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The Property Theory of Federal Reserved Water Rights

Implications for National Wildlife Refuges

SPEA V550: Property Theory

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1. Introduction

National Wildlife Refuges (NWRs) have historically faced challenges of procuring sufficient water rights for preserving natural resources within refuge boundaries. Refuges generally use water rights to maintain stream flow, sustain lake levels, and conserve wetlands (Fischman 2003). Approximately one-third of the area of the NWR System is wetland habitat and these habitats are affected by the quantity of water available for ecosystem services (Pringle 2000). Water rights are important for the preservation of refuge habitat for plants, aquatic organisms, and migratory waterfowl (Fischman 2003).

Obtaining rights for in-stream water flows or for conservation purposes on federal public land is a controversial topic in the subject of water law. Historically, the law of prior appropriation in the west and the doctrine of riparianism in the east developed at a state level to allocate water resources (Smith 2008). Most challenges to water rights for NWRs occur in the west where prior appropriation is the basis for state water law. NWRs are typically found downstream of senior users that divert and reduce stream levels, and in-stream flows are typically not considered a beneficial use (Fischman 2003).

NWRs have two methods for acquiring water rights: asserting federal reserved water rights and purchasing rights from states. Federal reserved water rights cases have generated tension between the federal government and individual state government over control of water resources. In 2001, the Idaho Supreme Court in *United States v. State of Idaho* (23 P.3d 117 (2001)) held that the Deer Flat NWR did not possess an implied reserved water right based on the language of the refuge's primary establishment purposes. Some western states' water codes are beginning to enable the acquisition of water rights for conservation purposes (Smith 2008). These changes

could be a result of the increased presence of the public trust doctrine in natural resource governance.

Federal reserved water rights stem from the evolution of property theory in water rights. Water rights are unlike many other types of property due to the types of uses, the high cost of monitoring those uses, and the variation in stream flow and supply over various temporal scales (Smith 2008). Water resources are governed by a variety of regimes that evolve as the culture and priorities of a region change. Future decisions about water use may involve a host of competing claimants whose uses will need to be prioritized particularly in light of changes in water supply (Miller et al 1997). The paper begins with the evolution of property theory in water rights, and moves into an examination of the federal reserved water rights doctrine. The Deer Flat NWR is presented as a case for determining the effectiveness of the doctrine for protecting aquatic resources, and the challenges and opportunities for incorporating other types of property regimes based on concepts such as the public trust doctrine and social goals into water rights regulation.

2. Institutions and Theory of Water as Property

Flowing water is a mobile resource that is expected to satisfy many human uses. A few of these uses are withdrawals of water, discharge into water, and in-stream uses (Smith 2008). The variety of uses, the high costs of measuring and monitoring those uses, and the complexity of predicting the water supply, makes water among the most challenging resources to manage. The fluid nature of water and its different uses have led to water regimes that differ by region and culture particularly in the United States (Smith 2008). There are different governance regimes for federal water resources compared to state managed resources, and also regional differences in the

way states manage water resource allocation. Thus, property rights in water are multileveled, with relations between owners or users of the water right and other individuals, and also the relations between the owner or user of the right and the sovereign entity, the federal or state government (Cohen 1927). The intermingling of these regimes can lead to conflict over the uses and users of water resources.

Property theory regarding natural resources evolved from the early concepts of Roman property systems as shown in Table 1. Water itself as a resource and the rights to water have characteristics of more than one type of property system. A realistic depiction of water rights contains aspects of private, public, and common property regimes.

Table 1. The conventional typology of property systems taken from the Roman interpretation of property rights (Cole and Ostrom 2011).

State/Public Property	The state or its agencies have the right to determine rules of access and use, but a duty (at least in theory) to manage publicly owned resources for the public welfare. Individual members of the public do not necessarily have a right of access or use, but they have a duty to observe access and use rules promulgated by the controlling/managing agency.
Private Property	Owners have the exclusive right to undertake socially acceptable uses to the exclusion of nonowners, and they have a duty to refrain from socially unacceptable uses. Nonowners have a duty to refrain from preventing owners' socially acceptable uses, but they have the right to prevent or be compensated for socially unacceptable uses.
Common Property	Each member of the ownership group has the right to access and use group-owned resources in accordance with access and use rules established collectively by the group, and a duty not to violate access and use rules. Each member also has the right to exclude nonmembers of the ownership group, but no right to exclude other members of the ownership group. Nonmembers of the ownership group have a duty not to access and use the resource except in accordance with rules adopted collectively by the ownership group.
Nonproperty/ Open access	No individual has a duty to refrain from accessing and using a resource. No individual or group has the right to prevent any other individual or group from accessing and using the resource as they choose.

2.1 Private Property Aspects of Water Rights

Privatization is one proposed solution to the problems of managing and governing water resources. The private ownership of water is a right to an allocation of a quantity of water per unit of time (Cole and Ostrom 2011). The first theory to rationalize privatizing natural resources was provided by Demsetz in 1967. His theory attempts to explain the growth of private/individual property rights as a response to a basic economic model of supply and demand for natural resources. The increasing demand for scarce resources causes a unidirectional movement towards parcelization and privatization of the public domain in order to reduce externalities and transaction costs (Demsetz 1967, see Cole and Ostrom 2011). The theory is incomplete because it fails to recognize that some private property regimes do not conserve scarce resources. It also promotes private ownership as a solution to the problems of managing different types of natural resources. The main failure of the theory is that efficiency is not the only criteria that should be taken into account when evaluating the outcome of privatizing goods, such as water (Cole and Ostrom 2011).

Free Market Environmentalists (FMEs) use Demsetz naïve theory of property rights as a springboard for their own theory of nearly complete privatization of natural resources. FMEs base their arguments on the premise that the free market and common law will best allocate natural resources when property rights are well defined, that privatization reduces externalities and transaction costs, and that public management of natural resources is inevitably worse than private ownership because bureaucrats have no long-term investment in the resources they govern (Cole 2002). This privatization approach has several inherent flaws that limit its applicability in real-world settings. The first is that property rights (particularly those of a mobile resource system) are costly to create and enforce (Coase 1960). Second, depending on what

discount rate is used to calculate the cost or benefit of conserving resources (Cole 2002), private interests and ownership can sacrifice natural resources for the reward of immediate profits (Cohen 1927). Finally, the private cost and the social cost of developing a natural resource can be very different, which makes private ownership non-ideal in some cases (Cole 2002).

Ditwiler (1975) also suggests that the basic problem of natural resources is scarcity, when the demand for water resources is high relative to the supply. In the past, the supply side of water resources was manipulated for various uses and users. As water supply reaches its peak, and there are few other water resources to develop, the manipulation of the demand side of water resources through the allocation or transfer of water rights will increase efficiency of water uses. However, this solution to water resource problems is inhibited by the high cost of identifying and quantifying transaction costs. This theory also recognizes that water rights consist of non-market values and are a mix of more than one property regime (Ditwiler 1975).

The doctrine of prior appropriation developed in the western states of the U.S, and demonstrates the private nature of water rights. The dominant uses of western surface waters were for consumptive and out-of-stream uses (Wilkinson 1984). Prior appropriation laws were designed to promote beneficial uses of water, and there was little stipulation for in-stream uses other than hydropower projects. The doctrine also states that the most senior water rights holder has first priority to the water (Miller et al 1997). Junior users may not exercise their water rights until the older rights are fulfilled. The prior appropriation system clearly establishes rights for various water rights holders to make use of their apportioned units of water. The doctrine effectively privatized a large amount of the water in western streams (Miller et al 1997).

2.2 Common Property Aspects of Water Rights

The common property characteristics of water include the high cost of excluding potential users, the vast extent or distance of flowing water resources, and once a unit of water is withdrawn, there is a reduction in the quantity of water available to other potential users (Smith 2008).

Shlager and Ostrom (1992) identified five property rights for examining ownership in common-pool resources and water rights. The first is that of entry, which is the right to become an owner of a resource or the ability to purchase a permit. The second is withdrawal, which is the right to take some resource units out of the system or a permit to extract diverse amounts of water units. A third right is exclusion, which determines who else can use the resource and what their rights of use will be. Management is another right of common pool resource ownership which allows a user or owner to change the physical structures in a resource system, such as building an irrigation system. Finally, the property right of alienation allows the owner to sell one or more of the above property rights.

Owners of most forms of property have nine distinct rights that form the bundle of sticks theory to property rights (Honore 1961). Water rights have fewer ‘sticks’ than most other forms of property for several reasons. First, the exercise of the right could encroach on a public common. Second, the rights are subject to an overarching public claim, which includes navigation, the public trust, and water pollution laws protecting the commons. And finally, their protection is limited to beneficial and non-wasteful uses, or the allocation is granted by permit and subject to constraints (Sax 1990).

Smith (2008) formulated a theory of a mixed or hybrid property regime he deemed a ‘semicommons’. This hybrid system exists where private and common property regimes overlap and interact. Water resources can be considered a ‘semicommons’ because exclusion is difficult,

and it is costly to prevent others from accessing the resource. Water could also be a limited access form of common property, because it often belongs to a restricted group of water users (Smith 2008). The increasing number of users and use demands on water resources is driving the governance of water toward more public and common regimes, contrary to Demsetz theory of a unidirectional movement to increased privatization. Moving from a theory of privatization to a common property governance system would require greater limits of the exercise of private rights and increased administrative control over water uses (Miller et al 2007).

The doctrine of riparianism exhibits the characteristics of water as a common property resource. It was formed in eastern states where water was a plentiful resource and most uses were for in-stream purposes. The riparian system in the U.S. was court-made property law based on the common law of England (Miller et al 2007). Riparian rights are a part of, and are not separated from the piece of land. They are held correlatively with all other riparian owners, as an ownership in common. Therefore, the claims of various riparian owners must be reasonable so that one riparian owner does not detract from the uses of other owners (Veeder 1965). As population growth and municipal needs continue to claim water rights to the supply in the east, the allocation and enforcement of competing riparian rights will become more important. Several states have adopted permit systems, while others have adopted registration requirements to regulate both in-stream and out-of-stream uses (Miller et al 2007).

2.3 Public/State Property Aspects of Water Rights

Water is a societal necessity, therefore, the privatization of water rights will nearly always be limited. Under Roman law, the emperor himself could not individually own flowing water, because it was a public resource that existed for the benefit of every citizen (Cole 2002). Aside

from the Roman characterization, water can be identified as public resource because of its variety of uses, the economies of scale for its production, and the transaction and information costs of its ownership and management (Cole 2002). Water rights are generally use rights that are nonexclusive and take many types of uses and diverse interests of users into account (Smith 2008). Private owners of water rights are members of a larger community, and therefore are subject to the larger whole of which they are a part (Cohen 1927).

Both federal and state doctrines of water use find an origin in the federal sovereign (Ranquist 1975). Early theorists wrote about the importance of the sovereign power in the creation of rights and laws over property. Hobbes (1660) expressed the importance of the sovereign entity for defining “mine” and “thine,” and that the sovereign authority promotes the formation of propriety and community. The absence of a sovereign power promotes uncertainty and fear to invest in resources in the long-run. Bentham (1843) went further to describe the functions of public regimes, which include the creation of rights to individuals, and also corresponding duties or obligations for those individuals and to others in regards to the rights.

The authority of the sovereign entity is apparent in history of water resource management in the U.S. The federal government possesses navigation servitude in its navigable waters by the authorization of the Constitution under the Commerce clause. This navigation servitude allows Congress to regulate the use of rivers and lakes in order to maintain navigation for commerce (Sax 1990). The Supreme Court has stated that the waters of the U.S. are the public property of the federal government for the purposes of navigation (Cole 2002). The U.S. Federal government owns 33% of all lands in the 50 states (Fischman 2003), which implies that public ownership is a conventional property regime in the U.S. Furthermore, most irrigation projects in the western part of the country were funded or constructed by government initiatives (Cohen 1927).

For purposes other than those stated under the commerce clause, states have the authority to manage waters in their boundaries. The doctrine of public ownership of available water supply has been declared in many states and lays the foundation for state control over the management and use of water (Ditwiler 1975). The state's authority over property is inalienable, which means it cannot be privatized (Cole 2002). Moreover, individuals cannot technically own water flowing in navigable water bodies, but they can possess limited use rights over the resource (Shlager and Ostrom 1992). Water rights are tending to move toward public/state property, managed by federal and state governments (Cole 2002), which is the opposite of most other types of property which are generally becoming more privatized.

Changes in the history and culture of a region affect the type of property regime used to manage water resources. As competing uses for water increased in western states, unregulated private appropriation was not in the public interest, and therefore, the states created governance strategies to administer the rights to various users. Agencies and officers administered the water laws and distributed the water to those entitled (Trelease 1964). Courts may increasingly recognize state constitutional declarations reserving water to the people of the state as acknowledgements that property rights in water are different from those in land, that water always maintained both its public and private aspects, and that no private water right may be exercised contrary to the public's interest in sound water resource management (Blumm 1989; Wilkinson 1984).

Although progress has been made in a few states to include conservation as a beneficial use (Fischman 2003), water laws in several western states continue to disregard in-stream uses of water as legitimate property right interests. In most cases, only a public agency can hold such rights. Some states allow private groups to purchase senior water rights and donate them to in-

stream use in perpetuity (Miller et al 1997). Since environmental, aesthetic and recreational uses tend to be non-exclusive, the role of the market is limited. Instead, environmental and recreational water users attempt to change the rules of water rights allocation, either through legislation or through court challenges to proposed or ongoing water uses. Inaccurate hydrologic information is frequently at the center of conflicts over proposed water transfers and new water developments (Miller et al 1997).

Water is a resource that has characteristics of private-individual, common, and public property regimes on the basis of supply relative to demand, the structure of underlying institutions (social norms and formal laws), ecological conditions, and culture. The success of a particular governance regime often depends on its fit to the local ecology of a region, whether users consider the governance system to be fair and valid, and how the rules of a governance or property system are created and change over time (Cole and Ostrom 2011). As uses of water continue to change, particularly the development of in-stream uses for conservation, new doctrines and thereby new property rights will need to develop to manage both new and established uses of water (Sax 1990).

3. Federal Reserved Water Rights

The federal government derives its authority to control commerce, to manage federal property, and to provide for the general welfare of the country from the U.S. Constitution. The Supremacy clause allows the federal government to perform these functions without authority from the states (Trelease 1964). The concept of federal reserved water rights is derived from a series of court cases expressing the federal government's authority to manage its properties without following state created mandates for water resources (Veeder 1965).

3.1 History

The federal reserved water rights doctrine was first created and applied during the Supreme Court case *Winters v. United States* (207 U.S. 564 (1908)). The court held that there is an implied reserved right to the use of water in streams that cross over or border along Native American reservations of land (Veeder 1965). Moreover, the power of the federal government to reserve water rights for Native American Reservations and exempt these rights from appropriation under state law is within the federal government's authority (Waring and Samelson 1980; Ranquist 1975; Veeder 1965). The *Winters* decision also stated that these reserved rights became vested in the federal government at the time when the land was reserved from the public domain (Veeder 1965).

Over 50 years after the decision in *Winters*, the Supreme Court expanded the scope of the federal reserved water rights doctrine in *Arizona v. California* (373 U.S. 546, 600, 601 (1963)) to include non-Native American reservations of federal lands to which the government holds title such as national forests, wildlife refuges, and national recreational areas (Waring and Samelson 1980; Ranquist 1975). The federal government could now exercise the power to declare rights from an executive order or statute, as well as by treaty (Veeder 1965). This case declared that the federal reservation of the Havasu Lake NWR and the Imperial NWR included water rights for the future requirements of the refuges. Furthermore, the case illustrates that the power of the federal government to reserve water rights stems from its property rights in the water itself. The authority does not arise from the power of a treaty, statute, or other legal document (Veeder 1965). Most importantly, this case sets a precedent that the federal government has the power to reserve unappropriated water for the present and future water uses of wildlife refuges.

Federal reserved water rights received further support in 1976, in *Cappaert v. U.S.* (426 U.S. 128 (1976)). The Supreme Court held that the desert pupfish in Devil's Hole National Monument was protected by a federal reserved water right. This Court stated that both the surface and groundwater that fed the pool for the pupfish were protected. The outcome of the case reinforced the fact that federal water rights were not dependent upon state law or state procedures (Waring and Samelson 1980). Furthermore, the facts of the case supported federal government ownership of the reserved water rights. The federal government reserved the land surrounding the pool in 1952 and thus implied a reserved right in unappropriated water, which was vested on the date of the reservation. This reservation date preceded the Cappaerts' purchase of land and stake in water rights. The importance of the *Cappaert* case is that it sets a precedent for in-stream uses for conservation as a viable beneficial water use in order to protect trust resources on federal lands (Trelease 1977).

There were several court decisions that limited the extent to which federal reserved water rights could be exercised by the federal government. In *United States v. Eagle County* (401 U.S. 520 (1971)), the court held that the federal government could be joined in a state court proceeding to identify and quantify all of the water rights, including federal reserved water rights (Waring and Samelson 1980). This decision gave the states more power to control the outcome of federal reserved water rights appropriations. The outcome of the case supported the McCarran Amendment, which was created in 1952 to grant a limited waiver of federal sovereign immunity. The amendment was used to assert state jurisdiction over reserved water rights (Veeder 1965). The federal government is required to submit to the jurisdiction of state courts for the adjudication of its water rights, whether reserved or acquired for the benefit of federal properties (Ranquist 1975).

In *United States v. New Mexico*, (438 U.S. 696 (1978)) the Supreme Court placed limits on federal reserved water rights (Waring and Samelson 1980) which entailed a strict reading of the establishment purposes of the federal reservation. After the decision federal reserved water rights could only be created through either explicit language in the establishment document, or by implicit intentions to reserve water within the establishment document. The Court created a test to determine whether the establishment purpose of a federally reserved land has an implicit interpretation of reserved water rights. An implied reservation of water exists only if necessary to:

1. Fulfill the primary, not the secondary purpose for which the reservation of land was created
2. Without water, the purposes of the reservation must entirely be defeated
3. The water claimed must be the minimum amount necessary to achieve the purposes of the reservation

A refuge has an implied federal reserved water right to fulfill only the primary purposes of its establishment document, with a priority date of the establishment or reservation of land (Miller et al 2007; Fischman 2003). The federal reserved right does not need to be consistent with state law to be granted to a refuge; however, western state courts adjudicating federal reserved water rights have been reluctant to grant the rights if they may interfere with other users' water rights (Trelease 1964). The reservation of water for use on federal lands disturbs the administration of water rights and distribution at the state level, and many federal reservations for in-stream uses of water often conflict with the 'beneficial use' criteria within prior appropriation states. Also, the federal authority to declare water rights for reserved lands for any current or future need causes states to fear that local benefits will be sacrificed in any federal level planning (Trelease 1964).

Another concern for NWRs is that even if a refuge is able to assert federal reserved water rights, they may be junior to other users of the water source (Fischman 2003). In these cases, refuges will need to purchase senior water rights to ensure flows. Moreover, any refuge that has establishment purposes requiring more water than would be necessary to meet the primary purposes will need acquired water. The process of acquiring water rights by purchase, quantifying water resources needed for the primary purposes of the reservation, and the adjudication process of defending water rights are costly. The Fish and Wildlife Service has limited resources to devote to individual refuges for the procurement and maintenance of water rights (Fischman 2003).

Cases adjudicated by the states for in-stream water rights have weakened the authority of the federal government to protect trust resources using federal reserved water right. In light of this trend, there are other methods for instituting in-stream water rights that aid in protecting in-stream uses and trust resources. Several states both in the east and west have recognized that water is a resource that is required and valued for a variety of purposes, including off-stream uses and diversions, as well as in-stream uses for recreation, aesthetics, industry, and wildlife and habitat conservation. Furthermore, the public trust doctrine is being used more often at the state level to protect trust resources.

3.2 The Rise of the Public Trust Doctrine

The public trust doctrine (PTD) gives a state the authority to enforce water quality standards to protect natural resources that take precedence over vested water rights. It also imposes a duty on a state or government entity to protect the heritage of a variety of natural resources for public purposes (Blumm 1989). Moreover, the PDT offers a framework for resource management and

decision making that allows resource managers to consider both the short-term and long-term needs of water users. It also promotes water uses that are ecologically and economically beneficial (Meyers 1988).

The creation of the PTD begins in Roman law, which stated that by natural law, men held the common right to the use of resources such as air, wildlife, running water, and the oceans and their shores (Institutes of Justinian). Since the institution of the Magna Carta, the common law in England has used the doctrine to assert ownership of natural resources vested in the sovereign (Meyers 1998). The concept of a public trust in the United States developed within the federal government from the Supremacy clause of the constitution, and the authority was also granted to the states. The federal government or states cannot alienate the public's rights or relinquish its management of trust resources without a beneficial public purpose (Meyers 1988). The resources to which the doctrine applies and the purposes it serves can be left to a state's authority. The PTD traditionally covered the boundary of protecting the public's rights to fishing, commerce, and navigation in navigable waters. The main impact of the doctrine is that it has recently expanded to include the protection of trust resources and public access at the state level (Blumm 1989).

The PDT is recognized in several decisions regarding water rights, and a state can assert the PDT to protect a right in the flow of rivers within its boundaries. The Mono Lake decision is a landmark for the PDT. The California Supreme Court held that a navigable lake was entitled to protection against water quantity reduction caused by diversions from its tributaries (Blumm 1989; Meyer 1988). The PDT has provisions that enable the continuance of public use in the face of private attempts to extinguish the trust, or if a government entity attempts to terminate the trust (Blumm 1989).

Other legislation and judicial decisions in California have further supported the inclusion of the PTD to protect natural resources. Most of these cases discuss that where upstream diversions were causing water quality problems downstream by diminishing flows in a river, all appropriators could be called upon to make releases sufficient to abate these problems (Blumm 1989). The implication of these decisions is that all appropriations within the state are subject to comply with a federal or state command to restore the flow of a river or stream.

The results of these cases promote public access to trust resources, and foster the inclusion of the public in decision-making processes regarding natural resources. The PTD allows the public to hold state water administrators and water governance institutions accountable for their decision making regarding the management of trust resources (Blumm 1989). Furthermore, the PTD encourages state courts to enter into a partnership with administrators to have concurrent legislative and judicial mandates regarding trust resources. Several states' constitutions have been updated to include provisions for the PTD, and clearly express the role of the state as a trustee over water resources (Blumm 1989; Meyers 1988).

4. Deer Flat NWR Federal Reserved Water Rights Case

The Deer Flat NWR consists of 94 islands over a 110 mile reach in the Snake River. The refuge was established for the purpose of preserving these islands as a sanctuary for native migratory birds and their breeding grounds (Executive Order 7655). Deer Flat NWR consists of the original Deer Flat NWR and of the former Snake River NWR (Executive Order 7691), and remains reserved for the purposes of both the original reservations (*United States v. State of Idaho*). In 2001, the federal government claimed that the use of the word 'islands' in the establishment purposes indicated that a reservation of water was implied to fulfill the primary purpose of

Executive Order 7691, by insuring that the land remained surrounded by water. The U.S. also argued that since the refuge was established for migratory birds, it established an implied federal reserved water right. The state of Idaho refuted the claim, stating that the establishment purposes did not contain language that implied intent that Congress created a federal reserved water right for the refuge (Idaho 2001).

The Idaho Supreme Court concluded that the establishment language in Executive Order 7691 did not rise to the level of an implied reservation of water. The court used the test for implied federal reserved water rights from *United States v. New Mexico*. First, the definition of islands in Executive Order 7691 was deemed unclear, which led the Court to the conclusion that in the primary establishment purpose, there was an intention to only reserve the lands for migratory bird use, not the surrounding water. Second, neither Executive Order provided clear expression of purpose upon which the court could rule that without water the reservation of the Deer Flat NWR would be entirely defeated. Finally, if there is no standard to quantify water needed for the preservation of the islands, it is indicative that quantification was not meant to be determined.

The court differentiated the case from *Cappaert* where specific quantification could be determined to preserve the endangered pupfish, or *Winters*, where the amount of water to irrigate the land could be quantified. In the Deer Flat case, the court determined that there was no standard for determining the amount of water necessary to have an island. Furthermore, the court concluded that simply reserving an area of land where certain species are attracted, without more, does not constitute a reservation of water.

In this instance, the Idaho Supreme Court read the establishment documents narrowly, and therefore, denied a federal reserved water right for the Deer Flat NWR. The establishment purpose in question was the creation of sanctuaries for migratory birds. The Court interpreted the

facts of the case to include that the federal government reserved islands that it already owned and purchased other islands to protect migratory bird habitat from the negative impacts of hunting, agriculture, and grazing. From this, the Court determined that the primary purpose of the Migratory Bird Conservation Act would not be defeated without a federal reserved water right. The Court failed to recognize that water resources are essential components to the habitat of many migratory bird species. Populations of migratory birds tend to correspond with available habitat acreage for nesting, feeding, and raising young (North American 2009). In particular, waterfowl are the most prominent group of migratory birds in North America, and they depend on wetlands and other habitat areas within proximity to water (North American 2009; Pringle 2000). At best, the court's decision reflects a misunderstanding of the need for water flows to support the establishment purpose of preserving migratory birds.

Furthermore, the Court reviewed the secondary purposes of the establishment, which include isolation from predators, proximity to open water, and riparian habitat, and determined that these uses were always secondary to reclamation. The Court determined that the islands exist in their current state because of the reclamation projects on Snake River, and if the United States intended to reserve water within the Refuge, that goal was ignored by the subsequent reclamation projects of the United States on the Snake River. Given the historical context of the West in regard to reclamation; agriculture and public works in general, the Court held that it was not reasonable to believe that preference was intended for migratory birds over farming. This conclusion is clearly biased toward uses of water for human consumption and use. If the state of Idaho had incorporated the PTD into the case deliberation, the outcome could have been in favor of the United States. The PTD could have been used to assert the importance of in-stream flows for trust resources such as migratory birds within the state.

Another reason why the Court denied the reserved water right was that they claimed that the United States did not intend to reserve water at the time the land was withdrawn because the reservation was not essential to fulfill the purpose of the Migratory Bird Conservation Act and, in addition, would frustrate the United States' control of its own reclamation activities. This reasoning negates the principle created in *Arizona v. California*, that federal reserved water rights can be claimed from unappropriated water resources for present and future needs of the federal reservation.

5. Conclusion

Water is a resource with mixed regimes that develop with various cultures and change over time as uses become more varied and the interactions between users become more complex. Since water rights have been moving toward a public governance structure rather than towards privatization, there are characteristics inherent in water that make it difficult to manage under completely private regimes. The high information and transaction costs of excluding users and identifying property rights create a higher social cost than a private cost, making public or common property regimes most effective for governing water resources. However, the best property regime fit will be dependent on the ecological conditions and culture surrounding a particular water resource.

The future of water rights for NWRs is wrought with uncertainty, particularly in recent cases of federal reserved water rights. The Deer Flat case reflects the authority that states can have over granting water rights to NWRs, and that the establishment documents can be held to a very strict interpretation of implied rights. State court decisions have weakened the power that the federal reserved water rights doctrine once asserted. States that are adopting the PTD into their water governance structure, and classifying in-stream uses and conservation as 'beneficial uses' of

water are directing the future of water rights for NWRs and other reservations of land or water that attempt to protect trust resources.

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