

WATER RIGHTS FOR GREAT SALT LAKE

IS IT THE IMPOSSIBLE DREAM?

By

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Abstract: THE GREAT SALT LAKE IS MANY THINGS: IT IS A TERMINAL LAKE. IT'S AN ENVIRONMENTAL JEWEL PROVIDING HABITAT TO MIGRATING BIRDS AND SIGNIFICANT WET LANDS—NATURE'S BEST FILTER FOR PRESERVING WATER QUALITY. IT SUPPORTS SIGNIFICANT ECONOMIC ACTIVITY. IT PROVIDES VARIOUS RECREATIONAL OPPORTUNITIES, AND IT IS A CONTRIBUTOR TO POOR RESPIRATORY HEALTH WHEN LAKE LEVELS ARE LOW. ALTHOUGH BASIN-WIDE WATER SUPPLIES HAVE NOT SIGNIFICANTLY CHANGED SINCE PIONEER SETTLEMENT TIMES, UPSTREAM DIVERSIONS UNDER APPROPRIATED WATER RIGHTS HAVE INCREASED AND THOSE DIVERSIONS HAVE LOWERED THE LAKE'S ELEVATION BY 11 FEET. THIS DECLINE WILL CONTINUE WITH OUR GROWING POPULATION AND THE INCREASING DEMANDS A DOUBLING OF OUR POPULATION WILL HAVE ON THE AVAILABLE WATER SUPPLY.

APPROPRIATED WATER RIGHTS ARE A PREFERENTIAL RIGHT OF USE GRANTED OR PERMITTED OF A STATE-OWNED RESOURCE. AND WHILE THE APPROPRIATED RIGHT GIVES A DEGREE OF EXCLUSIVITY IN THE POSSESSION AND PRIORITY OF USE, IT IS A VESTED BUT CONDITIONAL PROPERTY RIGHT THAT HAS ALWAYS BEEN SUBJECT TO THE ASSERTION OF BROADER FEDERAL AND STATE INTERESTS, WHERE NECESSARY, TO PROTECT THE BROADER NEEDS OF SOCIETY. THESE BROADER PUBLIC INTERESTS HAVE BEEN EXPRESSED IN THE PUBLIC TRUST DOCTRINE AND THE PUBLIC WELFARE ASPECT OF STATE APPROPRIATION LAWS. THE PUBLIC TRUST DOCTRINE IS GROUNDED IN FEDERAL COMMON LAW, WHEREAS THE PUBLIC WELFARE/INTEREST STANDARD IS A STATE COMMON LAW PRINCIPLE. EITHER OR BOTH DOCTRINES CAN BE ASSERTED BY GOVERNMENTAL AND PRIVATE INTERESTS, WHERE NECESSARY, TO PROTECT THE PUBLIC'S INTEREST, AND THEIR ASSERTION CAN DISPLACE OR MODIFY THE SO-CALLED VESTED APPROPRIATED WATER RIGHT.

THERE ARE OTHER AVENUES TO CREATING A WATER SUPPLY FOR THE GREAT SALT LAKE THAT ARE LESS DRACONIAN THAN THE PUBLIC TRUST DOCTRINE, THAT COULD BE EMPLOYED THROUGH VOLUNTARY MARKET BASED TRANSACTIONS ON EITHER A TEMPORARY OR LONGER-TERM ARRANGEMENT. CERTAIN CHANGES TO OUR WATER LAWS AND POLICIES WILL BE REQUIRED TO MAKE THESE OPTIONS MORE FEASIBLE.

Impacts of Water Development on Great Salt Lake and the Wasatch Front

White Paper February 24, 2016

A recent White Paper titled *Impacts of Water Development on Great Salt Lake and the Wasatch Front*,¹ was published in February of 2016. It followed on the heels of the *Great Salt Lake Comprehensive Management Plan*, (“CMP”) March 2013, by the Utah Department of Natural Resources, Division of Forestry, Fire and State Lands.² Both of these documents are “must-reads” for anyone interested in understanding the inter-connectedness of the Great Salt Lake (“GSL”) with the quality of life along the Wasatch Front, the environmental health of GSL, and the economic contribution a healthy lake provides to the State as a whole.

The major findings of the White Paper are as follows:

- Water diversions on upstream tributaries to GSL since settlement represent a persistent reduction in water supply to GSL, reducing its elevation by 11’ or a reduction in lake volume by 48%, and exposing much of the lake bed. In 1847, the surface area of the GSL was about 1600 square miles. Due to drought and upstream diversions, in 2015 the surface area was 1050 square miles, leaving 550 square miles of exposed lake bed.
- The proposed Bear River Development Project will lower the lake an additional 8.5”, exposing an additional 30 square miles of lake bed.
- There are no water rights allocated to GSL.
- While water conservation has reduced urban per capita demand by 18%, population increases have increased municipal water use over-all by 5%.
- Lower water levels expose more lake bed leading to more blowing dust carrying heavy metals, leading to respiratory problems and other health issues.
- At lower lake elevations, salt becomes more concentrated but harder and more expensive to access for processing. Brine shrimp rely on intermediate salinities to grow and reproduce, and do not thrive if salt concentrations are either too high or too low.
- Recreation is impacted by too low lake elevations.
- Lower water levels and higher salinity impact bird populations that rely on the lake for migration. Nesting grounds become exposed subjecting them to predation. Higher salinity concentrations impact food sources for birds.

¹ Wayne Burtsbaugh, Craig Miller, Sarah Null, Peter Wilcock, Maura Hahnenberger and Frank Howe, *Impacts of Water Development on Great Salt Lake and the Wasatch Front*, White Paper: February 24, 2016.

https://www.uvu.edu/ethics/docs/wurtsbaugh_white_paper_gsl.pdf

² <http://www.ffsl.utah.gov/images/statelands/greatsaltlake/2010Plan/OnlineGSL-CMPandROD-March2013.pdf>

The value of economic activities on GSL, as analyzed in 2012, is \$1.32b per year. This is spread among tourism, recreation, mineral and salt extraction, and brine shrimp harvesting. The salt extraction industry contributes about \$572m per year. The brine shrimp industry contributes about \$139m. Recreation, including hunting, contributes an additional \$135m to Utah's economy.

The major tributary rivers of the GSL are the Bear River, the Weber River and the Utah Lake-Jordan River drainages. These major tributaries, together with a minimal contribution from the west desert (54,000 acre-feet) and annual precipitation directly to the lake (1,000,000) contribute on an average annual basis approximately 3,582,300 acre-feet collected from a 30,180 square mile drainage area.

Table 2.3. Summary of Water Inflow to Great Salt Lake

Tributary	Drainage Area (square miles)	Average Annual Precipitation (inches per year)	Average Annual Flow to GSL (acre-feet per year)	Total (%)	Discharge Location in GSL
Bear River	7,118	21	1,450,000	40.5%	7% to Bear River Migratory Bird Refuge 93% to Bear River Bay
Weber River	2,476	26	640,300	18%	Ogden Bay Waterfowl Management Area (WMA), other waterfowl management areas, and Willard Bay
Jordan River	805*	23	438,000	12%	Farmington Bay, Gilbert Bay, various duck clubs, and the Inland Sea Shorebird Reserve
West Desert Basin	18,281	10	54,000	2%	Gilbert Bay and Gunnison Bay
Direct precipitation	1,500	12.5	1,000,000	28%	Entire lake
Total	30,180[†]	–	3,582,300	100%	–

Source: DWRe (2001).

* 4,651 square miles if including Utah Lake Basin.

† 34,026 including the Utah Lake Basin.

Average annual evaporation losses from GSL are in the range of 3.58 million acre-feet;³ although evaporation varies depending upon the volume of water in the lake and its salinity. Lower lake volumes result in a smaller surface area and higher salt concentrations that tend to reduce evaporation. When there is more water in the lake, surface area expands, salt concentrations are diluted and more water is lost to evaporation. Left alone, GSL would find its equilibrium between inflows and outflows from evaporation (including diversions for salt extraction). However, when drought cycles and upstream diversions take even more of the

³ Tarboton, *Great Salt Lake Water Budget*, Utah State University, http://www.gslcouncil.utah.gov/docs/2011/Mar/031611_budget.pdf

available inflows, lake levels decline, salinity increases and the equilibrium may be permanently upset.

Considering the economic contributions and environmental values of GSL to the state as a whole, there are increasingly urgent suggestions that we find a “water right” for GSL. or in some way facilitate sufficient water reaching the lake to maintain its elevation within an optimal range to protect recreation, economic activity and biological and environmental integrity. The question is how we might accomplish that considering that we are a very dry state and with the exception of the Bear River, all of our surface water inflows to GSL are fully, if not over appropriated; although not all appropriated water is in use.

Various options exist that are actually in use in other appropriation doctrine states. They range from the very severe Public Trust Doctrine and to a lesser degree the public interest aspect of appropriation doctrine, to market based voluntary arrangements to free up water for instream flow purposes. However, reliance on the Public Trust Doctrine to force reallocation or appropriated water rights would do so without regard to vested property interests created under the appropriation doctrine, and would provide no avenue for compensation for the loss and economic disruption such a reallocation would cause.

The alternatives we should explore rely on voluntary market-based solutions. These methods could generally include modification of the instream flow statutes to allow shared usage of water. Water banks have been successfully employed in Idaho and other states. Voluntary contractual arrangements could be made to fallow lands and allow water to be used for instream flows. Other options could include legislatively setting minimum stream flow or lake level requirements in those bodies of water to protect those water resources deemed critically in need of protection. The public welfare component of the appropriation doctrine could be used to favor new appropriations and change applications that promote the public welfare and perhaps even allow them to leap-frog priorities to approve those applications that have an instream flow component in addition to some diversionary use of water.

The governor has statutory authority to reserve unappropriated water in a source and set priorities on what types of beneficial uses would be favored and allowed access to this reserved pool of water. Lastly, would be to expand condemnation authority to allow the state and potentially others to acquire water rights for instream flow and other environmental purposes through eminent domain and payment of just compensation. Condemnation is never popular, but it is preferable to having water rights stripped away under the Public Trust Doctrine without compensation. Some statutory changes may be required to implement at least some of these alternative strategies.

The other area of emphasis has to be the management of GSL itself. Management strategies can have a tremendous impact on lake levels and related impacts to economic and environmental interests. The CMP created a very detailed matrix that looked at the impacts lake elevations have on resources, wildlife, land use, recreation, biological and environmental integrity as well as economic activities. The CMP concluded that the range of optimum lake levels that would best meet these competing interests in the GSL is between 4,198 and 4,204.9 feet above mean sea level. Lake levels above and below these levels require different management strategies and coordination among various state and federal agencies to minimize the adverse impacts of too high or too low lake levels.

The lake is, of course, too large and its elevations too dependent on external factors affecting the water supply to ever effectively control the level of the lake. Therefore, the CMP devised strategies that would be employed when lake levels are in the middle, low and high zones, and additional strategies to implement when lake elevations are in the transition zones (between 4195 and 4198 on the low side) and (between 4205 and 4208 on the higher side) to help blunt the harsher impacts of too high and too low lake levels. The matrix is below, but too small to actually read here. However, it can be found in Appendix A of the CMP.

Final Great Lakes Comprehensive Management Plan

GSL LAKE LEVEL MATRIX

Legend: — State Boundary Waters (Lakes 1-11) — State Boundary Waters (Lakes 12-18) — Highlighted for Review — Highlighted for Review

Elevation	Elevation in Feet, MSL	Elevation in Feet, MSL	WATER		WATER QUALITY	WILDLIFE	LAND USE	RECREATION	BIOLOGICAL	ENVIRONMENTAL	ECONOMIC	TOTAL
			State Boundary Waters (Lakes 1-11)	State Boundary Waters (Lakes 12-18)								
4,215	4,215	4,215	...	...	...	...	...	...	...	...	...	4,215
4,210	4,210	4,210	...	...	...	...	...	...	...	...	...	4,210
4,205	4,205	4,205	...	...	...	...	...	...	...	...	...	4,205
4,200	4,200	4,200	...	...	...	...	...	...	...	...	...	4,200
4,195	4,195	4,195	...	...	...	...	...	...	...	...	...	4,195
4,190	4,190	4,190	...	...	...	...	...	...	...	...	...	4,190
4,185	4,185	4,185	...	...	...	...	...	...	...	...	...	4,185
4,180	4,180	4,180	...	...	...	...	...	...	...	...	...	4,180
4,175	4,175	4,175	...	...	...	...	...	...	...	...	...	4,175
4,170	4,170	4,170	...	...	...	...	...	...	...	...	...	4,170
4,165	4,165	4,165	...	...	...	...	...	...	...	...	...	4,165
4,160	4,160	4,160	...	...	...	...	...	...	...	...	...	4,160
4,155	4,155	4,155	...	...	...	...	...	...	...	...	...	4,155
4,150	4,150	4,150	...	...	...	...	...	...	...	...	...	4,150
4,145	4,145	4,145	...	...	...	...	...	...	...	...	...	4,145
4,140	4,140	4,140	...	...	...	...	...	...	...	...	...	4,140
4,135	4,135	4,135	...	...	...	...	...	...	...	...	...	4,135
4,130	4,130	4,130	...	...	...	...	...	...	...	...	...	4,130
4,125	4,125	4,125	...	...	...	...	...	...	...	...	...	4,125
4,120	4,120	4,120	...	...	...	...	...	...	...	...	...	4,120
4,115	4,115	4,115	...	...	...	...	...	...	...	...	...	4,115
4,110	4,110	4,110	...	...	...	...	...	...	...	...	...	4,110
4,105	4,105	4,105	...	...	...	...	...	...	...	...	...	4,105
4,100	4,100	4,100	...	...	...	...	...	...	...	...	...	4,100

Reference: ¹ The lake level values associated with this measure are based on collected knowledge and judgment of the GCLMP Planning Team.
² Reference conditions

REVIEW OF VARIOUS OPTIONS TO MAKE WATER AVAILABLE TO GSL:

Public Trust Doctrine

Origins of the Public Trust Doctrine-Navigability

Water rights, whether riparian or appropriative in nature, are of necessity correlative in that the water must be shared among fellow users that can be both the general public as well as other water right holders in the source. One of the oldest recognized public rights is to freely navigate on the navigable waters, and to use them as a highway for commerce, fishing and travel. The traditional use of the Public Trust Doctrine has been to protect the rights of the public to access navigable waters for these purposes; although its reach has been expanded by some states in recent years.

Navigability for Title

American common law on navigability for title developed in the 19th century and followed English common law tradition regarding public ownership of the beds and banks of navigable bodies of water. Under English common law, the Crown owned the beds of waters that were below the high water mark, navigable, and affected by the ebb and flow of the tides, but the public had a right to navigate, fish and travel within the navigable waters. Title to non-tidal beds was *prima facie* in the abutting landowners. Because of the unique geography of the United States and its many miles of inland rivers that are navigable and important as highways of commerce, the United States Supreme Court extended admiralty jurisdiction to these non-tidal, navigable waters.⁴

The 13 original American states were deemed to have succeeded to all of the interests of the English Crown, so that navigable waters and submerged lands passed to them in the same sort of trust ownership in which they had been held by the Crown. *Illinois Central Railroad v. Illinois*⁵ put it this way:

The State holds the title to the lands under the navigable waters . . .
But it is a title different in character from that which the State holds in lands intended for sale. It is different from the title which the United States holds in the public lands which are open to preemption and sale. It is a title held in trust for the people of the State that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein freed from the obstruction or interference of private parties.

⁴ *The Genesee Chief*, 53 U. S. (12 How.) 443 (1851).

⁵ 146 U.S. 387, 452 (1892).

The original 13 states then assumed the federal government's ownership at the time of establishment of the Union. The federal government was held to take title to the land and water in the lands it acquired in the West in trust for the people of the later admitted states, so that as they joined the Union, they did so on an "equal-footing" with the original 13 states. The United States in disposing of the public domain, whether on the coast or the interior of the country, retained the navigable waters and the soil beneath them as public highways, and the government could not convey away these public trust resources during periods of territorial status of the West. Title was held in trust for the states and vested in the states once they were admitted to the Union, but this title was similarly encumbered with the public trust. This was true even regarding reservation lands established for Native American tribal groups.⁶

Land and water subject to the public trust, however, is not irrevocably tied up. The courts have recognized that certain dispositions of public trust assets are valid. In *Kootenai Environmental Alliance v. Panhandle Yacht club, Inc.*,⁷ the court said that not all dispositions of public trust assets are void. Transfers will be validated if they meet the following test: "One, is the grant in aid of navigation, commerce, or other trust purposes, and two, does it substantially impair the public interest in the lands and waters remaining?" If a proposed transfer meets the first test, and causes no impairment to the public's interest, the transfer is valid under the Public Trust Doctrine.

Navigability for title has been dealt with in three major United States Supreme Court decisions; *United States v. Oregon*, 295 U.S. 1 (1935); *United States v. Utah*, 283 U.S. 64 (1931); and, *United States v. Holt State Bank*, 270 U.S. 49 (1926). Johnson and Austin conclude in their article *Recreational Rights and Title to Beds on Western Lakes and Streams*, 7 Nat. Resources J. 1, 24-25 (1967) as follows:

Such navigability is determined by the natural and ordinary condition of the water at that time (statehood), not whether it could be made navigable by artificial improvements. However, the fact that rapids, rocks or other obstructions make navigation difficult will not destroy title navigability so long as the waters were useable for a significant portion of the time. . . .

Navigability in intrastate commerce is all that is required, not usability in interstate commerce. . . .

The waters must be usable by the "customary modes of trade or travel on water." This may include waters usable for commercial log floating. This includes waters as little as three or four feet deep that are geographically located so that they have been, or can be

⁶ *Idaho v. Coeur d'Alene Tribe of Idaho*, 521 U.S. 261 (1997).

⁷ 671 P.2d 1085 (Idaho 1983).

used by canoes and rowboats for commercial trade and for travel. This does not include waters which are difficult to access because of surrounding mud flats or the like, and which are geographically isolated from habitation and transportation routes, and which have never been and are not likely to be used for commercial trade or travel. This probably does not include waters that are geographically isolated from habitation and transportation routes and which have never been and are not likely to be used for commercial trade or travel, even though these waters are deep enough and large enough to float commercial type vessels, and are not physically inaccessible because of mud flats or the like.

Susceptible of Being Used in Commerce in their Ordinary Condition

In *Utah v. United States*⁸, the United States Supreme Court sustained Utah's title to the bed of GSL based on evidence that at the time of statehood, the lake was capable of being used for commerce. Although GSL is an interstate body of water, that fact did not affect the State's ownership of the bed of the lake within the State of Utah. The test is that the body of water at the time of statehood must be "navigable in fact when they are used, or are susceptible of being used, in the ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water." Citing *The Daniel Ball*.⁹ The court says that while the *Daniel Ball* case applied to rivers, it also applied to all watercourses.

Evidence showed that: Nine boats had been used to ferry cattle to Antelope Island; one private boat had been hired to haul livestock to the island; the City of Corinne excursion boat sailed the lake taking tourists on site-seeing trips around the lake; and, commercial ore and salt boats used it for commerce. The court acknowledged that the evidence showed that this use was sporadic, but that the "lake was physically capable of being used in its ordinary condition [at the time of statehood] as a highway for floating and affording passage to water craft in the manner over which trade and travel was or might be conducted in the customary modes of travel on water at the time."

The real fight here was over the right to receive royalties from the production of salt and other minerals from the lake. If the lake was non-navigable at statehood, the federal government, as a littoral land owner, would have retained title to the submerged lands abutting the BLM-owned lake-front property. That ownership interest would extend to the center of the lake. As the owner of these sovereign lands, it would have been entitled to the royalties derived from mineral production from these federal lands. If title passed to Utah at statehood under the Equal

⁸ 403 U.S. 9 (1971).

⁹ 77 U.S. (10 Wall.) 557 (1870), which extended the law of navigability to inland water ways when they are used or susceptible of being used in their ordinary condition, as highways for commerce by customary modes of travel.

Footing Doctrine, because it was a navigable body of water at the time of statehood, the royalties, amounting to many millions of dollars belonged to the State. The court held that the lake was navigable at statehood, and that Utah owned the land below the mean or ordinary high water of this inland navigable lake.

Non-Navigable for Title Waters Stream and Land Beds

In contrast to GSL, title to the streambed of non-navigable streams or lakes is held to pass to the owners of the land that owns both sides of the stream. Where different individuals own lands on the opposite banks, they are held to each own the thread of the stream or its centerline. The centerline is defined as either the mid-point between the banks or the thread of the main channel where there are several braided smaller channels. Deeds that define a river as forming a property boundary are construed to go to the center of the stream.

In *Monroe v. State*¹⁰, the Utah Supreme Court further considered the question of what constitutes a navigable lake and ownership of the bed and banks of that lake. The plaintiffs were landowners abutting Scipio Lake, an enlarged natural lake located in central Utah. The landowners and others had constructed a dam and impounded additional waters in this lake that they used for irrigation. As water was drawn out of the reservoir each year, lands would become exposed and a lush water plant that grew there made good cattle feed. The state had leased this exposed land to another individual for grazing for many years, and the plaintiffs brought suit claiming that the lake was not navigable, and therefore as the abutting landowners they owned this land. The determining factor, according to the court, was whether the lake was navigable at statehood. If so, the plaintiffs should fail, as title would have passed to the State. If the lake was not navigable, title would have gone to the littoral landowners as the land passed out of public ownership.

The court found that at the time of statehood, Scipio Lake was a natural lake. In 1867, a small dam was placed at the outlet to the lake extending the reservoir some distance and the depth was about 4 to 5 feet. The federal government, in 1871, had surveyed the meander line. By 1896, statehood, no evidence existed that the lake had been used for commerce. It had no connection with a navigable stream or other navigable body of water, but it had been used by the local population for boating, fishing and swimming. The trial court held that the lake was nevertheless navigable at statehood. The Utah Supreme Court reversed. The court noted that the lake was small and easier to go around than across at the time of statehood. It was used primarily as a reservoir for irrigation, and that it was improbable that it would ever be used or valuable as a highway for commerce. Such findings are inconsistent with navigability.¹¹ The court continued:

¹⁰ 175 P.2d 759 (Utah 1946).

¹¹ See *State v. Rolio*, 71 Utah 91, 262 P. 987 (1927), where the court held that Utah Lake was navigable at statehood and that the abutting land owners' ownership ended at the high water mark and the State of Utah owned the bed of the lake.

To meet the test of navigability as understood in the American law a water course should be susceptible of use for purposes of commerce or possess a capacity for valuable floatage [*sic*] in the transportation to market of the products of the country through which it runs. It should be of practical usefulness to the public as a public highway in its natural state and without the aid of artificial means. A theoretical or potential navigability, or one that is temporary, precarious, and unprofitable, is not sufficient. While the navigable quality of a watercourse need not be continuous, yet it should continue long enough to be useful and valuable in transportation; and the fluctuations should come regularly with the seasons, so that the period of navigability may be depended upon. Mere depth of water, without profitable utility, will not render a watercourse navigable in the legal sense, so as to subject it to public servitude, nor will the fact that it is sufficient for pleasure boating or to enable hunters or fishermen to float their skiffs or canoes. To be navigable a watercourse must have a useful capacity as a public highway of transportation

It seems fair to say from all of these decisions that navigability is not dependent merely upon the physical capabilities of the particular body of water to support transportation of goods. **The public interest in such a body of water arises only when it is so situated that it becomes or is likely to become a valuable factor in commerce.** (*Emphasis added*).

Original Application of the Public Trust Doctrine

Historically, the doctrine was applied as in the *Illinois Central Railroad* case that confirmed state ownership of the lands submerged under navigable bodies of water, and that the state held title in trust for the public. The public trust created a limitation on the actions of state government that would prevent the states from divesting itself of trust resources. The only noted exceptions were conveyances that were a grant in aid of navigation, commerce, or other trust purposes, or that it did not substantially impair the public interest in the lands and waters remaining. The Public Trust Doctrine has also been used to place limitations on the extent of the public's use of public trust resources. It has been couched in terms of the responsibilities of the state to regulate the use of its navigable waters and the lands beneath them to preserve the public's right to navigate and conduct commerce in the navigable waters of the state.

The Public Trust Doctrine is dynamic. It originally applied only to the proprietary interest the states took in tidal and navigable for title water and the lands beneath them. Its original focus was on navigation, commerce and fishing rights. It has been expanded to include protection of ecological values in water resources whether navigable in fact or not, and has been expanded to non-navigable tributary streams of navigable bodies of water. Most recently, the

Public Trust Doctrine has been employed to restrict the quantity of water appropriators may divert from a water source under the lawful, state-created water rights in order to protect the state's trust responsibilities.¹²

Competing Uses of the Water Resource: The Tension Between Private Appropriated Rights Under State Law and the Public Trust. The *Mono Lake* Decision: *National Audubon Society v. Superior Court*, 658 P.2d 709 (S. Ct. Calif. 1983).

The decision in the *Mono Lake* case shocked the water lawyers in the West, because this was the first time the courts had taken a position that state-created vested water rights were not really vested, protected interests in real property after all. Instead, private appropriated water rights were acquired subject to the public trust and the water rights could be modified by the state, where necessary, to protect the public trust resources. The decision seemed counter-intuitive, because the federal and state courts had held that a state-created appropriated water right was entitled to protection of due process and that if taken by the government, the appropriator was entitled to compensation.¹³ What we learned, however, is that even a perfected water right is subject to prior rights and the possible assertion of dominant federal or state interests. The dominant federal interest had been restricted to issues of navigation, commerce and fishing. The departure in *Mono Lake* was that the court held that private appropriated water rights, which are valid under state law, are also subject to the state's public trust obligations and that the state can define the public trust pretty much any way the courts or Legislatures want to.

Mono Lake extended the state's public trust jurisdiction to non-navigable tributaries of a navigable body of water, rather than restricting its application to the historical use of protecting the public's rights to navigation and all its incidents in navigable in fact waters of the state. Los Angeles thought it had solved all possible disputes by condemning all the riparian land owners surrounding the lake and also the tributary streams near its point of diversion, so that no riparian could contend that it was entitled to receive the stream undiminished. Once the likely water-use contestants were out of the way, the city filed to appropriate the water of these four tributary streams for municipal use in the city.

The Cal. Water Board, while acknowledging that there was a "public interest" component to Calif. appropriation doctrine, also noted that domestic use was to be given a priority or preference over all other uses under California appropriation doctrine. Therefore, it approved the applications over the protests of several recreational interests who complained that the water levels of the lake would be reduced and recreational and surface uses would be impaired due to

¹² See generally, Robin Kundis Craig, *A Comparative Guide to the Western States' Public Trust Doctrines: Public Values, Private Rights, and the Evolution Towards an Ecological Public Trust*, 37 Ecology Law Quarterly, 53, (2010); and Joseph L. Sax, *The Public Trust Doctrine in Natural Resources Law; Effective Judicial Intervention*, 68 Mich L. Rev. 471 (1970).

¹³ *Hunter v. United States*, 388 F.2d 148, 153 (9th Cir. 1967); *Hughes v. Lincoln Land Co.*, 27 F. Supp. 972 (D.C. Wyo. 1939); *Town of Sterling v. Pawnee Ditch Ext. Co.*, 42 Colo. 421, 94 P. 339 (1908).

the approval of the applications. The board concluded that it had no authority to deny the applications since the city's proposed use was the highest under state law.

The California Supreme Court noted that this case presented a real "clash of values." "Mono Lake is a scenic and ecological treasure of national significance, imperiled by continued diversions of water; yet the need of Los Angeles for water is apparent, its reliance of rights granted by the board evident, the cost curtailing diversions substantial."

Core Conclusions of the Court Regarding the Public Trust Doctrine, as Applied in California

1. The State has authority as the sovereign to exercise continuing supervision and control over the navigable waters of the state, and this authority applies to the lake, which was navigable at statehood, but also applies to non-navigable waters tributary thereto.

The court acknowledged that the prosperity and habitability of much of California required the diversion of great quantities of water from streams for purposes unconnected to navigation, fishing and commerce; the traditional areas of this retained state control. In that regard, the court noted that:

The state must have the power to grant non-vested, usufructuary rights to appropriate water even if diversions harm public trust uses. Approval of such diversion without considering public trust values, however, may result in needless destruction of those values. Accordingly, we believe that before state courts and agencies approve water diversions they should consider the effect of such diversions upon interests protected by the public trust, and attempt, so far as feasible, to avoid or minimize any harm to those interests.¹⁴

2. Individuals acquiring rights that are subject to the trust acquire no vested rights to the use of those rights in a manner harmful to the trust.

3. The exercise of the trust by the state is not a taking. The state does not divest anyone of title. The private rights were always encumbered by the trust and therefore subject to its exercise, as necessary, to protect the public trust values in the resource.

4. State's power is continuing notwithstanding the granting of a vested water right permit, and that power extends to the modification and even the revocation of a previously granted right or to the enforcement of the trust against lands long thought free of the trust. The grantee holds title subject to the trust, and while he may assert a vested right to the servient estate

¹⁴ *Supra* note 12, at p. 712.

or water right, he cannot claim a vested right so as to bar the recognition of the public trust or state action to carry out its purposes.

5. The California court defined the public trust as more than an affirmation of state power to use public property for public purposes. It is an affirmation of the duty of the state to protect the people's common heritage in streams, lakes, marshlands and tidelands, surrendering that right of protection only in rare cases when the abandonment of that right is consistent with the purposes of the trust.¹⁵

The public trust is susceptible of differing interpretations by the various states, and incorporates not only the legal recognition of the existence of the public trust, but the duty to actively protect the trust values as defined by the individual state.¹⁶

While California has applied the Public Trust Doctrine expansively, other states have taken steps to restrict its application. The Idaho Supreme Court seemed to adopt the expansive view of the doctrine in a few cases that seemed to merge the public trust and local public interest together.¹⁷ The Idaho Legislature struck back adopting Idaho Code §58-1201- 1203 in 1996, restricting the Public Trust Doctrine's application to the beds of navigable in fact lakes and streams. It goes so far in section 1203 (2) as to specifically exempt the doctrine's application to:

(a) The management or disposition of lands held for the benefit of the endowed institutions as set forth in article IX of the constitution of the State of Idaho;

(b) The appropriation or use of water, or the granting, transfer, administration, or adjudication of water or water rights as provided for in article XV of the constitution of the state of Idaho and title 42, Idaho Code, or any other procedure or law applicable to water rights in the state of Idaho; or

(c) The protection or exercise of private property rights within the state of Idaho.

However, if the public trust encumbers lands and waters as they were acquired by the state, and the doctrine bars the state from divesting itself of the public trust in trust resources, one might question the ability of the state to exempt the appropriation of water from its application.

¹⁵ *Id.* at 728.

¹⁶ *In re Water Use Permit Applications*, 9 P.3d 409 (Hawai'i 2000); and Craig, *supra* note 2.

¹⁷ *Idaho Conservation League, Inc. v. State*, 911 P.2d 748 (Idaho 1995), and *Kootenai Env'tl. Alliance v. Panhandle Yacht Club*, 671 P.2d 1085 (Idaho 1983), applying traditional public trust doctrine to navigable in fact streams or bodies of water under federal law.

MEETING CHANGING DEMANDS THROUGH USE OF “PUBLIC INTEREST” CRITERIA:

State Engineers could aid the prior appropriation doctrine in adapting to change through more creative use of their public interest powers. Many states recognize a public interest component in a water right.¹⁸ The public interest component has been expressed in a variety of ways, but always in vague and general terms. For example, Utah authorizes the State Engineer to deny an application if it will interfere with a more beneficial use of the water for other purposes, or if it will prove detrimental to the public welfare or the natural stream environment.¹⁹ Wyoming authorizes its State Engineer to deny an application that threatens to prove detrimental to the public interest.²⁰ In the absence of legislative direction, these determinations are left to the State Engineer. State Engineers are not necessarily the best judges of what is or is not in the public interest. However, the initial decision must be made by someone, and State Engineer decisions are subject to judicial review. Over time, the courts or Legislatures will put sideboards on the public welfare aspect of the appropriation doctrine.

The extent of the public interest power of a State Engineer is largely untested. One of the early public interest decisions was made by the Utah Supreme Court in 1943 in *Tanner v. Bacon*.²¹ There, the court approved a junior multipurpose application over a senior single-purpose application in the same stream. While the court did not clearly articulate that the public interest should be controlling, it did hold that where a large multipurpose project (construction of Deer Creek Dam and Reservoir under the Provo River Project) was ready for construction, the project should be given preference over the other more speculative, competing power projects.

The storage project would have provided municipal water for numerous cities as well as supplemental irrigation water for thousands of acres of farmland. It also had incidental public benefits, such as flood control, power generation and recreation. The competing private power project would have taken the river flow out and above and returned it to the river below the dam site. Thus, the two projects could not co-exist. The court agreed that the multipurpose project should be approved with a priority ahead of the prior and competing power application. Other public interest decisions have reached similar results.²²

The public interest statutes generally lack specific guidelines for application. In the absence of express legislative policies, the courts and administrative agencies have been

¹⁸ IDAHO CODE §42-1737 (Supp. 1987); NEV. REV. STAT. §533.370 (1986); N.M. STAT. ANN. §72-5-7 (1978); UTAH CODE ANN. §73-3-8 (Supp. 1988); WYO. STAT. §41-203 (1977).

¹⁹ UTAH CODE ANN. §73-3-8 (Supp. 1988).

²⁰ WYO. STAT. §41-203 (1977).

²¹ 103 Utah 494, 136 P.2d 957.

²² *Johnson Rancho County Water Dist. v. State Water Rights Bd.* 235 Cal. App. 863, 45 Cal. Rptr. 589 (1965); *East Bay Mun. Util. Dist. v. Dep't of Pub. Works*, 1 Cal. 2d 476, 35 P.2d 1027 (1934); *Shokal v. Dunn*, 109 Idaho 330, 707 P.2d 441 (1985); *Young & Norton v. Hinderlider*, 15 N.M. 666, 110 P. 1045 (1910); *City of San Antonio v. Texas Water Comm'n*, 407 S.W. 2d 752 (Tex. 1966); *Big Horn Power Co. v. State*, 23 Wyo. 271, 148 P. 1110 (1915).

reluctant to stray too far from traditional views regarding water appropriation, priorities and development.

Still, the tool is there waiting to be creatively used by State Engineers. Applications that promote conservation, or that propose to leave a portion of the appropriated water in the stream as a condition to approval of a new change of use, might be approved in preference to a competing application that sought to deplete water, as being less detrimental to the public welfare. It will be a trial and error process, with the State Engineer making decisions and the courts reviewing and either sanctioning or refining the decisions to define the scope of the public welfare. It is a long and slow process that could be circumvented by the Legislature taking the lead and adopting policies to put definition behind the public welfare aspect of the law. There was a bill offered in the 2015 General Legislative Session, SB 126²³, that attempted to put some definition behind the public welfare aspect of §73-3-8. Had it passed, it would have provided the State Engineer guidance in how to approach public welfare decisions. Unfortunately, this bill did not advance, but it may be time to revisit the issue. The mere suggestion of the bill caused a great deal of consternation. Some viewed it as an intrusion of property rights. Others saw it as a means to block future water development projects, and still others saw it as a means to an end to protect the various public values in GSL and other bodies of water and streams. However, we have such a limited water supply, we have to find better and more creative ways to share this limited but essential resource. Most of our water is already appropriated. Therefore, the future is the reallocation of existing appropriated rights, and the public welfare can play an important policy role in determining reallocation priorities.

Other Options to Make Water Available for Instream Flows

Other appropriation doctrine states have used various tools to free up water for instream purposes. These methods generally include modification of the instream flow statutes to allow shared usage of water; water banks; contractual arrangements; statutory reservations of any unappropriated water; establishing minimum stream flow levels in critical water ways; and even condemnation where fair market value compensation would be required. Some statutory changes may be required to facilitate and implement at least some of these alternative strategies.

Split Season Leases of Water Rights in Oregon

Oregon has a broad program of leasing water for instream flows, but one of the more innovative is the split season lease.²⁴ ORS §537.348, gives authority for a person to purchase, lease or accept a gift of all or a portion of an existing water right for conversion to instream

²³ <http://le.utah.gov/~2015/bills/static/SB0126.html>

²⁴ See http://www.oregon.gov/owrd/pages/mgmt_leases.aspx for a description of the Oregon Instream Leasing Program; and, *See generally* MacDonnell, Lawrence, *Enhancing Stream Flows in Wyoming*, University of Wyo. College of Law for an excellent survey of instream flow leasing and other programs in the West. https://www.uwyo.edu/owp/_files/project30finalreport.pdf

flows. The converted water right retains its original priority date. The party seeking to make an instream flow is to transfer the water right under ORS §540.505 (change application). ORS §537.348 also authorize leases with terms not to exceed 5 years, but may be renewed for a total of 10 years. It also authorizes a split season lease where a portion of the water right is used for irrigation for part of the irrigation season, and then the remainder of the water right is made available for instream use during the same calendar year. The conditions are that the irrigation and instream uses are not concurrent, but sequential. Adequate measurements and reporting of water use are made annually to demonstrate that there is no enlargement of the water right. Oregon Water Resources Department has a write-up of its water leasing program, and it describes one possible split season use scenario. Land could be irrigated from April to June to perhaps get a few cuttings of hay, and then the water would be taken from the land and for the balance of the irrigation season, the remaining water available under the water right in priority can be used for instream flows subject to adequate monitoring and reporting to the water agencies.²⁵

To qualify for an instream use, the lease must meet the same general criteria for instream water rights: must serve a public use such as recreation, scenic attraction, aquatic and fish habitat, wildlife, ecological values, pollution abatement and navigation.

Absent a split season lease, a water user can elect to lease a portion of her water right for instream flows, but a portion is determined not by a percentage of the total seasonal use, but by water tied to a discrete tract of land that can be retired to allow the water to be used for an instream flow purpose. A water user cannot simply use less water on the full acreage and then apply the balance of the water to an instream use. That is apparently viewed as an enlargement of the right. Still, a lease application can be submitted midway through an irrigation season if it is submitted no later than July 1st. However, if the right has been used to irrigate lands, it also cannot be used that year for instream uses unless a split season use instream lease is applied for. Instead, the instream use would have to be deferred to the next irrigation season. Further, if irrigation has taken place in a given season, a lease cannot take effect until the following season unless a split season lease is in effect. Again, the split season use lease is an exception to this rule.

Another Oregon leasing program is referred to as pooled leases. This device is generally used by an irrigation district or water company that has storage available. The company would pool water available to several willing contract holders or shareholders and lease the pooled water for instream flows. Primary benefit is the release of storage at optimum times to augment stream flows to protect a fishery. The internal economics would be worked out by the water district/company and its contract holders or shareholder. The pooled water would then be leased to a qualified agency for instream flow purposes and would go through the change application process.

²⁵ https://www.oregon.gov/owrd/pages/mgmt_leases.aspx

Idaho Water Banks

Idaho has been very successful in establishing viable water banks under statute.²⁶ Water banking began in Idaho as early as 1932, but formal legislation was not enacted until 1979. Idaho operates a State Water Bank that until recently was the only bank authorized to rent natural flow rights in addition to banked storage water. There are also five separate smaller (regional) rental pools that deal primarily with stored water. They have all be very successful in providing water for minimum stream flows to protect fisheries. In 2015, a total of 484,042 acre-feet of water were leased into the rental pools or banks, of which 476,533 acre-feet were then rented by others for supplemental irrigation and for stream flow augmentation. The leasing activity generated \$583,447 in administrative fee revenues to the state, which is in addition to the money paid for the rental of the water which is between the lessor and lessee.

The water banking program works well in Idaho, but in large part because there has been uncontracted Reclamation project storage water available for temporary use from various project reservoirs, and of course, there is a lot more water in Idaho's rivers and streams than we have in Utah. Whether a banking program can work in Utah will depend on whether space could be made available in existing privately owned, as well as Reclamation project reservoirs. Since new storage is probably not politically or environmentally feasible in Utah right now, any use of existing reservoirs would be on a space-available basis. There would be a cost attached to store, and within a federal facility a Warren Act contract would be required along with some NEPA compliance. As water stored in space available storage, it would be the first to spill in times of plenty, and clearly subordinate to federal project purposes. However, there are still some waters of the Central Utah Project that while ultimately committed, are not presently in use as the project is not yet under full demand. Some of this water is presently being leased for supplemental irrigation use, and some is being used under contracts with the federal government for instream flows to meet ESA requirements. Still, at times, there may be water that could be used for broader instream flow purposes, where it could be accomplished without impairing long-term project operations and carry-over storage needs for project purposes.

The Idaho State Water Plan paved the way for the current statutory instream flow program (approved in 1978 as the Minimum Stream Flow Act),¹²⁶ codified in Idaho Code, Title 42, Sections 1501 – 1508 (2011). Under Idaho law, minimum stream flows are declared a beneficial use of water, for the protection of “fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, transportation and navigation values, and water quality.”²⁷

Minimum stream flows as established [under Idaho Code Title 42, Chapter 15] are given priority over other water rights or claims asserted by any other state, government agency, or person for out of state diversion.²⁸ To date, Idaho has 297 licensed or permitted water rights for

²⁶<https://www.idwr.idaho.gov/water-supply-bank/overview.html>.

²⁷ Idaho Code Ann. § 42-1501 (2011).

²⁸ Idaho Code Ann. §42-1500.

minimum stream flows, and 4 for minimum lake levels, covering 1,577 miles of stream, and comprising 2 percent of the total stream miles in the state.²⁹ All instream flow leases in Idaho are accomplished by utilizing the Water Bank. Formal change applications are not required, thus greatly reducing the transactional costs and delays. The authorizations however, are all short-term rentals less than 5 years.³⁰ Water Banking is a tool for making currently unused water rights available for use by others, and water in a water bank is protected against forfeiture.³¹

One additional feature is the use of local water committees to help market and facilitate the rental of stored water from the local rental pools. The committees are appointed by the Water

²⁹ Idaho Water Resource Board, *Minimum Streamflow*, [http://www.idwr.idaho.gov/waterboard/Water Planning/Minimum%20Stream%20Flow/minimum_stream_flow.htm](http://www.idwr.idaho.gov/waterboard/Water%20Planning/Minimum%20Stream%20Flow/minimum_stream_flow.htm) (last visited Feb. 12, 2011).

³⁰ Idaho Code Ann. § 42-1764(1) (2011).

³¹ Idaho Code Ann. § 42-1764 (2011).

Resources Board, but it provides local stake-holder input into the leasing program.³²

Summary of 2015 Rental Pool Activity:

Rental Pool	2015 Rental Rates & Administrative Fees	Volume Leased into the Rental Pool	Volume Rented from the Rental Pool	IWRB Revenue from Rental Pool Rentals
Water District 1	\$14.50/AF (reservoirs didn't fill but enough water was available for flow augmentation rentals)	286,840 AF	286,840 AF	\$497,660.51
Water District 63	\$14.27/AF (IWRB 10% admin fee = \$1.43/AF)	14,081 AF	14,081 AF	\$20,135.83
Water District 65	\$2/AF for in-basin uses, \$14.27/AF for out of basin uses, (IWRB 10% admin fee = \$0.20/AF for in basin rentals and 1.43/AF for out of basin rentals)	183,121 AF	175,612 AF	\$65,651.60
Water District 65-K	\$13.28/AF rental rate IWRB 10% admin fee = \$1.33/AF)	0 AF	0 AF	\$0.00
Total Volume Leased and Rented in 2015:		484,042 AF	476,533 AF	
Administrative Fees Levied by the IWRB:				\$583,447.94

Contractual Arrangements (Bear Lake Example)

Although Bear Lake is a natural lake, what is not well known is that Bear River was not naturally tributary to the Lake. In the early 1900's, PacifiCorp's predecessor built up the north shore to create a man-made reservoir and Bear River was channeled into Bear Lake with an outlet from the lake back to the river. PacifiCorp's predecessor, as the owner of the storage right in Bear Lake, entered into contracts with most all of the water users on the Bear River providing for the storage and delivery of irrigation water to these water users, with PacifiCorp's

³² Idaho Code Ann. § 42-1765 (2011); *see generally* Idaho Department of Water Resources, *Overview of the Idaho Water Supply Bank*, (2010), <http://www.idwr.idaho.gov/WaterManagement/WaterRights/WaterSupply/PDFs/BankOverviewFAQ.pdf>.

predecessor generating power all along the way. Those holding contracts included Bear River Canal Company, which had the earliest and largest contract, Last Chance Canal Company, Cub River Irrigation Company, and West Cache Irrigation Company. The companies had come to rely heavily on the storage water allocated to them by contract out of Bear Lake.

Drought events in the 1990's and the resulting heavy draws on stored water had lowered the water levels in the lake to the point that land owners, boaters and recreationalists could not easily reach the water. PacifiCorp was having difficulty accessing the water for release to its irrigation contract holders and for generation purposes. It therefore applied for a 404 permit to dredge the canal to Mud Lake so water could be pumped out of the lake into Bear River for delivery downstream to the various irrigation canals for use by its contract holders, and for power generation at PacifiCorp's various hydropower plants along the river.

In response to PacifiCorp's application for the 404 permit, and the irrigators' and PacifiCorp's claim to a priority call on the water in storage in the Lake, the land owners abutting Bear Lake and public interest and environmental organizations, including Bear Lake Watch, Emerald Beach and Bear Lake East (the "Recreation Interests"), the primary plaintiffs, and others, filed an environmental lawsuit seeking to stop the withdrawal of water out of Bear Lake, based primarily upon the Public Trust Doctrine, similar to the *Mono Lake* case in California.

Prior to the filing of the lawsuit, in anticipation of what was coming, all of the main irrigation companies on the Bear River in Idaho and Utah formed the Bear River Water User's Association, whose members include Bear River Canal Company, Last Chance Canal Company, Cub River Irrigation Company, West Cache Irrigation Company, and a number of small individual pumpers along the river below Bear Lake. The risk of protracted litigation over the issuance of a 404 permit and the serious ramifications to the irrigators of a contrary judgment based upon the Public Trust Doctrine, brought all the stake holders to the table. After a period of serious negotiations, PacifiCorp and the Bear River Water Users Association entered into a settlement agreement with the Recreation Interests which brought an end to the lawsuit, almost at its inception. In general, the settlement agreement provides for a declining allocation of water to be delivered out of Bear Lake for use by PacifiCorp and the irrigators, calculated based upon receding lake levels and estimated system losses, down to an elevation of 5902 feet, at which no deliveries out of Bear Lake would be made. The unallocated water remains in storage.

Each year, PacifiCorp determines the estimated lake level and system losses for the coming irrigation season. The parties then meet and allocate the estimated available water. Of the water allocated to irrigation, 92.2% is allocated to the larger irrigation companies. The remaining 7.8% is allocated to small irrigators for supplemental irrigation use. The water remaining in storage serves to protect recreation and fishery interests. The various stake holders have also formed committees that meet annually, or more often as needed, to work through various issues on the Lake, such as how to promote water conservation and more reliable water supplies for all uses, etc.

The process has been in place now for over 20 years and is working well. It required no formal State Engineer action; although the state of Utah has been involved in the process, and the other basin states, Wyoming and Idaho are also involved to some degree. The litigation was settled quickly, and no money has changed hands. With annual allocations being determined prior to the irrigation season, irrigators are assured a reliable quantity of water each year so that they can reasonably forecast their farming operations and plan accordingly. The agreement assures the shore land owners and recreational interests that lake levels will be maintained at reasonable elevation to afford them access to the water, and assures PacifiCorp access to water for generation purposes along the river. It has proven to be a “win-win” for all concerned.

A similar agreement might be negotiated with large irrigation users on all the major tributary rivers to allow water that might otherwise be diverted to reach the GSL during dry cycles when lake levels are low. Those industries that benefit from a higher maintained lake level might be induced to provide economic assistance to the irrigators to off-set their lost crops and/or need to buy alternative feed and could be used in a split season lease approach as under the Oregon example.

Statutory Reservation

Under UCA §73-6-1³³, the governor can, by proclamation, reserve unappropriated waters in any source from appropriation and hold the water for future uses. This is how water for the Deer Creek dam and reservoir of the Provo River Project (PRP) was protected from being appropriated by others leaving an inadequate water supply available for the project. This option only works where there is some unappropriated water available, and therefore, it may not be a viable option today in Utah with the exception of the Bear River.

³³ **73-6-1. Suspension of right to appropriate -- By proclamation of governor.**

For the purpose of preserving the surplus and unappropriated waters of any stream or other source of water supply for use by irrigation districts and organized agricultural water users, or for any use whatsoever, when in the judgment of the governor and the state engineer the welfare of the state demands it, the governor by proclamation may, upon the recommendation of the state engineer, suspend the right of the public to appropriate such surplus or unappropriated waters.

73-6-2. Restoration by proclamation -- Priority of applications.

- (1) Waters withdrawn from appropriation under this chapter may be restored by proclamation of the governor upon the recommendation of the state engineer.
- (2) Such proclamation shall not become effective until notice thereof has been published:
 - (a) at least once a week for three successive weeks in a newspaper of general circulation within the boundaries of the river system or water source within which the waters so to be restored are situated; and
 - (b) in accordance with Section [45-1-101](#) for three weeks.
- (3) Applications for appropriations shall not be filed during the time such waters are withdrawn from appropriation; provided, that after the first publication of notice aforesaid applications may be deposited with the State Engineer and at the time such proclamation becomes effective the engineer shall hold public hearings, giving all applicants notice, to determine which applications so filed during the period of publication of such notice are most conducive to the public good, and shall file such applications in order of priority according to such determination.

Legislative or Administrative Established Minimum Flow Requirements

Washington State established minimum stream flow requirements and water shed planning tools. Any new appropriation approved after the setting of minimum flow requirements, is subordinate to the established minimum flow levels, and any such new appropriations therefore cannot interfere with the maintenance of the minimum flows. Water rights acquired prior to the establishment of minimum flow levels are not affected and can enforce their priorities even against an instream flow requirement.³⁴

The law allows minimum flows be established by administrative rule for the purposes of “protecting fish, game, birds or other wildlife resources, or recreational or aesthetic values of said public waters whenever it appears to be in the public interest to establish the same,” or in response to a recommendation of the Department of Fish and Wildlife.³⁵ When stream flows are established by rule, the priority date is thirty days after the date the rule is adopted. The Department of Ecology may also establish a minimum stream flow to protect water quality.³⁶ An instream flow in Washington, set by rule, functions within the established prior-appropriation system. The new instream flow right does not affect existing surface water or storage rights, but water rights issued after the rule adoption are junior to the instream flow right in priority.³⁷ All minimum stream flow levels set by Ecology are filed in the "Minimum Water Level and Flow Register."³⁸

The Watershed Planning Process

The Water Resources Act of 1971 also recognized the necessity for comprehensive state planning to address the competing water demands of the future.³⁹ The Act mandated water resources data collection,⁴⁰ and the development of comprehensive basin plans, or Water Resource Inventory Areas (WRIA's).⁴¹ The planning process has divided the state into 62 watersheds.⁴² The WRIA process allows all stake holders to form planning units, and for the units themselves to develop watershed management plans for their respective basins.⁴³

The stake holders themselves, through the planning units, along with Ecology, set minimum flow limits on a basin-wide level. The process identifies and recognizes all beneficial uses of water, including minimum stream flows, and then works to devise strategies to meet these various and competing needs before allowing new water rights to be appropriated. These

³⁴<http://www.ecy.wa.gov/> (last visited Feb. 27, 2011).

³⁵ WASH. REV. CODE § 90.03.247 (2011).

³⁶ WASH. REV. CODE § 90.22.010 (2011).

³⁷ WASH. REV. CODE § 90.22.030 (2011);

³⁸ WASH. REV. CODE § 90.22.030 (2011).

³⁹ WASH. REV. CODE § 90.54.010 (2011).

⁴⁰ WASH. REV. CODE § 90.54.030(1) (2011).

⁴¹ WASH. REV. CODE § 90.54.045 (2011).

⁴² WASH. REV. CODE § 90.54.010 (2011).

⁴³ WASH. REV. CODE § 90.54.010 (2011).

local planning efforts are state funded. Minimum flows must be maintained in the state's rivers and streams to "provide for preservation of wildlife, fish, scenic, aesthetic, and other environmental values, and navigational values. Diversionary rights are allowed only when overriding considerations of the public interest are present."⁴⁴

Where insufficient data exists to make informed planning decisions, Ecology may essentially reserve unappropriated water in the source to provide time to develop necessary data, blocking any new appropriations of water pending completion of the basin-wide plan.⁴⁵ The watershed planning process was further refined in the 1997 Watershed Planning Act,⁴⁶ which better defined the procedures for local planning decisions, provided additional agency assistance, and provided some grant funding to facilitate the process.

This approach works well in Washington where there are still unappropriated waters available to meet some of these more public welfare type needs. The process would be more difficult in a state such as Utah where the water is already fully allocated. Still, if the stakeholders of a river system could come together and decide that it is their mutual interest to maintain a minimum flow to improve water quality, enhance fishery and other wildlife interests as well as recreational needs, and if the state could be convinced to make funding available to again lease existing water rights for these purposes, the process could work. It would honor the appropriated water right and the property interest that exists under Utah law. It would provide an economic incentive to forego diverting every last drop of water they are entitled to under their water rights to protect the more public rights in the water supply and might work with irrigators if the transfers were temporary rather than perpetual.

Eminent Domain

Currently, the two state agencies Division of Wildlife Resources and the Division of Forestry, Fire and State Lands have authority to acquire water rights for instream flow purposes, but they are barred by statute from acquiring them by condemnation.⁴⁷ That leaves the divisions with the option of purchasing water with appropriated funds, or acquiring water rights by gift, donation, lease or other arrangements.⁴⁸ The prohibition of acquiring water through

⁴⁴ WASH. REV. CODE § 90.54.020 (2011).

⁴⁵ WASH. REV. CODE § 90.54.050 (2011).

⁴⁶ WASH. REV. CODE § 90.82 (2011).

⁴⁷ §73-3-30(2)(d), A division may not acquire water rights by eminent domain for an instream flow or for any other purpose.

⁴⁸ §73-3-30(2)

condemnation was incorporated into the Act out of fear that the state would aggressively start acquiring irrigation water rights for instream flow purposes. However, condemnation should be looked on favorably, as it requires payment of fair market value for the water rights and for severance damages for related economic loss caused by the loss of water rights. When viewed as an alternative to the reallocation of water under the Public Trust Doctrine, that provides no avenue for compensation, the condemnation approach may be worth revisiting.

Obviously, the Instream Flow Act would need to be amended in order for that tool to be used, but in critical stretches of streams and or in tributaries to GSL, it is another tool available that we should consider giving to these two divisions.

Water Supply Realities in the GSL Basin

The Great Salt Lake receives water from the Utah Lake-Jordan River Basin, the Weber River Basin and the Bear River Basin. The Utah Lake-Jordan River and the Weber River Basins are closed to new appropriations. There still remains some unappropriated water in the Bear River Basin. Therefore, new demands, whether for environmental or municipal purposes, generally must come from the acquisition of existing water rights. It is possible that some water will become available in the Jordan River drainage as a result of the ongoing general stream adjudication, as there are many old and dormant rights that may have been lost due to forfeiture. However, there are also pending applications to appropriate that will take any water freed up by forfeiture, as the law clearly provides that upon forfeiture, the water reverts to the public to first satisfy existing rights, and any left-over is then open to new appropriation.⁴⁹ The likelihood of there being any water left-over in the Jordan River drainage at the conclusion of the adjudication is remote at best.

The Jordan River Basin is the third largest contributor of water to the GSL.⁵⁰ Although the Jordan River Basin receives about 23” of water per year on average, there is only one

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- (b) A division may file a change application on:
- (i) a perfected water right:
 - (A) presently owned by the division;
 - (B) purchased by the division for the purpose of providing water for an instream flow, through funding provided for that purpose by legislative appropriation; or
 - (C) acquired by lease, agreement, gift, exchange, or contribution; or
 - (ii) an appurtenant water right acquired with the acquisition of real property by the division.
- (c) A division may:
- (i) purchase a water right for the purposes provided in Subsection [\(2\)\(a\)](#) only with funds specifically appropriated by the Legislature for water rights purchases; or
 - (ii) accept a donated water right without legislative approval.

⁴⁹ §73-1-4(2)(c)(iv).

⁵⁰ Jordan River Basin-Planning for the Future, Utah State Water Plan, March 2010, p. 1.,
See generally Utah Lake Basin Planning for the Future, June 2014, Division of Water Resources, found at

significant reservoir on the system, Little Dell Reservoir in Parleys Canyon, with capacity of 20,500 ac-ft. Utah Lake inflows are difficult to treat for municipal purposes. Consequently, much of the drinking water in the Jordan River Basin is provided not by native supplies, but from the Provo River, upstream of the Jordan, and from significant quantities of water imported from the Weber River, the Duchesne River and to a lesser degree, from the West Desert Basin.⁵¹

Current developed water supplies, including the withdrawal of ground water, are not sufficient to meet the anticipated needs of our projected population growth. Added to that are new demands for water for environmental purposes, such as improving water quality in the lower Jordan River and protecting lake levels in GSL. Consequently, the water resources of the basin will be strained beyond the breaking point. Meeting this demand will require a level of cooperation rarely experienced in the realm of water resources, including increased levels of conservation. Conservation must become a corner-stone of our water planning, but conservation will only defer, not stop future water development. Our population is expected to double in the next 30 years or so, and all of those people need a place to live, food to eat and clean water to drink. These basic human needs will increasingly compete for water with environmental and other purposes, and conservation alone cannot solve this water supply dilemma.

The Jordan River Basin is ringed by mountains. Precipitation falls unevenly within this geographic region. The high Wasatch Mountains to the east receive about 60” of water a year mostly in the form of snow fall. Conditions get drier moving west. The water supply of the basin comes from local surface streams, ground water, and water imported from the Weber River and the Duchesne River systems. Local supplies, on an average annual basis, total 809,000 ac-ft., comprised of 295,000 ac-ft. from the Jordan River measured at the Jordan narrows; 173,500 ac-ft. from the six Wasatch Mountain streams; 4,500 ac-ft. from the Oquirrh Mountains; and 165,000 ac-ft. from ground water withdrawals.⁵²

Ground water provides a valuable source of drinking water for the valley to augment surface supplies. Estimated annual ground water recharge is actually 367,000 ac-ft., but that figure is misleading. Natural recharge is probably more in the range of 219,000 ac-ft., while additional man-made recharge from irrigation return flows, conveyance losses in irrigation canals and artificial recharge-recovery operations provide an additional 148,000 ac-ft. of recharge annually. Annual recharge is declining because former irrigated agricultural lands are being developed, resulting in a loss of irrigation return flows. Water conservation efforts in our cities will further reduce return flows from lawn and garden irrigation, and all of these activities are having an impact on the available ground water supply.

Today, our regional sewer treatment plants discharge approximately 91,000 acre-feet annually to the Jordan River. However, as municipal demands increase, it is reasonable to

http://www.water.utah.gov/Planning/SWP/Uth_lk/UtahLake06302014A1.pdf

⁵¹ *Id.* p.1.

⁵² *Id.* p. 2.1

assume that re-use of treated effluent will also increase for irrigation and industrial uses not requiring water of drinking water quality. This recycling effort will also impact inflows to the Great Salt Lake over time.

Name	Permitted Discharge	Flow (ac-ft)
South Valley Water Reclamation Facility (1988–2005)	UT0024384 Effluent	28,061
Central Valley Water Reclamation Facility (1988–2005)	UT0024392 Effluent	61,041
South Davis South Wastewater Treatment Plant (2001–2005)	UT0021628 Effluent	2,599
Total		91,701

Imported supplies are also a significant source of water in the basin. The Provo River Project (Deer Creek Reservoir) imports about 61,700 ac-ft. of water into the basin each year. The Bonneville Unit of the Central Utah Project brings another 70,000 ac-ft. into the basin each year, with 30,000 more to be delivered starting in about 2023.

All totaled, the annual precipitation within the Jordan River Basin is about 900,000 ac-ft. Of this quantity, about 219,000 ac-ft. is lost to ground water recharge. Surface water runoff is about 173,500 ac-ft. for a total basin yield of only 397,000 ac-ft. annually. This means that approximately 56% of the annual precipitation or 503,000 ac-ft. is lost to vegetation and evaporation.⁵³

Of the estimated 863,000 ac-ft. of water available in the basin annually, depletions from agricultural, municipal and industrial uses and losses to evaporation, reduce the flow available to GSL to about 523,040 ac-ft. on average. That quantity will, out of necessity, be reduced over time as municipal demands within the basin increase, forcing the development of the remaining available ground water and surface water supplies.

Further, the flows to the lake vary with the water year. While average flows have been about 523,040 ac-ft. (1971-2000), those flows are reduced during drought years, like 2001, to 246,460 ac-ft. or less than half. Wet years create the opposite extreme. The Jordan River Basin contributed 1,230,870 ac-ft. to the lake during the very wet year of 1986.⁵⁴

Perhaps more interesting statistics come from testimony the former State Engineer, Dee Hansen, offered in opposition to several applications filed by Western Water Company⁵⁵ to

⁵³ *Id.*, p29.

⁵⁴ Jordan River Basin, Planning for the Future, Utah State Water Plan, March 2010, pp.3-31.

⁵⁵ Western Water Company LLC Applications to Appropriate, Water Right Numbers, 55-9399, Jordan River, for 69,210 ac-ft., (rejected); 55-5606 Jordan River for 75,139 ac-ft.(rejected); 31-5197 on Great Sale Lake, for 450,000 ac-ft. (withdrawn by applicant); 57-10282 ground water for 143,758 ac-ft. (rejected); and 59-5821 groundwater for 56,800 ac-ft. (pending but unapproved). The applications, protests, testimony and related documents can be found on the Division of Water Rights Web site, <http://nrwrt1.nr.state.ut.us/>.

appropriate a large volume of claimed unappropriated water on the Jordan River. Mr. Hansen concluded, based on his review of the State Water Plan of 2001, and the records of the Utah Division of Water Rights and Division of Water Resources, that about 1,223,000 ac-ft. of water was available in the Jordan River Basin from surface sources (netting out basin outflows) on an average annual basis.⁵⁶ Total surface water depletions equaled about 862,000 ac-ft., leaving about 370,000 ac-ft. of surface water that was undeveloped. However, he concluded that of this quantity, 320,000 ac-ft. was undevelopable for various reasons, leaving about 50,000 ac-ft. of water that could yet be developed practically in the system. That may seem encouraging, until you realize that there are pending applications to appropriate on file well in excess of this undeveloped water. Therefore, while the water may be undeveloped, it is not unappropriated.

Mr. Hansen further concluded that diversion rights of approximately 45,000 cubic feet per second of surface water were covered under currently approved but unperfected applications; perfected water rights; decreed rights; diligence claims; and, unapproved but pending applications to appropriate. When you put this in perspective, it is an absurd figure. 45,000 cfs is about the flow of the Colorado River at the town of Green River, Utah at high water. Average flows on the Jordan River this late in the season are a few hundred cfs. The water rights on file with the State Engineer on the Jordan River cover approximately 9,007,749 ac-ft., or a quantity of water that exceeds the actual physical supply by about 8 times.⁵⁷ All of these water rights are protected by the prior appropriation doctrine, to some extent, making it very difficult for any new demand for water to be taken seriously.

The situation involving ground water is not much better in the basin. Existing ground water rights would allow diversions at the rate of 10,624 cfs limited to about 31,839,741 ac-ft. Only a small portion of this water is actually in use, and the physical supply is again incapable of satisfying all of these paper water rights. The majority of the ground water rights are represented by diligence claims of questionable validity. However, even if many of these old claims are eventually weeded out through the pending general adjudication, the existing perfected rights, approved but unperfected, and unapproved pending applications to appropriate will more than consume the safe yield of the Salt Lake Valley aquifer.

Population growth in the valley will further strain our limited water supplies. Past studies indicate that the major wholesale water suppliers in the Salt Lake Valley, Jordan Valley Water Conservancy District (“JVWCD”), and the Metropolitan Water District of Salt Lake & Sandy (“MWDSL”) indicates that JVWCD will have a deficit of water equaling 43,393 ac-ft. to meet its demands in 2030, and short 88,781 ac-ft. to meet the needs of 2060. MWDSL will have small surpluses in those years, but Salt Lake City, the largest member municipality of the district itself, will have a deficit of 44,426 ac-ft. in 2030 increasing to 56,706 ac-ft. by 2060⁵⁸.

⁵⁶ These numbers do not necessarily correspond with the numbers from the Water Plan documents, but were contained in his testimony.

⁵⁷ *Id.*, Hansen, Dee C. testimony, Western Water hearings.

⁵⁸ Jordan River Basin, Planning for the Future, Utah State Water Plan, March 2010, p. 60.

Additionally, there are many independent water suppliers operating in the basin and collectively they will be short 11,195 ac-ft. to meet their projected demands in 2030, and short 71,936 ac-ft. for 2060.⁵⁹

All of these numbers assume continued conservation efforts will be successful. If it is not, the deficit demand in 2060 would increase from about 312,000 ac-ft. to almost 512,000 ac-ft. for all public water supplier systems. Accordingly, it will be exceedingly hard to find water to support some sustained level of Great Salt Lake without a significant cooperative effort to make this a priority among all water users.

Great Salt Lake is, of course, a broad, shallow, terminal body of water located in the bottom of the basin. Annual evaporative losses from the lake are approximately 3,000,000 ac-ft. Without controlling these natural losses, maintaining lake levels will be very difficult. Further, the lake suffers from radical fluctuations in supply as evidenced by the flooding in the 1980's that all but took out the Salt Lake Airport to its current level, resulting from recent drought and increased upstream depletions by those holding valid water rights.

So is there a solution to maintaining a sustainable lake level? As discussed above, the State Engineer might, through use of his public interest authority, favor those applications that might be willing to leave some water behind as a condition to approval in an effort to make up a sustainable flow of water to the lake. That will be a slow process, but over time may help create some instream flows to preserve the level of the lake. Water banks, leasing programs and other well-established alternatives from other jurisdictions can be implemented with some legislative changes.

A more radical approach would be to use the Public Trust Doctrine to force all water users on the system to reduce their diversions and depletions and contribute a portion of their appropriated supplies to preserve the lake as California did with Mono Lake.⁶⁰ This would lead to many years of contentious litigation, but ultimately would force some water to be made available to GSL.

We don't know the extent to which the Public Trust Doctrine might be applied by the Utah Supreme Court. Until either the Utah Supreme Court or the Legislature addresses the issue, it is hard to know the potential impacts on existing water rights. All we know with certainty, is that the Public Trust Doctrine is the trump card in the deck. Great Salt Lake was navigable at statehood⁶¹ and therefore, the public trust will apply to protect those public trust values in this resource. The Jordan River is also navigable and therefore, the public trust will logically extend up the river and to the other major tributaries of GSL even though only portions of them are

⁵⁹ *Id.*, p 60.

⁶⁰ The *Mono Lake* decision. *National Audubon Society v. Superior Court*, 658 P.2d 709 (S. Ct. Calif. 1983).

⁶¹ *Utah v. United States*, 403 U.S. 9 (1971).

navigable. The opportunity to assert public trust values exists, and there is significant precedent to do so.

It is unlikely that the State Engineer will climb onto that public trust limb without being pushed there by the court or the Legislature. However, the State Engineer can do a lot simply by using the existing public welfare component of Utah law to help protect this ecosystem. Whether enough water could ever be reallocated to the lake in light of the many competing demands of our growing population is questionable at best. However, short of actual acquisitions of water rights and converting them to instream flows for the lake, or through the voluntary tools discussed above, the public welfare or the more radical public trust approach is probably the only realistic way to obtain a sustainable water supply for the lake.

The better options are those that employ market based voluntary transfers of water to instream flows that can be temporary or long-term in nature. Some statutory changes will be necessary to incentivize on-farm conservation which may free up some water for instream flow use. These can include the split season use approach of Oregon, the ability to sell or lease conserved water through the conversion of farms to more efficient irrigation practices, to water banks and even condemnation if voluntary transfers aren't making sufficient water available. All of these are better approaches than the forced reallocation of water through the Public Trust Doctrine.

GSL is an important resource and provides so many ecological, biological, economic and recreational opportunities that we cannot ignore it much longer. Climate change and our current hydrologic cycle may be our new normal. If so, we will all have to learn to get by with less water and the necessity to allocate some water to environmental preservation must finally be given equal dignity in the appropriation process as diversionary rights that deplete the water supply. We clearly have the ability to do this, and the legal tools to make it happen. The question is whether we have the will to make the necessary changes. The Governor's State Water Strategy Report⁶² indicates the public sees value in conservation in order to preserve water for agriculture and for the environment and recreation. The public seems willing to reduce landscape irrigation to make that possible. The draft report also recognizes that maintaining a quality of life, depends on a strong economy, sufficient resources and supplies of water to meet not only our basic human needs, but also to protect and maintain a healthy environment.⁶³ I personally find this encouraging for the future. We have some amazingly capable people involved in water resource planning in our state agencies, our agricultural community, the environmental community and our major cities and water districts. What we have been lacking is water shed oriented planning in which all stake holders are at the table, using the best available science and technology to plan for the future. If we don't seize this opportunity to plan for the future, the future will do it for us, but I fear the result will be a dystopian world that is simply hot, dry and crowded.

⁶² Draft of September 2016 available at <http://envisionutah.org/projects/utah-water-strategy>

⁶³ Draft State Water Strategy Report, p. 46-47.