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# Working Together to Combat Invasive Species Threats: Strategies for Facilitating Cooperation Between the National Park Service and States

Stephanie Showalter Otts

Catherine Janasie

Paula Cotter

STEPHANIE SHOWALTER OTTS*, CATHERINE JANASIE†,
AND PAULA COTTER‡

# WORKING TOGETHER TO COMBAT INVASIVE SPECIES THREATS: STRATEGIES FOR FACILITATING COOPERATION BETWEEN THE NATIONAL PARK SERVICE AND STATES

## ABSTRACT

*Invasive species are a significant environmental and economic threat throughout the United States. Over 6,500 non-native species have been documented on national park lands. To adequately address invasive species issues, the National Park Service must work cooperatively with state governments to prevent the introduction and spread of non-native species. A variety of mechanisms, both formal and informal, are available to the National Park Service to cooperatively manage park ecosystems with their neighboring land management agencies. Coordination of programs can be achieved through simple informal working relationships between agency staff, incorporation of state laws into park policies, or negotiation of formal memoranda of agreement imposing contractual obligations. This article will highlight, through the lens of invasive species management, the legal options available to facilitate federal-state cooperation across National Park System boundaries.*

## I. INTRODUCTION

The National Park System encompasses some of America's most cherished landscapes and important historic sites. If you were to take the entire 1,450-mile journey down the Colorado River to Mexico, you would pass through or along five states: Colorado, Utah, Arizona, Nevada, and California. You would also pass through four national parks, as Congress has bestowed significant protection along the Colorado River. Starting with its headwaters in Rocky Mountain National Park, the Colorado River flows through Canyonlands National Park, Glen Canyon National Recreation Area, and eventually Grand Canyon National Park. To effectively manage the natural resources and visitor use along the Colorado River, the National Park Service (NPS) faces the near impossible task of coordinating the efforts of four separate park units and five state governments, as well as several

* Director, National Sea Grant Law Center; J.D., M.S.E.L., Vermont Law School.

† Research Counsel, National Sea Grant Law Center; J.D., Rutgers School of Law-Newark, LL.M., Environmental & Natural Resources Law, Lewis & Clark Law School.

‡ Former Director, Energy and Environment Project, National Association of Attorneys General (1998–2013); J.D., The Ohio State University Moritz College of Law.

Tribal entities. Similar multi-jurisdictional complexities are present at every unit within the National Park System (System), although often to a lesser extent.

In addition to complex multi-jurisdictional issues, the National Park Service (NPS) must also balance a dual mission when managing individual System units. Congress directed the NPS to manage the System "to conserve the scenery, natural and historic objects, and wildlife in the System units and to provide for the enjoyment of the scenery, natural and historic objects, and wild life in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."[1] Visitors are allowed to raft down the Colorado River through Grand Canyon National Park, but they may only do so as part of a commercial rafting trip or as authorized by an individual permit. Illustrative of the dual mandate and its need to balance use and conservation, the NPS does not allow unfettered access to the Colorado River within the park.

However, in the face of significant threats from non-native species at System units across the country, the NPS is struggling to fulfill its dual mandates of conservation and public enjoyment of System resources. By opening System units up to boating, for example, the NPS risks that those boats and associated equipment will introduce aquatic invasive species into the unit's waters.[2] Unfortunately, over 6,500 non-native species have been documented on System lands, with potentially severe consequences.[3] Non-native species that become invasive can displace native wildlife, alter ecosystems, and impair visitor use and enjoyment of park resources.[4]

The most effective way for the NPS to prevent economic and environmental harm from invasive species is to prevent the introduction of non-native species into System ecosystems. Accordingly, the issue of federal-state cooperation often focuses on how the NPS can work with states to prevent non-native species from being introduced to lands under NPS control and management. Less attention is paid to how the states can work with the NPS to contain species on federal land, although this issue demands more attention and discussion, given what is known about invasive species vectors and pathways.

States have primary responsibility for protecting the natural resources within their borders. In their roles as trustees of public resources, similar to federal land management agencies, states strive to both conserve the resources under their care and facilitate public access. For example, Colorado has declared that while people should be able to enjoy wildlife-related recreational opportunities in the state, the state must act to protect, preserve, and enhance the wildlife and wildlife environments in the state.[5] In their role as natural resource trustee, most states have enacted laws and policies seeking to address the problem of invasive species. In general, states prohibit the possession, sale, import, and transport of certain listed

1. 54 U.S.C.A. § 100101(a) (West 2015).

2. *See* NAT'L PARK SERV., QUAGGA/ZEBRA MUSSEL INFESTATION PREVENTION AND RESPONSE PLANNING GUIDE 4-5 (2007), http://www.nature.nps.gov/water/quagga/QuaggaPlanningGuide_ext.pdf.

3. *Invasive Species*, NAT'L PARK SERV., http://www.nature.nps.gov/biology/invasivespecies/ (last updated Aug. 12, 2009).

4. *Frequently Asked Questions About Invasive Species*, U.S. FISH & WILDLIFE SERV., http://www.fws.gov/invasives/faq.html#q2 (last updated Nov. 20, 2012).

5. COLO. REV. STAT. § 33-1-101 (2012).

invasive species to prevent their introduction and spread.[6] Many states have also developed programs to address particular invasive species vectors, such as aquaculture and ballast water. State invasive species laws that do not conflict with federal law are generally applicable within the national parks, adding another layer of complexity onto national parks management.

Working across jurisdictional lines presents numerous challenges for the NPS and state natural resource agencies, as tensions can emerge between the states and the NPS over management approaches, allocation of resources, and enforcement. To adequately address invasive species issues, the NPS must work cooperatively with its neighbors to prevent the introduction and spread of non-native species. Congress has provided the NPS with broad authority to protect and manage the nation's public parks. Park management, however, is decentralized, with authority for individual units delegated to Park Superintendents. Management actions can be difficult to coordinate among parks within a region, let alone among several federal and state agencies. Implementing successful cooperative efforts takes vision, leadership, time, funding, and personnel.

A variety of mechanisms, both formal and informal, are available to the NPS to cooperatively manage park ecosystems with their neighboring agencies. Coordination of programs can be achieved through simple informal working relationships between agency staff, incorporation of state laws into park policies, or negotiation of formal memoranda of agreement imposing contractual obligations. This article will highlight, through the lens of invasive species management, the legal options available to facilitate federal-state cooperation across System boundaries. Following an overview of the System in Part II, this article will discuss the invasive species problem and how the NPS and states have addressed the threat in Part III. Part IV provides a specific case study of Glen Canyon National Recreational Area in order to put the invasive species threat in context. Finally, Part V will discuss the ways the NPS can work with states to cooperatively manage System units to the benefit of both the NPS and the states.

## II. THE NATIONAL PARK SYSTEM

Since Congress established Yellowstone National Park as the country's first national park in 1872, the System has grown and evolved greatly. The System includes "any area of land and water administered by the Secretary [of Interior], acting through the Director [of the National Park Service], for park, monument, historic, parkway, recreational, or other purposes."[7] Today, the System is comprised of more than eighty four million acres and 408 different sites.[8] Although these different sites are diverse – from historic parks and monuments, battlefields and military parks, recreation areas, and seashores – Congress has instructed the NPS to manage the System as a whole, tasking each unit to meet the broad dual mandate

6. *See* MEG FILBEY ET AL., ENVTL. LAW INST., HALTING THE INVASION: STATE TOOLS FOR INVASIVE SPECIES MANAGEMENT 23–24 (2002).

7. 54 U.S.C.A. § 100501 (West 2015).

8. *Frequently Asked Questions*, NAT'L PARK SERV., http://www.nps.gov/aboutus/faqs.htm (last updated Sep. 23, 2015).

articulated for the NPS in its Organic Act.[9] Although Congress makes no distinctions among the Organic Act's dual mandates, the NPS's interpretation of the Act prioritizes conservation. According to the NPS Management Policies, "the fundamental purpose of the national park system . . . begins with a mandate to conserve park resources and values."[10] Though the NPS states that providing for visitor enjoyment of park resources is also a fundamental purpose of all parks, when there is a conflict between these two purposes, "conservation is to be predominant."[11] The NPS's interpretation of the Organic Act, therefore, places greater emphasis on conservation than on visitor use across the System as a whole.

**A. Unit Management**

System units have to meet the mandates of the Organic Act and any mandates described by Congress in unit-specific enabling acts. These enabling acts may stress particular aspects of the unit's purpose, often depending on whether the unit is a park, monument, recreation area, or seashore. Congress may direct the NPS to balance conservation and use in accordance with the Organic Act, or it may place more emphasis on preservation of the unit's resources, or providing more opportunities for the public to use and visit the specific unit.

For example, the enabling act of Zion National Park directs the NPS to manage Zion National Park according to the principles of the Organic Act. The NPS is "to administer Zion National Park as hereby established in accordance with her authority over the park heretofore granted by the Congress and in accordance with the general laws governing areas of the national park system."[12] The enabling act provides no other unit-specific management criteria.

The enabling act for Fire Island National Seashore, on the other hand, places a priority on conservation. The statute states that the unit was created:

> [f]or the purpose of conserving and preserving for the use of future generations certain relatively unspoiled and undeveloped beaches, dunes, and other natural features within Suffolk County, New York, which possess high values to the Nation as examples of unspoiled areas of great natural beauty in close proximity to large concentrations of urban population.[13]

By comparison, Lake Mead National Recreation Area's enabling legislation clearly places a hefty emphasis on recreation, and visitor use of the unit. The enabling legislation for Lake Mead National Recreation Area states that the unit's purpose is for public recreational use. Further, Congress stated that the area's allowable activities should be consistent with the preservation of the unit's recreational value.[14]

9. 54 U.S.C.A §§ 100101(b)(1)(B)–(C) (West 2015).

10. NAT'L PARK SERV., MANAGEMENT POLICIES 2006 § 1.4.3 (2006) [hereinafter MANAGEMENT POLICIES 2006].

11. *Id.*

12. 16 U.S.C. § 346c (2013).

13. *Id.* § 459e(a).

14. *Id.* § 460n-3(a).

Even though reference is made to preservation of resources, Congress has recognized that these resources contribute to the public's use and enjoyment of Lake Mead.

Despite the differences in language and emphasis in the various System units' enabling legislation, Congress directed the NPS in 1978 through the "Redwood Amendment" to manage the individual units as a system in a manner that is consistent with the Organic Act and for the benefit of the public.[15] The purposes of the individual units, however, are still relevant: following the directive to manage the System in accordance with the Organic Act, Congress emphasized that the NPS should only allow activities in units that align with the specific unit's purpose, unless Congress explicitly states otherwise.[16] For example, the NPS must manage the Lake Mead National Recreation Area first and foremost to comply with the Organic Act's dual mandate by balancing preservation and use. But the NPS must also meet the specific mandates in the area's enabling act. The NPS, therefore, must manage Lake Mead NRA in a manner that preserves its recreational value.

When managing individual system units, the NPS and Park Superintendents draw upon a hierarchy of authorities. At the top, of course, are the statutory authorities set forth in the Organic Act and each individual unit's enabling act. Next, to carry out activities authorized by legislation, the NPS may promulgate regulations on both a System-wide and unit basis. The Organic Act states that "[t]he Secretary shall prescribe such regulations as the Secretary considers necessary or proper for the use and management of System units."[17] The NPS has exercised this authority to address, for instance, snowmobile use throughout the System, water use from the springs, fountains, and other sources at Hot Springs National Park in Arkansas.[18] In addition to this general authority, Congress has authorized the NPS to adopt regulations related to specific activities, such as "boating and other activities on or relating to water located within System units."[19]

The NPS can also manage System units in less formal ways. For instance, Superintendents of individual units can exercise their discretionary authority to establish park-specific restrictions and regulations through the Compendium process. Park Superintendents, for example, have the authority to close or limit activities within particular units. If necessary to maintain public health or safety, protect environmental or scenic values, or protect natural or cultural resources, Park Superintendents may "close all or a portion of a park to public use or to a specific use or activity, or impose conditions or restrictions on an activity."[20] Superintendents may also "issue a permit to authorize an otherwise prohibited or restricted activity or impose a public use limit."[21] Park Superintendents are required to compile unit

15. 54 U.S.C.A. § 100101(b)(2) (West 2015).
16. *Id.*
17. *Id.* at § 100751(a).
18. *See* 36 C.F.R. §§ 2.18, 7.18(b) (2015)
19. 54 U.S.C.A. § 100751(b) (West 2015).
20. 36 C.F.R. §§ 1.5(a)(1)–(2) (2015).
21. *Id.* § 1.6(a).

restrictions and regulations in Superintendent Compendiums. These compilations must be updated annually and made available to the public upon request."[22]

The Compendium process, however, is not appropriate for every closure or use restriction a Superintendent may wish to impose. NPS regulations state that a closure or use restriction "which is of a nature, magnitude and duration that will result in a significant alteration in the public use pattern of the park area, adversely affect the park's natural, aesthetic, scenic or cultural values, require a long-term or significant modification in the resource management objectives of the unit, or is of a highly controversial nature, shall be published as rulemaking in the Federal Register."[23] Permanent or highly controversial use restrictions may, for example, require a formal rulemaking.

NPS decision-making regarding invasive species management at the individual unit level is governed and constrained by these authorities. The design and implementation of collaborative programs with state agencies to address invasive species threats will often, therefore, vary between states and even individual units due to differences in legislative authorities and unit-specific policies. The design of collaborative programs will also vary depending on the type of jurisdiction the NPS exercises within a System unit, as discussed in the next section.

**B. Jurisdictional Differences: Exclusive or Concurrent**

Decisions affecting a system unit may include considerations from tribal, state, and federal agencies that have an interest in how the land and resources of a unit are managed. Some units, like those along the Colorado River, border other units. Some, like Yellowstone National Park or the Great Smoky Mountains National Park, encompass land in multiple states. Others, like Glacier National Park in Montana, abut international borders. Thus, the land and resources within a unit may be governed by the management policies of multiple international, federal, state, local, and tribal entities. For instance, the management plan for bison in Yellowstone National Park involves numerous management entities with authority over the natural resources of the area, including the NPS, the U.S. Forest Service, the U.S. Department of Agriculture Animal and Plant Health Inspection Service, the Montana Department of Livestock, Montana Fish, Wildlife and Parks, the Inter Tribal Buffalo Council, the Confederate Salish and Kootenai Tribes, and the Nez Perce Tribe.[24] The regulations and policies of these eight entities, therefore, can significantly influence NPS decision-making regarding the management of the bison herd in Yellowstone.

It is important to understand the suite of federal and state regulations that may affect management efforts in a particular unit within the System. In general, state civil and criminal jurisdiction is not preempted within the System.[25] In fact, in

22. *Id.* § 1.7(b) (The Superintendent Compendiums can usually be found within the "Laws and Policies" section of individual unit websites.); *see, e.g.*, *Law and Policies*, ISLE ROYALE NAT'L PARK, http://www.nps.gov/isro/learn/management/lawsandpolicies.htm (last updated October 7, 2015).

23. 36 C.F.R. § 1.5(b) (2015).

24. *See IBMP Partner Protocols,* INTERAGENCY BISON MGMT. PLAN, 1–2 (last visited October 8, 2015), http://www.ibmp.info/Library/PartnerProtocols/PartnerProtocols_131209_final.pdf.

25. 54 U.S.C. § 102701(c) (2012) (" . . . [N]othing shall be construed or applied to affect any right of a State or political subdivision of a State to exercise civil and criminal jurisdiction within the System.").

some units, Congress has explicitly provided that state criminal and civil laws will still apply.[26] When aligned with NPS priorities, state law enforcement activities may assist the NPS in achieving management goals. Jurisdictional disagreements and misunderstandings, however, can interfere with the implementation of collaborative programs.

Federal jurisdiction over a particular System unit may be exclusive, concurrent, or proprietary.[27] At a minimum, the federal government has proprietary jurisdiction over the land it owns.[28] According to the Supreme Court in *Kleppe v. New Mexico*, the Property Clause "gives Congress the power to determine what are 'needful' rules 'respecting' the public lands."[29] With the consent of the state, the United States can acquire concurrent or exclusive jurisdiction on federal lands.

On concurrent jurisdiction lands, both the state and the federal government have the authority to legislate and govern certain conduct on federal lands. In a letter accepting concurrent jurisdiction over lands within the Cape Cod National Seashore, the NPS Director stated that concurrent jurisdiction means that both the state and the United States may exercise all sovereign rights, including with regards to traffic and criminal violations, taxes, and other actions under the police power.[30] If state law conflicts with federal law, however, federal law will preempt, or block, the application of state law. Pursuant to the Supremacy Clause of the United States Constitution, "any state regulation issued on the basis of concurrent jurisdiction must give way before a conflicting federal restriction."[31]

When the United States has exclusive jurisdiction, "the state in which the federal property is located has ceded all of its jurisdiction to enforce its criminal law."[32] On such lands, the federal government "has the 'sole authority to legislate,' and thus federal criminal law applies to the exclusion of state criminal law."[33] The U.S. exercises exclusive jurisdiction over some of the System units. For example, in the enabling act for Yellowstone National Park, Congress established that the park "shall be under the sole and exclusive jurisdiction of the United States."[34] Further, both Wyoming and Montana law explicitly recognize that the United States has exclusive jurisdiction within the park.[35] With these foundational issues in mind, the next section examines the complex legal framework within which the NPS operates when implementing invasive species management programs.

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26. *See*, *e.g.*, 16 U.S.C. § 460u-8 (2012) ("Nothing in this subchapter shall deprive the State of Indiana or any political subdivision thereof of its civil and criminal jurisdiction over persons found, acts performed, and offenses committed within the boundaries of the Indiana Dunes National Lakeshore or of its right to tax persons, corporations, franchises, or other non-Federal property on lands included therein.").

27. MANAGEMENT POLICIES 2006, *supra* note 10, at § 8.3.5.

28. Kleppe v. New Mexico, 426 U.S. 529, 539 (1976).

29. *Id.*

30. U.S. v. Roberts, 2010 WL 4056084, at *2 (D. Mass. Oct. 15, 2010).

31. U.S. v. 319.88 Acres of Land, 498 F. Supp. 763, 769 (D. Nev. 1980).

32. U.S. v. Stafford, No. MJ-10-0013 GGH, 2010 WL 2218792, at *1 n.1 (E.D. Cal. June 1, 2010).

33. U.S. v. Bennett, No. 8:11-CR-00014-T-33AEP, 2011 WL 1690122, at *2 (M.D. Fla. Apr. 19, 2011).

34. 16 U.S.C. § 24 (2012).

35. WYO. STAT. ANN. § 36-10-106 (2015); MONT. CODE ANN. § 2-1-207 (2015).

## III. THE INVASIVE SPECIES THREAT

The invasion of non-native species is not a new phenomenon. Species have always moved around the planet, expanding into new territories, traveling through seeds in the wind, and being transported by other animals. Humans, however, dramatically accelerated the interaction of life from Eurasia with life from the Americas in the late fifteenth century. This historic series of events is known as the Columbian Exchange.[36] In addition to bringing new diseases, European explorers and settlers also brought livestock, seeds for crops, and stowaways, such as rats and insects, on their ships and cargo.

One writer has estimated that 50,000 non-native species have been introduced into the United States.[37] Some species were consciously introduced to different parts of the world. Europeans, for example, brought horses wherever they settled in North, South and Central America. However, other species were inadvertently introduced to new ecosystems. For example, Dutch Elm Disease, which has devastated elm trees in many parts of the United States, is believed to have spread from Asia to Europe and then North America during the 1920s and 1930s through the shipment of infected logs.[38] There are also species such as the kudzu, which was brought to the United States to control erosion. It has since defied control and has spread so successfully that it is now known as the "plant that ate the South."[39]

### A. Environmental and Economic Harm

Executive Order 13,112, issued by President William Clinton in 1999, defines invasive species as "an alien species whose introduction does, or is likely to cause, economic or environmental harm or harm to human health."[40] The NPS Management Policies uses the term "exotic species," defining them as "those species that occupy or could occupy park lands directly or indirectly as the result of deliberate or accidental human activities."[41] The definition highlights the breadth of concerns raised by invasive species, concerns shared by scientists, state and local governmental bodies, individual citizens, and nongovernmental organizations.[42] Invasive species compete with native species for food and habitat and can significantly impact ecosystems by reducing native biodiversity, altering food webs,

36. *See* ALFRED W. CROSBY, THE COLUMBIAN EXCHANGE: BIOLOGICAL AND CULTURAL CONSEQUENCES OF 1492 (1972) (coining the expression).

37. David Pimentel et al., *Update on the Environmental and Economic Costs Associated with Alien-Invasive Species in the United States*, 52 ECOLOGICAL ECON. 273, 273 (2005).

38. DUTCH ELM DISEASE HISTORY, http://www.dutchelmdisease.ca/history/ (last visited July 10, 2015).

39. Liz Burlingame, *Kudzu, the Plant that Ate the South, Spreads North as Climate Warms*, WEATHER UNDERGROUND (Aug. 3, 2014), http://www.wunderground.com/news/kudzu-spreads-north-climate-changes-20140802.

40. Exec. Order No. 13,112, Invasive Species, 64 Fed. Reg. 6183 (Feb. 3, 1999).

41. MANAGEMENT POLICIES 2006, *supra* note 10, at § 4.4.1.3.

42. *See*, *e.g.*, *Invasive Species*, U.S. FISH AND WILDLIFE SERV., http://www.fws.gov/invasives/ (last updated October 17, 2012); *The Threat of Invasive Species*, THE NATURE CONSERVANCY, http://www.nature.org/ourinitiatives/habitats/forests/explore/the-threat-of-invasive-species.xml (last visited July 10, 2015).

and changing habitats.[43] Ecological costs associated with the destruction of an existing ecosystem are difficult to measure, but invasive species can also impact property owners, governmental operations, and businesses. A decade ago, the economic costs associated with invasive species were estimated at $120 billion annually.[44]

Given the interconnectedness of the world today, no ecosystem remains untouched by humans, and the System is no different. The parks, monuments, shores, rivers, and trails that comprise the System are in large part open to the public; the NPS reported that 292,800,082 people visited the areas in the System during 2014.[45] Many of the visitors and their vehicles, equipment, food, and pets travel vast distances to vacation, tour, or camp in System units. Further, visitors, just like the early European settlers, can inadvertently introduce non-native species into the System since species can "hitchhike" on just about anything, including firewood, hay, fishing gear, and boats.

Consider, for example, the NPS's concern with the potential for an accidental, inadvertent introduction of non-native species into Crater Lake National Park. Crater Lake is the deepest lake in the United States (1,943 feet) and the primary attraction of Oregon's only national park. Because it contains some of the clearest water in the world, Travel + Leisure Magazine named Crater Lake one of America's best lake vacations for scuba diving in August 2002.[46] Later that month, the NPS issued an emergency order temporarily closing Crater Lake to scuba diving. Only a few people dove Crater Lake each year, in part because accessing the prime diving location involves hauling gear over strenuous trails. Diver numbers had been increasing following a February 2011 episode of Oregon Public Broadcasting's Oregon Field Guide entitled "Diving Crater Lake,"[47] however, and park officials were concerned that divers would introduce non-native species, such as quagga mussels or the hemorrhagic septicemia virus, into the lake environment. As of 2015, the emergency order is still in effect, and the NPS is considering closing Crater Lake to scuba diving permanently.[48]

**B. National Park Service Response**

The NPS has broad authority to protect System resources from invasive species threats. As discussed above, the NPS is directed to manage the System in a way that allows people to enjoy System units, but only in a manner that conserves

43. *See generally*, INVASIVE SPECIES ADVISORY COMM., U.S. DEP'T OF THE INTERIOR, MARINE BIOINVASIONS AND CLIMATE CHANGE (2011), http://www.invasivespecies.gov/ISAC/White%20Papers/ISAC_Marine_Bioinvasions_WhitePaper.pdf

44. Pimentel, *supra* note 37, at 282.

45. Press Release, Nat'l Park Serv., Nat'l Parks Draw Record-Breaking Crowds in 2014 (Feb. 17, 2015), http://www.nps.gov/aboutus/news/release.htm?id=1678.

46. Joe Yogerst, *America's Best Lake Vacations,* TRAVEL + LEISURE (Aug. 16, 2012), http://www.travelandleisure.com/slideshows/americas-best-lake-vacations/3.

47. *Oregon Field Guide: Diving Crater Lake*, OREGON PUB. BROAD., http://www.opb.org/television/programs/ofg/segment/diving-crater-lake/ (last updated August 4, 2015).

48. NAT'L PARK SERV., CRATER LAKE NATIONAL PARK SUPERINTENDENT'S COMPENDIUM 2014, SUMMARY OF CHANGES, 1 (2014), http://www.nps.gov/crla/learn/management/upload/CRLA-Supt-Compendium-Site-Bulletin-2014.pdf.

the natural resources and leaves the resources "unimpaired for the enjoyment of future generations."[49] The NPS has taken actions to regulate invasive species both through broad, system-wide policies, as well as in unit-specific rules.

There are no System-wide regulations explicitly addressing invasive species, although several regulatory provisions provide NPS with implied authority to take action. NPS regulations, for example, prohibit "introducing wildlife, fish or plants, including their reproductive bodies, into a park area ecosystem."[50] This broad prohibition applies to both native and non-native species and can serve as the foundation for management policies aimed at reducing the risk of introduction. In addition, within the regulations governing fishing activities, the NPS prohibits, except in designated waters, possessing or using as bait in fresh waters "live or dead minnows or other bait fish, amphibians, nonpreserved fish eggs or fish roe."[51] Again, the NPS could draw upon this broad prohibition to specifically address the introduction of non-native species into the System. Although, to date, the NPS has not issued comprehensive invasive species regulations, regulatory authority exists for some unit-level restrictions to address invasive species threats.

Although there is no System-wide invasive species regulation, it is important to note that the NPS has issued a formal regulation to address invasive species threats within the boundaries of St. Croix National Scenic River. 36 C.F.R. § 7.9 prohibits a person from entering, launching, or operating a vessel in park area waters "when that vessel or the trailer or the carrier of that vessel has been in water infested or contaminated with aquatic nuisance species." These launch restrictions include requiring vessels that have been in waters that are contaminated or infested with aquatic invasive species (AIS) to be inspected and cleaned before entering park area waters.[52] In addition, the NPS also prohibits the placing or dumping of bait containers, live wells, or other water-holding devices filled with AIS contaminated waters.[53] Finally, the use of wet suit or associated diving equipment previously used in infested waters prior to being inspected or cleaned is prohibited.[54]

Most of the NPS's directives regarding invasive species are found in non-regulatory documents, such as the agency's management policies and orders. The NPS Management Policies are "the basic [and] the highest of three levels of guidance documents in the NPS Directives System."[55] The other two levels are Director's Orders (second) and handbooks and reference manuals (third).[56] The NPS Management Policies (2006) sets forth the agency's key principles for management of the System and individual units. With respect to biological resource management,

49. 54 U.S.C.A § 100101(a) (West 2015).

50. 36 C.F.R. § 2.1(a)(2) (2015).

51. *Id.* § 2.3(d)(2). Designated waters are limited to those in which non-native species are already established; the introduction of additional numbers of non-native species would not adversely impact native populations; and park management plans do not call for elimination of non-native species. *Id.*

52. 36 C.F.R. § 7.9(c)(2) (2015) ("vessels, trailers or other carriers of vessels wishing to enter park area waters from aquatic nuisance species contaminated or infested waters may enter after being inspected and cleaned using the technique or process appropriate to the nuisance species").

53. *Id.* § 7.9(d).

54. *Id.* § 7.9(e).

55. MANAGEMENT POLICIES 2006, *supra* note 10, at 4.

56. *Id.* at 4–5.

Policy 4.4.1 states that the NPS "will maintain as parts of the natural ecosystems of parks all plants and animals native to park ecosystems."[57] To maintain native park ecosystems, the NPS generally strives to minimize the human impacts on native species and ecosystems.[58]

The NPS Management Policies further state that "[e]xotic species will not be allowed to displace native species if displacement can be prevented"[59] and "[i]n general, new exotic species will not be introduced into parks."[60] With respect to exotic species that are already present in System units, Policy 4.4.4.2 states that such species "will be managed – up to and including eradication" if control is prudent and the species meets one of seven designated characteristics (e.g., damages cultural resources). The Secretary of Interior can also order the destruction of animal and plant species that impair the use of a System unit. [61] Park Superintendents, therefore, have broad authority pursuant to these Management Policies to implement invasive species control and eradication programs.

More specifically, Park Superintendents are directed to implement early detection and rapid response programs to prevent invasive species from spreading into designated wilderness areas within System units. On May 13, 2013, the NPS Director issued an order on wilderness stewardship. Director's Order Number 14 spoke, in part, to the management of invasive species in and around designated wilderness, as a supplement to Policy 4.4.4.2. Although the Director's Order declared that the NPS should manage parks to detect the early presence of non-native species and respond rapidly in wilderness adjacent areas, the order noted that regulations may need to be put in place within a unit's compendium to prevent introduction and spread of invasive species. Finally, the Director's Order states that units should use Integrated Pest Management to guide invasive species planning and implementation with the goal of eradicating the invasive species, and if that is not feasible, to contain the species to prevent further spreading.[62]

Although the NPS has only issued formal regulations to address invasive species concerns for one System Unit, Park Superintendents have the discretionary authority, under existing regulations, to implement invasive species programs in their respective units. As recognized by Director's Order number fourteen, invasive species threats may be addressed at the individual unit level through the more informal Compendium process discussed above. Drawing upon these authorities, Park Superintendents around the country have taken action to protect their individual units from invasive species threats. For example, through the Compendium process, Isle Royale National Park in Michigan has imposed launch restrictions, requiring all aircraft and vessels, including canoes and kayaks, to be decontaminated before entering park waters.[63] Permissible decontamination methods include cleaning and

57. *Id.* § 4.4.1.

58. *Id.*

59. *Id.* § 4.4.4.

60. *Id.* § 4.4.4.1.

61. 54 U.S.C.A § 100752 (West 2015).

62. NAT'L PARK SERV., U.S. DEP'T OF THE INTERIOR, DIRECTOR'S ORDER #41: WILDERNESS STEWARDSHIP, § 6.9 (May 13, 2013), http://www.nps.gov/policy/DOrders/DO_41.pdf.

63. NAT'L PARK SERV., ISLE ROYALE NATIONAL PARK 2015 COMPENDIUM, 5 (2015), http://www.nps.gov/isro/learn/management/upload/ISROCompendium2015FINAL03-04-15.pdf.

drying the vessel or washing with a hot water spray or disinfectant.[64] Glacier National Park in Montana goes one step further and requires individuals to obtain a permit before launching a motorized or trailered vessel in park waters.[65] To qualify for a launch permit, vessels must be certified free of AIS by an NPS inspector. Inspections may be required at any time. Vessels and boat trailers found to present an AIS risk must be decontaminated and re-inspected to qualify for a permit. In addition, infested vessel may be quarantined for up to 30 days. Self-certification permits are required to launch non-motorized watercraft.[66] Thus, superintendents of individual park units have taken steps to address the threat of invasive species being introduced into their respective units.

### C. State Response

States also play an important role in invasive species management. State natural resources agencies, as trustees for natural resources within their borders, have broad mandates to manage the state's resources similar to the NPS'. For example, Colorado has declared:

> It is the policy of the state of Colorado that the wildlife and their environment are to be protected, preserved, enhanced, and managed for the use, benefit, and enjoyment of the people of this state and its visitors. It is further declared to be the policy of this state that there shall be provided a comprehensive program designed to offer the greatest possible variety of wildlife-related recreational opportunity to the people of this state and its visitors and that, to carry out such program and policy, there shall be a continuous operation of planning, acquisition, and development of wildlife habitats and facilities for wildlife-related opportunities.[67]

In general, states have regulatory authority to "control the entry and release of invasive species within their borders, particularly fish and wildlife species."[68] In managing invasive species, states have used a variety of tools, including tools for prevention, regulation, control and management, enforcement and implementation, and coordination.[69]

Regulation, unfortunately, has often been reactionary.[70] Thus, the provisions are often directed at specific invasive species for which the state is at particular risk, rather than broad categories. For instance, California has provisions that address the risk only from certain salt water algae species and dreissenid mussels.[71]

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64. *Id.*

65. NAT'L PARK SERV., GLACIER NATIONAL PARK 2015 COMPENDIUM: 36 C.F.R. 1.7(B), § 1.5(a)(1)(v)(C) (2015), http://www.nps.gov/glac/learn/management/upload/2015-Compendium-June-2015.pdf.

66. *Id.*

67. COLO. REV. STAT. § 33-1-101 (2012).

68. MEG FILBEY ET AL., *supra* note 6, at 23.

69. *Id*. at 24.

70. *Id*.

71. CAL. FISH & GAME CODE §§ 2300–2301 (West 2001 & West 2013).

Many states, however, have chosen to regulate a specific invasive pathway, such as aquaculture or ballast water. To address the risk of AIS, such as dreissenid mussels, many states have provisions addressing the trailered recreational boat pathway. Several states restrict the transportation or launch of watercraft with AIS attached.[72] Sixteen states have developed extensive watercraft inspection and decontamination programs.[73] Similar to the NPS provisions for St. Croix National Scenic River, these state provisions often require boaters to comply with a variety of protocols, such as removing plants and mud from the boat's exterior and draining water from compartments, before launching or transporting recreational boats.[74] To raise awareness of the invasive species threat and verify compliance with regulatory requirements, these states also authorize state officials to conduct watercraft inspections and decontaminations at checkpoints strategically located along highways or at particular bodies of water.[75] Trained personnel usually perform inspections by visually assessing the risk that the watercraft is transporting invasive species. If the inspector determines that the watercraft poses a high risk of invasive species introduction, the watercraft usually must be decontaminated by flushing the boat's exterior and systems with 140 degree water to remove any animals or organic matter on the boat or its trailer.[76]

Unfortunately, no federal or state agency has the resources or capacity to address all invasive species pathways, which leaves ecosystems vulnerable to new introductions. In addition, invasive species readily move, as a result of natural forces or human activities, across jurisdictional boundaries. It is therefore essential that federal and state governments work together to address jurisdictional gaps and efficiently implement management programs to protect natural resources.[77] Part III illustrates the importance of federal-state collaboration when addressing invasive species threats, by discussing management efforts to prevent the introduction of quagga and zebra mussels into Glen Canyon National Recreation Area (Glen Canyon NRA).

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72. Stephanie Showalter Otts & Catherine Janasie, *From Theory to Practice: A Comparison of State Watercraft Inspection and Decontamination Programs to Model Legislative Provisions,* NATIONAL SEA GRANT LAW CENTER 1, 10–11 (2014), http://nsglc.olemiss.edu/projects/model-legal-framework/files/state-comparison.pdf.

73. *Id.* at 3.

74. *See generally*, *id.*

75. Stephanie Showalter Otts & Terra Bowling, *Legislative and Regulatory Efforts to Minimize Expansion of Invasive Mussels through Watercraft Movements,* 3 ARIZ. J. OF ENV. L. & POL'Y 62, 78 (2013).

76. Lake George Park Comm'n, *What is a Boat Decontamination (washing) and How Long Does it Take?*, LAKE GEORGE BOAT INSPECTIONS, http://www.lgboatinspections.com/ (last visited July 7, 2015).

77. *See* Read D. Porter, Susan Graham, and Akiva Fishman, *Status and Trends in State Invasive Species Policy: 2002–2009,* ENVIRONMENTAL LAW INSTITUTE 6 (2010), http://www.eli.org/research-report/status-and-trends-state-invasive-species-policy-2002-2009.

## IV. INVASIVE SPECIES THREATS AT GLEN CANYON NATIONAL RECREATION AREA

Congress established the Glen Canyon NRA in 1972 "to provide for public outdoor recreation use and enjoyment of Lake Powell . . . and to preserve scenic, scientific, and historic features contributing to public enjoyment of the area."[78] Lake Powell was created in 1963 upon the completion of Glen Canyon Dam. The lake spans 13 percent of Glen Canyon NRA.[79] Glen Canyon NRA runs along the Colorado River, encompassing more than 1.25 million acres in northern Arizona and southeastern Utah.[80] More than 2.4 million people visited Glen Canyon NRA in 2014,[81] most enjoying the boating and associated recreational opportunities on Lake Powell.

### A. Mussel Threat

The primary species of concern for System units in the western United States are dreissenids (zebra and quagga mussels). Over 80 species of non-native mollusks have been introduced in the country and established in the United States.[82] Two of the mussels that have received greatest attention, because of the harm they can inflict, are the zebra (*Dreissena polymorpha)* and the quagga (*D. bugensis*).

Dreissenids found in the United States are similar to those in Eastern Europe,[83] and are believed to have originated in that region. Both species were first identified in the Great Lakes region in the late 1980s.[84] The assumption is that European ships introduced the invasive mussels into the Great Lakes through ballast water discharges. The mussels have no native predators and were able to thrive in their new environment; they are now found in many water bodies in the Great Lakes region and other river systems of the eastern United States.

Dreissenids secrete byssal threads, which are fibrous extensions of their bodies that allow the dreisssenids to attach to a variety of hard surfaces present in water bodies. Dreissenids can foul water treatment intake pipes, cooling-water intake pipes, and mechanical parts of boats. Boaters moving watercraft between waters may inadvertently transfer dreissenids to new, hydrologically separate areas. Because of

78. 16 U.S.C. § 460dd(a) (2003).

79. Glen Canyon National Recreation Area, *Frequently Asked Questions*, NAT'L PARK SERV. (last updated Oct. 1, 2015), http://www.nps.gov/glca/faqs.htm.

80. NAT'L PARK SERV., FOUNDATION DOCUMENT OVERVIEW: GLEN CANYON NATIONAL RECREATION AREA RAINBOW BRIDGE NATIONAL MONUMENT, http://www.nps.gov/glca/learn/upload/GLCA-RABR_OV_SP.pdf.

81. *Tourism to Glen Canyon National Recreation Area and Rainbow Bridge National Monument Creates Over $175 Million in Economic Benefits*, NAT'L PARK SERV. (last updated Oct. 8, 2015), http://www.nps.gov/glca/learn/news/tourism-to-glen-canyon-national-recreation-area-and-rainbow-bridge-national-monument-creates-over-175-million-in-economic-benefits.htm.

82. Pimentel, *supra* note 37, at 279.

83. *Quagga and Zebra Mussels*, CTR. FOR INVASIVE SPECIES RESEARCH (last updated Oct. 13, 2011), http://cisr.ucr.edu/quagga_zebra_mussels.html.

84. *See Frequently Asked Questions About the Zebra Mussel,* U.S. GEOLOGICAL SURVEY (last updated May 5, 2015), http://fl.biology.usgs.gov/Nonindigenous_Species/Zebra_mussel_FAQs/zebra_mussel_faqs.html#firstfound; *Quagga Mussel (Dreissena bugensis)*, U.S. GEOLOGICAL SURVEY (last updated Sept. 30, 2015), http://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=95.

the popularity of boating at Lake Powell, scientists predicted that Glen Canyon NRA would be the first western water infested with zebra mussels.[85]

Dreissenids are extremely destructive of the water systems they inhabit. They remove suspended particulates from the water, including phytoplankton, which are food for many fish. Moreover, the increased water clarity resulting from fewer phytoplankton may encourage bacteria, algae, and macrophytes (aquatic plants) in lakes. Potential economic impacts of dreissenids can also be significant. For instance, it is estimated that dreissenids cost the power industry in the Great Lakes $3.1 billion, as power plant owners and operators incur additional expenses to clean and maintain affected equipment.[86] Dreissenids can also indirectly damage an affected area's economy by out-competing native species due to the dreissenids' monopolization of nutrients on the lower end of the food chain.

**B. NPS Efforts to Prevent Introduction of Dreissenids into Glen Canyon NRA**

In 2000, the NPS began implementing an aggressive program to screen incoming boats Glen Canyon Dam and Lake Powell, as a mussel infestation would have several economic and environmental consequences for these critical components of the water supply system for the southwestern United States.[87] Decontamination services were offered on a voluntary basis to operators of watercraft presenting a high risk of mussel introduction.[88] The program evolved over the years as the NPS began discovering mussels on boats and the threat increased. In 2003, decontamination became mandatory for all watercraft that were not cleaned, drained, and completely dried before arriving at Lake Powell.[89]

Then, in 2007, an adult quagga mussel was discovered at a marina in Lake Mead National Recreation Area.[90] The NPS intensified its program again, requiring all vessels to be certified as "mussel free" prior to launching.[91] Drawing upon its authority under 36 C.F.R. § 1.5 to impose limits on public use, the NPS required operators of vehicles towing boat trailers to display a "clean boat" inspection certificate issued by NPS personnel.[92] In areas in which NPS inspections were unavailable, such as remote launching sites, boat operators were required to follow self-certification procedures.

85. Glen Canyon Nat'l Recreation Area, *History of Mussel Prevention*, NAT'L PARK SERV. http://www.nps.gov/glca/learn/nature/history-of-mussel-prevention.htm (last updated Oct. 8, 2015).

86. *Clean Boats Only,* LAKE GEORGE WATERKEEPER & THE FUND FOR LAKE GEORGE 25, http://fundforlakegeorge.org/sites/default/files/site/default/files/lakegeorge/clean/clean_boat_report_final_small.pdf.

87. *A History of Mussel Prevention*, *supra* note 85.

88. *Id.*

89. *Id.*

90. Erik Stokstad, *Feared Quagga Mussel Turns Up in Western United States*, 315 SCI. 453, 453 (2007).

91. *Id.*

92. Press Release, Nat'l Park Serv., 2012 Updated Regulations Available for Glen Canyon and Rainbow Bridge (June 1, 2012), http://www.nps.gov/glca/learn/news/2012-updated-regulations-available-for-glen-canyon-and-rainbow-bridge.htm.

In 2010, 2011, and 2012, the NPS inspected over 52,000 watercraft and decontaminated 15,000.[93] In total, the agency prevented 68 vessels with mussels attached from launching.[94] In 2009, a boater was prosecuted for not following the Glen Canyon mussel abatement procedures. In the trial, which was the first one enforcing such procedures, a federal judge imposed a $2,500 fine on the boater for failing to obtain and display a clean boat certificate.[95]

Despite the extraordinary effort by the NPS, adult mussels were discovered in Lake Powell in March 2013, and by 2014, the mussels established a stable population in Lake Powell.[96] If the NPS had required every single boat to undergo decontamination beginning in 2000, and every single boat actually entered legally following a decontamination, perhaps the infestation could have been prevented. Such requirements, however, would have been expensive and difficult to administer, and, as a practical matter, would surely have limited the numbers of people who could enjoy Lake Powell.

In March 2014, after the infestation, the NPS began to shift its focus away from prevention management actions, lifting restrictions on ramp hours and requirements for mussel-free certifications on entering boats.[97] The NPS chose to focus from that point forward on containing the mussels, primarily by implementing a targeted outreach campaign at Glen Canyon NRA to promote the "Clean, Drain, and Dry" message.[98] Although the NPS offers decontamination services to boaters entering or exiting the park with visible mussels attached, there are no mandatory decontamination protocols for exiting boats other than what is required by state law.[99]

### C. State Response to Prevent Mussel Spread from Lake Powell

Utah first attempted to address the mussel threat within the state in 2008, by enacting the Aquatic Invasive Species Interdiction Act.[100] Under the Act, a person may not "possess, import, export, ship, or transport a Dreissena mussel" or release a mussel into a water body, facility, or water supply system.[101] In addition, a person may not "transport a [watercraft] that has been in an infested water within the

93. *See A History of Mussel Prevention supra* note 91.

94. *Id.*

95. *See* U.S. v. Ward, 2:09-PO-00695 (D. Utah Oct. 27, 2009) (basing fine on Ward's violation of 36 C.F.R. 1.5(f), which states that "Violating a closure, designation, use, or activity restriction or condition, schedule of visiting hours, or public use limit is prohibited"); *See also*, Press Release, Nat'l Park Serv., Nevada Man Found Guilty in Quagga Mussel Case (Oct. 30, 2009), http://www.nps.gov/glca/learn/news/nevada-man-found-guilty-in-quagga-mussel-case.htm.

96. Emiley Morgan, *Vexing mussels: Officials concede defeat at Lake Powell, seek to contain invasive species*, DESERET NEWS (May 19, 2014), http://www.deseretnews.com/article/865603517/Vexing-mussels-Officials-concede-defeat-at-Lake-Powell-seek-to-contain-invasive-species.html?pg=all.

97. Press Release, Nat'l Park Serv., Quagga Mussel Containment Strategy (May 23, 2014), http://www.nps.gov/glca/learn/news/quagga-mussel-containment-strategy.htm

98. *Mussel Containment Program,* NAT'L PARK SERV., (May 16, 2014), http://www.nps.gov/glca/learn/nature/mussel-containment-program.htm.

99. *Id.*

100. *See* UTAH CODE ANN. §§ 23-27-101 to 23-27-401 (West 2008).

101. *Id.* § 23-27-201(1).

previous 30 days without decontaminating the [watercraft]."[102] The March 2013 discovery of mussels in Lake Powell prompted the Utah Division of Wildlife Resources (Utah DWR) to designate Lake Powell as an "infested water." As a result of this designation, boaters leaving Lake Powell in Utah must now have their watercraft professionally decontaminated or self-decontaminate by removing all visible plants, mud, and animals on their watercraft, draining the engine, tanks, and livewells, and drying their watercraft for a prescribed period of time.[103] The Utah DWR operates inspection stations near Lake Powell and performs professional decontaminations.[104] Utah law enforcement personnel also conduct random checkpoints near Lake Powell to verify that mussels are not being transported.[105]

In addition, Arizona enacted Aquatic Invasive Species (AIS) legislation in 2009.[106] Arizona's law, which is broader than the Utah's law, prohibits the possession, importation, shipment, and transportation of any AIS,[107] as well as the release into state waters or water supply facilities.[108] Similar to Utah, Arizona also prohibits the launching of watercraft that have been in waters where AIS are present within the previous 30 days without first decontaminating.[109] In July 2013, the state included Lake Powell on its list of waters affected by AIS.[110] The state now also requires boaters leaving Lake Powell in Arizona to decontaminate their watercraft (i.e., clean, drain, and dry).[111]

**D. Federal-State Tensions**

The NPS's management approach following the quagga mussel infestation at Lake Powell is quite different from the states. Whereas the states are very "hands on" – physically inspecting boats and performing decontaminations – the NPS is more "hands off" – focusing on containment and encouraging boater compliance through outreach campaigns. Although both the state and federal management approaches are valid, they create a management tension regarding whether the other party is doing "enough," and can lead to visitor confusion. As mentioned in Part II above, federal jurisdiction within Glen Canyon NRA is not exclusive: non-conflicting state law is applicable within the unit's boundaries.[112] At first glance,

102. *Id.* § 23-27-201(1)(c).

103. *See* UTAH ADMIN. CODE r. 657-60-5 (2015).

104. *Quagga Mussel Checkpoints added near Lake Powell, decontamination options*, ST. GEORGE NEWS (May 29, 2015), http://www.stgeorgeutah.com/news/archive/2015/05/29/quagga-mussel-checkpoints-added-near-lake-powell-decontamination-options/#.VZQhZ6aiQUZ.

105. *See* UTAH DIV. OF WILDLIFE RES., WESTERN STATES BOAT INSPECTIONS: PREVENT THE SPREAD OF AQUATIC INVASIVE SPECIES, http://wildlife.utah.gov/mussels/PDF/Boat_inspection_information.pdf.

106. *See* ARIZ. REV. STAT. ANN. tit. 17, Ch. 2, Art. 3.1 (2009).

107. *Id.* § 17-255.02(1).

108. *Id.* § 17-255.02(2).

109. *Id.* § 17-255.02(3).

110. ARIZ. GAME AND FISH DEP'T, DIRECTOR'S ORDER 2 – R07/13 (2013), http://azgfdportal.devaz.gov/PortalImages/files/fishing/InvasiveSpecies/AIS_DO.pdf.

111. ARIZ. GAME AND FISH DEP'T, DIRECTOR'S ORDER 1– R07/13, 1746 (July 5, 2013), http://azgfdportal.devaz.gov/PortalImages/files/fishing/InvasiveSpecies/AIS_DO.pdf.

112. *See* ARIZ. REV. STAT. ANN. § 37-620(A) (2007); *see also* UTAH CODE ANN. § 63L-1-201 (2008) (ceding concurrent jurisdiction over only those lands the U.S. acquired for military purposes) (Arizona

state law decontamination requirements would seem to facilitate cross-boundary management of the recreational boat vector. The NPS, however, takes the position that it has no authority to enforce state laws regarding containment of quagga mussels at Lake Powell.[113] This places greater pressure on state law enforcement personnel to monitor and patrol boats leaving and entering Lake Powell. Although state officials have full authority to enforce state laws within Glen Canyon NRA, they are often dependent on the cooperation of the NPS' park staff to do so. Disagreements over the placement and use of state decontamination units within Glen Canyon NRA's boundaries, for instance, may interfere with state enforcement efforts.

On June 2, 2015, the NPS and the State of Utah entered into a memorandum of understanding (MOU) "defining the terms of operating watercraft inspection stations and decontamination equipment for the 2015 boating season" at Glen Canyon NRA.[114] The MOU is intended "to facilitate joint participation, meaningful effective communication, coordination, and collaboration between the NPS and [Utah] DWR to prevent the spread of aquatic invasive species to and from the waters of Glen Canyon [NRA]."[115] Although the state of Arizona is not a party to the MOU, the MOU supports both states' efforts to contain the mussels."[116]

In the MOU, the NPS agrees to make areas available to the Utah DWR to conduct inspections and to allow the Utah DWR to use NPS decontamination units. The Utah DWR agrees to assume responsibility for using the decontamination units, use best management practices to ensure that wastewater does not adversely affect NPS resources, and manage their operations in a way that does not interfere with NPS operations. In addition, both parties agree to meet at least quarterly and keep each other informed of management efforts.[117]

The negotiation of this MOU is an important step forward toward more cooperative management of the invasive species threat at Glen Canyon NRA. There are, however, many other ways in which the NPS could facilitate cooperation and align federal and state regulatory authorities. Part V will discuss some of these methods that the NPS and states could use to better protect natural resources.

## V. OPPORTUNITIES FOR THE NPS TO WORK COOPERATIVELY WITH STATES

Because invasive species cross the boundaries between federal, state, local, and private property, Congress gave NPS the authority to work cooperatively to protect the resources of the System. Executive Order 13,352, "Facilitation of Cooperative Conservation," issued on August 30, 2004 by President George W. Bush, encourages the NPS to collaborate with state governments. The Executive Order instructs the Secretaries of the Interior, Agriculture, Commerce, and Defense,

has ceded concurrent criminal jurisdiction over Glen Canyon NRA to the U.S. while Utah has not. The NPS, therefore, exercises only proprietary jurisdiction in the Utah portions of the NRA.).

113. *Mussel Containment Program*, *supra* note 98.

114. STATE OF UTAH, DEP'T OF NAT. RES., DIV. OF WILDLIFE, CONTRACT NO. 70 2014 WITH VENDOR NATIONAL PARK SERVICE: GLEN CANYON NATIONAL RECREATION AREA (June 2, 2015) (on file with authors).

115. *Id*. at 1.

116. *Id*.

117. *See generally id.*

and the Administrator of the Environmental Protection Agency to carry out programs and projects relating to the environment and natural resources in a manner that facilitates cooperative conservation.[118] Cooperative conservation refers to "actions that relate to use, enhancement, and enjoyment of natural resources, protection of the environment, or both, and that involve collaborative activity among Federal, State, local, and tribal governments, private for-profit and nonprofit institutions, other nongovernmental entities and individuals."[119]

The NPS has also developed policy to encourage cooperation with non-federal entities. NPS Director's Order Number 20 instructs NPS managers to "actively seek opportunities to efficiently and economically accomplish the NPS mission by entering into advantageous relationships with Federal and non-Federal entities."[120] By working collaboratively to align NPS policies with state policies, both parties can enhance their ability to achieve their environmental goals, including invasive species management goals. These collaborations can take a variety of forms, and may result in formal agreements or policy reform. Several of these collaboration mechanisms are detailed below.

**A. Cooperative Agreements**

The NPS uses three types of agreements to formalize collaborative relationships with federal and non-federal entities: (1) Cooperative Agreements, (2) Interagency Agreements, and (3) General Agreements.[121] Interagency Agreements are used exclusively to document agreements between the NPS and another federal agency, which is beyond the scope of this article. Whether an agreement is classified as a Cooperative Agreement or General Agreement depends on whether the NPS is transferring something of value with the agreement, such as money, property, or services.[122] Specifically, Congress directs federal agencies to use cooperative agreements when:

> (1) the principal purpose of the relationship is to transfer a thing of value to the State, local government, or other recipient to carry out a public purpose of support or stimulation authorized by a law of the United States instead of acquiring (by purchase, lease, or barter) property or services for the direct benefit or use of the United States Government; and (2) substantial involvement is expected between the executive agency and the State, local government, or other recipient when carrying out the activity contemplated in the agreement.[123]

Congress has authorized the Secretary of Interior to enter into cooperative agreements with state governments to protect natural resources both within and

118. Exec. Order No. 13352 § 3(a)(i), 69 Fed. Reg. 52989 (Aug. 26, 2004).

119. *Id.* § 2.

120. NAT'L PARK SERV., U.S. DEP'T OF THE INTERIOR, DIRECTOR'S ORDER #20: AGREEMENTS, ¶ 3.1 (July 23, 2003), http://www.nps.gov/policy/DOrders/DOrder20.html.

121. *Id.*

122. *Id.* at 4.1–4.2.

123. 31 U.S.C. § 6305 (2012).

outside of the System.[124] The Secretary of the Interior can use cooperative agreements for unit natural resource protection in three situations: to prevent, control, or eradicate "invasive exotic species that are within a System unit or adjacent to a System unit;"[125] "to develop adequate, coordinated, cooperative research and training programs concerning the resources of the System;"[126] and to carry out Congressional directives. Congress, for instance, encourages the Secretary "to enter into cooperative agreements with appropriate eligible entities with respect to historic light stations" located within System units.[127]

Through cooperative agreements, the NPS can work with state and local governments and non-government organizations to coordinate or facilitate their participation in management programs. Although NPS managers have latitude to draft and enter into agreements,[128] the Organic Act requires that cooperative agreements clearly and directly benefit a System unit's natural resources.[129] The NPS has interpreted direct benefit or use to mean when a product or service "(a) supports the day-to-day operations of the NPS; (b) is a recognized objective or mission of the NPS; or (c) is used to promote the welfare of the general community in situations where the NPS has primary responsibility."[130]

The NPS can also work cooperatively outside of unit boundaries, which its Management Policies state is a necessary action to meet its mandate to preserve park resources for future generations.[131] In fulfilling its duties, the NPS can enter into agreements with neighboring property owners and natural resource managers to protect park resources and ensure that activities occurring outside the System units do not endanger the unit's resources. Although the NPS recognizes that "NPS activities may have impacts outside park boundaries,"[132] cooperative agreements must be "park-centric" – used as a means to enhance park operations or programs.

It is important to note, however, that the NPS has the authority to enter into "cooperative management agreements," which are slightly different from cooperative agreements. When a System unit is located adjacent to or near a state park, the Secretary may enter into an agreement with the state to provide for cooperative management of the federal and state park areas.[133] The Secretary may not transfer administrative responsibilities under such agreement, but may acquire from or provide to, the state goods and services for cooperative management of land.[134] Although this is a management option, neither the Director's Order number twenty nor the NPS Agreements Handbook provide guidance on cooperative

124. 54 U.S.C.A. § 101702(d)(1) (West 2015).
125. *Id.* § 101702(d)(2)(A)(ii).
126. *Id.* § 101702(b).
127. *Id.* § 305103(c)(2)(D).
128. DIRECTOR'S ORDER #20, *supra* note 120, ¶ 1.2.
129. 54 U.S.C.A. § 101702(d)(2) (West 2015).
130. NAT'L PARK SERV., U.S. DEP'T OF THE INTERIOR, AGREEMENTS HANDBOOK 12 (Oct. 1, 2002), http://www.nps.gov/hfc/acquisition/pdf/agreements/handbook-full-document.pdf
131. MANAGEMENT POLICIES 2006, *supra* note 10, § 1.6.
132. *Id.*
133. 54 U.S.C.A. § 101703(a) (West 2015).
134. *Id.* § 101703(a), § 101703(a), § 101703 (b).

management agreements. Both documents state that such guidance is being developed and will be inserted when complete.[135]

Thus, although the NPS can work outside unit boundaries, any cooperative management activities undertaken must benefit the System. NPS Policies are clear that cooperative actions must benefit the Park System. For instance, an NPS Management Policy on partnerships directs the NPS to:

> develop agreements with federal, tribal, state, and local governments and organizations; foreign governments and organizations; and private landowners, when appropriate, to coordinate plant, animal, water, and other natural resource management activities *in ways that maintain and protect park resources and values*.[136]

Another section of the NPS Management Policies directs Park Superintendents to be actively involved in external actions that may affect unit resources. The Policy states that:

> In working cooperatively with surrounding landowners and managers a superintendent might, for example, comment on potential zoning changes for proposed development projects, or brief the public and officials about park resources and related studies that are relevant to proposed zoning or other changes. Superintendents should, whenever possible, work cooperatively and communicate their concerns as early as possible in the process to minimize potential conflict.[137]

The NPS, however, is not geographically constrained and cooperative actions may focus on addressing threats far removed from an individual unit. When considering the source of such distant threats, like air or water pollution, the NPS Management Policies state that:

> In such cases the Park Service will coordinate at the regional or national level in making its concerns known and in seeking a remedy to the problem. Threats to parks from external sources should be identified and addressed in the general management plan or in other planning documents. The result will be enhanced public awareness of the far-reaching impacts of these threats and an increased likelihood of remedial actions by those who are responsible.[138]

Given the NPS mission, the focus of the NPS Management Policies on achieving benefits to the System is understandable. The authorizing language in the Organic Act, however, does place some unfortunate limits on the ability of the NPS to return the favor and participate in state programs designed to protect state resources outside

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135. *See* DIRECTOR'S ORDER #20, *supra* note 120, at ¶ 6; AGREEMENTS HANDBOOK, *supra* note 130, at 191.

136. MANAGEMENT POLICIES 2006, *supra* note 10, at § 4.1.4 (emphasis added).

137. *Id.* § 3.4.

138. *Id.*

park boundaries. All NPS authorities speak to protecting System units and authorize cooperation with outside parties for the purpose of achieving that objective. The NPS has no clear authority to enter into agreements with a primary purpose to protect state resources. The next section will discuss other options available to the NPS to align park policies with state natural resource management programs.

**B. General Agreements**

The NPS routinely uses memoranda of understanding and similar contractual agreements to work collaboratively across park boundaries with other federal agencies, state and local governments, and volunteer organizations to manage invasive species. These types of arrangements are usually formalized through General Agreements.[139] The NPS defines a General Agreement as "a generic instrument used to document a wide range of mutually-agreed-to policies, procedures, objectives, understandings and/or relationships with federal and non-federal entities."[140] These are "handshake" agreements that document "policies and procedures of mutual concern, provide[] mutual assistance, or exchange[] results for the promotion of common endeavors."[141] Appropriate use of General Agreements might include planning and development agreements and law enforcement assistance agreements.[142] With a general agreement, the NPS cannot commit to providing financial assistance or transferring goods or services to another entity.[143]

General Agreements are less formal than Cooperative Agreements. Cooperative Agreements, because they involve the transfer of funds or property, must be signed by the appropriate NPS contracting officer. Park Superintendents can sign General Agreements that cover matters and areas under the Superintendent's jurisdiction.[144] However, the Regional Director must sign any General Agreements with region-wide impact.[145]

The NPS has entered into General Agreements to accomplish a range of management objectives. For instance, the State of Montana and the NPS entered into an MOU in 2014 to facilitate the preparation of a joint Environmental Impact Statement (EIS) to consider changes to management of the Yellowstone bison herd.[146] The MOU memorialized the understandings of the two parties with respect to the process and their respective roles and responsibilities, noting that "the

139. According to Director's Order #20, the NPS does not use the terms MOU or MOA to reduce confusion in selecting the appropriate agreement. However, the NPS Agreements Handbook still uses the term. *See* AGREEMENTS HANDBOOK, *supra* note 130, at § 2.3.

140. DIRECTOR'S ORDER #20, *supra* note 120, ¶ 7.1.

141. *See* AGREEMENTS HANDBOOK, *supra* note 130, at § 7.1(1).

142. DIRECTOR'S ORDER #20, *supra* note 120, ¶ 7.1.

143. *Id.* at ¶ 7.3.

144. *Id.* at ¶ 9.8.

145. *Id.* at ¶ 9.6.

146. NAT'L PARK SERV., MEMORANDUM OF UNDERSTANDING BETWEEN THE NATIONAL PARK SERVICE AND THE STATE OF MONTANA FOR THE BISON CONSERVATION PLAN/EIS FOR YELLOWSTONE NATIONAL PARK, 1 http://parkplanning.nps.gov/document.cfm?parkID=111&projectID=50877&documentID=58407.

cooperation extended in this MOU does not transfer any jurisdictional roles or responsibilities."[147]

General agreements are also frequently used to manage invasive plants. The NPS' Exotic Plant Management Program currently supports sixteen teams working in over 225 park units.[148] Exotic Plant Management Teams (EPMT) are often involved in organizing and implementing strategies related to cooperative weed management areas (CWMAs), which "are local organizations that bring together landowners and land managers to coordinate action and share expertise and resources to manage common weed species."[149] CWMAs are governed by a steering committee that functions under the authority of a formal agreement, such as an MOU.[150]

For example, the Indiana Dunes National Lakeshore falls within the Indiana Coastal Cooperative Weed Management Area (ICCWMA). The ICCWMA encompasses the Lake Michigan coastal zone in Lake, Porter, and LaPorte Counties in Indiana.[151] The NPS is a member of the Steering Committee, along with representatives from The Nature Conservancy (TNC), the Indiana Department of Natural Resources, and several local land trust and conservation organizations.[152] The ICCWMA was formalized through an MOU in which the parties agreed to participate and cooperate in the development of a Weed Management Plan.[153] The plan sought "to enhance the potential for success of a Weed Management Program in the region by encouraging the sharing of resources, information, expertise, and effort on a willing and cooperative basis on both public and private lands and waters."[154] The MOU provides very broad roles for the Steering Committee and designates TNC, an environment non-profit organization, as "Lead Interested Party,"[155] which authorizes TNC "to apply for and administer grants, contracts, and other funding mechanisms" to support the ICCWMA.[156]

### C. Enforcement of State Law

NPS System-wide regulations expressly adopt non-conflicting state law, requiring certain activities to be conducted in accordance with the laws and regulations of the state in which the park is located. Unless unit-specific policies

147. *Id.* at 7.

148. *Meet the Exotic Plant Management Teams ("EPMT")*, NAT'L PARK SERV. (last updated Aug. 12, 2009), http://www.nature.nps.gov/biology/invasivespecies/EPMT_teams.cfm.

149. *Cooperative Weed Management Areas*, NATIONAL NETWORK OF INVASIVE PLANT CENTERS (last visited June 12, 2015), http://www.weedcenter.org/cwmas/docs/CWMA_03%20finaleport.pdf.

150. *Id.*

151. *Places We Protect: Indiana Coastal Cooperative Weed Management Area*, THE NATURE CONSERVANCY (last visited October 9, 2015), http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/indiana/placesweprotect/indiana-coastal-cooperative-weed-management-area.xml.

152. *Id.*

153. IND. DEP'T OF NAT. RES., NAT'L PARK SERV., IND. DUNES NAT'L LAKESHORE, SAVE THE DUNES CONSERVATION FUND, SHIRLEY HEINZE TR. & THE NAT. CONSERVANCY, MEMORANDUM OF UNDERSTANDING (#0001), Art. 3(a), http://www.nature.org/images/final-mou-in-coastal-coop-weed-mgmt-area.pdf.

154. *Id.* at Art. 3.

155. *Id.* at Art. 5.

156. *Id.*

provide otherwise, visitors seeking to engage in fishing, hunting and trapping, and snorkeling activities must comply with state law.[157] State law also governs traffic and the use of vehicles, bicycles, and snowmobiles within park units.[158] In addition, unless preempted by U.S. Coast Guard regulations, "vessels and their operation on all waters subject to NPS jurisdiction are governed by non-conflicting boating safety laws and regulations of the State within whose interior boundaries a park area or portion thereof is located."[159] So long as state invasive species laws are part of a state's fishing, hunting, or boating laws and do not conflict with federal law, those state laws may be adopted by reference, and therefore, enforceable as federal law.

Furthermore, as discussed in Part II, state civil and criminal jurisdiction is generally not preempted within the System.[160] The NPS prefers to exercise concurrent jurisdiction for all units in the System to allow for a more efficient enforcement of state and federal law within the units.[161] Concurrent jurisdiction occurs when the state grants enforcement power to the federal government, but reserves the right for itself to enforce state law as well.[162] Where NPS jurisdiction is concurrent, law enforcement officers from the federal, state, and local government can enforce state laws.[163]

System units where the NPS exercises only proprietary jurisdiction are more complicated. On proprietary jurisdiction lands, as mentioned in Part II, the federal government has the authority to enact regulations governing the use of public lands pursuant to the Property Clause.[164] Under the Supremacy clause, NPS regulations (both System-wide and unit-specific) would preempt conflicting state regulations. However, unless a state consents or cedes jurisdiction to the federal government, the state "undoubtedly retains jurisdiction over federal lands within its territory. . . . "[165] Thus, in System units with proprietary jurisdiction, the state has not ceded its authority to enforce its criminal laws to the federal government.[166]

Congress, however, has authorized the Secretary of the Interior to "cooperate, within the System, with any State or political subdivision of a State in the enforcement of . . . the laws or ordinances of that State or subdivision."[167] The U.S. Forest Service, which is in the U.S. Department of Agriculture, provides an example of how this law enforcement cooperation might work with the NPS. In 2014, the Intermountain Regional Office issued a directive letter to Forest Supervisors entitled "Issuance of Forest Aquatic Invasive Species Orders for Law

157. 36 C.F.R. § 2.3(a) (1997); § 2.2(b)(4).

158. *Id.* § 3.18(e); *Id.* at § 4.2(a); *Id.* at § 4.30(g)(2); *Id.* at § 2.18(b).

159. *Id.* § 3.2(b).

160. 54 U.S.C.A. § 102701(c) (West 2015) (" . . . nothing shall be construed or applied to affect any right of a State or political subdivision of a State to exercise civil and criminal jurisdiction within the System.").

161. *Id.* § 102701(C).

162. Ben Miller, *Assimilation, Enclaves, and Take: How States Might Protect Wildlife on Federal Reservations*, 22 J. ENVTL. L. & LITIG. 383, 402 (2007).

163. NAT'L PARK SERV., FIRE ISLAND NATIONAL SEASHORE: LIGHTHOUSE BEACH DIRECTIVE, (Feb. 5, 2013), http://lighthousebeachtimes.com/LHB%20Directive.pdf.

164. Kleppe v. New Mexico, 426 U.S. 529, 539 (1976).

165. *Id.* at 543.

166. U.S. v. Stafford, No. MJ-10-0013 GGH, 2010 WL 2218792, at *1 n.1. (E.D. Cal. June 1, 2010).

167. 54 U.S.C.A. § 102701(b)(2)(A) (West 2015).

Enforcement."[168] The letter provided templates for AIS orders for National Forests located in Idaho and Utah, which all forest supervisors were encouraged to sign and issue. The orders incorporated the relevant state invasive species law by reference. For example, the template order for Idaho National Forests states that "[p]ursuant to Title 36 § 261.50(a) the following acts are prohibited within the Idaho National Forest until further notice: (1) [p]ossessing, storing, or transporting any aquatic invasive species as defined by Idaho Administrative Code 02.06.09(800)."[169] When issued, these orders will authorize Forest Service law enforcement officials to enforce state AIS laws on forest lands. Drawing from the congressional directive to cooperate, the NPS could take similar action to coordinate state and federal law enforcement within System units.

The NPS, through special regulations or the Compendium process, could similarly adopt relevant provisions of state invasive species laws. As discussed above in Part III, the NPS has broad authority to manage visitor use and take action to protect park resources and values. In this way, the NPS could adopt a "mirror" program to align unit and state policies. For example, the Compendium for Curecanti National Recreation Area in Colorado requires watercraft launching in Blue Mesa Reservoir to be inspected for AIS and, if necessary, decontaminated in accordance with procedures established by the Colorado Division of Wildlife.[170] Referencing state law in the Compendium, however, does not authorize the NPS to enforce state law. The NPS could enforce *Compendium violations* under 36 C.F.R. § 1.5 (e.g., failure to inspect), but not the underlying state law. A special regulation pursuant to 36 C.F.R. § 1.5(b) would likely be required to effectively adopt state law in a System unit.

Returning to the Glen Canyon NRA case study, the NPS has issued special regulations for the unit, but the regulations focus primarily on whitewater boat trips and personal watercraft use.[171] The NPS could enhance collaboration with Utah and Arizona by using the compendium process to require boaters to comply with similar protocols (i.e., requiring all boats to clean, drain, and dry before launch and upon exit). In some instances, it might be effective to implement a NPS program that mirrors state requirements. If state inspections have certain defined elements, the NPS could structure the unit's requirements to impose similar protocols, which would provide a more seamless experience for boaters. In other situations, the NPS Superintendents might seek to dovetail unit requirements with state requirements in such a way that extra protections can be required, allowing states to focus on one species, boat size, technique, or pathway, while the unit is able focus on others.

168. E-mail from Cynthia Tait, Regional Aquatic Ecologist, U.S. Forest Service Intermountain Region, to Stephanie Otts, Director, Nat'l Sea Grant Law Ctr. (Sept. 26, 2014) (on file with authors).

169. *Id.*

170. NAT'L PARK SERV., CURECANTI NATIONAL RECREATION AREA 2014 SUPERINTENDENT'S COMPENDIUM, 4 (June 23, 2014), http://www.nps.gov/cure/learn/management/upload/CURE.pdf; *See also Watercraft Inspections: Curecanti National Recreation Area*, NAT'L PARK SERV. (last visited June 26, 2015), http://www.nps.gov/cure/planyourvisit/mussel_free_certification.htm.

171. *See* 36 C.F.R. § 7.70 (2007).

### D. Assimilation of State Invasive Species Laws

Even if the NPS does not expressly adopt state law through regulations or the Compendium process, the NPS may be able to enforce state invasive species laws through the Assimilated Crimes Act (ACA). The ACA makes state law applicable to certain conduct on lands under the exclusive and concurrent jurisdiction of the federal government.[172] When an act or omission has been made punishable by a state, but not Congress, the ACA states that the violator "shall be guilty of like offense and subject to a like punishment."[173] Prosecutions under the ACA do not technically enforce state law. Rather, state law is assimilated (adopted by reference) and enforced as federal law.[174]

Whether a state invasive species law could be assimilated through the ACA varies depending on the System unit. The use of the ACA, of course, would be limited to System units under the exclusive or concurrent jurisdiction of the NPS. Assimilation also depends on whether a state's invasive species laws impose criminal punishments. For instance, some states only impose civil penalties for violations of invasive species laws.[175]

Under the ACA, existing federal law could preclude the assimilation of state invasive species laws. Although the Organic Act does not directly address invasive species, other federal laws do – primarily the Lacey Act. Depending on the conduct and the species involved, the Lacey Act might prohibit the conduct.[176] For instance, Title 16 of the Lacey Act makes it unlawful for any person "to import, export, transport, sell, receive, acquire, or purchase any fish or wildlife or plant taken, possessed, transported, or sold" in violation of any federal, tribal, state, or foreign law.[177] If the conduct is already punishable under the Lacey Act, assimilation of the state invasive species law under the ACA could be precluded if applying state law would interfere with federal invasive species policy or enforcement activities. Similarly, if a special regulation or compendium provision for a particular unit would interfere with federal law, it might also preclude assimilation. However, in situations where the NPS has not specifically prohibited the conduct in question, NPS law enforcement officials could enforce state law through the ACA.

## VI. CONCLUSION

The introduction of an invasive species into an ecosystem can have substantial negative economic and ecological consequences for the area. The NPS must take action to address invasive species threats to fulfill its dual mandates of conservation and visitor use of System units. Invasive species, however, do not recognize the boundary between System units and state land. As a result, the NPS must work with state and local governments to combat the invasive species threat.

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172. *See* Assimilated Crimes Act (ACA), 18 U.S.C. §§ 13(a)–(b), 7(3) (2012).

173. *Id*. § 13(a).

174. Puerto Rico v. Shell Co., 302 U.S. 253, 266 (1937) ("Prosecutions under [18 U.S.C. § 13], however, are not to enforce the laws of the state, territory, or district, but to enforce the federal law, the details of which, instead of being recited, are adopted by reference.").

175. *See*, *e.g.*, IOWA CODE ANN §§ 456A.37, 805.8B (West 2014).

176. 16 U.S.C. § 3372(a) (2012).

177. *Id.*

The NPS has broad authority to work collaboratively with state agencies to manage invasive species both within and outside the System. As discussed, there are many mechanisms the NPS can use to better align its policies and procedures with those of neighboring states. However, as illustrated by the Glen Canyon NRA case study, a simple willingness to work together can help the NPS and state governments chip away at these barriers, including jurisdictional misunderstandings and law enforcement conflicts, and begin to more effectively work together to protect both state and federal resources.