the Canadian Border).").

90. *Id.* at 29,044.

91. *Id.*

92. *Id.*

93. *Id.*

94. *Id.*

95. *Id.*

96. Mississippi Comm'n on Natural Res. v. Costle, 625 F.2d 1269, 1276 (5th Cir. 1980).

97. *Id.*

98. *Great Lakes Interagency Task Force*, U.S. ENVTL. PROT. AGENCY, http://www.epa.gov/greatlakes/iatf/index.html (last visited Sept. 26, 2013) ("Former EPA

collaboration has reduced duplication of agency efforts in conjunction with restoring and protecting the Great Lakes environment efficiently and effectively.[99]

The states have the principle role in instituting water quality standards.[100] *American Wildlands v. Browner* held that states must submit their water quality standards to the EPA's Regional Administrator to review the standard.[101] Then, the EPA must review the state's standard and either approve or disapprove.[102] If the EPA disapproves of the standard, it must notify the state of changes that would meet the EPA's standard for approval.[103]

Congress amended the Clean Water Act to mandate the EPA to manage "'vessels and other floating craft,' along with the discharge of 'biological materials' such as ANS."[104] Originally, the EPA did not regulate ballast water discharges as part of its responsibilities under the Clean Water Act.[105] However, in 2006 the District Court for the Northern District of California ordered the EPA to begin regulating ballast water.[106] The court ordered the EPA to regulate boat

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Administrator Mike Leavitt fulfilled this requirement by establishing the Great Lakes Regional Collaboration in December 2004."); *see also* 41 JOHN A. GEBAUER ET AL., OHIO JUR. ENVTL. PROTECTION §105 (3d. ed. 2013) (stating that the Environmental Protection Director is accountable for affirming "standards of water quality applicable to the waters of Ohio").

99. BUILDING ON SUCCESS, *supra* note 6, at 1 ("Regular meetings and dialogue have resulted in an unprecedented degree of communication, cooperation, and coordination of governmental efforts at all levels in the Great Lakes basin.").

100. American Wildlands v. Browner, 260 F.3d 1192, 1194 (10th Cir. 2001); *see also* 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. § 131.21(a).

101. *Browner*, 260 F.3d at 1194.

102. *Id.*

103. *Id.*

104. Howe, *supra* note 22, at 385; *see* Zdravka Tzankova, *The Political Consequences of Legal Victories: Ballast Regulation and the Clean Water Act*, 40 ENVTL. L. REP. NEWS & ANALYSIS 10,154, 10,154 (2010) ("CWA [Clean Water Act] authority was superimposed over an already existing system of dedicated federal ballast law and regulation—a system that had evolved over 19 years of policy negotiation and interest group contestation, and one which is partially augmented by some state ballast controls aimed at filling the gaps in invasion prevention that have been left by the federal regulatory compromise.").

105. Howe, *supra* note 22, at 385; *see also* Rapanos v. United States, 547 U.S. 715, 717 (2006) ("Congress passed the Clean Water Act (CWA or Act) in 1972. The Act's stated objective is 'to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.'").

106. Howe, *supra* note 22, at 385 ("The California court gave the EPA until September 30, 2008 to enact ballast water regulations that would coexist with NISA."); *see also* Loren Remsberg, *Too Many Cooks in the Galley: Overlapping Agency Jurisdiction of*

discharges.[107] The Clean Water Act requires that no person can discharge pollution into the water absent an EPA permit.[108]

D. International Joint Commission

Three U.S. members and three Canadian members make up the International Joint Commission ("IJC").[109] These members "investigate and report upon the conditions and uses of the waters adjacent to the boundary lines between the United States and Canada."[110] Under the 1909 Boundary Waters Treaty, the IJC "prevents and resolves disputes between the United States of America and Canada . . . and pursues the common good of both countries as an independent and objective advisor to the two governments."[111] The 1909 Boundary Waters Treaty gives specific recommendations for joint programs to abate these environmental problems.[112] The Treaty recommends that the IJC have the authority to supervise and to coordinate the effort to solve these environmental problems.[113] Specifically, the IJC governs projects in transboundary waters and regulates project operations in this area.[114] Finally, the IJC alerts the government to arising issues along the

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Ballast Water Regulation, 76 GEO. WASH. L. REV. 1412, 1412 (2008) (discussing *Nw. Envtl. Advocates v. EPA*'s holding that "Congress clearly intended that EPA regulate ballast water discharges, under the Clean Water Act ('CWA'), despite the fact that the United States Coast Guard had promulgated and administered ballast water regulations pursuant to its congressional mandate in the National Invasive Species Act of 1996 ('NISA'). The district court's statutory interpretation of the CWA appears correct: EPA is without discretion under the CWA to decline to regulate the specific type of discharge that occurs when a ship docks at a United States port and releases its ballast.").

107. Tyler W. Wickman, *The Battle Against Invasive Species: The Clean Water Act and Environmental Protection Agency Regulation of Recreational Boats*, 91 MARQ. L. REV. 605, 606 (2007) ("Due to the invasive species threat posed by recreational boats and large commercial ships, the EPA will need to recognize and regulate both types of vessels when drafting the new regulatory scheme that complies with the CWA, the NPDES, and the holding of Northwest Environmental Advocates.").

108. Noce, *supra* note 25, at 594.

109. 22 U.S.C.A. § 267b.

110. *Id.*

111. *About the IJC*, INT'L JOINT COMM'N, http://www.ijc.org/en_/About_the_IJC (last visited Nov. 9, 2013).

112. *Id.*

113. Ohio v. Wyandotte Chem. Corp., 401 U.S. 493, 503 (1971).

114. *See Role of the IJC*, INT'L JOINT COMM'N, http://www.ijc.org/en_/Role_of_the_Commission (last visited Nov. 9, 2013).

border.[115] The United States and Canada developed the IJC because each country affects the other when it takes actions in shared waters.[116]

While the IJC regulates water withdrawals from the Great Lakes, it focuses its attention on water quality.[117] The Great Lakes Water Quality Agreement gave the IJC more power with respect to water quality and water levels, and it increased public involvement in the IJC's activities.[118] However, the IJC may only monitor and report water capacity, air quality, water quality, and water levels.[119] The United States and Canada's governments, rather than the IJC, are responsible for achieving the Great Lakes Water Quality Agreement's objectives.[120]

IV. PENDING ISSUE REGARDING AQUATIC NUISANCE SPECIES IN THE GREAT LAKES

Many environmental organizations have the power to observe, research, and regulate the aquatic nuisance species problems in the Great Lakes. However, no one body can effectively regulate the serious problems that these species pose. This Article advocates for an overarching-governmental organization to manage and control all of the current agencies and organizations. Because current organizations may only regulate but not make binding decisions, a new organization with the authority to make more stringent and binding decisions should be created. Further, because the Great Lakes region is so precious and its problems so costly, there is a large incentive to promulgate a new organization with the power to regulate and manage this region and its problems with authority.

The Asian carp problem illustrates how all of the organizations discussed above, in addition to The Asian Carp Regional Coordinating Committee and the Army Corps of Engineers, work, albeit ineffectively, to solve a pending aquatic nuisance species problem.

115. *Id.*
116. *Id.*
117. Camacho, *supra* note 13, at 148.
118. Hall, *supra* note 6, at 713.
119. Camacho, *supra* note 13, at 149.
120. *Id.*

A. Asian Carp and the Problems the Species Poses to the Great Lakes

Two types of invasive species of Asian carp—bighead and silver carp—threaten the Great Lakes.[121] Asian carp can weigh up to one hundred pounds and grow up to three feet long.[122] Asian carp have traveled up the Mississippi River and "now are poised at the brink of this man-made path to the Great Lakes."[123] The Chicago Sanitary and Ship Canal is the only connection between the Mississippi River and the Great Lakes.[124] This canal is "the final chokepoint for controlling the Asian carp's progress toward Lake Michigan."[125]

> The carp are voracious eaters that consume small organisms on which the entire food chain relies; they crowd out native species as they enter new environments; they reproduce at a high rate; they travel quickly and adapt readily; and they have a dangerous habit of jumping out of the water and harming people and property.[126]

The Asian carp will impose irreparable harm to the Great Lakes when they invade, and it is quite certain that Asian carp can exist and reproduce in the Great Lakes.[127]

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121. Robin Kundis Craig, *Asian Carp and the Great Lakes: When is Irreparable Harm "Likely" and "Imminent" Enough?*, 42 NO. 4 A.B.A. TRENDS 1, 13 (2011); *see also* Michigan v. U.S. Army Corps of Eng'rs, 667 F.3d 765, 768 (7th Cir. 2011) (discussing Asian carp as an invasive species).

122. Craig, *supra* note 121, at 13.

123. *U.S. Army Corps of Eng'rs*, 667 F.3d at 768.

124. Craig, *supra* note 121, at 2.

125. *Id.*

126. *U.S. Army Corps of Eng'rs*, 667 F.3d at 768.

127. *Id.* at 784-85 ("A species typically requires multiple introductions before it takes root in a new ecosystem, and there has been a substantial debate, reflected in the literature, about whether the food supply and other features of the Great Lakes could support the carp. On April 28, 2011, however, the Obama Administration presented two pieces of what it called 'bad news' . . . new evidence suggests that the fish will happily switch from eating plankton to consuming the green algae that now covers the lake floor (thanks to another invasive species, the zebra mussel); and . . . while experts had thought the carp need coastal rivers between 30 and 60 miles long to spawn, it turns out they can make do with much shorter breeding grounds.") (citations omitted).

B. The Asian Carp Regional Coordinating Committee and the Army Corps of Engineers Are Additional Organizations, Different from the Organizations Above, That Are Aiding the Asian Carp Problem in the Great Lakes

1. The Asian Carp Regional Coordinating Committee

During the fall of 2009, twenty-one federal, state, and local agencies and other entities formed the Asian Carp Regional Coordinating Committee ("ACRCC"), which is designed to monitor and to stop the migration of invasive carp.[128] The ACRCC is composed of the Corps and the District, the Coast Guard, the U.S. Department of Transportation, the White House Council on Environmental Quality, the Great Lakes Fishery Commission, the City of Chicago, and the state departments of natural resources of all the plaintiff states, plus Illinois, Indiana, and New York.[129]

The ACRCC developed the Asian Carp Control Strategy Framework.[130] This framework recently has employed over forty collaborative projects.[131] The working group designed the projects to aid in the invasive carp problem, and many of these initiatives are underway or are complete already.[132] The projects fall under eight categories:[133] (1) above and below the barrier, targeting and enhanced monitoring assessment activities, including electrofishing and rapid response teams; (2) below the barrier, commercial harvesting and removal actions involving fishing and removal of fish in the Lockport area, where the Chicago Area Waterway System ("CAWS") connects to the Des Plaines River, establishing new markets for the fish, and investigating certification requirements for the commercial sale of invasive carp; (3) waterway division methods and electric barrier actions;[134] (4) studies on the best methods to separate the watersheds, various measures and their effectiveness, risk modeling, and technology and research development; (5) research and technology development (includes investigating about

128. *Id.* at 797.
129. *Id.* at 798.
130. *Id.*
131. *Id.*
132. *Id.*
133. *Id.*
134. *Id.* (stating that these include "construction of barriers between various waterways so that fish cannot move from one to the other during flooding; expedited construction of the now-completed third electric barrier, fish tagging to test the effectiveness of the barriers; and separation of various watersheds that pose risks.").

how fish move around CAW, eliminating invasive carps' food sources in lakes, using seismic technology to divert or kill invasive carp, attracting and repulsing pheromones of invasive carp, creating toxin screens to kill fish, studying carps' weaknesses to different toxins, physical barriers, reducing carp egg viability, and detecting new methods); (6) eDNA analysis and refinement involving "monitoring and sampling for eDNA in the CAWS and increasing the effectiveness of eDNA testing"; (7) preventing transfer of carp between waters through enforcement activities; and (8) working on funding and developing methods to pay for measures among the contributing groups.[135]

2. The Army Corps of Engineers

In November 2010, the Corps built a thirteen-mile long electric barrier to help prevent Asian carp from entering the Great Lakes via the Chicago Sanitary and Ship Canal, acting pursuant to the Non-Indigenous Aquatic Nuisance Prevention and Control Act of 1990, as amended by the National Invasive Species Act of 1996.[136] Despite these efforts, the Corps has found at least one Asian carp in Lake Michigan and has completed environmental DNA ("eDNA") studies, which resulted in over sixty positive samples in 2009 and 2010.[137] As Judge Doe stated, "[a]t this stage, eDNA testing cannot identify whether one or more individual fish are responsible for a positive result."[138] The Corps is unsure of whether a single positive result comes from one fish or if multiple positive results can come from one fish.[139]

C. Laws That Are Working to Solve the Asian Carp Problem

Although the Lacey Act is the only federal defense against importing potentially damaging plants and animals, it guards only twenty groups of organisms. Along with carp, most of these organisms made this list long

135. *Id.*

136. Craig, *supra* note 121, at 1; *see also* 16 U.S.C. § 4722(i)(3)(A), (C); Regulated Navigation Area, 75 Fed. Reg. 75,145, 75,146 ("The possibility exists that vessels will transport Asian carp eggs, gametes or juvenile fish safely through the electrical dispersal barrier in water attained south of the fish barrier that is then transported and discharged on the other side of the barrier. The Asian carp are the subject of an ongoing multi-agency study aimed at preventing their introduction into the Great Lakes.").

137. Craig, *supra* note 121, at 1, 14.

138. *Id.* at 14.

139. *Id.*

after they damaged the environment.[140] NANPCA and NISA give the Coast Guard the power to apply action with respect to ballast water.[141] The Coast Guard has this power subject to two exceptions. First, ships may "ignore the rules if following them would endanger the ship or crew."[142] Second, ships may ignore the rule if "as a matter of custom" ships declare that they have "no ballast on board."[143] These exceptions are extremely broad and give the Coast Guard a great amount of discretion.

One state in the Great Lakes region, Michigan, has attempted to fill the gaps in the federal regulatory scheme with its own laws. Michigan applied its regulatory framework to the Asian Carp problem.[144] The Michigan law requires that, prior to entering a Michigan port, a vessel not planning to exchange ballast water in Michigan must verify that fact with the Michigan Department of Environmental Quality.[145] If the vessel plans to exchange ballast water, then it must apply one of four state ballast water treatment methods.[146] This rule is more stringent than the Coast Guard's regulations because it does not give as much discretion to the agents employing the Michigan rule, and it does not have the broad exceptions that the Coast Guard's guidelines allow.

D. Organizations Working to Solve the Asian Carp Problem

NISC could make recommendations for specific measures regarding the Asian carp problem, but it cannot make any binding rules for regulation.[147] The EPA can manage the vessels with ballast water, which could contain Asian carp.[148] In April 2011, "the EPA announced its first

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140. Kari Lydersen, *Notre Dame Professor Leads Effort to Keep Asian Carp Out of Great Lakes,* N.Y. TIMES (Mar. 31, 2011), http://www.nytimes.com/2011/04/01/us/01cnclodge.html.

141. AQUATIC NUISANCE SPECIES TASK FORCE, *supra* note 65.

142. Clark, *supra* note 10, at 236.

143. *Id.*; *see also* 33 C.F.R. § 27.3 (describing the maximum penalty for aquatic nuisance species at $35,000).

144. *See* Howe, *supra* note 22, at 386.

145. *Id.*

146. *Id.* These methods include: "(1) hypochlorite treatment, (2) chlorine dioxide treatment, (3) ultraviolet light radiation treatment, or (4) deoxygenation treatment." *Id.* at 386 n.47.

147. *Id.* at 396 (discussing the holes in the current regulatory framework and calling for "[a]n oversight body similar to the NISC could help harmonize ballast water regulations that have yet to be enacted by the EPA and the CWA with those already in place under NISA, the MBWS, and other similar state statutes").

148. *See id.* at 385; *see also* Tzankova, *supra* note 104, at 10,154.

mandatory limits on the amount of organisms that shippers can discharge in ballast."[149] The IJC can govern projects regarding Asian carp but cannot make binding regulations or rules concerning them.[150] Further, the ANSTF can develop treatment programs to ensure that both state and federal goals are met.[151] However, the ANSTF cannot force organizations to adopt its treatment programs, and it cannot make binding decisions regarding these.[152] If the species falls under one of the exceptions, then the Lacey Act grants the U.S. Fish & Wildlife Service the authority to grant a permit that allows a person to transport the injurious species between states.[153]

Without binding rules, these organizations cannot enforce the very important regulations they promote. Thus, an overarching-governmental organization is needed to manage and control all of the current agencies and organizations. Since the current organizations may only regulate and not make binding decisions, a new organization needs the authority to make more stringent and binding decisions. Because this region hangs in the balance of fragility and risk, there is a large incentive to promulgate a new organization with the power to regulate and manage this region and its problems with authority instead of creating smaller, more limited organizations with no binding authorities.

Although it is outside the scope of this Article, a solution is needed to require binding laws and administrative order for these organizations in the Great Lakes. The organizations as they are now are insufficient. These organizations need an overarching organization with binding authority to ensure the Great Lakes region is protected and preserved.

V. CONCLUSION

Aquatic nuisance species' presence in the Great Lakes calls for environmental and governmental organizations to cooperate to mitigate the economic and environmental harms that the aquatic nuisance species cause. Now, these organizations' missions and regulatory frameworks are more important than ever. With respect to the Asian carp problem, Asian carp have traveled up the Mississippi River and are now approaching the Great Lakes.[154] The Asian carp problem illustrates how

149. Lydersen, *supra* note 140.
150. *Role of the IJC*, *supra* note 114.
151. *See* AQUATIC NUISANCE SPECIES TASK FORCE, *supra* note 65.
152. *See id.*
153. Boothe, *supra* note 9, at 414.
154. *See* Michigan v. U.S. Army Corps of Eng'rs, 667 F.3d 765, 768 (7th Cir. 2011)..

all of the organizations listed above, in addition to the Asian Carp Regional Coordinating Committee and the Army Corps of Engineers, work ineffectively to solve a pending aquatic nuisance species problem as this problem persists and threatens this fresh water resource.

The Michigan law holds the potential to fill the discretionary gaps in federal regulation.[155] The law requires that, prior to entering a Michigan port, a vessel not planning to exchange ballast water in Michigan has to verify that fact with the Michigan Department of Environmental Quality.[156]

Time will tell if this law effectively curtails the Asian carp infestation of the Great Lakes. Still, a more permanent and pervasive solution exists to prevent, curtail, and manage other similar issues. An overarching organizational structure encompassing and promoting all the organizations above would streamline and make more efficient all of the efforts currently in place. More management and control by this overarching agency over all these government agencies will promote efficiency and cooperation to promote efficiency and effectiveness while preventing discord and discretionary gaps that currently frustrate efforts to preserve ecosystems and promote balance and interaction between environment, species, and human behavior.

155. *See* Howe, *supra* note 22, at 386.
156. *Id.*