

Resource Allocation under Stress: The Snake River in Idaho



University of Washington



University of Idaho

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Preface¹

In October 2009 the Swedish Nobel Committee awarded its 2009 Nobel Prize for economics to Oliver E. Williamson and Elinor Ostrom, for work on what might be described as non-authoritative or informal governance mechanisms in communities, social groupings, and corporations. These governance structures do not involve formal public sanction, and are ownership based. That is, all major participants in the utilization of a resource have some level of ownership interest in the resource. The concept strikes a middle ground between the common view of private property and neo-classical competitive markets on the one hand, and authoritative public regulation and allocation on the other.

The work of Williamson and Ostrom, following on that of former Nobel Laureates R.H. Coase and Douglass North, describes real-world contracting and allocation processes, in which individuals and groups participate in resource decisions through ownership of rights to the resource. As Williamson describes the concept, a property right exists if the holder has the ability to control allocation of the returns from a resource.

This book is a study of the Snake River as an example of informal, multi-faceted governance under conditions of growth, climate variability, and changing social preferences. The participants in the story include surface and groundwater irrigators, the State of Idaho, the Idaho legislature, federal agencies, Congress, the President of the United States, the judicial system, and native tribes. While many of the entities involved are governmental agencies, they do not possess formal regulatory authority over use of the River or allocation of its water. They are more like participants in a multi-faceted social contract, in which each has claims but none is in a controlling position, and are caught up in an ongoing dance over allocation and use. In this dance, the judicial system acts as an outside constraint and motivator, but because of its own inefficiencies not as a determining player in the outcome.

The implications of climate change for water resources raise the question of how well water institutions in the Western United States might be expected to adapt to changed volume or timing of water flows. Particularly in basins where snowpack provides substantial storage, late season flows will be significantly reduced and

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underground recharge from slowly melting snow will also be reduced.² Within that context, it would be helpful to develop an understanding of what institutional structures are conducive to adaptation, and to what extent new or changed institutions might be required or expected to emerge. This study examines these questions in the context of the Snake River in southern Idaho. The Snake provides a useful case study for several reasons: it lies almost entirely within a single state, Idaho, and thus within a single water-law jurisdiction; it is coupled with an extensive aquifer, providing complexities of hydrologic and legal interaction that make it a complete case; and the water law underlying Snake River water allocation is based in the prior appropriation doctrine, providing a test of whether that doctrine continues to be useful.

A Snake River study has another value as well. The Snake history encompasses a major shift of public-policy preference from development of the West (19th and early 20th centuries) to protecting environmental values from development pressure (late 20th century). During the period of development priority, public policy explored several public and private models to realize the scale economies required for irrigation and hydropower. Simultaneously, institutional innovations were required to deal with climate variability, primarily in the form of drought. Finally, as the river became fully-appropriated and public preferences changed in the late 20th century, institutions had to deal with changes in use and resource scarcity in the context of a growing population and changing economy.

The contents cover evolution of the system and governance; policy tools developed by the University of Idaho and the Idaho Department of Water Resources to assist management of water rights; special problems posed by conjunctive use of ground and surface water; and case studies in the ongoing institutional development to accommodate change.

The citation format of each chapter is per the original article.

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² Edward L. Miles, et al., "Pacific Northwest Regional Assessment: The Impacts of Climate Variability and Climate Change on the Water Resources of the Columbia River Basin," *Journal of the American Water Resources Association* (2000), 36(2): 399-420.

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Chapter I: Introduction

Richard A. Slaughter

In the beginning of modern history there was the river, rising in southwestern Wyoming and flowing westward across southern Idaho and north along the Idaho-Oregon and Idaho-Washington borders, and then swinging westward again to meet the Columbia. Although it flows across some of the most arid land in the western United States, the Snake contributes to the Columbia over 25 percent of the flow of that mighty river as measured at The Dalles, sixty miles upstream from Portland. It was traditionally home to several species of salmon and steelhead, some migrating over 1,000 miles upstream from the Pacific to spawn in the central Rockies.

Today, the Snake irrigates some 3.4 million acres of cropland, of which over 3.0 million are in Idaho. It produces more than over 25 million megawatt hours of electricity in an average year and serves the municipal needs of some 2 million people before reaching the Columbia. No salmon spawn above Hells Canyon, where three hydroelectric dams block the river. At Milner Dam, near Twin Falls in south-central Idaho, during part of most summers the river is almost totally diverted to provide water to 1,000 miles of canals that reach 600,000 productive acres in the most successful Carey Act project in the United States. The Snake, like many rivers in the West, is fully appropriated.

Snake and Columbia comparison

Attribute	Snake River	Columbia River	Snake percent of total Columbia
Length	1,040 miles	1,240 miles	
Acres Irrigated	3.5 million in Idaho	7.1 million total in 3 state region (all rivers, all water sources)	49 percent
Avg. Annual Flow	< 2.0 MAF (Million Acre Feet) (Milner), 6.5 MAF (King Hill), 12 MAF (Weiser, below the Boise River), 27.5MAF at Hells Canyon, 36.0 MAF (Lewiston)	134 MAF at The Dalles (includes Snake)	27 percent
Basin Drained	109,000 sq. miles	248,500 sq. miles (includes Snake)	44 percent

Source: Length, flow, basin (Snake): National Park Service: nps.gov/rivers/waterfacts.html#lengths, Bureau of Reclamation Flow Augmentation Study; Columbia: Bonneville Power Administration (BPA), *Columbia River Inside Story*. Irrigated acreage: 1997 Census of Agriculture. Columbia: length, acres: encyclopedia.com; flow: Northwest River Forecast Center, National Oceanic and Atmospheric Administration (NOAA).

*The Geological History*¹

The current geology of the Snake River is the result of massive changes in the Earth's crust over hundreds of millions of years. During the Paleozoic Era, much of the Pacific Northwest was deep under ocean waters. Mountain and land building actions began during this time, creating among others the Seven Devils near the Hells Canyon. During the Mesozoic the Idaho Batholith, the granite core that forms the Rocky Mountains in Idaho, was formed. Then during the Cenozoic, from about 65 million years ago, came the building of the Cascade Range and a series of lava flows that cover some 60,000 square miles of southern Idaho and central Oregon and Washington. Further shaping of the land has occurred during the ice ages of the last three million years, particularly the Wisconsin Ice Age, beginning about 70,000 years ago and lasting until approximately ten to twelve thousand years ago when the last of the Missoula floods occurred.

The Missoula floods, sudden releases of water from huge lakes in Montana that were formed by ice plugs in the Clark Fork River and held as much as half the water in Lake Michigan, scoured and formed much of the Columbia Basin in Washington and northern Idaho. Those floods flowed at rates estimated at between nine and sixteen cubic miles of water per hour. The Snake River was last significantly altered by the Bonneville flood, a much smaller but still devastating flood from a cut eroded through hills at the Utah – Idaho border. Lake Bonneville was the ancient lake formed during the glacial period in the Great Basin of Utah and Nevada. The Great Basin has no outlet, so during the cool and wet period of the glacial ages, water rose until it broke through. The Bonneville Flood was much smaller than the Missoula Floods, but was still large enough to form much of the southern Idaho landscape and deposit rocks as far as the Lewiston Valley, some five hundred miles to the north.

A former Idaho Public Utilities Commissioner² referred to Pacific Northwest hydrology as a “perpetual motion machine,” powered by the sun. Water rises from the Pacific, is carried eastward by prevailing winds to fall on the Cascades of western Washington and Oregon, the Blue Mountains of eastern Oregon, and finally the Rocky Mountains that largely define the Continental Divide. Little moisture escapes from this hydrologic system, except back to the Pacific. There are even claims that evaporation from irrigated farmlands in southern Idaho is not lost, because it merely moves eastward again to the Rockies, where it falls as rain or snow and re-enters the basin's hydrology. To a large degree, this may be true.

The water that does not escape the system through evaporation and migration out of the region eventually finds its way back to the Pacific, falling some 10,000 - 12,000 feet

¹ Background is from Keith C. Petersen, *River of Life, Channel of Death: Fish and Dams on the Lower Snake*. Lewiston, Idaho: Confluence Press, 1995.

² Perry Swisher, Idaho journalist, legislator, and PUC Commissioner from 1979 to 1991.

elevation in the process. Some 27% of that water, approximately 36,000,000 acre feet in a normal year, flows to the Columbia River near Pasco, Washington, via the Snake River, cutting across southern Idaho and then forming the border between Idaho on the east and Washington and Oregon on the west.

The energy and water provided by this perpetual motion machine has undergirded human activity in the Pacific Northwest since there were humans in the region. In the early years, humans lived along the river, which sustained vegetation and wildlife, teemed with fish, and provided transportation. By the late 19th century, Europeans were displacing earlier populations, harvesting the fish, diverting the river for irrigation in southeast Idaho, and beginning to build dams for hydroelectric generation.

Native tribal use

Humans have likely been in the Pacific Northwest for many thousands of years prior to the Missoula and Bonneville floods, but little evidence of those populations can be found, since the flood waters washed away both them and evidence of their existence. The earliest common evidence of human habitation goes back about ten thousand years, after the land had been formed and carved into its present shape. But we can be sure that during the period of human habitation the rivers were used for food, water, and transportation.

European use

From the late 19th century, and gaining momentum in the 20th, European settlers began to use the power of those flows for irrigation and generation of hydro electricity. The economic development of southern Idaho and eastern Washington can be directly attributed to those uses of water.

On the upper and middle Snake, from the area of Jackson, Wyoming, across southern Idaho, has been developed just short of four million acres of irrigated cropland. The river flows at the surface from Wyoming to the town site of Milner, between Burley and Twin Falls. At Milner, where early 20th century developers built a run-of-the-river private dam to feed over 1,000 miles of canals, the Snake cuts a gorge some 400 feet deep into southern Idaho basalt, and then emerges close to the Oregon border.

North of that canyon lies most of the Eastern Snake Plain Aquifer, an underground lake estimated to hold approximately twice the volume of Lake Erie, in what can be considered to be a gigantic underground bathtub containing rock, clay, sand, and gravel. Water flows out from the bathtub at the west end of the canyon, in an area near Hagerman, Idaho.

From 1900 to about 1950, irrigation was by means of surface canals, many of which originated at the Milner site. Percolation into the basalt aquifer from canals and heavy irrigation caused the aquifer water level to rise, substantially raising outflows in the Hagerman "thousand springs" area. Two developments changed that pattern. First, with the advent of large scale underground pumping in the 1950s, some of the water

sources were converted from surface to underground, and new lands were irrigated from deep wells. Second, following a severe drought in 1977, many farmers on the Plain converted from flood irrigation, with efficiencies in the 30% range, to sprinklers, with efficiencies approaching 80%. The result of these two changes is that less water percolates into the aquifer at the same time that more water is withdrawn. The water levels have begun to decline back to their level prior to the start of irrigation.

Prior Appropriation and Water Allocation

At the core of debate over water allocation in the West is the doctrine of prior appropriation. The doctrine developed to meet the needs of mining, and then irrigation communities, for a water-allocation technique that would be predictable over time and enforceable. In brief, the doctrine holds that he who first appropriates (diverts) water for a beneficial use on appurtenant land – or, in the case of a municipal or industrial right, for use as specified – continues to hold that diversionary right so long as the water is beneficially used, and in an amount (duty) appropriate for its purpose, as determined by the technology in existence at the time of the diversion. In times of drought, earlier (senior) rights holders hold their place in the queue ahead of junior rights holders. It is a usufructory right, and not a right to the water itself, ownership of which remains with the state.

"Western prior appropriation law is a property rights-based allocation and administration system, which promotes multiple use of a finite resource. The fundamental characteristics of this system guarantee security, assure reliability, and cultivate flexibility. Security resides in the system's ability to identify and obtain protection for the right of use. Reliability springs from the system's assurance that the right of use will continue to be recognized and enforced over time. Flexibility emanates from the fact that the right of use can be transferred to another, subject to the requirement that other appropriators not be injured by the change."³

Within the framework of Western water law there are embedded significantly different property regimes, established through the evolving history of Federal investments in support of irrigation, beginning with the Reclamation Act of 1902, and through prior natural flow claims pursuant to previous Federal Acts: the Homestead Act (1862), the Desert Land Act (1877), and the Carey Act (1894).⁴ This study does not address questions of the history or policy of reclamation issues. It merely compares two situations that are similar in many but not all important ways.

Many have questioned the continued utility of prior appropriation in times of changing uses and needs. In the absence of markets (excepting an existing state water

³ Hobbs, G.J., Jr., 1997. Colorado Water Law: An Historical Overview. 1 *U. Denver Water L. Rev.* 1 (with updates 2 *U. Denver Water L. Rev.* 223, 4 *U. Denver Water L. Rev.* 111), p. 2.

⁴ Getches, David, 1999. *Water Law in a Nutshell*, 3rd Ed. St.Paul: West Publishing; Slaughter, Richard. See Chapter II.

bank and several rental pools) and because of the unique nature of water, allocation is frequently made to low-value uses ahead of those with a higher economic or social value. Criticisms of such allocation range from the historical analysis of Donald Pisani that highlights early monopolistic effects⁵ to recent criticisms that prior appropriation obstructs re-allocation to higher social uses. For the most part, these criticisms object to the obstacles that prior appropriation poses for re-allocation of water. But some basis for allocation must exist. If prior appropriation is to be scrapped, and the historic rights re-allocated, then there must be another specific legal institution to accomplish that purpose.

Any allocation scheme, if it is not to be inherently political, must be based in a legal system wherein the right to divert water is owned and alienable. While such a system might theoretically provide for public ownership of the usufructory right, it is difficult to conceive of a public system that can support substantial, continuous private investment and non-politicized transfers. If the system is not to be continuously dependent on the political access of various claimants, then rights, once assigned, must be transferable over time through a consistent, known mechanism.⁶

As a case study, the Snake provides yet another wrinkle, not unique to the Snake, but not often considered by critics of either prior appropriation or irrigated farming. The Eastern Snake River Plain in Idaho incorporates an immense aquifer, hydraulically linked to the river (the Eastern Snake Plain Aquifer [ESPA]). The linkage is such that diversions in excess of consumptive use recharge the aquifer, and the aquifer discharges into the channel downstream from the diversions. Many junior water rights depend on these “return flows.” Additionally, pumping from the aquifer serves both as a buffer against dry years and as a water source to expand irrigated acreage and meet growing municipal needs. The third-party effects⁷ of conservation measures can be severe.

⁵ Donald J. Pisani, *To Reclaim a Divided West: Water, Law, and Public Policy 1848-1902* (Albuquerque: University of New Mexico Press, 1992), chapter 2.

⁶ See Richard Slaughter, *et. al.*, “Mandates vs. Markets: Re-allocation of Pacific Northwest Rivers,” *Water Policy* 12 (2010) pp. 305-317.

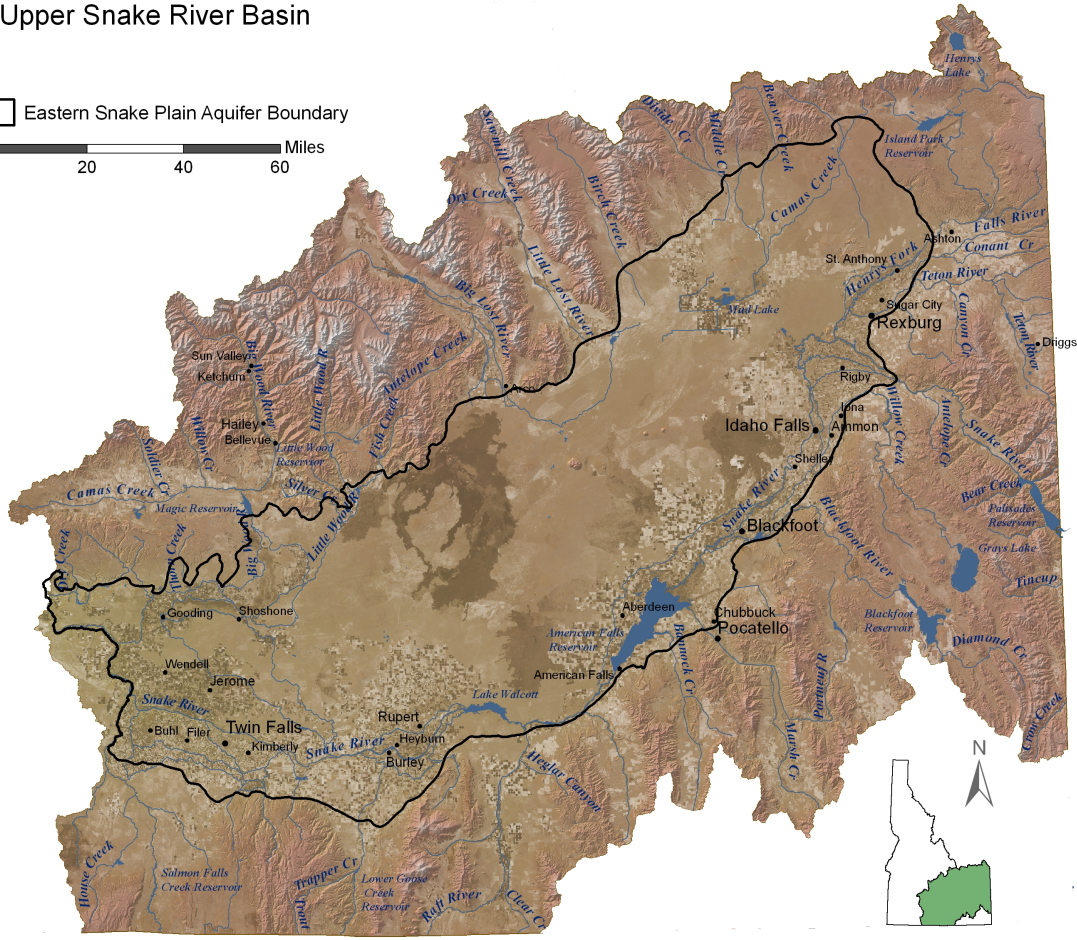
⁷ Third parties are stakeholders not party to a transaction or event that changes the flow pattern. In a river system, movement of the diversion point may affect return flows, which in turn may be the source for another (third) water user. For surface water irrigators, return flows can amount to as much as two-thirds of diversions.

Maps

Upper Snake River Basin

Eastern Snake Plain Aquifer Boundary

0 20 40 60 Miles



Chapter II: The Snake River, 1850 - 2010

Richard A. Slaughter

The Institutional History

The first irrigation in Idaho occurred in 1837, at Henry Harmon Spalding's mission to the Nez Perce on the Clearwater River above its junction with the Snake. The first Boise Valley irrigation evidently occurred by 1843, on the Boise River.¹ Irrigation by early Mormon settlers in the Upper Snake valley in eastern Idaho began shortly thereafter. The development of interest, however, is that which has occurred under federal land policy since 1862.

Public Policy: Generating Private Capital to Develop the West

Beginning in 1862, Congress undertook to promote private development of arid Western lands. The policy instruments began with constrained grants of land and progressed to greater government involvement and support as it became clear that the required scale economies could not be achieved without investment in amounts that were beyond the capacity of the individual farmer or entrepreneur. The mining-based canal systems in California, which proved so unpopular with later critics,² were somewhat more successful than the early private irrigation systems in Idaho and Utah. Many of the latter failed because they depended on natural flow and had insufficient storage to serve farmers' needs in dry years. Where significant private investment made large canal systems possible, it proved insufficient to provide the storage required for successful long-term farming.³ That need was finally met through dams constructed under the Reclamation Act of 1902.

The 1862 Homestead Act, one of the earliest federal efforts to encourage settlement in the West, anticipated dry farming and did not work well in the West prior to enactment of the Reclamation Act. The earliest Homestead Act settlements in southern Idaho were quickly abandoned: individual farms, absent irrigation structures and modern pumping, were no match for a dry climate. Many of the parcels deeded in Idaho, as in

¹ Harry H. Caldwell and Merle Wells, *Economic and Ecological History Support Study* (Moscow: Idaho Water Resources Research Institute, University of Idaho, 1974), 31.

² Donald J. Pisani, *Water, Land, and Law in the West: The Limits of Public Policy, 1850-1920* (Lawrence: University Press of Kansas, 1996), 7-23.

³ Except in significant cases such as the Twin Falls Tract, where large-scale storage was not necessary.

much of the West, were filed on only for the purpose of transferring title to a development company, in contravention of the Congressional purpose.⁴

The early policy emphasis was on private capital and small-scale private development. The 1877 Desert Land Act envisaged individual farmers capitalizing their own irrigation works. This proved an impossible task on the desert above the river, the capital required to bring water to any but riparian lands being well beyond the capability of individual farmers.⁵ Ironically, by the 1960s the same act proved very successful in southern Idaho, when advances in pump technology made it possible for a family of four to claim a full section of desert, providing water by means of high-lift pumps with no canal, dam, or diversion required.⁶ Groundwater irrigation rose from 100,000 acres in 1950 to 700,000 acres by 1965 and 1.1 million acres by 1980.⁷

By 1889, some 217,000 acres were irrigated in the Boise Valley and the Upper Snake Valley (eastern Idaho), all from natural flow, most using coffer dams that were rebuilt each year. By that same year some 40 canals had been built, at a cost of over \$1 million, but were frequently dry because none originated in a secure reservoir or permanent waterworks.⁸

In 1894 Congress tried again, expanding public involvement in search of scale economies to make irrigation viable. The instrument was the Carey Act, which provided for large land grants to individual states. The states administered the land grants, which could be transferred to a private party that would finance construction of irrigation works and water delivery and recover its investment by sale of the land to settlers. This arrangement enabled somewhat larger-scale private development, making possible the construction of a water source sufficiently large and dependable that droughts could be survived. The Carey Act led to the first major state-level involvement, inasmuch as grants were made through the states and not directly to individuals. In Idaho, the Office of the State Engineer, the forerunner of today's Department of Water Resources (IDWR), handled responsibilities for approving and to some extent supervising Carey Act projects.⁹

⁴ William D. Gertsch, "The Upper Snake River Project: A Historical Study of Reclamation and Regional Development, 1880–1930" (Ph.D. dissertation, University of Washington, 1974), 37-39; J. Anthony Lukas, *Big Trouble: A Murder in a Small Western Town Sets Off a Struggle for the Soul of America* (New York: Simon & Schuster, 1997), 740-42.

⁵ Gertsch, "Upper Snake River," 38.

⁶ Jeff Martin, interview with author, 18 April 2003 (notes in possession of author), and personal recollection of author from development in the 1950s.

⁷ L. C. Kjelstrom, "Irrigated Acreage and Other Land Uses on the Snake River Plain, Idaho and Eastern Oregon," United States Geological Survey Open-file Report 84-052, scale 1:1000000, 2 sheets.

⁸ Shirl L. Chapman, "Irrigated Agriculture: Idaho's Economic Lifeblood" (unpublished paper, Idaho Water Users Association, Boise, Idaho, undated), 2.

⁹ Chapman, "Irrigated Agriculture," 3; Gertsch, "Upper Snake River," 81-91.

The Carey Act is also partially responsible for a quasi-governmental element of water-resource institutions, the irrigation district and canal company. By enabling large-scale development, the act encouraged the creation of financing and management entities that ultimately handled water provision. Canal companies had existed previously, but many had failed because of insufficient water rights or capital. In 1917 the Idaho Legislature provided for legal organization and taxation authority for irrigation districts.¹⁰

Some Carey Act projects proved out, as it was now possible for private capital to earn a return on water provision to farmers. On the Twin Falls South Side project in particular (1904–1909), the most successful Carey Act project in the country, farmers found a water source that was sufficiently reliable to assure crops each year while the canal company was able to earn a return on invested capital. The original project irrigates some 260,000 acres of land, using over 1,000 miles of canals.¹¹ The promoters of the Twin Falls project were able to file on most of the un-appropriated flow of the Snake River at Milner, a site east of Twin Falls, Idaho, where the river begins a descent from the level of the plain to a canyon over 400 feet deep.

The Storage Problem and the Federal Solution

The Carey Act solved the problem of development scale but did not address the issue of a reliable water source. Public attitudes still favored private development, with little or no federal involvement. With the exception of the Twin Falls project, however, few Carey Act projects had sufficiently reliable water to survive.

For the next step it became necessary not only to create a bundle of legal rights sufficient to support canal construction and that of a small dam, but to build a dam large enough to provide long-term storage. This, at the time, was beyond the capacity of private finance, given especially the nature of the Carey Act. In short, further expansion required not only a sufficient water right and the ability to divert the required water, but also sufficient storage to ensure water during dry years. This was a new, and expensive, requirement, which would provide a return on investment only in those years when the storage is needed.

The solution came through the Newlands Reclamation Act of 1902, which after many years of debate put the federal government — by means of the U.S. Reclamation Service, now the Bureau of Reclamation — into the dam-building business in support of private agricultural development. Not only could a federal project realize greater scale economies, but the federal government did not require immediate, positive returns on its investment. Thus, what was not possible privately became possible publicly. Federal financing made possible social returns — settlement of the West — that could not, given the current technology and capital markets, be realized privately with the existing institutional structure.

¹⁰ Gertsch, “Upper Snake River,” 90-91.

¹¹ Gertsch, “Upper Snake River,” 62; Chapman, “Irrigated Agriculture,” 4.

While the Reclamation Act solved the storage issue, it did so at the expense of private development. The Act provided funding from a revolving pool of funds created by sale of development rights. Because this fund required no positive return on investment, it solved the risk problem for project finance, but in such a way as to undercut returns on privately funded projects.

Further, the Act changed the nature of water rights on the Snake. Federal reclamation projects created storage for downstream irrigation to supplement natural flow rights. One early reservoir, Wyoming's Jackson Lake (1911-1916), built for the Minidoka Project in south-central Idaho, was upstream of the earliest natural-flow irrigation in eastern Idaho. Jackson Lake storage produced the irony of natural-flow rights holders having their water shut off while there was substantial flow in the river, the flow belonging to storage-rights holders downstream in the Minidoka Project.^{12 13} This situation, in the context of the measurement and modeling technology of the day, led to the first collaborative institutional innovation on the river, the Committee of Nine. The Committee's task was to negotiate annually an allocation of water between natural-rights and stored-rights holders in the upper Snake (above American Falls) and the middle Snake (irrigation withdrawals above Milner).¹⁴

Milner Dam, completed in 1905 with private funds, made possible the successful Twin Falls South Side project under the Carey Act. But expansions of that project, particularly on the north side of the Snake River, were not as successful because Milner is a run-of-the-river dam, with inadequate storage for dry years. The North Side project had the junior water right. The problem was solved in 1926 with construction of the publicly funded American Falls Dam, under the Reclamation Act. American Falls provided storage sufficient to guarantee delivery over several water years, and made the projects north and east of Twin Falls successful. On the Boise, a Snake tributary, storage problems were solved with construction of Arrowrock Dam in 1915, at the time the highest dam in the world.¹⁵

There are two trends of significance in this history. The first is that once the original natural-flow projects had been completed after 1890, irrigation expansion required ever larger-scale economies from centralized canal construction and large

¹² The contract between the developers of the Minidoka project and the Bureau of Reclamation provided for joint management of Bureau reservoirs on the upper and middle Snake, so that obligations from Lake Walcott (Minidoka Project) could be met with storage in Jackson Lake, and vice-versa. Thus, water could literally "flow uphill."

¹³ Gertsch, "Upper Snake River," chapter 3. The Minidoka Project was authorized in 1904, two years before the Boise-Payette Project in southwest Idaho.

¹⁴ Mark Fiege, *Irrigated Eden: The Making of an Agricultural Landscape in the American West* (Seattle: University of Washington Press, 1999), 114.

¹⁵ Chapman, "Irrigated Agriculture," 6; Gertsch, "Upper Snake River," chapter 4.

storage dams. Technological change, in the form of high-efficiency pumps, negated much of that requirement after 1950. The second significant trend is that risk associated with large-project construction, together with the public nature of the resource involved, led inexorably to state and federal government involvement.

The context for these developments was set by two external variables: public-policy preference and climate variability. Public policy from 1850 to at least 1950 favored irrigation to promote settlement at the expense of other values, many of which were not contemporaneously recognized. Climate variability required that physical infrastructure and social institutions be developed to deal with the effects of water insufficiency. Ironically, the greater the system's capacity to deal with climate variability, the greater expansion it could support in normal years, leading to further expansion of use and consequently a continuing need for institutional innovation during succeeding droughts. The limits to this growth did not become clear until the 1970s.

The Problem: To Allocate a Scarce Public Resource

In 1850, the river was immense and human needs few. Early diversions were of natural flow by means of extending an obstruction into the channel to provide water for a small acreage. As demand and technology increased pressure on the river, there grew to be competition for water, between natural flow and storage rights (irrigation), and between irrigation and hydroelectric production, recreation, fish, and finally navigation. While there was substantial dredge mining on the Boise River and in other basins elsewhere in the state, there was never much mining demand for water from the Snake itself. Even on the Boise, mining did not divert water from the basin but returned it to the channel; the problem posed by dredge mining was sediment, not diversion.¹⁶ For that reason, many of the conflicts evident in California were avoided in southern Idaho.

Nonetheless, the fact that mining brought the first diversions, together with the fact that many of the early miners had experience in California, led to an early preference for prior appropriation. That early preference resulted in prior appropriation being written into the Idaho Constitution – a fact that may be highly relevant for the relative success of market development in Idaho.¹⁷

When a resource is abundant relative to demand, few institutional constraints are required. When, however, the demand grows to claim most or all of the resource, the institutions matter. At base, there are two, and only two, ways to allocate a scarce resource: by price and by queue. Allocation by price is the normal function of a market, where ownership and use can be allocated, in full or in part, through exchanges between willing buyers and sellers. Allocation by queue occurs when a market does not evolve or

¹⁶ Jack Peterson, interview with the author, 16 July 2003 (notes in possession of the author).

¹⁷ Hal N. Anderson, interview with the author, 12 May 2003 (notes in possession of the author).

is superseded by political considerations. In that case, typically those in the front of the line are fully satisfied and those at the end may receive, or buy, nothing.

There is seemingly a third option – public regulation, wherein wise regulators have the responsibility and authority to allocate and re-allocate among claimants in the public interest, however that is defined. This third option, however, is only a variant on allocation by queue. The public authority defines the rules of the queue and may re-arrange the queue, providing preference to different sets of claimants. If the authority engages in determining outcomes instead of just interpreting and enforcing the rules, the entire process may be politicized, where the currencies are different, efficiency is not a criterion, and the “public interest” subject to re-definition as political sentiment changes. One effect is to diminish investment, because political risk is added to business and weather risks.

Under the method of prior appropriation laid out in the Idaho state constitution, a diversion right could be established simply by a continuing diversion of water. Today, rights are established through registration of the claim with the IDWR.

Prior appropriation establishes the queue. While many commentators prefer riparian rights, or community rights,¹⁸ prior appropriation is probably the preferable means of accomplishing an initial allocation from the perspective of 21st-century needs: the movement of water from one use and/or user to another. By establishing a reasonably well-defined right, prior appropriation – as interpreted and reformed over the years – has accomplished a fundamental market requirement: ownership of a right that can be bought and sold. Riparian systems have difficulty with use of water at some distance from the river itself, a situation common in the West. Community systems have difficulty accommodating continued growth. Neither establishes the legal basis necessary for an efficient movement of water from one use to another, while accommodating growth.

Still, while prior appropriation establishes the initial queue and to some degree a bundle of legal rights, it is still a queue. Junior rights holders may receive no water during a dry year. Overall supply cannot increase in response to demand. While some institutional development of market-like instruments has occurred, the exchange of water between senior and junior users, not to mention between different uses, was until recently a sometime, and usually *ad hoc*, event.

Institutional Innovation

Institutional innovation on the Snake has occurred in three phases, not totally distinct chronologically: first, new instruments were created and new responsibilities adopted at the federal and state levels, to enable successful irrigation in furtherance of over-arching national policy. For the most part, these innovations recognized the need to

¹⁸ Pisani, *Water, Land, and Law*, 18-20.

expand economies of scale; that is, reduce the unit diversion cost for water diversions. Greater scale economies enabled private capital to realize returns high enough that individuals would commit to the desired social purpose. In practice, a failed mechanism would frequently be followed by a new initiative that more fully recognized the need for larger scale development. The history includes opening of public lands to private development through the Homestead Act (1862) and Desert Land Act (1877), state organization of development through the Carey Act (1894), and Federal funding of large-scale diversion works under the 1902 Reclamation Act.

Second, institutions evolved to enable the established irrigation community to cope with periodic drought. While some innovations required further federal intervention to realize scale economies, most were initially informal means of sharing or allocating water during drought. Some involved legal changes to help the prior appropriation doctrine fit with current need. Ironically, stretching the resource during drought frequently provided expanded water during normal flows, thus underwriting a larger demand. That demand, in turn, produced an even greater difficulty during the next drought.

Finally, there have been innovations to accommodate new demands, new public preferences, and recognition of pre-existing tribal claims. Those new uses stemming from purely economic origins have, for the most part, been accommodated successfully. New demands stemming from changes in public preference have proved more difficult. In this latter case, preferences have tended to find expression in the political arena, and the initial instruments used have been political.

Innovations to Provide Scale Economies

Carey Act

The Carey Act provided a state-level institutional mechanism for the organization of irrigation districts. These districts combined many settlers' irrigation needs in order to fund diversion and canals.

Twin Falls Land and Water Company (1900)

The Twin Falls Land and Water Company was one of the first irrigation companies to take advantage of the Carey Act in Idaho. A private organization, the company financed and built irrigation works for farmers holding 260,000 acres of southern Idaho land under the Carey Act. The company also financed and built Milner Dam to divert nearly the entire flow of the Snake River for irrigation. The business continues as the Twin Falls Canal Company, established in 1905.

Reclamation Act of 1902 (Newlands, or Reclamation Act)

The Reclamation Act created the Reclamation Service (now the Bureau of Reclamation (BOR)) and put the federal government into the dam-building and irrigation business.

Reclamation Act dams: Arrowrock, American Falls, Minidoka, Jackson Lake, Palisades

Several dams have been built by the Service and Bureau on the Boise and Snake Rivers. While not themselves innovations, the dams are a consequence of the Reclamation Act. The dams include Arrowrock, Anderson Ranch, and Lucky Peak, on the Boise, and Minidoka, Jackson Lake, American Falls, and Palisades on the upper and middle Snake. Some of the dams made possible dependable irrigation on projects already in existence, and also provided for growth. Arrowrock (1911-1915) made the Boise-Payette Project successful, Minidoka (1904-06) and Jackson Lake (1911-16) provided water for the Minidoka Project, and American Falls (1926) provided, in addition to new irrigation, storage for the existing private Carey Act development on the north side of the Snake River that had suffered from undependable supply.¹⁹ These dams are an example of the ability of the federal government to capture the scale economies necessary for storage, as well as the willingness of the government to provide either patient capital or subsidy (depending on one's calculations and perspective) in pursuit of national social goals.

Warren Act (1911) and Kuhn Agreement

The Warren Act provided that storage in federal reservoirs, when excess capacity existed, could be contracted to private interests. In this way, the federal government not only helped to overcome problems of scale economies, but also provided that water could be stored for interests not in a federal reclamation project.²⁰ Today, water in federal storage, controlled by private owners, can be rented or sold for other uses without the blessing of Bureau officials.

In 1913 the Kuhn syndicate, a group interested in developing the north side of the Snake near the Minidoka Project, contracted with the Reclamation Service to enlarge Jackson Lake (in Wyoming, 6770 ft. maximum elevation), in return for storage rights in the reservoir. At the same time, the contract provided that Lake Walcott (4245 feet elevation), also part of and near to the Project, would be managed together with Jackson Lake. This provision in part handled the problem of natural flow versus storage in the upper Snake, but also effectively made water run uphill by managing the two reservoirs as a single unit.²¹ Water was provided to the Minidoka Project solely from the Minidoka

¹⁹ Gertsch, "Upper Snake River," Ch. 3.

²⁰ *Op. cit.*, p. 164-5.

²¹ Gertsch, *op. cit.*, pp. 128 – 136.

reservoir (Lake Walcott) until minimum natural flow was reached, at which point water was provided from Jackson Lake.

Innovations to Cope with Climate-Induced Stress

Committee of Nine

The Committee of Nine was created following the drought of 1919 and the raising of the elevation of Jackson Lake in 1916. The new storage at Jackson Lake belonged to the Minidoka Project, a federal project in the Middle Snake just above Milner Dam. During the drought years of 1919, 1924, and 1926, Upper Valley farmers would find their headgates closed while there was still strong flow in the river. The flow was from the Minidoka Project storage at Jackson Lake. The State Engineer and several consultants determined that it was technically impossible to separate stored flow from natural flow, because existing means of measuring flow as well as interaction with the aquifer were not adequate to the task. Part of the solution was to create a committee, composed of three representatives each from the Henry's Fork, the South (main) Fork, and the Minidoka Project. The Committee of Nine then negotiated an annual determination, on best available evidence, of the proper allocation of stored and natural flow. The committee was never sanctioned in law but was effectively institutionalized by its 1924 water-distribution agreement.²² It still exists to negotiate water appropriation and serves under authority from the Idaho Water Resource Board as the operating committee for the District 1 Rental Pool, setting prices and conditions under which water can be rented from the pool. District 1 constitutes all of the Snake River irrigated acreage above Milner Dam.

Groundwater Development

About 1950, pumping technology reached the point that it became economically practical to draw groundwater for irrigation above the Eastern Snake Plain Aquifer (ESPA). Groundwater had the advantage of being dependable, inasmuch as surface irrigation had been incidentally recharging the aquifer and raising its level for over fifty years.

The new technology led to two developments of significance. First, lands that had not been irrigated, because they could not be served by gravity flow or were too distant from a canal or other resource, were now opened under the 1877 Desert Land Act. Second, in some areas there was a large-scale conversion from surface to groundwater irrigation. Between them the aquifer, whose level had been rising for fifty years due to surface irrigation, began to fall. It is asserted that "Springs abundant before the Civil

²² Fiege, *Irrigated Eden*, 112.

War are now dry” (MacMillan, 2007), though data indicate that aquifer levels are still generally above the 1911 level.

In 1951, Idaho enacted legislation to provide a statutory means of acquiring groundwater rights, inasmuch as groundwater was not mentioned in the Constitution. This legislation, together with follow-on statutes through 1994, makes Idaho distinct from states following groundwater “rule of capture” rights.²³ Idaho has gradually extended state jurisdiction over groundwater to require a permit for groundwater (1963), authorizing IDWR to shut down unauthorized wells (1986), and requiring new groundwater users in a measurement district to install meters to measure withdrawals (1994).²⁴

1980s Swan Falls Suit and Agreement

The hydropower rights of Idaho Power Company at Swan Falls, an early hydro development on the Snake just south of Boise, are the only hydro rights on the river not subordinated to irrigation. For many years, however, the company effectively subordinated its rights in practice. In 1978 a shareholder group, fearful of losing water rights as well as irritated at the loss of revenue, sued the company to enforce the company’s water rights. In 1984 an agreement was reached under which the company’s water rights were affirmed but the dam would continue to be operated in such a way as not to interfere with upstream irrigation (Appendix C).

The agreement remained contentious, primarily with regard to the extent of the Legislature’s ability to assign what had been designated the “trust” waters – the remaining non-subordinated rights above minimum flow – under the agreement. There had been an attempt in the Legislature to assign waters from the “trust” for aquifer recharge. A final resolution between the state and Idaho Power was reached in 2009 under which remaining issues were resolved and the state committed to support water marketing sufficient to enable Idaho Power to purchase water for hydroelectric generation above that provided by minimum flows. Idaho Power also recognized that potential aquifer recharge could provide a benefit to the Company by moving river flows from the spring runoff to other times of the year when water was more valuable, and also would cool the summer flows, helping the Company to achieve water temperature requirements.

1990 Water Supply Committee

The Idaho Drought Plan initially formulated in 1990 provided for a Water Supply Committee to coordinate drought-related activities whenever a drought is likely. The

²³ Robert J. Glennon, *Water Follies* (Washington, D.C.: Island Press, 2002), 89-91.

²⁴ Richard T. Raines, “Following the Law in Idaho: Legal and Institutional Impediments to Conjunctive Water Management,” *Water Resources Update*, No. 106, Winter 1996 (Carbondale: Southern Illinois University, Universities Council on Water Resources, 1996), 32.

Committee is formed on an *ad hoc* basis to monitor conditions, provide information and recommendations, and if necessary develop a formal contingency plan. A committee was formed during the 1987-1994 drought period, implementing steps short of a demand-reduction program.²⁵

1992 Moratorium on New Consumptive Appropriations from ESPA

In 1992 IDWR placed a prohibition on new consumptive appropriations, and a groundwater moratorium on the Boise basin. By shutting off new appropriations, this action made transfers the only available method by which to acquire water. As a result, transfer applications increased substantially after 1991-92.²⁶

2001 Energy Buybacks: Idaho Power Company, PacifiCorp

In 2001, in the context of both drought and spiking wholesale energy prices resulting from California deregulation, the Idaho Public Utilities Commission authorized programs by Idaho Power Company and PacifiCorp to purchase from irrigators the irrigators' rights to energy for irrigation pumping during the 2001 season. The companies paid irrigators \$150 per megawatt hour for that energy. Participation in the Idaho Power program was quite extensive. While not purchase of water specifically, the result was often that water remained in the channel or was not pumped from the aquifer.²⁷

Innovations to Cope with Changing Policy Preference

1979 Idaho Water Bank (Snake, Boise, and Payette River Rental Pools)

Informal rental arrangements have operated in eastern Idaho since at least 1932, when 14,700 acre-feet of water were rented for 17 cents per acre-foot. In 1979 a formal program for transfer of water from willing sellers to willing buyers, for either new or existing uses, was authorized by the legislature. The Water Board designated the Committee of Nine the local committee for water-bank administration in District 1. A second bank was created for the Boise River in 1988 and a third in 1990 for the Payette drainage. The Shoshone-Bannock tribes in eastern Idaho also operate a water bank.²⁸

²⁵ Idaho Department of Water Resources (hereafter IDWR), idwr.state.id.us/water/supply/committee.htm

²⁶ Jeff Peppersack, water rights permits section, IDWR, e-mail correspondence with the author 20 March 2003 (email in possession of the author).

²⁷ Idaho Public Utilities Commission (IPUC), orders 28699, 28702, and 28757, approving buyback programs for Idaho Power Company, PacifiCorp, and Avista, respectively, www.puc.state.id.us.

²⁸ IDWR, www.idwr.state.id.us/waterboard/water%20bank/history.htm. In more specific usage, the term "bank" generally refers to natural-flow water, whereas the rental pools consist of storage rights in various federal reservoirs that are contracted by farmers and irrigation districts that assisted in the financing of the dams.

The rental pools have added to the value of stored water, and in so doing they have changed the incentive structure. Unused stored water can now be rented for hydroelectric production, fish, or downstream irrigation. That being the case, there is pressure on BOR and Corps management to change the operating-rules curve bias from flood control toward refill. The rule curves specify maximum allowable fill by date to manage the risk tradeoff between flood potential and insufficient irrigation. They are impacted by reservoir capacity and expected runoff.

Revision of state law on beneficial use

As part of the law authorizing water banks, the Legislature changed the definition of beneficial use to include the banking of water. As a result, the “use it or lose it” feature of the prior-appropriation doctrine may be stayed indefinitely by placing the water in the state bank, enabling water to be moved temporarily to higher valued uses without loss of the right. The law also provides that managed recharge is a beneficial use (I.C. 42-234). Recent amendments provide for full IDWR oversight of recharge projects to ensure non-interference with other water rights.

Changes Resulting from The Endangered Species Act (ESA)

ESA has not yet had the devastating impact on the Snake that it has had in other basins, but its effects have not been absent. In particular, ESA has changed the operating priorities of the Bureau of Reclamation, and has added almost 500 KAF demand that was not present when the projects were built.

1995 Biological Opinion and Reclamation Water Purchases

In March 1995, after two years of development and legal skirmishes, the National Marine Fisheries Service issued a multi-year biological opinion. It found that several Snake River species, including salmon, the peregrine falcon, and others, were endangered and that others were threatened. It recommended a program to augment Snake River flows during the early and mid-summer period to help move young salmon past the dams. The opinion has precipitated an evident change in Bureau focus and operations, wherein the Bureau appears to be less concerned with irrigation *per se* and more with restoring streamflow. The Bureau has in recent years engaged in several purchases of water rights for the purpose of returning water to the channel.²⁹ As of this writing, a federal court has invalidated the mitigation plans incorporated in the opinion, bringing the fundamental public policy issue (navigation vs. fish) back to the fore.

²⁹ Ted Day and Pat McGrane, Bureau of Reclamation, Boise, Idaho, interview with the author, 12 May 2003 (notes in possession of the author). The 1995 multi-year Biological Opinion is described in *Snake River Flow Augmentation Impact Analysis Appendix* (Boise, Idaho: Bureau of Reclamation, February 1999), 1 - 2.

“427” Program

The opinion recommended augmentation of Snake flows by 427 thousand acre feet (KAF) during the summer period. The augmentation was put into place in 1993 and has been maintained, excepting for recent drought years, since then.³⁰ The commitment was made permanent as part of the Snake River Water Rights Agreement.

Snake River Water Rights (Nez Perce) Agreement

A major negotiation was begun between the Nez Perce Tribe, the United States, the State of Idaho, local communities, and water users in 1998, as part of the Snake River Basin Adjudication. The tribe had made claims to all flows in the river. Following several years of negotiations the parties reached an out of court agreement in 2004 that provided for reserved water rights for the tribe, enhanced salmon management, enforcement of the 427 KAF augmentation provision at all times, with water leased by Reclamation, and other provisions to protect the river and fish.³¹ The agreement also authorized an additional 60 KAF acquired from a former irrigation project (Bell Rapids).

Groundwater and Conjunctive Management

Idaho has moved toward conjunctive management of ground and surface water over the past fifty years. In 1951 the state exerted jurisdiction over groundwater and in 1963 began requiring a permit for new wells. It was not until 1986, however, that IDWR was authorized to shut down unauthorized wells, and metering was not required until 1994. The legislature also prohibited IDWR from removing its moratorium on all new diversions from the Snake Plain Aquifer in 1994. The prohibition has since expired, but the moratorium remains in effect.

IDWR Flow Measurement

In the 1920s the State Engineer was unable to ascertain with confidence the extent to which Middle Snake flows at any given time were from natural flow or from storage at Jackson Lake. This inability prompted creation of the Committee of Nine. Today, IDWR is able to measure flows at a large number of head gates and other flow points electronically. These measurements also contribute significantly to modeling of the river and the aquifer.³²

UI, IDWR Groundwater Flow Model

³⁰ Bureau of Reclamation, *op. cit.*

³¹ See Appendix C.

³² Alan C. Robertson, et al., “Stream Flows in the Snake River Basin: 1989 Conditions of Use and Management,” IDWR Open-File Report, June 1989, 1-6.

University of Idaho hydrologists in the Idaho Water Resources Research Institute (IWRRI) have developed a spreadsheet model of flows in the ESPA, based on current knowledge of the ESPA's flow characteristics.³³ This model describes the effects of increased or reduced draws from any point in the aquifer at any other point, in annual steps, for up to 150 years. IDWR uses this model to effect its transfer policy, under which transfers of water rights from any one point to any other point may only be approved if there is no impact on third parties or if those effects are fully mitigated.³⁴

IDWR Transfer Policy, effected through flow model

In 2002, IDWR published revisions to its policy on water transfers. This policy applies to transfers between points of use for irrigation, or between uses: e.g., sale of water rights from agriculture on one reach of the river to improve flow for fish or hydro on the same or another reach. The policy was revised in 2009.

The spreadsheet-based flow model links the standard hydrological model on which it is based with the policy requirement. In standardizing policy application, it both specifies and reduces transactions costs associated with water transfers, making possible transfers that otherwise would not occur.

Voluntary reversion to surface irrigation, purchase of water from water bank, to protect flows for older rights.

Beginning about 1950, many owners of surface water rights in the Milner-King Hill reach of the Snake River converted from surface to groundwater irrigation. Many of these surface rights were then transferred to other users and other uses. Additionally, following a major drought in 1977, many surface irrigators drilled supplemental wells and converted from flood irrigation to sprinkler. Together, these actions increased the draw from the aquifer and significantly reduced recharge. As a result, the annual outflow from the ESPA at Thousand Springs has fallen from its peak, reducing flows at springs where water rights are dependent on a higher outflow.

³³ The model is a simplified version of the MODFLOW ground water flow model developed by IWRRI for the Idaho Department of Water Resources.

³⁴ Donna M. Cosgrove and Gary Johnson, *Eastern Snake River Plain Hydrologic Effects Spreadsheet* (Moscow: Idaho Water Resources Research Institute, 2000), <http://www.if.uidaho.edu/~johnson/ifiwrrri/effects.html>; Christopher H. Meyer, "ESPA Water Transfers," memorandum of 16 October 2002, attachment 13 to Jeffrey C. Fereday, Christopher H. Meyer, and Michael C. Creamer, *Handbook on Idaho Water Law* (Boise: Givens Pursley, LLP, 1 January 2004).

In 1993 irrigators and aquaculture interests that rely on aquifer-fed springs in the Hagerman Valley filed the first of several “calls” for water, formal requests of the IDWR Director to curtail withdrawals by junior users. Legal and administrative action has continued since then. Surface and springwater users have sued to protect their water rights. Groundwater users, under threat of curtailment, have endeavored to reduce their usage and find replacement water for the surface irrigators. The IDWR has attempted administrative and negotiated solutions, including constraining surface rights to the amounts actually used by rights holders.

To mitigate impacts on senior surface water users, groundwater users have undertaken to convert pumping from groundwater back to surface for lands that can utilize both sources, provide rental-pool water directly to the surface users, and recharge the aquifer. For groundwater land that does not have surface rights, the conversion must be accomplished in part with water from the rental pool or water bank.³⁵ Efforts have also been made to enhance recharge, though until revisions to the Swan Falls agreement were adopted in 2009, Idaho Power water rights at Swan Falls were a hindrance to recharge. In the revised agreement there remains a potentially binding upper limit to recharge from natural flow.

A curtailment of junior groundwater rights would impact several industrial concerns that operate with purchased water rights, large dairy operations, and municipal water expansions, as well as the irrigators. The case has forced to the fore the issue of hydrologic interconnections between the ESPA and surface flows.³⁶

Comprehensive Aquifer Management Planning (CAMP)

To deal with the issues of conjunctive administration, the Legislature in 2006 directed the Idaho Water Resource Board to undertake a comprehensive aquifer management planning effort. The resulting ESPA plan (CAMP) was adopted by the Legislature in 2009. Loosely following the model of earlier adaptations to drought, CAMP involves participation of the major water users and interests. It establishes a 20 year goal of increasing supply and reducing demand to accomplish a 600 KAF change in the water budget. The measures include

- 1) conversion of ground water rights to surface water, through substitution of water below Milner for salmon flow augmentation currently provided by surface water above Milner;

³⁵ Martin interview.

³⁶ Raines, “Following the Law,”3-36.

- 2) additional recharge, using the Board's natural water permit, storage water when available, and 2009 changes in the Swan Falls Agreement with Idaho Power Company;
- 3) demand reductions, through water purchases, subordination, fallowing and crop mix changes, and federal conservation programs; and
- 4) winter cloud seeding to improve the snow pack.

Of all the challenges stemming from climate variability and changing social preferences, joint administration of surface and ground water is proving to be the most difficult to resolve. In part, that is because the fundamental rules are different: prior appropriation is relatively easy to apply to surface water sources, but very difficult when appropriation is via a well, the source is a large aquifer and the rules require reasonable measures to be taken by the injured party (e.g., drilling the well a bit deeper) rather than the junior appropriator to be cut off. Partly, the nature of underground flows and returns to the surface stream greatly complicate measurement and obligation. As well, issues arising from sometimes considerable lags between curtailment of a well and relief at the spring have not been resolved. And, in the case of the Snake, the reasons for the aquifer's rise during the 20th century and for its decline at present are to be found in changing technology used by surface irrigators, as well as in expansion of well drilling.

Conclusions

Snake River institutions have demonstrated a remarkable adaptive capacity over the past 160 years. Solutions have not been easy, or certain. But, at least partly because decisions have been in the collective hands of water users rather than in the hands of an over-arching State or Federal agency or the judiciary, participants have, occasionally under duress from potential court judgments or Federal administration, worked out allocation difficulties in collaboration with each other.

If we think of basic water institutions as an ongoing contract among all water users, over time the contract terms have had to be adjusted to accommodate drought, expanding use, changing economic structure, and changing public preferences. To the extent that the initiators of change have had an economic basis (drought, problems of scale), innovation has been largely successful. To the extent that more recent change is due to shifting social priorities in the context of a fully appropriated resource, innovation is proving more difficult. Still, emerging water markets, conjunctive administration, flow management, and the acquisition of water rights for in-stream use have largely kept up with water demands for industrial, municipal, and environmental uses.

At the same time, expansion for irrigation has been halted through an ongoing moratorium on new rights applications, and some irrigated land has been withdrawn to accommodate industrial and environmental use. This should be seen as a normal development, particularly as about 98 percent of current Idaho water diversions are for

agriculture. The state's economic base has moved from mining to timber to agriculture to manufacturing and services over the past century and a half, and that shift will continue. A 1989 study identified movement of the state's economic base from resource industries (mining, timber, agriculture) to manufacturing (primarily electronics) and services during the latter half of the 20th century. While agriculture remains the dominant industry, accounting for perhaps 35 percent of all economic activity, excepting for the dairy industry economic growth since about 1970 has been non-agricultural.³⁷

The institutional history can be seen in three phases:

First, adaptation enabled the private sector to successfully develop western land. This adaptation allowed realization of greater scale economies, first through legal expansion of private efforts (Carey Act), and then through public assumption of development risk for storage (Reclamation Act) and private ownership of part of that storage (Warren Act).

Subsequently, climate variability (drought) brought forth informal collaborative innovation (Committee of Nine), state oversight (State Engineer, IDWR), and extension of Reclamation's role in building storage. Together with technological development and rural electrification, climate variability also stimulated extensive groundwater use, leading to conjunctive administration – which, as noted, is not without its own difficulties.

Finally, changing public preferences are proving more difficult to deal with but have also brought forth a continuing series of innovations. It should be noted, however, that except for Idaho Power's flow management at Hells Canyon, amendment of the Swan Falls Agreement, and Reclamation buyouts of water for fish, the fundamental conflict continues. That conflict remains in the public/political arena, which may help explain why it is so resistant to resolution.

While prior appropriation can be criticized for monopoly abuses prior to reforms in the late 19th century, and shortcomings relative to moving water from lower to higher valued uses, it is not clear either that the doctrine is inherently responsible for those failures or that any other legal basis would provide a superior means for re-allocation. Legislated adjustments to the definition of beneficial use, together with emerging IDWR rules on transfer procedures and mitigation have enabled mechanisms within the doctrine—water banks, rental pools, buyouts, minimum streamflow appropriations, conjunctive management, flow management—to address the requirements of changing public preferences as well as stress created by drought and growth.

Collaboration among water users has also been part of the solution, particularly to drought-induced stress. Users have voluntarily shared water on many drought occasions,

³⁷ Richard A. Slaughter, "Education and the Idaho Economy: The Dynamics of Education and Economic Growth in Idaho" (Boise: The Idaho Business Council, 1989).

though they have not engaged in the kind of collaborative planning frequently proposed as a solution to resource conflict. Instead, they have developed new institutional forms to deal with stresses as they occur.

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III: Governance and Markets

In a private market with many buyers and many sellers and a reasonably undifferentiated product, there is generally no problem with opportunistic or monopolistic behavior, or lack of knowledge about pricing. If one vendor raises prices above the level required to clear the market, he/she will see falling sales; similarly, those who cannot produce profitably at that level will tend to either cut costs or go out of business. Rising demand tends to call forth new supply at higher than the previous market-clearing cost. Buyers and sellers are said to “adjust their behavior at the margin,” ensuring the most efficient outcomes overall.

Water in its natural course is not like that. It flows as a function of geology, weather, existing control structures, and as impacted by existing diversions, including wells. It cannot easily be moved uphill. The saying “water moves uphill to money” is not without merit, and implies the extra costs involved to change the location of water use. Because water exists naturally and as a result of existing diversions and uses in given places at given times and with varying uncertainty, would-be buyers and sellers of water use rights face differing costs depending on their circumstances. Additionally, many of the social costs of water use and transfer are not borne by immediate buyers and sellers, but by other water users and a multitude of environmental uses. Such costs are “externalities,” not borne by those involved in the immediate transfer or use.

This chapter considers several aspects of external costs, mechanisms to reduce both externalities and transfer costs, and the working of existing and developing water institutions, primarily on the Snake. Bryce Contor covers many of the issues that stem from groundwater banking on the Eastern Snake Plain Aquifer; Richard Slaughter and John Wiener compare the working of Snake River institutions with those on the Klamath River and Richard Slaughter discusses the design of water markets in the context of the nature of water. Mike Creamer covers issues relating to water transfers in Idaho.

1. Ground-Water Banking In The Eastern Snake Plain Aquifer*

Bryce A. Contor and R.D. Schmidt

Background

Eastern Snake Plain Aquifer/River Interaction

Physical Description. The Eastern Snake Plain Aquifer occupies approximately 10,000 square miles in the southeastern part of the state, extending from Ashton Idaho in the northeast to King Hill, Idaho in the southwest. The largest source of recharge is percolation incident to irrigation from the Snake River. The primary discharge is to the Snake River, via tributary springs and direct river gains. Ground-water pumping for agricultural irrigation is a large secondary discharge from the aquifer. The average net discharge from the aquifer to the Snake River is approximately 5,350,000 acre feet/year (Cosgrove et al, 2005). Especially during the summer months, the bulk of the flow in the Snake River at King Hill is derived from spring discharges. The Snake River is an important tributary of the Columbia River and an important migratory pathway for Pacific steelhead and salmon. In the vicinity of the springs, the Snake River is also habitat for sturgeon.

Administrative Concerns. Idaho's surface-water allocation process and ground water allocation process were developed on parallel tracks that failed to acknowledge the hydraulic connections that can exist between surface water and ground water. In 1993, this failure was challenged by a user who relied on spring discharges and held senior water rights (Raines, 2004). One result of this challenge, known as the "Musser Case," was the implementation of conjunctive management rules for the Eastern Snake Plain Aquifer (Idaho Department of Administration, 1994). The rules officially link ground-water and surface-administration, wherever a hydrologic connection exists. Idaho's implementation of the rules is evolving, with implications extending to ground-water transfers (Johnson et al, 2004) and surface-water delivery calls (Idaho Department of Water Resources, 2006).

Environmental Concerns – Mid-Snake. Summer-time water-quality concerns in the reach immediately adjacent to the springs include temperature, dissolved oxygen, sediment loading and nutrient loading. These are all affected by the quantity of cool, clean water entering from the springs.

Environmental Concerns - Pacific Steelhead and Salmon. The Snake River is important tributary to the Columbia River and an important fish migration pathway. Reclamation participates in providing flow augmentation water to Pacific species by purchasing water from Idaho surface-water rental pools, in arrangement authorized by Idaho legislation (State of Idaho, 2006). The connection between aquifer/surface interaction and Pacific species is two-fold; not only do springs from the aquifer provide a large fraction of the summertime flows in the Snake River, but storage in the aquifer is a potential source of to meet water needs in dry periods, including ecological needs.

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Allocation, Markets and Prior Appropriation

Some economists assert that the prior appropriation system does not facilitate the emergence of water markets and that, therefore, "water is often not allocated to the highest value uses" (Hamilton et al, 2000). Others suggest that since water rights can be bought and sold, water is allocated by the market; in this view prior appropriation is not an alternate method of allocation but an alternate *property right description mechanism* within a market allocation system (Slaughter, 2006). In the context of ground-water banking it is probably not important which viewpoint is correct; what is important is to understand that water isn't bought and sold in the ways we are used buying and selling other commodities. In Idaho, what is generally exchanged and marketed is not water itself but *the right to the use of water*, if and when it is physically and administratively available.

Markets. A simple definition of a market is "a place where many sellers display and sell their goods... a region or outlet for successful trading" (Lexicon, 1992). More formally, a functioning market includes (though perhaps imperfectly) the following characteristics (Medema, 1993):

- property rights
 - fully specified
 - exclusive
 - enforceable
 - transferable
- costs and benefits *internal* to the players
- adherence to moral norms
- adequate numbers of buyers and sellers
- no barriers to exchange
- adequate information
- homogeneous commodity

Preliminary work in the Ground-water Banking Project suggests that instances of conflict, waste, ecological harm or impeded economic development associated with water use can be traced back to a deficiency in one or more of these market or property-right requirements. Many of these deficiencies may be discussed in terms of *externalities* and public goods.

Externalities. An "externality" or 'third-party effect' occurs when a cost (or benefit) of a transaction is borne (or enjoyed) by a group or individual not a party the transaction. The core of the definition is that the cost or benefit is *external to* the decision process of the party undertaking the activity from which the cost or benefit flows. To economists, externalities are a problem in terms of equity (by the simple definition that it is unfair to either bear the costs or enjoy the benefits of others economic activity) and efficiency (since the full cost or benefit is not considered in the decision, the decision cannot be optimum for society as a whole).

Not all unpleasant consequences of water allocation are externalities, though there is a tendency to call them such (Taylor, 2005). The reality of allocation of scarce resources to infinite wants, failure of enforcement, failure of adherence to social norms and market barriers can all be mistaken for externalities. The key element of an externality is that *part of the cost or benefit of an activity is external* to the decision process of the party engaging in the activity.

Public Goods. Public goods are goods that 1) can be enjoyed by one person without diminishing the enjoyment by another, and 2) that lack the property-right characteristic of exclusion. Typically in a market these goods do not attract resources commensurate with their value to society, because it is not rational for any individual to expend resources towards those goods, when others will continue to extract enjoyment and cannot be excluded (Medema, 1993).

Externalities And Ground-Water/Surface-Water Aquifer Interactions

Addressing externalities requires an understanding of their origins. In the context of ground-water/surface-water interactions, a necessary but not sufficient condition for an externality to exist is a hydrologic connection. A second necessary condition is for the hydrologic connection to not be recognized in the allocation system. Thus, Slaughter and Weiner (2006) identify the separate management of ground water and surface water (in jurisdictions that ignore the hydrologic reality of interconnection) as an “important failure to specify property rights.” In Idaho prior to the Musser Case, any material harm that junior groundwater pumping caused to holders of senior spring rights was an externality. Today in Idaho, with the existence of conjunctive management rules, any such harm would be a failure of adherence to social norms, or a failure of the enforcement mechanism. Impacts of senior pumping are the result of our society's allocation decision and not externalities. They are not externalities because part of the opportunity cost considered by the senior pumpers is the market price the rights would command if sold. This implicitly includes the demand of holders of junior rights; their demand is therefore internal to the decision process.

Idaho's conjunctive management rules attempt to address one hydrologic externality, the potential negative impact of ground water pumping on springs and river gains. Other hydrologic externalities still are unaddressed in Idaho. These include:

1. The positive impact to the aquifer of incidental recharge from surface water irrigation. In total annual volume this far exceeds the externality that current conjunctive management rules address. Further, changes in surface water practices have reduced this incidental recharge. with an impact to springs of the same order of magnitude as the ground-water pumping that is addressed by the rules (Cosgrove et al, 2005).
2. The ecological cost to the river ecosystem of surface-water irrigation diversions. It may be argued that this is simply a result of our social decision to prefer irrigation to instream flows (an allocation decision). However, because current Idaho legal

barriers largely prevent purchasing senior water for instream flow, the potential demand of environmental interests is not part of the opportunity cost considered by irrigators and the ecological cost is external to irrigators' decisions.

3. The excess benefit to one or more river reaches that is often generated as part of a transfer mitigation plan. This is small in volume relative to other externalities, but important in the context of economic growth since transfer of existing rights is virtually the only source of water now available for economic growth in southern Idaho.
4. Managed¹ recharge.
5. Retirement of existing ground-water pumping.
6. Providing surface water during times of plenty as an in-lieu supply to lands that otherwise would be irrigated with ground water.

These all are externalities because hydrologic connections exist but the property allocation system does not allow the costs or benefits to be internal to the decisions of those initiating the activities. The last three activities would cause quantity of water stored in the aquifer to be greater than it otherwise would have been. They are currently externalities because there is no mechanism to assign ownership of the benefits. As expected for a case of positive externality, these activities currently take place at very low levels, if at all. Because of lack of specification of a property right, the market fails to properly signal the value they could have to all water users.

Externalities And Ground-Water Banking

Ground-water banking can address externalities by quantifying and assigning ownership to hydrologic impacts. Reclamation and IWRRI have incorporated response functions (Cosgrove and Johnson, 2004) and basic financial accounting principles (double-entry accounting) in a "proof of concept" computer program that illustrates how a ground-water banking system could perform these functions. Incorporation of hydrologic tools allows adjustment for the hydrologic reality of migration and dissipation of impacts over space and time. Incorporation of a standard financial accounting method tracks ownership and prevents withdrawals from ever exceeding the residual balance of past deposits. Effects are *internalized* by the assignment of a property right (ownership of banking debits or credits).

For new activities such as managed recharge or retirement of senior ground-water pumping, the assignment of ownership is straightforward. The proposed activity has not

¹ The Idaho definition of managed recharge is physically placing water in the aquifer with the primary intent to increase storage, no matter the nature of the structure or location of recharge. This differs from the Arizona definition that managed recharge is intentional recharge that takes place in a natural (vs. human-made) channel or structure (Swieczkowski, 2003).

yet occurred, and the water it will cause to be stored in the aquifer will have been there, but for the proposed activity. No obstacles exist to assigning ownership of chits to the person or entity who will cause that water to be stored.

On the other hand, incidental recharge has existed as an externality for decades. Any attempt to address the externality by assigning ownership to the incidental recharge will have an impact on property rights that were perfected in the presence of the externality. Great care is warranted. At least three potential owners could be identified:

1. The public as custodian of the environment. Those who believe that the environment was the first user of the water (and that irrigators were second in time) consider suggestions that environmentalists should *buy* water as "bizarre" (Green, 2003). An argument can be made that society as a whole bears the cost of reduction in ecological services due to removing this water from the river, and that therefore the public custodian of the environment should own the incidental-recharge chits.
2. Senior surface-water irrigators whose diversions supply the incidental recharge. These users can logically assert ownership of the chits because their predecessors expended the resources to create the distribution systems, and they themselves own the water rights under which the diversion is authorized.
3. Ground-water users and downstream surface-water users (spring users and river users who rely upon river gains). These users may also assert ownership because they have expended resources to perfect water rights in the resulting aquifer storage, river gains and spring discharges. They undertook this activity in good faith, in accordance with the water environment that prevailed at the time. Further, communities have sprung up dependent upon the farm economy sustained by these water uses. Current Idaho law allows perfection of a water right in a waste stream but forbids the user to compel the waste to continue. However, Idaho's constitution (State of Idaho, 2003) authorizes the legislature to modify prior appropriation. An equity² and public-interest argument could be made that the property-right specification of rights in waste water should be changed; assigning chits to spring users would essentially be this kind of change.

In order that the assignment of chits may perform its economic function of sending signals to guide water-use decisions, water users who are not assigned chits must be required to purchase them in some manner. While the Coase Theorem of economics suggests that the distribution of water to canal leakage, aquifer use and instream-flows would equilibrate to the same point regardless of who owned the chits (Taylor, 2005),

² In this context, equity is defined more broadly as 'that part of the legal system built around the principles of natural justice and fair conduct, [and] specifically designed to deal with those cases where formal law would result in an unfair outcome' (Green, 2003). The economic problem of externalities is both an equity problem and an efficiency problem, thus both equity and efficiency arguments are appropriate in considering how to address externalities.

there are very real issues of equity (in the broader definition) and transfer of wealth to consider. Note, however, that any correction of an imperfect property specification potentially involves a transfer of wealth, because current patterns of ownership and prices of assets have equilibrated to the current condition with its externalities. For example, the conjunctive management rules, as they become fully implemented, are reducing the value of junior ground-water rights and are precipitating a transfer of wealth from those who are currently invested in junior groundwater. On the other hand, having the externality unaddressed would have perpetuated what has been essentially a transfer of wealth from spring users and users of reach gains.

In summary, ground-water banking can potentially address current externalities as well as externalities of potential future beneficial activities. Using ground-water banking to internalize benefits of beneficial future activities, thereby promoting flexibility and economic opportunity, is relatively straightforward and could be implemented in the first step of an incrementally-developed ground-water banking plan. Using ground-water banking to address existing externalities will require considerable care and deliberation and might best be approached in a later step.

Barriers And Ground-Water Banking

Ground-water banking may help overcome the frustration environmental interests feel in the current inability to move senior water rights to instream-flow purposes. One mechanism (potentially available under current statute and policy) would be for Reclamation to acquire ground-water rights through providing in-lieu supplies in wet years, retiring ground-water rights, managed recharge or purchase. In dry years, Reclamation could negotiate with holders of water in surface-water rental pools to use Reclamation's ground-water rights by irrigating with ground water instead of rental-pool water. In exchange, the surface-rental-pool water would be made available for flow augmentation.

Providing market access to water for all purposes, including ecological purposes, would provide procedural equity. It would also certainly reduce conflict; if a market mechanism existed for environmental groups to purchase water for instream flow, there would be little justification to pursue water via litigation.

Public Goods And Ground-Water Banking

Many ecological and recreational uses of water include characteristics of public goods: one person can enjoy the resource without diminishing the enjoyment of another, and additional participants cannot be excluded or compelled to pay. The market fails to capture all of the potential demand and therefore the price signal is an incorrect representation of the desires of society as a whole. Therefore, even with the provisions described above, ground-water banking might still not result in the optimum level of instream flows for society as a whole; as a public good, instream flows may not attract resources commensurate with their true value to society. In the case of individuals, "economic value may diverge markedly from willingness to pay" (Green, 2003). In the case of potential purchasers who are public institutions (such as Reclamation),

willingness to pay is tied closely to the resources available from taxation. However, "for the efficient level of public investment to be achieved, the tax taken... must be equal to the efficient level... Tax levels are unlikely to be set either in this manner or with this effect" (Green. 2003).

Conclusion

Instances of conflict, waste, ecological harm or stifled economic growth suggest flaws in an allocation system. Economic principles and the requirements of markets and property right systems may be used to examine problems with water allocation.

The economic concept of externalities can be used to explain allocation issues associated with surface-water irrigation, pumping of ground water, and enjoyment of spring discharges and river gains associated with the aquifer. Ground-water banking can be a tool to internalize some of these effects. If the effects are internalized, the signals sent to water users will promote decisions that more closely align the utilization of resources with the needs of society as a whole. Because current patterns of ownership have equilibrated to existing externalities and conditions, there is a need to proceed with great care and deliberation in ground-water banking policies that assign ownership to existing effects (such as incidental recharge from surface-water irrigation). Assigning ownership to the effects of future activities (such as retirement of ground-water pumping, providing in-lieu supplies, or managed recharge) is more straightforward because to one yet has developed a claim to ownership of the benefits.

Ground-water banking can also be a tool to facilitate the movement of water to ecological purposes. It certainly would promote equity of process, reduce the potential for conflict and move some water to ecological uses. However, the public-goods characteristics of water for recreation and ecological purposes may still prevent ground-water banking from facilitating the optimum allocation between recreational, ecological and other water uses.

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2. Water, Adaptation, and Property Rights on the Snake and Klamath Rivers*

Richard A. Slaughter and John D. Wiener

Introduction

This chapter focuses on implementation of the prior appropriation doctrine in the two basins. It does not assume that the doctrine, which confers usufructuary rights in priority to appropriations of water to beneficial use, is inappropriate to today's needs, but argues that the body of law developed under that doctrine provides the necessary basis not only for current allocation but also for any market development through which today's conflicting priorities might be reconciled.

The authors take advantage of the remarkable contrast offered by the existing regimes within the Klamath River Project in Oregon and California, and the development of the Snake River in Idaho. While the Klamath is a single Bureau of Reclamation (USBR, or Bureau) project, the Snake includes several USBR projects together with development under the Carey Act (1894) and other private development both prior and subsequent to USBR projects. USBR plays an important role in both areas, but market reallocation has progressed much further on the Snake than on the Klamath. The informative value lies in the differing property rights regimes on the two systems. Readers may wish to consider Fiege (1999), and Slaughter (Chapter II), for more complete treatment of the Snake situation. The Klamath situation is described in legal detail in the August 31, 2005 ruling by Judge Allegra in *Klamath Irrigation District et al. v. United States et al.*, (Ct. Claims, No. 01-591L), in Braunworth (2002), and in the NRC report (2004) resulting from the unhappy events of 2001.

The Klamath situation involved suspension of USBR irrigation water deliveries in response to environmental mandates under the Endangered Species Act (ESA) and associated findings. Irrigator frustration was nationally reported in provocative terms, stimulating attention to such conflicts (McHenry, 2003). As described below, losses stemmed from agency decision-making in a context of central administration. Economists would note that there was then considerable uncertainty about who held property rights (Benson, 1997), and that this uncertainty might itself have adversely impacted consideration of market reallocation. The Snake River history has not exhibited a similar inability to manage conflict, although many similar problems have been present.

Outcomes-based Objections to Prior Appropriation

Many objections to the prior appropriation doctrine are based on failure of water law to explicitly incorporate environmental values (Huffman, 2004). Streams can be totally dewatered without fully meeting the requirements of existing diversion rights (e.g., Trout Unlimited 2002, 2003; Snake River at Idaho Falls and below Milner). Supporting these complaints is the point that water in the Western U.S. is in a

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constitutional sense publicly owned (Getches, 1999; Pisani, 1996), and only usufructuary rights have been granted for irrigation or other beneficial use. To further consternation, community interests may not be recognized in water law proceedings, where only injury to other vested water rights falls within the water court's jurisdiction (Hobbs, 1997).

The continuing disconnection between water quantity and water quality makes sense, perhaps, only to those contemplating the technical struggle of how to merge them. How long this separation can be maintained is unclear, but reconciliation of the two without some accepted allocation mechanism is even less clear. For example, effluent limits may reflect mixing zones, dilution factors, or low flow estimates, but discharge permittees may not have the rights to maintain such flows or demand that others do so (Hobbs, 1997; *City of Thornton v. Bijou Irrigating Co.*, 926 P. 2d 1, (CO, 1996)). Both Federal and State authorities have jurisdiction over permits, but not over flows. In practical terms, there are high stakes here for permittees as well as states bearing the burden of regulatory administration.

Prior appropriation originally applied only to surface sources, partly because extensive pumping of underground water was not feasible until the 1940s. Efforts to integrate ground and surface water management have been complicated by technical difficulty and the substantial investment in groundwater uses that is now understood to adversely impact surface water uses. Consequences range from unhappy imposition of permitting requirements and regulation, to termination of pumping where surface supplies cannot be made whole, and even interstate litigation where failure to account for groundwater depletions has been held to affect Compact obligations (*Kansas v. Colorado*, 543 U.S. 86, 2004; *Simpson v. Bijou Irrigation Co. et al.* 69 P.3d 50, (CO), 2003). The collision of the old mining water allocation system, prior appropriation, with rapid urban and industrial growth in a semi-arid climate without massive groundwater sources or riverine flows may be best exemplified by Colorado, which as a result may lead in the evolution of property-rights-based water law (Hobbs, 1997, 2002). Idaho has experienced a lower level of violent conflict, but has, for over a century, continually developed new property-rights-based allocation mechanisms in response to water shortage, industrial demand, and changed social preferences (Slaughter (Chapter II)).

Full review of these and other outcomes-based objections to current water law is well beyond the scope of this paper but these objections are a reason why the comparison presented here is important. The examination will show that the environment has been better served in the regime where certainty of interests has allowed transferability and reallocation through evolving institutions rather than as the result of a more politicized process, where outcomes may be less predictable.

Increasing Needs for Reallocation

Additionally, climate change poses threats to the assumptions underlying many of the West's water systems, specifically the assumption that snow accumulation at high elevations will provide runoff during hot summer months. In the Pacific Northwest in particular, substantial elevation-dependent declines in PNW snowpack have been

documented, indicating that regional warming is already reducing water supply (Mote, 2003); a runoff advance of 15 days or more has already been documented (Idaho State Journal, 2005). Further, warming is expected to advance the period of peak runoff by 30 days and more over the next quarter to half century, reducing summer water availability by 30-50% (Climate Impacts Group (CIG), 2005). A change of that magnitude, even if total precipitation were to rise, would require either changing the allocation of water between uses or finding additional storage on some of the Pacific Northwest's major rivers. The threat is perhaps most acute on the Snake River, which has over 150,000 water rights claims, is fully allocated, has storage for only 43% of annual runoff, and drains 44% of the Columbia Basin (Slaughter (Chapter II)). Parallel threats have been noted for most of the West (Wagner, 2003; Ojima et al., 2002; Gleick, 2000).

Pressure for water transfers will increase over time. Even the best-case scenarios described by Barnett et al. (2004, special issue *Climatic Change* 62(1)) for modeling impacts of climate change, indicates that current management systems are seriously threatened. In a different integrated assessment team effort, Edmonds and Rosenberg's group report the counter-intuitive finding that under all of the scenarios, whether higher or lower precipitation for the areas studied, irrigation water use declines, even with strong growth in U.S. agricultural yields and no constraints from fossil fuel for energy or feedstock agricultural inputs, and without competition for water (Edmonds and Rosenberg, 2005:155).

As with discussion stimulated by other stresses and issues in water law, these discussions seldom address how existing property rights are to be recognized and used, instead merely stating concern with public use or common pool issues, and perhaps implying that water use may be re-directed at any time (e.g., NRC, 2001: 34; Bell, et al., 1996). "In times of drought, political leaders do the best they can; however, these belated efforts usually point to the necessity of structural and legal arrangements instituted well in advance." (Hobbs, 2002: 53).

This cursory sketch of water issues and the increasing need for effective water institutions is a reminder of the context in which the comparison offered takes place. The passions and stakes are high. Although presented concretely, the intent of the following comparison is to argue the somewhat abstract point that given similar situations and similar stresses on the status quo, interests seem to have been better served where institutions are market-like than where institutions are political and/or administrative.

Snake and Klamath Comparison

During the summer of 2001 USBR, in compliance with Federal court orders, suspended irrigation water delivery on the Klamath River in Oregon. The suspension was ordered to provide legally required flows for endangered fish stocks in the Klamath as well as flows to Indian tribes required by treaty. The Bureau's action ignited a political firestorm, involving irrigators, environmentalists, the Governor, and the state's Congressional delegation. Political pressure soon forced the Bureau to partially back off, restoring some flows and undertaking to purchase surface water and subsidize

groundwater to relieve some of the irrigators' losses. Gov. Kitzhaber placed much of the blame for the situation at the feet of Federal management agencies, and proposed, as a solution, to move river management from Federal agencies to a new entity responsible to citizens of the region. His proposal would shift responsibility, but retain planning, public consensus, and authoritative regulation – centralized decision-making – at the core of water management. Jurisdiction over environmental constraints under the Endangered Species Act (ESA) lies with NOAA Fisheries (formerly the National Marine Fisheries Services (NMFS)), and the US Fish and Wildlife Service (USFWS).

In Idaho during the same period, a threatened new Biological Opinion (BiOp, the approved scientific basis for management decisions under ESA), together with tribal claims on the middle Snake and surface/groundwater conflicts on the upper Snake, led to a major negotiated settlement, ratified by Congress, the Idaho Legislature, and the Nez Perce Tribe (IDWR, 2004b). The agreement provides for retiring irrigated lands, state and USBR purchase/exchange of water rights, a new conservation reserve, economic development support for the Nez Perce nation, and other measures voluntarily arrived at, funded in part by water users whose rights might otherwise be in jeopardy and implemented through existing market mechanisms. A second major conflict is discussed below (see “Water Law – Sources of Dispute”).

Why do the two river systems, with similar water uses, similar reclamation backgrounds, and similar claims, exhibit such different behavior in resolving conflicts from similar sources? Both Idaho and Oregon apply the prior appropriation doctrine to determine priority of water rights: Idaho constitutionally in 1890, Oregon statutorily in 1909. Both basins contain private natural flow rights and storage rights to water in Federal projects. Both have tribal claims to water, and are in adjudication. Both have had to contend with stresses emanating from the Clean Water Act, the Endangered Species Act, drought, and growth. Both have highly complex hydrology and are over-appropriated, especially when non-consumptive uses are included.

The two prior appropriation histories differ significantly, as do some of the physical features of the projects. Actual water allocation on the Klamath system has primarily been Bureau of Reclamation (USBR) responsibility, while Snake River irrigators have always been owners of their water and culture in a very real sense, with the State Engineer and his successor, the Idaho Department of Water Resources, functioning more as referee than as central authority. Additionally, in part because Idaho is drier than much of Oregon, drought has been a major factor almost from the beginning, forcing Idaho irrigators to seek water supply solutions far earlier than their Oregon counterparts. The Klamath was developed as a single integrated project, while the Snake grew over time, with private development, multiple USBR projects, and governance driven by over 150,000 water rights claims in the context of evolving prior appropriation.

Physical comparisons

The Snake River rises in western Wyoming and flows across southern Idaho, crossing the state from east to west before flowing north along the Idaho-Oregon border

and thence westward to the Columbia. This study is concerned with the area in southern Idaho that is extensively irrigated by the Snake River and its associated aquifer.

The Klamath River originates in Upper Klamath Lake in southwestern Oregon, fed by rivers from mountains east of the Cascades, and generally south of Crater Lake. The basin is located in SW Oregon and in northern California. The Klamath Project consists of irrigated lands, wildlife refuges, reservoirs, pumping stations, and diversions, all under the administration of the Bureau of Reclamation. The overall basin contains 202,000 hectares of irrigable land, of which 97,000 are inside the Project and 81,000 receive Project water (Braunworth, 2002: 35, 378).

Tables 1 - 2 show metrics of the Snake and Klamath systems. The Snake system is approximately 6.5 times as large as the Klamath in terms of reservoir storage and irrigates seven times the area of the Klamath basin as a whole and fourteen times the area of the Klamath Project.

*Table 1. Reservoir Storage (thousand M³)**

Snake River		Klamath River	
Upper Snake	5,148,177	Upper Klamath	600,494
Boise River	2,365,109	Clear Lake	650,045
SE Oregon	1,365,966	Gerber	116,280
Total	8,879,252		1,366,819

*1000 M³ = .81 acre foot (AF)

Source: USBR, 2005; Braunworth: 48 - 53.

Several differences emerge from these data. First, storage on the Snake contains only 43% of an average year's use, while storage on the Klamath totals 133% of annual irrigation. That fact, however, may be misleading: Clear Lake Reservoir was constructed in part to reduce water flows through downstream wildlife refuges, and not for irrigation storage. Because the overall Klamath system is small, it has extremely limited capacity to withstand multi-year droughts. Such droughts have occurred six times in the Project's history, the latest prior to 2000 being 1991-94. During the 1991-94 period, reduced deliveries were made to the two wildlife refuges (Braunworth, 2002).

Environmental policy changes exacerbate the vulnerability. Upper Klamath Lake varies from zero storage to more than 600,000 thousand M³ over a vertical range of only 2.1 meters. In 1994, the lake fell to 1,260.9 meters elevation, only 23 cm above dead pool. The 2001 operating plan, required by the final 2001 BiOp, required a minimum elevation of 1,262.6 meters on June 1, falling to 1,261.9 meters on October 15 (Braunworth 2002: Ch. 2), simultaneously with a requirement for Coho salmon of increased flow requirements at Iron Gate Dam. With those requirements, the lake can provide almost no irrigation support in a critically dry year.

A second, and major, difference is that the Snake combines USBR projects with substantial private irrigation based on natural flow rights, developed before and independently of the Bureau. Most of this irrigation, while not subject to Bureau policy, remains vulnerable to the Bureau's actions because the Bureau controls all large storage on the river. The major natural flow exceptions are 19th century development on the upper Snake, and the Twin Falls project, a Carey Act project near Twin Falls, Idaho. Natural flow rights at the privately constructed Milner Dam, built as part of the Twin Falls Project, exceed 340 M³/s (IDWR 2005a, "Findings," ¶ 42, 46, 48), completely de-watering the river for several miles each summer.

Table 2. Irrigated Acreage (hectares)

Snake River, total	1,375,900
<u>Private</u>	
Twin Falls Project and expansions (natural flow, private): beginning 1900	202,300
Other private	507,100
<u>US Bureau of Reclamation</u> (includes land supplemented with USBR water)	
Minidoka and Palisades Projects (USBR): 1907 - 57	449,600
Boise and Owyhee Projects and other	216,900
Klamath Basin, total	206,000
Klamath Project: 1904 (average 1998 – 2000)	97,100 202,300

Data is rounded to the nearest 100 hectares

Sources: USBR, 1999: 2-17; USBR, 2005; Gertsch, 1974: 52; Twin Falls Canal Co.; Braunworth, 2002: ch. 2, 8.

The presence of the Eastern Snake Plain Aquifer (ESPA) introduces a large conjunctive component that is not evident in Klamath management. Approximately the size of Lake Erie, the aquifer has annual recharge and discharge of approximately 7.5 MAF (USBR, 1999, Ch. 2). It is recharged by surface irrigation as well as by rainfall, the river, and its tributaries. Pumping in many locales supplants surface water during dry years. Idaho law prohibits mining the aquifer; net drawdowns, excluding drought impacts, are relatively minor (IDWR 2005a, "Findings," ¶ 3,4,60,61).

The combination of natural flow and storage diversion rights on the Snake contributes to a management complexity not present on the Klamath, and may explain some of the evident institutional innovation. As an example, the droughts of 1916 and 1919, when natural flow rights owners saw their headgates shut off while there was still flow in the channel from storage at Jackson Lake in Wyoming, gave rise to the Committee of Nine, an extra-legal governing body that has allocated water between natural flow and storage water users since 1919.

Development Histories

The Snake River

Irrigation on the Snake River began about 1850, when farmers in what is called the Upper Valley in eastern Idaho built temporary structures out into the river to divert water onto their land. Major development began with the 1894 Carey Act, which, by scaling projects up from the individual level to the incorporated irrigation district, led to private dam and canal construction, with flows and participation sufficient to ensure success. Later, under the 1902 Reclamation Act the USBR built large-scale storage dams on the river that eliminated most private storage risk and led to very large-scale irrigation.

Early projects featured private, natural flow diversions. Later, the Reclamation Act brought major expansion, but because of the prior private development did not result in the centralized structure known in the Klamath Basin. Groundwater began to be a factor after 1950, resulting in large-scale groundwater use not related to Bureau control.

Beginning with droughts in the early 20th century, Snake irrigators and the State have been active institutional innovators. The first innovation of significance was a 1913 contract whereby an irrigation interest in what later became the Minidoka Project (in southern Idaho) paid to raise Jackson Lake dam (in Wyoming) by 5.2 meters, and USBR contracted to provide water not just from Jackson Lake, but from any federal reservoir, including the one closest to the project. This provision later came to be of enormous value to the earliest natural flow irrigators, because it allowed joint management of the entire reach, including legal provision of water to irrigators upstream from the reservoir in which they owned storage (Gertsch, 1974: 136-8). It also merged federal and private ownership interests, of importance in later decision dynamics.

Other innovations have included the Committee of Nine, created *ad hoc* in 1919 to arbitrate natural flow and storage rights on the upper and middle Snake (Fiege, 1999: 90-112), and since that time entrusted with management of the world's largest irrigation district; re-defining "beneficial use" to allow the clock to be suspended for any water assigned to a rental pool or water bank; providing for transfers from agricultural to industrial use; and creation of several species of water banks and rental pools. The rental pools and water banks have been used not only to move the point of diversion, but also to change the nature of use, primarily for hydro and fish. In 2005 these innovations, together with sophisticated modeling of the Snake hydrology that supports conjunctive management over the entire aquifer, have enabled the State to move forward on resolution of major water conflicts whose consequences could be vastly greater than those on the Klamath.

The Klamath Project

The Klamath Project was authorized in 1905 by the Bureau of Reclamation, and opened to homesteaders in 1917. Most of the Project's institutional history has flowed from agency and congressional policy, including the rights of Indian and former-Indian lands (1975 filing, *US vs. Adair*, 2002 *Adair III* opinion: Braunworth, 2002: 83-85);

establishment of the wildlife refuges; the Klamath River Basin Compact (1957); ESA designations; US Fish and Wildlife Service (USFWS) BiOp on suckers (1992); and National Marine Fisheries Service (NMFS, now NOAA Fisheries) BiOp on coho salmon (1999) (Braunworth, 2002: Ch. 1,3).

USBR administers all land in the project below Upper Klamath Lake with regard to water supply (Braunworth, 2002). Though individual water rights exist, and droughts occurred to foreshadow the 2001 crisis, there were evidently no shortages prior to 2001 sufficient to create an institutional crisis. Droughts in the 1990s resulted in loss of water for fish and wildlife rather than irrigators.

BiOps were issued in 1992 and 1999. In January 2001, on the basis of predictions for the lowest inflow on record into Upper Klamath Lake, USFS and NMFS issued new opinions that resulted in a higher minimum level in Upper Klamath Lake, and simultaneously a higher flow at Iron Gate Dam. Following the BiOp, USBR informed Project irrigators that no water from the Upper Lake would be available for either irrigation or the wildlife refuges during the 2001 irrigation season. In July, on the basis of higher than expected precipitation, USBR released over 49 million M³ (40,000 acre feet) for irrigation, and 32 million M³ (26,000 acre feet) for the refuges.

Water Law

Prior appropriation

Both states use prior appropriation as the basis for water allocation. Idaho adopted prior appropriation at statehood in its constitution in 1890 (Article XV, Section 3). Prior appropriation's inclusion in the Constitution may have been because mining was the state's first economic base, and miners had long memories of their California and Colorado experience (Personal communication with Hal N. Anderson, Administrator, Planning and Technical Services, Idaho Department of Water Resources, May 12, 2003). Because of private development prior to Reclamation projects, there is a rich body of case law supporting water use in Idaho. Also, because the basic law is in the constitution, the legislature has tended to address issues through definition of terms rather than change the basis of allocation. Groundwater was brought under State jurisdiction by statute in 1951 (Slaughter (Chapter II)), after the development of efficient pumps in the 1940s enabled developers to make practical use of the Desert Lands Act of 1877 (Slaughter (Chapter II)).

Oregon adopted prior appropriation by statute in 1909. Prior to that time the state had followed the riparian doctrine, which was well suited to conditions in the Cascades. Water was abundant in western Oregon, and there was little need to transport water from a source to a place of use; individuals looked to themselves or local courts for rights enforcement (OWRD, 2004: 6). All new appropriations have been subject to a permitting process since 1909, and adjudication is underway in the Klamath Basin for rights that pre-date 1909. The 1909 statute post-dates the 1905 acts that appropriated all water in the Klamath Basin to the United States for the Klamath Project. The Klamath Project is thus under Reclamation law, though the water rights are defined and held under state law

(Allegra, 2005). The State assisted in acquisition and transfer of water rights to the Bureau in order to establish the Project, which still holds title.

Sources of dispute

Idaho water disputes have primarily centered on irrigation use; for that reason, most water law and institutional innovations have been worked out between irrigators, irrigation districts, hydroelectric companies, and the state legislature, which for most of its history has been dominated by agricultural interests. Over 95% of diversions are for irrigation, and environmental pressures only began to develop in the 1970s. Appropriations for minimum flows may only be undertaken by the Idaho Water Resource Board (Title 42, Ch. 15, Idaho Code). The Board may not accept gifts of water rights for in-stream flows .

The institutions developed by irrigation and hydro interests have also served current issues well: the statewide water bank; storage rental pools; legal and technical support for transfers between users and uses; conjunctive management; aquifer recharge; and others. These developments all reduce the transactions costs involved in changing the use of water. The speed and expense of transactions are important: high costs block some transactions and limit the returns on others, costing society the benefit of many small, incremental changes.

A remaining unresolved major conflict has roots ranging from the Desert Land Act of 1877 to major efficiency improvements adopted by surface irrigators in the wake of the severe 1977 drought. Much of southern Idaho's irrigated land is above the Eastern Snake Plain Aquifer. Diversions in excess of consumption since the early 1900s caused the aquifer level, and discharge from the "Thousand Springs," to rise until the mid-1950s, when increased groundwater pumping, made possible by new technology, tapped into the aquifer. Then, in the wake of the 1977 drought, surface irrigators began switching from flood irrigation to sprinklers, reducing their diversion requirements, and their recharge, in the process. At the same time, the improved efficiencies increased their consumptive use, by evenly irrigating high ground that had previously been unproductive.

Both changes reduced aquifer recharge, and ultimately reduced spring outflows to the river. The first "calls" from senior users for enforcement of their rights came from trout farmers in the early 1990s (see "Conjunctive Management," below). The issue has been before irrigator working groups and the Legislature for several years. Lawsuits have been twice deferred, but are again before the courts. Resolution is difficult in part because the parties on whom the costs will fall – groundwater pumpers, including municipalities – are only partially responsible for the problem. Ironically, the present issue results from efficiency increases in first use, which seems desirable until one considers use-dependent water rights – rights that are met from return flows or recharge (Huffaker, et al., 2000).

Prior appropriation law has difficulty with this issue because it isn't a simple matter of allocating available water between senior and junior users. The senior users all have surface rights (mostly pre-1920); the junior users, groundwater rights (mostly post-

1950). In April 2005, the IDWR Director, in his role as referee, issued an order that would resolve much of the problem if and when accepted by the parties. Holding to the prior appropriation doctrine but changing Idaho practice, he effectively ruled that surface irrigators' diversion rights are limited to the diversions required to meet their consumptive use under their current practice, rather than the technology in use when the appropriation was made (IDWR 2005c; see Neuman, 1998). When – and if – upheld by the courts, this formula will reduce the impact on junior groundwater rights holders without significantly harming senior surface rights, because diversion in excess of consumption cannot be sold. For those whose rights are curtailed, including municipal and industrial users, water for use during dry years will have to be obtained by purchase of existing senior rights.

Salmon, of course, are a major environmental issue on the Snake. The Bureau has released surplus water, when available, from its storage since 1995 to support a 527 million M³ flow requirement. Beginning in 2006, it will lease firm water from the State and farmers for that purpose under the 2005 Nez Perce agreement. These sales will dry up significant acreage in southern Idaho. Idaho Power Co. manages releases from its Hells Canyon complex to support fish flow, and the Nez Perce agreement contains flow guarantees with “time immemorial” rights (before 1860) (IDWR, 2004b).

Because Idaho has a small population, conflicts between agricultural and municipal uses are only now becoming evident. While domestic uses have a constitutional preference, there is no preference for lawn watering or industrial use within cities. In 1996 the legislature provided that municipalities could acquire water rights for a reasonable future period, defined as up to 50 years, instead of the normal five years plus one five year extension, the allowable period of non-use before loss of the right. The first case invoking a 50-year planning horizon is now before the Department (IDWR, 2002b).

Most Idaho cities have historically derived their water from groundwater pumping, and have not been concerned about their water rights, since their uses have been small in comparison with both the resource and agricultural use. With the advent of meaningful conjunctive management, however, many cities with wells drilled since about 1949 now have reason to be concerned.

Oregon water bank program designs suggest that the primary motivation for innovation has been the protection of environmental uses of water (Clifford, 2004). The institutions that support water transfers and trading – the Oregon Water Trust, the Walla Walla Lease Bank, the Deschutes Water Exchange Annual Leasing Program and the Deschutes Groundwater Mitigation Bank – all have stream flow and habitat protection as their primary objective. Even the Klamath Basin programs, initiated by the Bureau of Reclamation in the wake of the 2001 curtailment, would likely not exist but for the overriding need to protect water levels in Upper Klamath Lake and stream flow below Iron Gate Dam. Jaeger, however, suggests that water trading has been active in Oregon since the 1980s, with “more than 250 applications per year for out-of-stream uses and five applications for transfers to in-stream uses ...” (Jaeger, 2002: 382). Half of these transfers are between agricultural uses, and half move water to other uses.

The Klamath situation stands in stark contrast to both the Snake and Oregon experience outside the Klamath Basin. There appears to be continuing resistance to water markets in the Klamath region (Jaeger, 2002), and recent judicial decisions have made clear that the Klamath is largely governed by Reclamation contracts, with the Bureau in the role of a water supplier under contract, and subject to other Federal mandates. The Allegra decision (2005) makes clear that individual districts and irrigators on the Klamath have only limited claims to water, because their rights are claims for delivery, under certain conditions, of water acquired by the Bureau under water rights it holds.

Adjudication

Klamath rights for claims prior to 1909 remain in adjudication. Those rights include most of the claims for sources above Upper Klamath Lake. As of this writing approximately 90% of 5,663 contests, and 76% of 730 claims have been resolved (<http://www.wrd.state.or.us/OWRD/ADJ/index.shtml>). The Snake Basin is also in adjudication, with 87% of 145,700 claims, 50,000 of them Federal, either decreed or submitted for decree, in a process that began in 1987 (IDWR, 2003, 2005d).

Marketing on the Klamath may be inhibited by the ongoing adjudication, because presumably most of the claims in adjudication are those above Upper Klamath Reservoir, and not in the Project. The Snake adjudication, however, does not appear to have inhibited transfers or banking. A more likely explanation is the centralized allocation mechanism operating on the Klamath, in which the only marketing arrangement is the annual bid process of the Bureau, and that only since 2001 (Braunworth, 2002; statements made by John W. Keyes, III, Commissioner of the Bureau of Reclamation, and Mr. Dan Keppen, former Executive Director, Klamath Water Users Association, Boise, Idaho, April 19, 2005).

Changes in use

Water rights may be separated from the land and moved to other agricultural use and to different uses in both states. In Idaho, interest has grown since the Snake River became fully appropriated in the 1970s, a moratorium was placed on new diversions in the 1980s, and a prohibition on new consumptive appropriation from the ESPA in 1992. Permits for rights transfers in most years after 1992, when the prohibition went into effect, are approximately double the number filed in previous years.

Institutional support for temporary transfers takes two forms. First, changes in prior appropriation definitions were made to provide for water banking as a beneficial use. This change allows a rights holder to bank water for an indefinite period of time without losing the right. Second, legal support for a water bank (statewide, primarily natural flow) and rental pools (stored water, in specific watersheds) was enacted and regulations promulgated by the Idaho Water Resource Board in the late 1970s. Using the rental pools and the water bank, water has been increasingly moved between users and uses over the past decade.

Permanent transfers are now common in both states, other than on the Klamath. In Idaho, only the consumptive use can be transferred, because water diverted but not

consumed – used by plants or evaporated – returns to the system through runoff or recharge.

Injury to other water rights holders is handled somewhat differently in the two states. In Oregon, transfers that cause third party injury are prohibited (OWRD, 2004), though OWRD has some authorization to attach conditions to ameliorate the injuries. Hydrologic studies can be performed in specific instances, but pre-existing models for determination of mitigation requirements do not exist, due to their cost (Personal interview, Bernadette Williams, Oregon Water Resources Department, November 9, 2005.). In Idaho, the IDWR toolkit includes a procedure for determining the extent of potential injury and any required mitigation (Meyer, 2002; IDWR, 2002a). Backing up that policy process is a hydrologic modeling system developed in conjunction with the Idaho Water Resources Research Institute (IWRRI), of the University of Idaho. A revision of December 2003 makes possible the calculation of 100-year mitigation requirements for transfers from any of 10,447 active grid cells in the ESPA to any other. The model calculates the resulting increase or decrease in response function – the gain to the river – for five discharge reaches on the Snake River and six spring discharge reaches (IDWR, 2002a; IWRRI, 2003, 2003a). This capacity enables the parties to efficiently identify the transactions costs for any proposed transfer, resulting in transfers taking place that would not otherwise occur.

Impacts on third-parties other than water rights holders are a different set of issues in discussion West-wide. The widely-asserted lack of adequate representation for these interests (such as environmental, or socio-economic interests related to agricultural use of water) is at the heart of much of the complaint noted above as "outcomes-based objections" to the prior appropriation system.

Recharge is also becoming more common, frequently as mitigation for water transfers. Water may now be stored underground (aquifer recharge) in both states, a beneficial use, to change the timing of delivery within or between water years (IDWR, 1999; OWRD, 2005).

Rental pools, a mechanism through which privately owned storage in Federal reservoirs is rented during an irrigation season to other irrigators, for hydropower, or flow augmentation, have come to play a major role in moving water between Idaho uses and users. Most pools are under the jurisdiction of Water District #1, a mammoth district that incorporates most Snake River irrigation and several Federal projects. The district was formed in the 1920s by combination of several existing districts, and is governed by the "Committee of Nine," an extra-legal institution created to allocate water between natural flow and storage rights owners, and to lobby Congress for a storage dam at American Falls (Fiege, 1999, Gertsch, 1974).

In 2003, Idaho District #1 formed a "Global Rental Pool," which automatically includes all unused stored water, thus increasing the percentage of stored water available during drought. In that year, the third year of the driest period on record on the Snake, the global pool succeeded in preventing any delivery reductions, even though water consumption was at record levels (Annual Meeting, Water District #01, Idaho Falls,

Idaho, May 6, 2004). Further, there were no crop losses in 2004, another drought year. A study by the Washington Department of Ecology indicates that Idaho water markets are the oldest and most developed of any western state (Clifford, 2004).

Conjunctive Management

Blomquist, et al. define conjunctive management as the active management of surface and groundwater sources to maximize water availability, partly through use of groundwater during times of drought (Blomquist, 2004). Conjunctive management here is defined as the management of water rights for both surface and groundwater within the same body of law and regulation (IDA, 2005), not as management for maximum availability. There are two reasons for this approach. First, as Glennon points out, many states do not manage groundwater at all; in some, anyone can just stick a straw in the ground and pump at will. In others, e.g., California, surface and groundwater sources are managed separately, making rights enforcement and water marketing difficult or sometimes irrational where surface water flows have been sold and groundwater substituted regardless of hydrologic reality (Glennon, 2002; Dixon et al. 1993; Slater 2005). This is an important failure to specify property rights.

Second, management for maximum water availability may lead to expansion of use. By reducing drought impacts, pressures to constrain use are relieved, resulting in higher usage growth and increased stress during the next drought (Slaughter (Chapter II)). Given climate change potential, there is no way to know whether the effects of a multi-year drought are transitory or the result of a changing climate. Attempts to maximize use during the short term could well exacerbate long-term stress.

Conjunctive management has developed in Idaho since the 1993 call by surface users in the Thousand Springs area of the Snake, where the Eastern Snake Plain Aquifer discharges through springs in a bluff above the river. When the call was issued, the requisite tools for conjunctive management did not exist, but the courts determined that Idaho law required it anyway (Raines, 1996). Tools and policy developed in the past few years provide the basis for current orders conjunctively managing the resource (IDWR, 2005a).

While it is generally understood that groundwater pumping will reduce return flows to surface streams, Oregon law and practice appear to allow replacement of surface flows with new groundwater sources, in some instances subsidizing groundwater pumping to increase in-stream flow. This can have the effect of enlarging the water right, as in this example from the Oregon Water Trust:

“...three ... water right holders sold their ... ditch rights to OWT ... in exchange for \$1,000 to \$1,500 an acre [\$2,471 - \$3,707 per hectare]. **One of the landowners has converted to a groundwater source, and OWT helped to facilitate this process.** The application to transfer these water rights to an in-stream right has been approved by the Oregon Water Resources Department. Deschutes County, the Deschutes Resources Conservancy and OWT funded the purchase of these rights.” [emphasis added] (<http://www.owt.org>)

The critical benefit of conjunctive management is its ability to improve the certainty of water rights, which in turn supports economic reallocation. The OWT example illustrates insufficient integration, which by allowing new rights out of priority undermines the conditions required for markets. Failure to adequately specify property rights is always a problem; here, it undermines surface water rights, with predictably unhappy results. In another example, Colorado paid a high price for delaying the integration of ground and surface water management in the *Kansas v. Colorado* case (543 U.S. 86, 2004), and in the South Platte River Basin (*Simpson v. Bijou Irrigation Co.*, 69 P. 3d 50 (CO 2003)).

Oregon practices conjunctive management of groundwater sources where a clear hydrologic connection exists, generally within one mile of a surface source (OWRD, Aquabook, 2004; Williams interview). The practice is to require full mitigation, or replacement of water pumped within the zone, in a hydraulically connected region. Water pumped further from the source, where the connection is less definite and/or the effect occurs over a period of years, is considered groundwater and is not controlled without specific hydrologic studies (Williams interview).

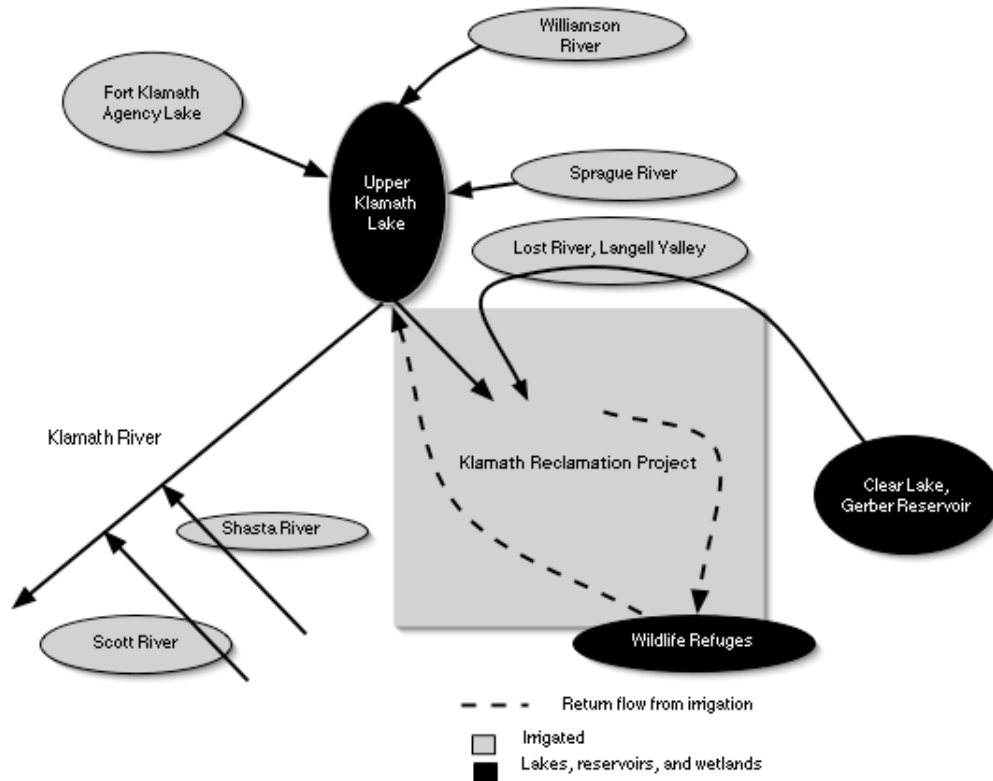
Klamath 2001

In 2001, the Bureau adopted a revised management plan, combining requirements for minimum flow at Iron Gate Dam, below the Project, as determined by the National Marine Fisheries Service (NMFS) for coho salmon; and water depths in Upper Klamath Lake (UKL), agreeable with the US Fish and Wildlife Service (USFWS), for shortnose suckers. The agreed plan required minimum flows at Iron Gate Dam of approximately 48.1 M³/s (1700 cfs), in contrast to the USBR's proposed minimum flow in a critically dry year of 11.3 M³/s (398 cfs) in August, and approximately 14.2 M³/s (500 cfs) the remainder of the summer. Because flows had to be met while the lake level was maintained, the Bureau curtailed water from a large portion of the Project during the 2001 irrigation season (Braunworth, et al., 2002: Ch. 2).

The economic loss resulting from that decision included an estimated \$74 million gross loss to farmers in the Project, not including secondary losses to communities in the area. That estimate is net of groundwater substitution, estimated to have been worth \$13 million. Because the basin has the potential for substitution of Upper Klamath Lake (UKL) water with water from upstream sources, the presence of a water market would have enabled farmers with upstream rights to sell or lease water to Project farmers (Jaeger 2002: 374-77).

Figure 1 illustrates the unrealized market potential. The USBR controls flows out of UKL, for use in the Project and wildlife refuges below the lake. The management plan codified in a BiOp impacts only USBR decisions. Thus, the decision structure in place provides no avenue for moving resources not under USBR control from lower value land above the lake to higher value Project land.

Figure 1: Key Features and Irrigated Areas in the Upper Klamath Basin and Klamath River System



Source: Braunworth, 2002: 366

Table 3 shows the values that could be accessed by a market. Class IV and V land (low productivity) constitutes some 87% of the acreage above UKL and 70% of all non-project lands, with an average marginal return on water of about \$9.73 per thousand M^3 (\$12 per acre foot (AF)). In contrast, land inside the Project, subject to USBR regulation, is 71% Class II and III, and returns an average of about \$40.54 per thousand M^3 (\$50 per acre foot). A market structure that would allow rights holders above the lake to sell water for use below the lake would benefit all parties. Jaeger estimates that a market would have reduced the gross primary impact from \$74 million to \$6 million (Jaeger, 2002).

The Bureau conducted a bid auction for water to meet part of the BiOp requirements in 2002. Through the bid process, USBR obtained water from 6,687 Project hectares at an average of \$412 per hectare or \$67.29 per thousand M^3 (\$167 per acre or \$83 per acre foot), well above the marginal return on water (Table 3). The Bureau also paid for groundwater substitution at an average \$26.75 per thousand M^3 , for 82,643 thousand M^3 (67,000 AF) of groundwater. The USBR used market mechanisms to obtain water, but paid substantially more than might be expected from a market where farmers were both buyers and sellers. Project farmers would likely not have paid more for water than they expected to realize from its use.

Four years later, USBR continues to purchase water directly, based on an advance assessment of requirements for the current year. There is no true market in place (Statement by John W. Keyes, III, Commissioner of the Bureau of Reclamation, Boise, Idaho, April 19, 2005).

Table 3: Marginal Value of Water in the Klamath Basin

	Hectares	% of total	Imputed Water Value (\$/1000 M ³)
<u>Above Upper Klamath Lake</u>			
Class II	1,097	2.1%	\$31.62
Class III	5,797	10.8%	\$15.75
Class IV	34,894	65.3%	\$12.95
Class V	11,667	21.8%	\$4.60
Total	53,495	100.0%	
<u>E and S of Upper Klamath Lake</u>			
Class II	5,378	15.0%	\$49.45
Class III	14,449	40.3%	\$27.69
Class IV	15,761	43.9%	\$3.52
Class V	300	0.8%	\$3.52
Total	35,888	100.0%	
<u>Total Non-Project</u>			
Class II	6,474	7.2%	
Class III	20,246	22.7%	
Class IV	50,655	56.7%	
Class V	11,967	13.4%	
Total	89,342	100.0%	
<u>Klamath Project</u>			
Class II	14,207	17.2%	\$54.13
Class III	44,714	54.2%	\$32.31
Class IV	23,370	28.3%	\$17.15
Class V	251	0.3%	\$3.95

Source: Braunworth: 370 - 73

In contrast, Snake basin water has rented for prices ranging from \$2.19 to \$40.54 per thousand M³ during the 2001 – 2005 period (Table 4). A state purchase from an irrigation project for in-stream use under the Nez Perce agreement is priced at \$324.29 per thousand M³, about \$18.24 annual value (IDWR, 2005b). There is anecdotal evidence that additional payments have been made “under the table” for water rentals, but no substantiated records of those transactions exist. The prices quoted for District One are administrative costs set by the Committee of Nine, so sales reported at that level likely understate the value of the full transaction. In Oregon, water sales during the 1990s averaged \$291.86 per thousand M³, or \$17.84 annual value at a six percent interest rate (Jaeger, 2002: 382).

Table 4: Prices paid in Idaho water markets

	Location (River)	Date Pool or Bank Started	Water Source	Price (thousand M ³) (lease except as noted)	Nature of price	Activity (thousand M ³ per year)	Purchaser/Use
Rent or Lease							
<i>Rental Pools:</i>							
District 1	Upper Snake	1930's	Stored	\$2.39 - \$8.51*	Minimum	308,371	Irrigation/ Power/ In stream
District 63	Boise River (Snake tributary)	1988	Stored	\$5.27 - \$5.62	Recent	3,700	
District 65	Payette River (Snake tributary)	1990	Stored	\$2.59 - /\$6.89	Recent	185,022	
Shoshone-Bannock	Upper Snake	1990	Stored				All
Lemhi River	Lemhi River	2000	Surface	\$118	Posted	1,583	In stream (USBR)
District 65-K	Payette River (Snake tributary)	1999	Surface	\$2.19	Posted	2.5	In stream (USBR)
Water Bank							
State	Statewide	1979	Surface/ Ground	\$8.92+	Recent	6,167	Irrigation/ Power
State	Snake River	2001	Surface	\$40.54	Recent	49,339	In stream (USBR)
Permanent Transfer							
State	State	1900s	Surface/ Ground	Various			All
State	Snake River	2005	Surface (state buyout)	\$324.29 (sale)	Purchase, Nez Perce agreement	74,009	State, for USBR lease/ In stream

Conclusions

Two features stand out from the comparison. First, property rights relative to water diversions are somewhat stronger on the Snake than on the Klamath. Second, the Idaho system is characterized by a very high level of ownership and decision-making participation on the part of water users, the owners of the usufructuary rights in question. The Klamath system has been characterized by centrally administered allocation (Allegra, 2005). Both systems feature USBR projects dating from the early 1900s; both had irrigated agriculture prior to that date. On the Klamath the USBR has been central to development and allocation from the beginning, whereas in Idaho the Bureau is but one of the players, both as owner of unallocated storage and as a buyer of water for fish.

It is, of course, possible to push this too far. The different outcomes may be merely an historical accident; it may be that if pushed to the same extent by ESA, the

Idaho system would also break, and seek purely political solutions. As of this writing, the ESPA dispute between surface and groundwater users has not been resolved, but to date the system has not broken. The system has been sufficiently robust to create settlements in the face of crisis: current ESA requirements and tribal claims are the subject of a large scale negotiated settlement recently approved by the State Legislature, Congress, and other parties (IDWR, 2004b), and the Legislature remains involved in the ESPA dispute (IDWR, 2004a; “Sources of Dispute,” above).

This suggests something other than the superior political genius of Idahoans. On the Snake, water allocation was in the hands of the users from the beginning, and prior appropriation pre-dates the Constitution. When large scale Federal storage became part of the system, the allocation of stored water had to be integrated with existing natural flow rights; conflicts, together with occasional drought and demand growth, gave rise to a series of institutional responses by, and on behalf of, the water users. There has never been a central authority with the right to actually allocate water, as opposed to policing the system. Under environmental pressure (NEPA, ESA, etc), and demands from Indian nations for treaty rights, settlements have been negotiated and a large-scale adjudication has taken place. While political institutions have been involved, they have done so as parties or interested third parties, not as authoritative allocators.

From a transactions cost viewpoint, the Snake experience can be considered a case study in *post-hoc* ordering, with the parties to a contract changing contract terms when circumstances change, by non-judicial means (Williamson 1985: 20-29). This is possible on the Snake, because the rights distribution allows owners to negotiate directly with each other, the Legislature, IDWR, and Federal agencies (Slaughter (Chapter II)). The public role has been to reduce transactions costs by enforcing the rules and efficiently providing information (on aquifer flows) not otherwise available. These outcomes are more difficult on the Klamath, where decision authority resides in the Bureau of Reclamation, bureaucratically subject to other Federal mandates (e.g., ESA. Allegra, 2005), and full conjunctive management is cost-prohibitive. To affect the decision process, water users have had to use political tools, reaching to Congress in the first instance (Kitzhaber, 2001).

Two related hypotheses can be offered for further research. First, that water markets are a beneficial, and perhaps the most efficient, means available for moving water between users and between one major use and another; and second, that such markets are most likely to develop in systems that exhibit robust ownership on the part of water users, with the public role focused on reducing transactions costs.

While there is considerable literature on water markets and on the shortcomings of prior appropriation, there has been little focus in the water literature on the underlying institutional structure – the distribution of bundles of legal rights (Coase, 1960; North, 1990) – in which markets exist. Recent research (e.g., Clifford, 2004) focuses on the design of markets or water banks, or on markets as a tool for water resources management. But as noted above, many discussions appear to assume that 1) movement to environmental uses is an unqualified good, and 2) ownership of water formally lies with states (or the public), so that re-allocation is a matter of policy and not of law. The

former assumption pre-supposes social policy and the latter, while nominally accurate, ignores the vast body of case law supporting prior appropriation. Future research might more profitably focus on water markets as institutional structures and the legal context in which they can be most effective.

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3. A Transactions Cost Approach to the Theoretical Foundations of Water Markets*

Richard A. Slaughter

Introduction

Diversion rights to water in the western United States have been allocated over the past century and more through what is known as the prior appropriation doctrine. Under prior appropriation, water is appropriated in perpetuity by he who first diverts water for a beneficial use, and receives an assigned priority in the order of the claim. The right is subject to several constraints in most states, including ongoing use by the original appropriator or his/her heirs or assigns. Because early uses were primarily mining and agriculture, most western water sources have been appropriated for those uses. Today, while agriculture in particular remains a large water user in the western United States, diversion rights are subject to demand pressure from growing populations, industry, and changing social preferences. In addition, climate change has led to increased stress from longer and more severe drought.

Given that the waters of most western basins are already fully appropriated, and that changing economics and social preferences create pressure to reallocate water from its earlier uses, how is the task to be accomplished?

This paper addresses whether water can most efficiently be reallocated through a policy approach, by competitive markets, or through some third arrangement; the role of property rights in answering that question; and from a transactions cost perspective, the fundamental features of a viable transfer mechanism.

In a 1959 article (Coase, 1959), R.H. Coase put the following proposition:

“Whether a newly discovered cave belongs to the man who discovered it, the man on whose land the entrance to the cave is located, or the man who owns the surface under which the cave is situated is no doubt dependent on the law of property. But the law merely determines the person with whom it is necessary to make a contract to obtain the use of the cave. Whether the cave is used for storing bank records, as a natural gas reservoir, or for growing mushrooms depends, not on the law of property, but on whether the bank, the natural gas corporation, or the mushroom concern will pay the most in order to be able to use the cave.”

In the context of water law and prior appropriation, to what extent does the initial appropriation of water by a user, for a specified beneficial use, determine the future use of that water? Does the underlying legal structure (prior appropriation) have to be abolished or rescinded to accomplish reallocation, or do property rights created under prior appropriation provide sufficient basis for ongoing transfers between uses and users?

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Approaches found in the literature

Much of the literature on water reallocation and the prior appropriation doctrine treats reallocation as a public policy decision, implicitly assuming that public authorities are empowered to determine who has access to water and for what purpose. For many writers, some working from a public trust perspective, the prior appropriation doctrine is an impediment to be removed so that a more enlightened or community-based process might take its place (Pisani, 1996; Wood, 2007). There would appear to be three basic approaches to the reallocation:

1. Claim of public ownership, and claim of federal ownership of water in Bureau of Reclamation projects

Several state constitutions declare water to be the public property of the state (e.g., Idaho: Article XV, Section 1; California: Article X, Section 5; Colorado: Article XVI, Section 5), and also provide that “the right to divert and appropriate the unappropriated waters ... to beneficial uses, shall never be denied.” In most states, this language provides the legal basis for appropriation and state jurisdiction over appropriation and transfers.

For some, the language provides the basis for a view that because water is public property, its allocation is a matter for public process determination, and thus, ongoing politics (Pisani, 1996; Clifford *et al.*, 2004). There is also a developing body of case law making water allocation and use subject to several Federal Acts through Federal agency jurisdiction (*Klamath Irrigation District v. the United States* (2005)), and the Federal government exercises policy impact on areas such as navigation, reserve rights, water quality, and species protection. The Interior Department Solicitor, following the ruling in *Nevada vs. United States* (1983) opined that legal title to water in irrigation projects developed under the 1904 Newlands Reclamation Act lies with the U.S. Bureau of Reclamation, having been obtained through appropriation under the laws of the individual states (Interior Department Solicitor, 1983).

Beneficial title, however, was noted by the Solicitor to lie with the landowner-irrigator. A line of Supreme Court cases has held that the right to beneficial use of water, which approaches the standing of a property right, resides with “he who first put the water to beneficial use” (*Ickes v. Fox* (1937), *Nebraska v. Wyoming* (1945), *Nevada v. United States* (1983)).

The view that the user has no property right but only contract rights to fair treatment finds support from some commentators (Sax, 1967) as well as the above-cited Federal Court of Claims decision (*Klamath Irrigation District v. the United States* (2005)). However, “the ... predominant view ... appears to be that beneficial ownership is a true ownership interest, in the property law sense.” (Fereday, et al., 2004).

2. Regulatory approaches to reallocation

A regulatory approach to water reallocation is, on its face, attractive from the standpoint of social equity and efficiency. Commentators frequently decry the failure of markets for allocating water, and conclude that the best option is to entrust a public agency with the job (Dellapenna, 2005).

Two Model Regulated Water Codes (Riparian and Appropriative) hold out a means whereby allocation can be accomplished through a system of state permits overseen by expert agency personnel (Dellapenna, 1997, 2007). In an attempt to serve both efficiency and equity, however, the Codes contain provisions that are necessarily politically contentious. Both codes appear to anticipate that non-political agency personnel will be capable of balancing social and economic interests, in the absence of clear, legislatively-based policy prescription. Indeed, the editor of the model codes has stated “What works best . . . is to treat water as inherently public property for which basic allocation decisions must be made by public agencies” (Dellapenna, 2005).

By arguing that “basic allocation decisions must be made by public agencies,” Dellapenna appears to beg the question of how underlying policy is adopted, as well as ignoring existing property rights claims. On the Klamath River in Oregon and California, even with clear policy prescription in place (an Endangered Species Act (ESA) - required Biological Opinion), the exercise of agency authority resulted not in smooth reallocation but in high-level political intervention on behalf of the dominant economic interests (Slaughter and Wiener, 2007). In economic terms, agency personnel are necessarily agents, not principals. As such, while they can make expert determination of fact and apply established rules, they cannot make the underlying social determinations.

3. Markets based on well-defined property rights

While provisions of the prior appropriation doctrine can frustrate changing social policy preferences, the ownership created thereby provides the basis for the large-scale investment required for efficient water use. As one commentator put it: “Western prior appropriation law is a property rights-based allocation and administration system, which promotes multiple use of a finite resource. The fundamental characteristics of this system guarantee security, assure reliability, and cultivate flexibility. Security resides in the system's ability to identify and obtain protection for the right of use. Reliability springs from the system's assurance that the right of use will continue to be recognized and enforced over time. Flexibility emanates from the fact that the right of use can be transferred to another, subject to the requirement that other appropriators not be injured by the change.” (G.J. Hobbs, 1997: 2).

This paper takes the view that a property right sufficient to enable the beneficial owner to control returns from diversion and use of water is a necessary condition for reallocation through market mechanisms.

A framework of for discussion of water markets

Several articles in the literature discuss the creation and use of water markets. Some address desirable reforms of prior appropriation to support markets (Huffaker, *et*

al., 2000; Hamilton et al., 1989), and some treat markets as a novel idea (Clifford, *et al.*, 2004). Many rudimentary markets exist in the several western States, attempting to address a wide range of issues (Clifford, *et al.*, 2004; Chong and Sunding, 2006; Houston, 2002). Most were created in response to specific situations or to promote environmental objectives. Transfers arranged through the California Drought Emergency Water Bank in 1991 and 1992, and current water purchases in the Klamath basin by the Bureau of Reclamation are examples of governmental use of water purchases for temporary reallocation, but are not markets and should not be characterized as such.

This discussion works from a transactions cost perspective to ask what institutional bases of markets - and the processes whereby those institutions are created and altered over time - best support marketing and use of water, or other public-domain resource?

Property rights and the nature of contract

A contract is an agreement that allocates benefits and responsibilities to the various parties. Expanding on the social contract theorists (Locke, 1689; T. Hobbs, 1651; Rousseau, 1762), we can think of contracts at many levels, including an underlying unwritten understanding between members of society who share a common social and legal system.

The social contract is considered here to be an informal, evolving social understanding with regard to mutual responsibilities and the nature of government. Such contracts can evolve and be enforced over an indefinite time period through continuous, informal negotiation (“private ordering”) among the parties in response to need; parts of the contracts may occasionally be subject to adjudication (North, 1981, Ch. 3).

The property rights literature indicates that ownership matters, ownership being the right to use, to appropriate returns, and to change the form and/or substance of an asset (Williamson, 1985, p. 27). The concept is clear: few people will invest in an asset whose returns are controlled by an external third party, unless the third party is itself controlled through political means. Applying this concept to water institutions, rights allocation must be such that parties have an ownership stake, have investment at risk, and have contract rights sufficient to significantly impact allocation decisions.

The property rights literature also assumes that judicial enforcement of contract rights is efficient – that contract disputes are usually, and most efficiently, resolved through legal action (Williamson, 1985, p. 28, 29). In the judicial process, the underlying standard is the original contract, or constitutional or legislative provision, with little room for changes in context or preference. Over time, however, the values that underlie the original agreement (e.g., constitutional provision for water appropriation) change, but a formal re-negotiation, involving society as well as the immediate parties, may not be economically feasible.

From this perspective, judicial enforcement of agreements is not efficient, leaving most dispute settlement to take place through private ordering. In such a world, bargaining is pervasive, and *ex post* (after the original arrangement, legislation, or

contract) institutions matter (Williamson, 1985, p. 29). In practice, while many features of water law are honed through judicial actions, underlying decisions regarding resource allocation are taken through an on-going dance involving water users, environmental and other non-ownership interests, legislatures, State water agencies, and others.

Over time, western water users in most states have modified the terms of their contract, as circumstances have changed and new stresses arisen. At times, these modifications have altered the prior appropriation doctrine itself, such as broadening beneficial use to include in-stream uses, water banking, and underground storage for recharge.

In this discussion, “private” does not mean the exclusion of public entities, but that alterations are the result of negotiation, however carried out, among parties with ownership interests in the contract, and not by unilateral action of a public agency. Revisions to an original contract may involve sanction by a public entity, and be codified through revisions of the law, e.g., the definition of beneficial use, appropriation of in-stream rights, movement or sale of water out of basin or out of state, and other provisions. A recent Idaho negotiation that altered the nature of prior appropriation on the middle Snake River required approval by the State Legislature and Governor, Congress, the President, the state water resource board, a water users’ association, an association of environmental groups, and a Native-American tribal council. Among many other provisions, the agreement accomplishes the transfer of up to 527 thousand M³ (427 thousand acre feet) annually from irrigation to provide flow augmentation in the middle Snake River for salmon (Nez Perce Water Rights Settlement, 2004).

A transactions cost approach to water institution design

Transactions costs are the costs associated with contracting: obtaining information and enforcing contract provisions. Such costs are not trivial, but their consideration is frequently absent from neoclassical economic analysis (economists are aware of these costs, but assume them away for purposes of theoretical clarity).

Literature that has grown out of Ronald Coase’s path-breaking 1960 article, “The Problem of Social Cost,” (Coase, 1960; Coase, 1988, pp. 95-156) illustrates the implications of transactions costs for neoclassical economic theory in the real world, and in consequence, the effects of institutional structure on the nature and scope of possible transactions (Coase, 1988; North, 1990; Williamson, 1985). Coase demonstrated that in the absence of transactions costs, the initial distribution of bundles of legal rights between parties to an exchange would not matter. Under those circumstances, the parties would costlessly negotiate preferred outcomes in full consideration of potential payoffs and limitations.

Coase undertook the proof not to demonstrate that zero costs were possible, but to show that because costs are universally positive, bundles of legal rights, or institutions, do matter. In a world of positive costs, the world we live in, institutions matter because institutions affect information and enforcement costs (Coase, 1988, pp. 114-115).

One effect of positive transaction costs is the existence of externalities, social costs that cannot be reflected in a competitive market, causing the value of production to be less than optimal (Coase, 1988, p 158). Examples include pollution from the burning of gasoline in automobiles, and global warming from burning fossil fuels for energy. Within a drainage basin, externalities can include water supply impacts on downstream users from the transfer of a water right upstream, and in a State with “Rule of Capture,” the near-absolute right to pump water underneath one’s land. Groundwater pumping by one user lowers the water table accessed by many others, depending on basin hydrology.

Positive transactions costs reduce optimal allocation in two ways: first, by preventing otherwise-optimal transactions, and second, by shifting costs from the parties to society (externalities). In a drainage basin, shifting the diversion location may negatively impact a third party. Depending on the state, the injured party may either be able to stop the transfer entirely, or be unable to avoid injury. Either outcome prevents optimal allocation. Pumping from an aquifer in a state with Rule of Capture may injure tens of thousands of other individuals, many of whom may own rights in other states, who have no ability to enforce their rights and may have no knowledge of the withdrawals.

Institutional arrangements, such as governance and financial markets, can enlarge the set of possible transactions by reducing costs. This is true even though the institutions carry substantial costs in themselves. Instruments such as insurance further reduce costs by spreading the risk of unknown events (an information cost), thereby reducing the risk cost for some transactions to a level below the expected return. Douglass North has shown that government – a social institution with decision-making capabilities and having a monopoly on the legitimate use of force – reduces costs by enabling society to accomplish defense, security, and other agreed public ends without endless negotiation, and without privately-arranged contract enforcement (North, 1990).

Considering the overall payoff matrix – the distribution of transaction costs and benefits to the parties, and beyond the parties to society as a whole – the lower the level of transactions costs, the lower the differential between private cost and social cost (Coase, 1988, p. 158). Colby (1990) examines “publicly imposed transactions costs” as a means of moving externalities into the market through policy action, possibly because the paper does not consider property rights enforcement a transactions cost. This paper takes the opposite view: that even though an individual transaction may be more costly to the parties with rights enforcement than without, it becomes less costly to society, thus reducing externalities and moving closer to optimal allocation.

More recently, the drastic reduction of information costs made possible by the Internet (self-governing communications protocols and standards) and communications technology has led to a vast expansion of possible transactions. This expansion has in turn contributed to a major global productivity increase, accompanied by shifting of the locus of production for many goods and services (frequently called “outsourcing”). As management and information costs fall, production that was previously localized because of cost barriers has re-located, resulting in higher overall production and welfare, from the same resources. Earlier in the 20th century, the post-WWII international economic

system – IMF, World Bank, a succession of trade agreements under GATT – generated much of the Post-WWII prosperity by reducing the cost of negotiating and enforcing contracts. In general, as innovations have reduced transactions costs, the economically feasible subset of all potential transactions has grown.

The challenge of resource allocation

Whatever one's preference for either the mechanics or outcomes of resource allocation, there are three challenges that must be met if the effort is to be successful. The first stems from the state of knowledge about the future, the second from underlying human behavior, and the third from the nature of the asset to be allocated (Williamson, 1985, p. 31). As noted, this discussion treats allocation as a matter of contract, not as a policy issue reflecting political arrangements.

Constrained future knowledge

The first challenge is the extent to which the future is known or foreseeable. Some future events are knowable, at least for a near-term future. The US population absent migration, for example, is predictable for about 20 years into the future, because most of those who will be here then have already been born, and mortality rates are reasonably constant. Migration is not knowable, but for a large population can be predicted within reasonable errors for that period of time. For a longer time period impacted by climate change, say 100 years, population is far less predictable, as are other socio-economic variables, technology, and many physical variables including climate itself. For that reason, the International Panel on Climate Change (IPCC) periodically adopts socioeconomic scenarios, potential outcomes without assignment of probability, instead of forecasts.

Opportunism

The second challenge is the tendency of individuals to engage in opportunistic behavior. All contracts normally expect the parties to engage in simple interest-seeking on the basis of known information. Opportunism is the very human tendency to go beyond simple interest-seeking, to take advantage of asymmetrical information or opportunity, including incomplete or distorted disclosure. It can also include more odious forms of behavior, and may be active or passive, before or after the contract.

For many years prior to passage of the Securities and Exchange Act of 1934, insider trading and market manipulation were considered sound business practice; companies did not publish financial reports (B.M. Smith, 2001, p. 25-30). Similarly, during drought a farmer may extend his well further into the aquifer to gain an advantage at his neighbor's expense. Clearly, if all water users did likewise, any shared use of the resource would collapse.

The effects of opportunistic behavior can result from failure to adequately specify property rights (both constraints on, and protection of, the right), and from adopting reforms with future effective dates. In many states, ground water is either not regulated

or is not conjunctively managed together with surface sources (Glennon, 2002). In Arizona, water law reform in 1980 prohibits appropriation of groundwater in excess of natural recharge, beginning January 1, 2025. Holland and Moore find that the future restriction on groundwater withdrawals will increase the rate of withdrawal prior to the effective date of the restriction (Holland and Moore, 2003). In Texas, while surface water is governed by prior appropriation, groundwater is governed by the Rule of Capture, under which landowners have an absolute right to pump water from under their property. Several normal constraints of prior appropriation – that the diversion right is limited to the requirements of the beneficial use, that third party injury be avoided, and that water not be wasted – do not apply. In one case, a partnership has purchased land above the Ogallala Aquifer, proposing to pump water drawn from it to San Antonio and other cities. Water may be withdrawn at rates up to 1.23 million M³ (1,000 acre feet) per acre, or 60 billion gallons per year from 81 hectares (200 acres) of land. The subsurface water flows to the partnership's land from other areas in Texas, Oklahoma, and potentially as far north as South Dakota (Glennon, 2002, Ch. 6; Public Citizen 2008).

Asset specificity

The final challenge is presented by *asset specificity*, which refers to the unique nature of the asset itself. Water in nature is unique in many ways, including that it may or may not exist at any given location at a given time. In western parlance, it is also “fugitive,” able to run away down a water course, seep into the ground, or evaporate back into the air. Knowing the average precipitation or average flow at a particular point does not tell you what there will be next year, nor the flow a few miles down the river.

Colby *et al.* found that prices for water vary across a region in part due to the “specific attributes of the right” (Colby, *et al.*, 1993). Blackstone perhaps best captured both the specific nature of the asset and the use constraint on the property right: “Water ... is a moveable, wandering thing, and must of necessity continue common by the law of nature; so that I can only have a temporary, transient, usufructuary right therein: wherefore if a body of water runs out of my pond into another man's, I have no right to reclaim it. But the land, which that water covers, is permanent, fixed, and immoveable: and therefore in this I may have a certain, substantial property, of which the law will take notice, and not of the other” (Blackstone, 1765-69: Book 2, Chapter 2, p. 18).

Any allocation scheme must be able to handle the consequent variation in water availability and value. This is one reason for the design of prior appropriation, the dominant legal structure for water in the western U.S., where water scarcity makes unworkable the riparian doctrine, common in the Eastern United States where rainfall is much higher. The property right relates to a priority right to divert, and is usufructuary, meaning that *the right is to use water when it is available*, and not to hoard or waste it. It takes the form of a queue, in which those first in line may fulfill their entitlement before those behind them receive any. The security provided by one's place in the queue is a fundamental contributor to the value of the right. The lack of obligation to share is one of the major complaints about prior appropriation, but at the same time allows users to calculate the hydrologic and climate risk of insufficient supplies without the complexity of political risk.

Dealing with the challenges

To deal with the three challenges, Oliver Williamson identifies a universe of four decision models, each of which responds differently to the set of challenges (Williamson, 1985). The optimal model depends on the characteristics of the market and the assets in question (Table 1).

Table 1. Resource Allocation Models

Contract Model	Behavioral Challenge (can the model accommodate)		
	Constrained future knowledge	Opportunism	Asset Specificity
Planning	No	Yes	Yes
Trust	Yes	No	Yes
Competition	Yes	Yes	No
Governance	Yes	Yes	Yes

Planning

A contract can be based on *a priori* planning, in which case the relevant risks are assigned and appropriate means to resolve conflict are identified, as in a mortgage contract. Information about the future is not constrained to a degree beyond that which was anticipated in the original contract terms. Even very long term contracts may be feasible, as in the British 100-year lease on Hong Kong. The Chinese government honored the lease through to its conclusion in 1997, and the British government honored its obligation to cede Hong Kong back to China. These obligations were honored despite two revolutions in China that drastically changed that country's political system, and a fundamental shift in Britain's position in the international power structure, during the interval.

With water in the western United States, such is not the case. When the legal infrastructure supporting western development – prior appropriation and the Homestead, Mining, Carey, Reclamation, and Warren Acts – came into being between 1862 and 1911, the agreed social priority was development. The various Acts and the Federal agencies created to implement those acts reflected public opinion. Today, the legal infrastructure still exists, but public priorities have changed. The Clean Air, Clean Water, and Endangered Species Acts are testimony to that changed opinion, but must be implemented by 19th and early 20th century institutions created for other purposes. The planning behind the Bureau of Reclamation, the Bureau of Land Management, the Forest Service, and the Corps of Engineers did not, and could not have, anticipated the later Acts. As illustrated in the Klamath Basin in 2001, long term central planning may not be

up to the adaptive task when social priorities or physical circumstances change over time (Slaughter and Wiener, 2007).

A planning model assumes the absence of constraints on relevant information, i.e., that future events of significance are knowable. This is a heroic assumption. For farmers in the Bureau of Reclamation Klamath (Oregon) Project, their contract provided that Reclamation would deliver water when available, except in cases of *force majeure*, unforeseeable events such as earthquakes or volcanic eruptions that might prevent water delivery (Slaughter and Wiener, 2007; Braunworth, 2002). The term “force majeure” could not, at the time, have included changing social priorities. When the courts, some 95 years later, determined that Endangered Species Act constituted a *force majeure* event, the irrigation customers, having not anticipated that risk, moved immediately to the political arena.

On the other hand, a planning model, because obligations are prescribed and an efficient public judicial process is assumed, handles both opportunism and asset specificity well. A planning-based contract takes those characteristics into account.

Trust

A second contract model is based on trust. In this situation, the parties tacitly understand that none will take undue advantage of changed circumstances at the expense of others. It works, particularly with regard to constrained future knowledge and asset specificity, when the parties are subject to strong informal institutional constraints such as may be found in a tribal village or among the elite classes in Britain or Japan, reputation being all-important. Despite calls in modern cultures for greater social trust and harmony, a trust model does not work well where there is significant social, physical, legal, or cultural distance between the parties. With limited exceptions to the contrary, most economic progress has resulted from institutions created specifically to overcome the inability of trust to control opportunism – including banks, insurance, judiciaries, and limited executives (North 1990, Slaughter 2002).

A trust model does not require comprehensive knowledge in advance of the contract because of the nature of the underlying relationship. Participants can depend on others to not take advantage of changed circumstances, but to work things out on the basis of known self-interest. The model works well where the requisite conditions are present. On the other hand, cultures where trust is the primary basis of business intercourse tend not to grow beyond the boundaries of persons known to each other (e.g., southern Italy, tribal cultures). North makes clear that the industrial revolution could not have occurred until institutions to support wide-ranging trade and scale economies were in place (North, 1981).

Arrow notes that the “efficacy of alternative modes of contracting [varies] among cultures because of differences in trust” (Arrow, 1969, p. 62, cited in Williamson, 1985, p. 9). Fukuyama describes the consequences of varying levels of trust between high and low-trust societies, focusing on contract enforcement as the primary transactions cost, to

the exclusion of information (Fukuyama, 1995). Common cultural links, where they exist, make it possible to deal collaboratively with a highly specific asset.

There are limits, however; the presence of opportunism can be fatal to trust-based arrangements, even in the most close-knit communities. The son of one pioneer family remembers it this way:

“In the late 1940's I would walk to the diversion box with my grandfather to take our irrigation turn. Sometimes this was in the day, sometimes in the middle of the night with the light of a Coleman lantern. This was in a small Mormon town in northern Utah of less than 1,000, where everyone know everyone else, [and all but one family] attended the same [Mormon] Church Ward. When we would go divert the water to our land my grandpa always took with him a loaded .32 special rifle. As I remember there was never anyone else around and never any trouble. ... However as a young boy raised in a law abiding and conservative Mormon rural town the message was clear. There was something different about water. Water transcended other commodities as well as the civil order of our lives. This imprint has lasted a lifetime and it is impossible to understand the social and economic importance of water to western society without this depth of understanding. Access to water in the arid west cannot be compared to other commodities in the ordinary meaning of economic goods. And because arid western economies could not exist without access to scarce water resources it forms the foundation of these societies ” (Don Reading, unpublished memoirs, Boise, Idaho, 2000).

In another instance, an historian relates the case of an Idaho farmer killed with a shovel by a co-religionist neighbor during an early morning confrontation over a headgate (Fiege, 1999, pp. 81-83). In Mark Twain's words, “Whiskey is for drinking. Water is for fighting over.”

Competitive markets

The third means of enforcing contract terms and handling changed circumstances is a competitive market in which, following Adam Smith (A. Smith, 1776), the parties automatically enforce the rules, through their individual responses at the margin to changed conditions. For a market to work, costs imposed on society by one individual's actions must be reflected in prices and conditions faced by other market participants; that is, costs must be internal to the market. Changed circumstances and opportunistic behavior are not a problem as long as information is fully available to all participants. Each can change his/her behavior at the margin, and no monopoly may exist. Sunk capital, of course, may temper adjustment in the short term: existing roads, the lack of public transit, and widely dispersed housing limit individual abilities to immediately respond to rising energy costs, for example. Over time, however, different choices as to automobiles, housing and employment location, public transit, and other variables can and will be made.

A competitive market on the neoclassical model handles both constrained future knowledge and opportunism well, provided that the asset in question is reasonably

homogeneous and traded in a broad market. Changes in conditions lead to price adjustments at the margin, which lead directly to adaptation. Opportunism is automatically constrained, because all parties have access to the same or similar products from multiple vendors, provided the market is reasonably transparent. Thus, no customer must accept the price of any one vendor, and no vendor must yield on price to a single customer.

Asset specificity is not handled well by competitive markets, because the very uniqueness of the asset to be traded (e.g., water diverted from its natural source in a given location or quality) violates the requirement for competing buyers and sellers.

Governance

The final option is governance, wherein a collective or public entity acts as referee in an allocation process, but does not control outcomes. The governor/referee helps to specify rules as necessary, enhances transparency, and enforces contract terms, as decided through legislative, judicial, agency, or consultative processes. Governance in this manner provides the mechanism through which society may attempt to imitate the outcomes of a competitive market while reducing externalities.

Utility regulation provides a reasonable analogy. While public utility commissions set rates, they do not do so arbitrarily. Policy criteria for the standards to be applied (e.g., lowest price to the ratepayer, incorporation of environmental costs, etc.) are set in advance by state legislatures and Congress. Commissions then consider utility revenue applications with regard to capital structure, allowable return on invested capital, expenses undertaken on behalf of ratepayers, plant to be included in the rate base, and allocation of costs to customer classes. In contrast to the role proposed by Dellapenna (Dellapenna, 1997, 2007), utility commissions and their staffs do not normally make policy with regard to the social ends to be served.

Application to water

Water exhibits constrained future knowledge, opportunism, and asset specificity. Contracting *before the fact* is made difficult by climate variability, demand growth, new uses, and changing social preferences. Thus, planning models are unlikely to be successful.

A trust model will have limited application, due to opportunism that is necessarily present with an asset-specific resource. A neoclassical market is not possible, if only because water diversion must be very specific in place and time for surface users, and only slightly less so for ground water users. Information on market values, normally obtained from multiple transactions between many buyers and sellers, will not be available because the market is in fact many small markets, each constrained in time and place (Colby *et al.*, 1993).

The combination of asset specificity, knowledge constraints, and opportunism normally requires some level of governance. The presumption of constraints on knowledge of the future, however, excludes governance of a planning nature, and the

property rights literature reminds us that ownership matters. Thus, an efficient solution in the presence of asset specificity must incorporate a large measure of ownership on the part of participants, coupled with a governing presence to enforce the rules. Such an institutional arrangement will be characterized by a large measure of private ordering, *post hoc*, through which the participants continuously innovate to deal with stresses on the original contract due to drought, population growth, changes in social preferences, and other sources.

Discussion

Now return to consideration of R.H. Coase's cave, and whether the initial assignment of legal rights determines the future use of that asset.

The cave proposition led to Stigler's assertion of the Coase Theorem (Stigler, 1966, p. 113, cited in Coase, 1988), which Coase defined as "with zero transaction costs, private and social costs will be equal, ... [and] social value will be optimized." (Coase, 1988, p. 158).

In the real world, where transaction costs are always greater than zero, who owns the cave clearly does matter, at least to the claimants, and private and social costs are frequently not equal. But does existing ownership matter for the purpose of optimizing social value, if that optimization requires that a different entity own the cave (or water)?

Coase's answer is that the existing ownership does not matter, so long as the law determines with whom prospective users must deal, and the quality of their property right after making the deal. If the property right is sufficient to the purpose (and if the characteristics of the asset are such that it can be traded), then social value can be optimized at any time.

Further, if optimization requires that the asset be transferred from a private to a public use, it does not matter from the standpoint of overall social cost whether the transfer is effected by means of a tax on the existing rights holder or by public purchase from the existing rights holder. The only difference is in with whom the public contracts for use of the water (Coase, 1988, p. 157). Clearly, it does matter to the existing rights holder, and quite possibly to the specific public budget(s) involved, but aside from jurisdictional questions, it need not matter to society as a whole. Total social costs (including all private costs) are the same whether the asset is paid for or confiscated. If the institutional support is adequate, 19th and 20th century allocations to mining and agriculture can change going forward without resorting to means that might be considered the taking of a private interest for a public purpose.

In this insight lies the import of property rights in water diversion, and the import of getting governance right. Applied to the Texas case, is the ability of an individual landowner to mine water from the Ogallala Aquifer a failure of policy, of markets, or of property rights?

Pumping groundwater in excess of the rate of replenishment has opportunistic effects, even if it is both legal and the information on which it is based available to all.

This result is due to the physical nature of groundwater. Assuming that the physical reality is that unlimited pumping will eventually exhaust the aquifer, how is that outcome to be avoided?

An attempt to bring private costs into line with social costs through policy – legislative or “expert” assignment of rights to use water - would entail a potentially endless process of public input and legislation. The outcome of such a process would be highly contentious, politicized, inefficient, and constantly subject to revision as in the Klamath experience (Slaughter and Wiener, 2007).

Competitive market solutions under current law are impossible, because the social costs of Rule of Capture water sales are external to the market: the water is free to the pumper, even though his actions reduce not his own reserves but those of other pumpers in his own and other states, while overall scarcity of clean water makes the commodity valuable in the market. The only market response available to others is to do likewise, thereby gaining as much value as possible before the resource is exhausted.

A trust model exhibits similar shortcomings: it does no good for Oklahoma or Colorado farmers to trust Texas landowners to observe their interest, because they have no market or legal hammer to wield.

The problem comes down to the property right not being defined in such a way that the currently externalized costs are brought into the market. In this case (in contrast to Idaho, and Arizona from 2025), Texas does not view subsurface water as a common pool resource with surface water, limiting withdrawals to the natural rate of recharge. Texas need not confiscate existing rights nor plan for the currently and politically desirable end uses of water, using policy to correct a perceived case of market failure. Texas need only constrain the property right in ground water to the natural rate of recharge, going forward, in order to prevent waste, to properly value water, and to promote optimal utilization.

Further, following from the Coase analysis, Texas can acquire existing rights through purchase rather than regulatory taking, without imposing additional costs on society. Exactly that path has been followed in Idaho, where the Idaho Water Resource Board, in combination with the Bureau of Reclamation has acquired consumptive rights from large irrigation projects for the purpose of enhancing river flows for salmon. One of these agreements reduced diversions by nearly 122 million M³ (98,000 acre feet) annually, removing irrigation from 10,000 hectares of land (Bell Rapids Letter of Intent, 2005 (available from author); Nez Perce Rights Settlement, 2004). Another, with the U.S. Department of Agriculture (USDA), has placed up to 40,000 hectares into a groundwater conservation reserve, freeing up 250 million M³ (200,000 acre feet) for fish and hydropower (USDA Conservation Reserve, 2006).

The level of institutional support for rights transfers matters, because in most states it is easy to challenge a transfer under prior appropriation provisions, and difficult to quantify injury for the purpose of mitigation. Facing high hurdles, few transfers are attempted.

J. R. Lund found that when state action reduced the risk of a water transfer being unsuccessful, more transfers tend to be undertaken (Lund, 1993), suggesting that states undertake to more firmly assign property rights, make transactions more transparent, and disseminate information on market conditions. These actions all work to reduce both information and enforcement transaction costs.

Work by the Idaho Department of Water Resources (IDWR) and the University of Idaho's Idaho Water Resources Research Institute (IWRRI) over the past quarter century has served to significantly reduce transfer costs for groundwater on the Eastern Snake River Plain Aquifer. Policy actions and research have included adoption of transfer protocols and procedures, limitation of transfers to the consumption, not diversion, right (irrigation consumption, or evapo-transpiration, normally constitutes from 30 – 80 percent of water diversion, depending on irrigation technology), and hydrologic modeling that allows calculation of the mitigation required to prevent injury to other water right holders. The latter eliminates the practical requirement that buyers prove no injury, shifting the calculation to the state, and thereby significantly reduces barriers to transfers. A hydrologic model resulting from collaboration between IDWR and IWRRI allows calculation of the 100 year flow effects of moving groundwater extraction from any one of 11,000 grid cells on the aquifer to any other, and to fourteen reaches of the Snake River (Cosgrove *et al.*, 2006; Dreher and Young, 2002).

Further work by the model's authors indicates that when there are many transfers, only the net differential need be mitigated instead of requiring full mitigation for each transfer (Johnson *et al.*, 2008). With the addition of an accounting system to track and assign ownership to hydrologic effects, a market in hydrologic credits becomes possible. At that point, effects are largely internalized and efficiency improved (Johnson *et al.*, 2008, p. 35).

Characteristics of institutional support for water marketing

Based on the prior discussion, an efficient water allocation structure might exhibit the following characteristics:

- (1) A basis for usufructuary diversion rights, sufficient to support investment and transfers. This has been defined as property rights sufficient to support owners' direction of use and returns from use. For most western states in the US, the underlying legal structure is an implementation of the prior appropriation doctrine.
- (2) One or more non-judicial, or quasi-judicial governing structure(s) to serve as referee(s) and administrative rulemaker(s), and to ensure transparent access to information on water transfers. Such institutions might serve under custom, mutual agreement of the parties, or color of state authority, with powers to make policy with regard to all water issues other than allocation itself. They might also monitor the application of the Clean Water and Endangered Species Acts, and other constraints on water rights (Colby, 1990), for purposes of enhancing market transparency. Surface and ground water should be conjunctively managed within

a basin. Geographic overlap and differing competencies as found in California and Washington State may be possible, though split jurisdictions would be expected to complicate administration.

(3) Hydrologic modeling sufficient to support calculation of potential injury to third parties resulting from a water transaction, on the basis of which mitigating measures can be determined. For the Snake River Plain Aquifer in southern Idaho, modeling by the University of Idaho is sanctioned by the Idaho Department of Water Resources (Cosgrove, *et al.*, 2006).

(4) Continuous *post hoc* ordering. *Post hoc* ordering occurs when parties with significant interest in an allocation arrangement possess sufficient ownership that they are able to change allocation (contract) terms through negotiation with each other, directly or through public institutions. They are distinctly not customers of a resource provider, with claims only to fair treatment, but analogous to those shareholders in a corporation who have sufficient ownership to affect major decisions. Issues addressed through *post hoc* ordering include changes to address new social preferences, demand growth, and other pressures: e.g., expanding beneficial use to include in-stream and aquifer recharge; changes to burden of proof with regard to 3rd party injury from transfers; conjunctive management of surface and ground water rights; accounting for water rights transfers; quality constraints; and reduction of barriers to transfers through hydrologic research and models to simulate transfer effects and surface/ground water interactions.

Conclusions

The role of governance is to reduce transactions costs, both of information and of contract enforcement. By accomplishing that end, barriers to optimizing transfers can be reduced, and externalities brought into the market. This benefit accrues to society, not necessarily to an individual transferor, since some costs would no longer be externalized.

Information costs can be reduced through means including improved transparency; hydrologic modeling; accounting for net effects of water transfers; and unified administration. Contract enforcement costs can be reduced through improved definition of the property right, including adjudication of all rights in the basin; conjunctive management, through which both surface and ground water are managed through a single structure; limitation of transfers to the consumptive component of the diversion right; and the addition of recharge, water banking, and in-stream as beneficial uses.

In sum, uniqueness of water in nature prevents the existence of classical competitive markets in water rights and leads to opportunism that makes trust a dubious institutional choice; unknown future changes of climate, population, and social preference make planning a litigious option. The most robust water markets will be found in systems with sufficiently specified property rights to support investment, sufficient hydrologic information to provide accurate analysis of third party effects, conjunctive

management of surface and ground water, and a governance structure capable of administering the rules while not determining outcomes.

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4. Idaho Water Transfers*

Michael C. Creamer

Introduction

Like other western states, Idaho experienced significant economic growth over the past fifteen years. During approximately this same period, Idaho also experienced several deep drought cycles. The most recent of these has been touted as a 1-in-500-year event that rivaled the most severe drought on record, which occurred in the early 1930s. Despite growing demand and periodic droughts, sufficient water generally has been available to satisfy existing and new water requirements. Two reasons for this are that Idaho is a relatively water-rich state when both its surface and ground water supplies are considered, and significant improvements in irrigation efficiencies have been implemented in response to drought that have helped conserve developed supplies, especially storage supplies.

Nevertheless, a general public perception seems to have emerged that Idaho is "water-short." This perception likely has been reinforced by recent determinations of several substantial federal and tribal water right claims in Idaho's Snake River Basin Adjudication (SRBA), and by imposition of flow augmentation requirements that essentially have reallocated up to 427,000 acre-feet per year of upper Snake River Basin storage to promote migration of endangered Pacific salmon. Declining spring discharges from the Eastern Snake Plain Aquifer (ESPA) also have created concerns about ground water supplies (see Budge, TWR #64 and Fereday, TWR #40).

The shortage perception has contributed to what may best be viewed as an "administrative drought" in which the Idaho Department of Water Resources (IDWR) has imposed moratoria and other constraints on ground water development in certain areas and implemented conjunctive administration of ground and surface water sources in areas where water rights have been decreed and can be administered by Watermasters in Water Districts. Because surface water sources have been fully-appropriated in most developed areas of Idaho, ground water has been the primary source of new water supplies for new uses since the early 1950s. The response to the administrative drought has been an increase in the number of transfer applications IDWR has received and processed, which seek to change the place of use, nature of use, or point of diversion of existing surface and ground water rights. The growing number of transfers being sought, and their increasing complexity and contentiousness, has prompted the IDWR to develop and update uniform transfer policies and processing procedures.

This article summarizes Idaho law and policy concerning water right transfers, including the IDWR's recently-updated Transfer Memorandum. The growing importance of mitigation as a means for junior users to continue diversions under existing rights and as a means to develop new water rights is discussed as well. As much as

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anything else, mitigation requirements have spurred the increase in Idaho water transactions and transfers and the need for uniform policies and procedures to process them. This article also touches on the importance of analytical tools - particularly hydrologic models - in Idaho water right transfers. Not covered are conveyances or assignments of storage rights in federal reservoirs or transfers using Idaho's water banks and storage rental pools.

Background

The Right to Transfer

In Idaho, the appropriative right in public water is a valuable real property right that can be conveyed together with, or apart from, the land to which it is appurtenant. In the case of *In re: Robinson*, 61 Idaho 462, 103 P.2d 693 (1940), the Idaho Supreme Court held that a water right can be conveyed 'separate and apart from the land on which it is used and may be made appurtenant to other lands so long as such transfer does not injure other appropriators." The transfer right is an incident of the constitutional right of appropriation. *First Security Bank of Blackfoot v. State*, 49 Idaho 740, 291 P. 1064 (1930) held: "One of the valuable incidents of [a water right] of which an owner cannot be deprived is the right to use it where he will and to change its place of use, providing always that by such use or such change in the place of use the rights of others are not adversely affected."

By statute, the Legislature has required the right holder to apply to the IDWR for review and approval of a transfer. Idaho Code §§ 42-222 and 42-108. Idaho statutes also provide for notice and an opportunity for protest and hearing by any person. Idaho Code § 42-222(4)(a).

Development of Transfer Policies and Procedures

The director must approve the transfer in whole, or in part, or upon conditions, provided:

- No other water rights are injured
- The change does not constitute an enlargement in use of the original water right
- The change is consistent with the conservation of water resources within the State of Idaho
- The change is in the local public interest. The "local public interest" is defined as "the affairs of the people in the area directly affected by the proposed use." See Idaho Code § 42-203A(5).

The most common water right transfers involve changing the nature of use (often from irrigation to commercial, industrial or municipal uses), place of use, period of use, and/or the point of diversion. Other water right elements that may be changed in a transfer, by request or by condition, include the season of use or priority date (typically by subordination).

Injury

What constitutes “injury” to a water right is largely a question of fact. However, at least as a matter of rule and policy, a distinction has developed in Idaho between injury in the context of priority administration (regulation) of water rights and in the context of new appropriations and transfers. In water rights administration, injury must be “substantial” or “material” before a junior right will be curtailed. The evaluation of materiality takes into consideration numerous factors, including whether the senior’s ability to accomplish his beneficial use will be impaired and the reasonableness of the senior’s means of diversion. In conjunctive administration — the regulation of surface and ground water together under the priority system — there are enumerated criteria to be used in this analysis. See *Conjunctive Management of Surface and Ground water Resources*, IDAPA 37.03.11.042.

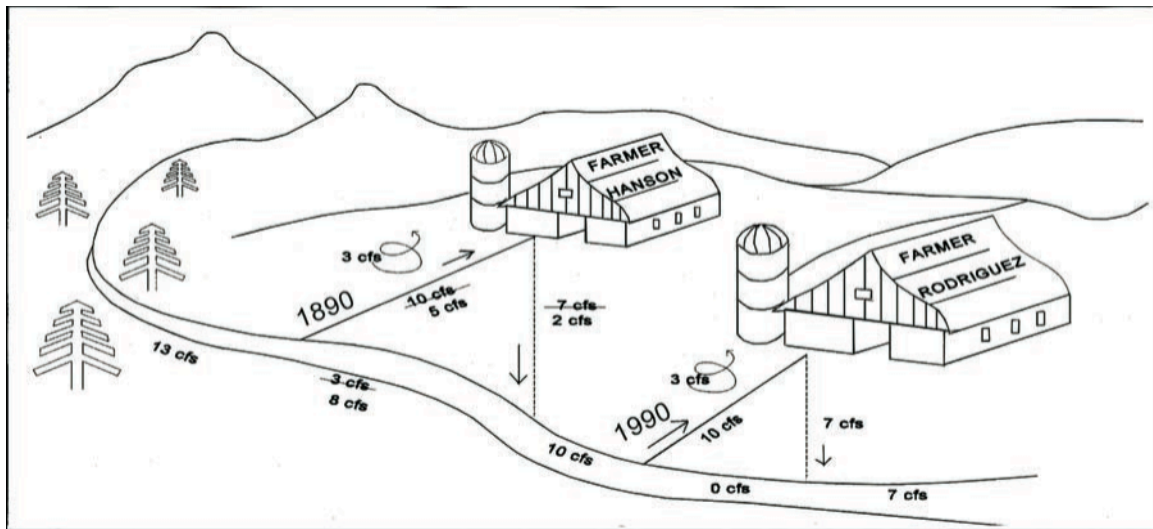
By comparison, when analyzing whether a *new* appropriation or transfer will cause injury, the IDWR’s position is that even where the depletive effect of a new appropriation or transfer is so small as to be immeasurable, if it is “real and determinable” it constitutes injury. See *In the Matter of Applications for Transfer No. 5174 in the Name of Dennis M. Baker and No. 5175 in the Name of Huf-N-Puf Trust*, Final Order (Nov. 25, 1998)(transfer); *In the Matter of Application to Appropriate Water No. 31878 in the Name of Bown Crossing LLC*, Preliminary Order (Feb. 7, 2005), and Final Order (Nov. 17, 2005)(new appropriation).

Juniors in the water system are entitled to the maintenance of conditions that existed at the time the junior users made their appropriation. The law has required that a transfer not reduce the “return flows” serving a junior right that are attributable to the historical use of the transferred right. When speaking of water diverted for irrigation, “return flow” is that water that percolates through the soil and returns to the water source after it has been applied to the land and gone underground to perform its nutritional function. In regard to other beneficial uses, “return flow” is that water that percolates underground and returns to the water source after having been applied to the beneficial use. Return flows that have returned to a water source are subject to appropriation by the public, and to the extent that they support a junior appropriation, no transfer of, or change in, the senior right can occur that would reduce those “return flows.” Consequently, the injury analysis in Idaho transfers traditionally has focused primarily on the effect on junior water rights and involved a fairly limited review of the transferred water right’s historical use, consumptive use, and timing and location of return flows. Senior users in the system, however, traditionally have been presumed to be protected by their priority. Now other factors, including potential impacts to seniors or to the public interest, are being raised more often in transfer proceedings. Complexities are compounded by the inclusion of minimum stream flows (rights) on the water rights rolls and the growing concern of senior storage spaceholders about their refill and carryover potential. In addition, the fact that more technical knowledge exists today about Idaho’s surface and ground water systems, means that more information can be brought to bear in analyzing transfers.

Hydrological Connections

In certain areas of the State, such as the areas overlaying the ESPA of southern Idaho and in the Treasure Valley of southwest Idaho, ground water transfer applications are accompanied by a hydrologic analysis showing transfer impacts on timing and location of return flows and depletions affecting junior and senior rights in hydrologically connected sources. In some cases where a well-developed hydrologic model is not available, and where the likelihood of controversy is high, an applicant may be required to develop one if he expects to have the transfer processed and approved.

The increased number of transfers and mitigation requirements for new appropriations, combined with their greater complexity, prompted the IDWR in October of 2002 to adopt an "Administrator's Memorandum" ("Transfer Memorandum" or "Memorandum") standardizing transfer processing policies and procedures. The 2002 Transfer Memorandum was superseded by an update in January 2009 to account for experience gained using the transfer policies in the interim and to address emerging transfer issues. IDWR also proposed additional procedures and mitigation policies in an attempt to streamline the transfer process and provide more information to applicants and the public.



In this illustration's example, although Farmer Hanson has a senior 1890 diversion totaling 10 cfs from the river, his historical water use results in consumption of only 3 cfs, with the balance of 7 cfs accruing as return flow to the river and supporting Farmer Rodriguez' 1990 diversion of 10 cfs. Rodriguez is entitled to have conditions on the stream remain as he found them in 1990 if the 1890 right is transferred. A transfer to change the place of use of Farmer Hanson's entire 10 cfs right would need to be conditioned to ensure the continuance of 7 cfs of return flow or to require replacement water as mitigation to the junior right. For the same reason, if Farmer Hanson decided to implement water efficiency measures that allowed him to reduce his diversion requirement to 5 cfs, he would not be entitled to use the 5 cfs of conserved water at another place of use. This would be an enlargement of the original water right, and would reduce the historical return flow from 7 cfs to 2 cfs. This would be deemed an injury to Farmer Rodriguez' 1990 right.

IDWR's transfer memorandum and mitigation policies

IDWR's October 2002 Transfer Memorandum standardized processing procedures that

previously were often implemented differently in the State's four administrative regions. In the past, transfer applications with vague supporting information or that were otherwise incomplete on their face might still be processed and approved with limited IDWR analysis if no protests were filed. Idaho Code § 42-222 contemplates, among other things, that a water right transfer must satisfy non-injury and non-enlargement requirements and be consistent with the conservation of water resources within the State and with the local public interest. Nevertheless some water rights that had not been used for far in excess of the statutory five-year forfeiture period were essentially allowed to be "revived" by a transfer. In other instances, local Watermasters were not consulted as required by the statutes. The kind and level of proof required or accepted by the regional offices concerning a water right's historical use and historical consumptive use also had not necessarily been consistent.

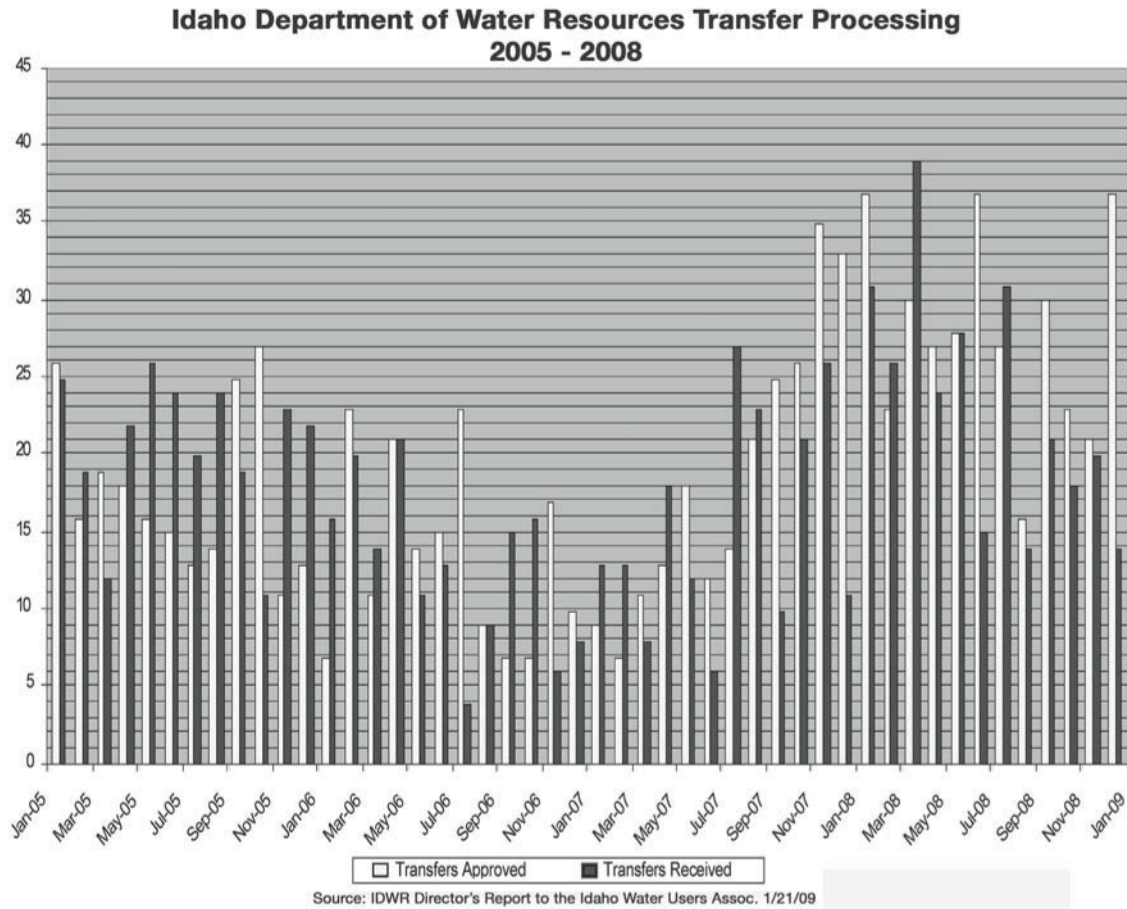
Not surprisingly, the Memorandum received early criticism from some water users and some members of the Idaho water bar because it set out requirements that they were unfamiliar with or that appeared to complicate and delay transfers. For example, the 2002 Transfer Memorandum required an up-front, detailed submittal by the applicant describing the proposed transfer and required a detailed IDWR analysis of the transfer on the merits before the application would be published. In addition, IDWR's review now will routinely include consideration of comments from state and local governmental agencies concerning local public interest issues. Another criticism of the Transfer Memorandum has been that the policies and procedures it requires should be adopted through a formal rule making process.

The 2002 Transfer Memorandum

The introductory sections of the Transfer Memorandum state that regardless of whether or not a transfer application is protested, IDWR is, at a minimum, required to evaluate injury, enlargement, the local public interest, impacts on the local economy, water right validity and ownership, and the authority of the person signing the application. The 2002 Transfer Memorandum also established minimum requirements for an acceptable transfer application, uniform guidelines for determining when a transfer application is not required, who may amend an application once it is submitted, and when an application that has been published must be re-published if it is amended.

The Transfer Memorandum provides direction to IDWR staff on certain emerging issues affecting transfers. For example, the Memorandum establishes specific procedures for evaluating ground water transfers within the ESPA and Ground Water Management Areas. In response to the large number of dairy operations that have moved to Idaho and required transfers from irrigation to commercial and stockwater uses, the Transfer Memorandum includes guidance for processing transfers involving confined animal feeding operations and disposal of the resulting wastewater by land application or other means. The Memorandum also provides guidance to give effect to legislation passed in 1996 recognizing the right of "municipal providers" to acquire and hold water for "reasonably anticipated future needs."

The 2002 Transfer Memorandum was an attempt to make the transfer process more efficient for applicants and the IDWR. A "parallel review" process was established in which staff in both the regional office and state headquarters of the Idaho Department of Water Resources reviewed an application before it was published. The intent was to minimize the potential that an application that appeared acceptable and approvable at the regional level would be delayed or returned to "square one" because a state office review identified policy or other concerns months later when the transfer was forwarded to the Director for final approval.



The 2009 Transfer Memorandum

Before amending the Transfer Memorandum in 2009, IDWR circulated draft revisions for comment, along with several other draft guidance documents addressing transfers involving mitigation. These included a proposed new transfer application form, guidance concerning the nonuse of existing water rights proposed as mitigation for a transfer or new appropriation, guidance for evaluating mitigation plans submitted with applications for permits to appropriate water, and a protocol for delivery of and accounting for Upper Snake Basin storage water used for transfer mitigation. IDWR also held a "Transfer/Mitigation Workshop" to discuss the proposed Transfer Memorandum revisions and mitigation guidance with water users, consultants and attorneys.

The January 2009 revisions to the Transfer Memorandum were largely housekeeping changes that clarified certain guidelines based on experience over the intervening years. Other revisions were more substantive. For example, the 2009 Transfer Memorandum confirms that Regional Managers have delegated authority to review, approve and sign "routine or non-complex" transfers. The parallel review process established in the 2002 Memorandum now is reserved for "non-routine or complex" transfers where policy issues are more likely to arise.

Public Notice

Another substantive change in the Transfer Memorandum is discussion concerning whether and how notice of transfer applications and IDWR decisions concerning them will be provided. Notice of a rejected or denied application must be sent to an applicant by certified mail. Public notice must be given of any pending application and any contested application (i.e., where the applicant contests a preliminary order rejecting or denying the application and requests a hearing). A limited exception to the public notice requirement exists where an application proposes to change only the point of diversion or place of use of a water right in a manner that IDWR deems will not change the effect on the original or hydraulically connected source or otherwise affect other water rights.

Mitigation

New language in the 2009 Transfer Memorandum concerning evaluation of injury and mitigation in transfers provides a segue to several separate draft mitigation policies. These include policies entitled "Water Rights Dedicated to Mitigation Protected from Forfeiture" and "Evaluation of Mitigation Plans for Water Right Permits." These policies both remain in draft form at present.

Mitigation plans now are required to accompany applications for a permit to appropriate water for new uses in Ground Water Management Areas and Critical Ground Water Areas, in areas subject to administrative moratoria on processing of new permit applications, and from fully-appropriated water sources or other areas subject to "administrative holds" on permit application processing. Absent a mitigation plan, the application will not be processed.

A common method to mitigate the depletive effect of a new appropriation, particularly a ground water appropriation, is to acquire an existing senior surface or ground water right and terminate its use (i.e., eliminate the consumptive use of the existing right to offset the consumptive use and depletion of the new right), or change its place of use and/or nature of use. A common example is the use of a senior surface water right to provide "make-up water" in a newly constructed pond that has been excavated to intercept ground water. The place of use (and perhaps also the point of diversion) of the surface water right is transferred to the pond where it will offset the depletion to the ground water source associated with evaporation from the pond surface. In other instances, senior surface water rights might be transferred so that they can be diverted into canals and delivered for aquifer recharge at a different time and location to offset increased depletions to a stream

reach.

In the ESPA, where a well-developed three-dimensional model is available, a transfer of a ground water right from one location to another must be supported by an analysis showing how the timing and locations of historical depletions will be affected by the transfer and by a plan demonstrating that the applicant can offset any increased depletions. IDWR has developed an "ESPA Model Transfer Spreadsheet" and accompanying programs that provide a tool to analyze hydrologic impacts of ground water transfers within the ESPA. Impacts of a transfer over time may be computed for eleven hydraulically connected stream reaches in the Snake River. The spreadsheet, a user's manual, and evapotranspiration data required by the spreadsheet can be downloaded from IDWR's website (www.idwr.idaho.gov/WaterManagementiWaterRights/WaterRightTransfers/wrt_default.htm).

Mitigation Plan Evaluation

IDWR's draft policy entitled "Evaluation of Mitigation Plans for Water Right Permits" states that it is the applicant's responsibility to complete and submit a depletion analysis with the application. Ground water transfers in the ESPA must be accompanied by the ESPA Transfer Spreadsheet analysis. In the Big Wood River Basin, a well-developed ground water model has not previously been available. Because the ground water source has been designated as a Ground Water Management Area, those transfer applicants who desired to have their applications approved have had to use their own funds to develop a model that adequately described the effects of their transfers on relevant reaches of the Big Wood River.

The draft policy also summarizes the types of mitigation most commonly offered, including ground water recharge, using other rights to provide "make-up water" to offset evaporative losses from ponds and other water amenities, storage releases and nonuse of water. Transfer applications proposed as part of a mitigation plan must offset the identified depletions in quantity, time and location.

Non-Forfeiture of Water Rights Used for Mitigation

Because Idaho law imposes a forfeiture penalty if a water right is not used for five or more consecutive years, and because nonuse of existing rights has become a common means to mitigate the depletive effects of new appropriations, in 2004 the Idaho Legislature passed legislation providing that nonuse of a water right under an approved mitigation plan was a defense to forfeiture. Idaho Code § 42-223. Prior to this statute, where a water right was proposed to be "unused" as mitigation for a new appropriation, the applicant needed to file a transfer application to change the "use" of the existing right to "mitigation" or "ground water recharge"- uses that were deemed by IDWR as beneficial uses - even though the mitigation really amounted to a "nonuse" of the water right. Absent a transfer, the unused right would be forfeited after five years, and then another water right would have to be procured to provide continued mitigation. The statute clarified the legal effect of nonuse in the mitigation context.

The "Water Rights Dedicated to Mitigation Protected from Forfeiture" policy gives guidance to IDWR staff and the public about how IDWR will implement the mitigation statute. This policy provides that where a new appropriation is to be mitigated by the nonuse of water under other rights, the approval order for the new permit will be the vehicle for changing IDWR's record for the mitigation right that no longer will be used. Upon approval of the mitigation plan, IDWR will alter its database to reflect that the nonused right is dedicated to mitigation. This avoids the need to file a transfer application where nonuse is the only change to the existing right anticipated by the mitigation plan, but it still allows IDWR to reflect the "change" in its database.

Public Access to Information

IDWR has upgraded its website to provide links to all of the policies and documents that have been discussed in this article. The website also now has an interactive transfer application link that steps a potential transfer applicant through the application preparation procedures. This website should be a first stop for anyone unfamiliar with Idaho water transfers (IDWR's website: www.idwr.idaho.gov),

Conclusion

For Idaho water users, complexity in water appropriations and transfers is a relatively new reality. Increasingly, water right transfers require consultants to prepare the applications and supporting analyses, and lawyers to prosecute them through to approval. Water administrators, users, consultants and counsel in more populous states with long-standing water supply challenges likely will view this as "old hat" in their jurisdictions. Requiring reliable supporting information to be included with transfer applications to ensure that transfers do not adversely impact existing water rights seems to be good policy. Putting a uniform set of transfer policies and procedures in writing and making them available to the public is, in itself, a big stride forward in Idaho water administration.

IV. Groundwater and Conjunctive Administration

This chapter addresses the problem of simultaneously managing surface and groundwater rights, termed “conjunctive administration.” Building on Bryce Contor’s analysis of the problem and discussion of groundwater banks as a solution (Chapter III, No. 1), Donna Cosgrove, Gary Johnson, and David Tuthill address the need to utilize models of hydrologic flows, and the nature of uncertainty inherent in modeling. The discussion is illustrated by the Snake River Plain experience and the nature of conflict that must be addressed. Johnson, Contor, and Cosgrove then take the discussion further, expanding on the nature of both ground water and surface water impacts that derive from the transfer of ground water rights. They propose and discuss innovations in ground water banking that promise to greatly simplify conjunctive administration and reduce transaction costs. Finally, Jeff Fereday analyzes the legal history of one of the most critical conflicts arising from the application of prior appropriation through conjunctive administration to ground water and surface water use on the Snake.

Water right transfers are one of the basic means of implementing changes in water use in the highly appropriated water resource systems of the western United States. Many of these systems are governed by the Prior Appropriation Doctrine, which was not originally intended for application to ground-water pumping and the conjunctive administration of ground water and surface water. That design deficiency, together with an absolute need to jointly administer surface and ground rights, creates an administrative challenge. The challenge results from the fact that ground-water pumping can affect all interconnected surface-water bodies and the effects may be immeasurably small relative to surface water discharge and greatly attenuated in time. Although we may have the ability to calculate the effects of ground-water pumping and transfers of pumping location on surface-water bodies, mitigating for all the impacts of each individual transfer is sufficiently cumbersome that it impedes the transfer process, frustrates ground-water users, and consequently inhibits economic development.

1. Water Management on the Ground: The Role of Uncertainty in the Use of Ground Water Models for Administration of Water Rights*

Donna M. Cosgrove, Gary S. Johnson, and David R. Tuthill

Competing demands for water resources are creating high profile disputes throughout the western United States. Models are increasingly being used to help sort out the disputes. Invariably, the models themselves end up being the object of court cases due to the inherent uncertainty of modeling natural systems (Cosens 2006).

As the water use issues were brought to a head by persistent drought, in the eastern Snake River Plain in southeastern Idaho, the Idaho Department of Water Resources (IDWR) embarked on developing a ground water model that would become the basis for conjunctively managing the surface and ground water resources. Recognizing that model uncertainty has been used in the past to undermine the use of scientific models in natural resource management, IDWR attempted to address model uncertainty through a consensus approach. With a priori knowledge of the major points of dispute, IDWR invited the primary water users to have their hydrologic consultants participate in the re-formulation of the ground water model of the eastern Snake River Plain aquifer. In some respects, this constituted using a social approach to address the issue of model uncertainty. A similar approach was successfully used in developing a surface water model in the Milk River Basin in Montana (Cosens 2006). The purpose of this paper is to draw on experiences gained in the eastern Snake River Plain in Idaho to propose some concepts of the use of models in supporting conjunctive administration decisions and the role of uncertainty in that process.

Background

There is little doubt that most of us prefer to have our natural resource management based on the best available scientific information and tools. In many cases, this means that relatively sophisticated models are used in developing decisions regarding rules and policies. Anderson and Woosly (2005) discuss the increasing dependence on scientific modeling in sorting out western water issues. In addition to providing a sound scientific basis for management decisions, models can assist in developing a common view among conflicting parties of the physical consequences of proposed actions (Olsson and Andersson 2007). It would seem that the process of integrating model development and application in the decision process is fundamental to the effectiveness and acceptance of water administration decisions and the underlying models. The fact that environmental models inherently contain uncertainty complicates the process by potentially limiting the acceptance of the models and related administration decisions and by providing an opportunity for those adversely impacted by these decisions to challenge the legitimacy of the models and the administration's dependence on them. The actual legitimacy and technical rigor of a model may have little to do with the acceptance of that model in a political and social arena when the stakes are high. The question becomes: how do we maintain a strong scientific basis for administrative decisions amidst social and political

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pressures?

In order for environmental models to be accepted by conflicting parties it may be proposed that these models be developed and applied (via scenarios) in an open, rigorous, and transparent process. In an ideal and efficient system, the use of such "best available science" to support administrative decisions should be recognized and accepted by all parties. If these models are applied to support resource administration in which the stakes are sufficiently high, however, this process is not sufficient to ensure that the models and the administration using them will not be challenged in court. Challenges are commonly directed at the weakest link, whether technical or legal. The inherent uncertainty of environmental models may often be considered one of the weak links open to criticism.

So what happens then? Does "best available science" prevail? Do we abandon attempts to include models in resource administration because they will be attacked?

Sources of Model Uncertainty

Our understanding of interconnected stream-aquifer systems, like all environmental systems, is never complete. Consequently, model representations of these systems are subject to uncertainty and contain some level of error. Specification of uncertainty is not necessarily a simple task, since some types of uncertainty (e.g. incomplete conceptual understanding of complex natural systems) are difficult to quantify and vary depending upon the task the model is asked to perform (Saloranta and Kamari 2003).

Model uncertainty is often addressed through determination of statistical measures associated with matching of historic observations of data or with parameter optimization routines. These analyses are useful, but it must be recognized that they present an incomplete picture of model uncertainty. These statistical descriptions are generally based on the assumption that the modelers have a clear understanding of the physical system, that this conceptual understanding is appropriately represented in the numerical model, and that the modelers' lack of understanding is limited to the model parameters representing the physical properties of the system being modeled.

The real need of water managers and decision makers is an understanding of the complete uncertainty associated with specific model predictions. We are generally not yet able to provide this information. A qualitative understanding may be created by extensive communication between modelers and decision makers, but that understanding will be incomplete.

Uncertainty as a Scapegoat

Recognition of the imperfection of these models may tend to drive resource administrators and the public to not accept model analysis when considering and formulating policy. The result is often the postponement of critical decisions. Uncertainty, however, does not justify inaction in the face of significant risks (Olsson and

Andersson 2007). Policy and administrative decisions must be based on the best available science, which is increasingly represented by complex system models.

A thorough description of model uncertainty is necessary in order for decision makers to weigh the significance of model results relative to other information. Lack of specification of uncertainty can result in decision makers putting either too much or too little trust in model results. Konikow and Bredehoft (1992) indicate that it is not possible to verify complex models because the models are essentially a formulation of a complex hypothesis of system operation and, like hypothesis testing, the model can be invalidated (proven wrong) but never validated (proven right under all conditions). Because of the difficulty in understanding and specifying model uncertainty, it may be advisable for the decision maker to consult with modeling experts to gain an understanding of the level of uncertainty associated with a specific decision.

Another danger to the elusive description of model uncertainty, however, is that administrative decisions often create a perception of winners and losers. Even with well-founded policies that account for consequences of model uncertainty, perceived "losers" may choose to exploit the existence of unavoidable model uncertainties to argue against what may be a sound technical basis for resource administration. Model uncertainty can be manipulated to support any point of view.

The inherent uncertainty in using model results to support management decisions creates an opportunity for opponents to attack the technical basis of management. By attacking the scientific basis for management decisions, managers are left with few options. These attacks delay and possibly misdirect system management and significantly add to the cost incurred by all participants. When striving for effective and efficient water resource system management, the question we are faced with is "how do we avoid technical assassination of reasonable model-based management practices when the stakes are high?"

The Case of the Eastern Snake River Plain

The eastern Snake River Plain has a long history of agricultural development. The highly transmissive eastern Snake River Plain aquifer underlies a 26,000 km² area in southeastern Idaho, bounded by the Snake River on the east and south (Figure 1). With a relatively high altitude (ranging from 700 m to 1500 m), a semi-arid climate (approximately 25 em of annual precipitation), and a seemingly unlimited source of irrigation water with the Snake River, the plain was ideal for early agricultural development.

... The Prior Appropriation Doctrine was originally intended for management of conflicts among surface-water diverters, using water for mining or agriculture. As both technology and societal needs have evolved, the doctrine has been applied to increasingly complex water uses, such as exist on the eastern Snake River Plain. In the State of Idaho, water law is based on the Prior Appropriation Doctrine: "First in time is first in right." Prior Appropriation is used in arid or semi-arid western states where agriculture is

predominantly irrigated. The Prior Appropriation Doctrine was originally intended for management of conflicts among surface-water diverters, using water for mining or agriculture. As both technology and societal needs have evolved, the doctrine has been applied to increasingly complex water uses, such as exist on the eastern Snake River Plain.

Surface-water diversions for irrigation commenced as early as the 1870s. By about 1905, most of the surface-water supply was fully allocated. Initial irrigation projects were elegantly designed gravity-fed projects, with elaborate networks of diversion canals and laterals. The high rate of leakage in canals required irrigators to divert far more water than was needed for crops in order to accommodate canal transmission losses. Irrigation applications also resulted in aquifer recharge as applications routinely exceeded crop water use. Aquifer water levels rose dramatically in response to the recharge incidental to surface-water irrigation. With the rising aquifer water levels, spring discharges to the Snake River also rose dramatically and many new water rights were developed in the 1920s and 1930s on the increased spring and river flows, especially along the Thousand Springs reach of the Snake River (Figure 2). Several major dams and reservoirs (and many minor reservoirs) were built to help sustain the supply of irrigation water. With these dams and reservoirs came new water rights, both for stored water and for hydropower generation. [See Chapter II for elaboration]

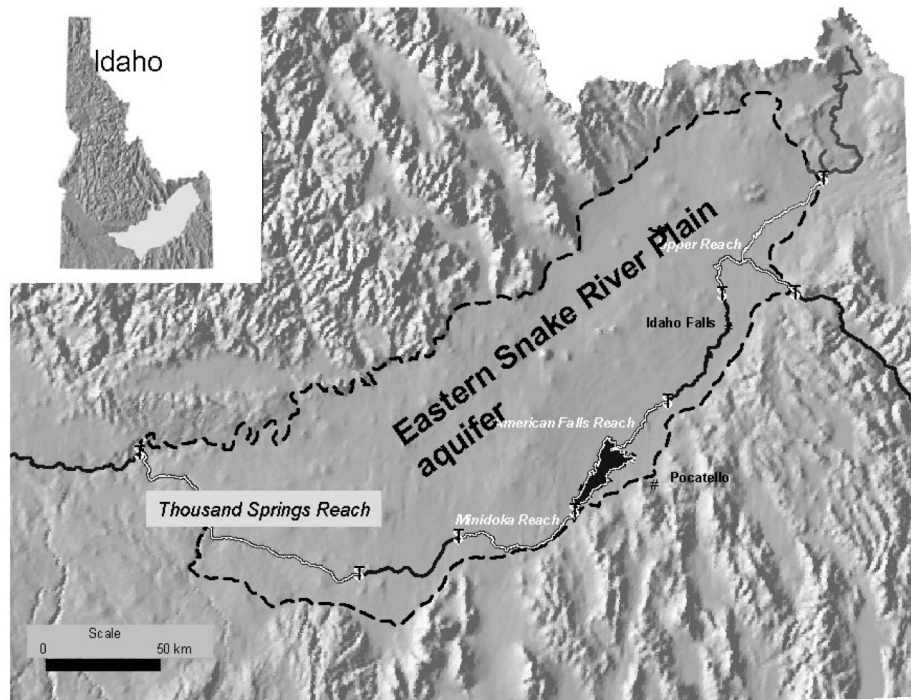


Figure 1. Location and extent of the eastern Snake River Plain aquifer.

Snake River Plain aquifer water levels continued to rise until the 1950s when several changes occurred virtually simultaneously. Rural electrification and new technology resulted in development of ground water as a source of irrigation water

consuming water directly out of the aquifer. Additionally, new sprinkler systems came into use, greatly reducing the incidental recharge due to surface water irrigation. As water levels started to drop, "water conservation" became popular, resulting in the lining of many canals and the application of less water on furrow- and flood-irrigated fields, also reducing the incidental recharge. These three factors caused aquifer water levels and spring discharges to decline steadily, starting in the 1960s (Figure 2).



Figure 2. Historic variation of the collective discharge of springs in the Thousand Springs reach of the Snake River (U.S. Geological Survey data).

By the 1960s, when aquifer water levels were at their peak, surface water was fully appropriated and ground water was undergoing rapid development. Over 2 million acres of irrigated land were served by surface water rights, ground water rights or a mix of both. Many of the irrigators additionally had reservoir storage rights. The Bureau of Reclamation and commercial power companies had invested heavily in large hydropower projects.

As aquifer water levels and associated spring discharges have declined, there has been mounting competition for both ground water and surface water and an increased focus on the interaction between the two resources. Water rights that had been developed on water that did not exist in the natural system (i.e. resulting from incidental irrigation recharge) were now being threatened by the combined impacts of improved water distribution efficiencies, drought, and the more junior ground water pumping. The intimate relationship between ground water and surface water in the eastern Snake River Plain and the complexity of water rights throughout the region has necessitated the development of a method of conjunctively administering the aquifer and the river, which had traditionally been administered separately. The state has been increasingly dependent

upon a ground water model of the Snake River Plain aquifer to assist in conjunctive administration efforts.

In the eastern Snake River Plain water dispute, the stakes are high. With two million irrigated acres, numerous hydropower facilities, and one of the most productive commercial fish hatchery settings in the US, there is a high degree of economic impact tied to water administration decisions. There is also a general resistance to change, as our society re-evaluates how water is used and what our priorities are. Ecosystem services that were not considered when the water was first put to beneficial use (habitat, aesthetics, etc.) are now considered important, at least by a portion of the population. The value of water has increased; not just the value for irrigating agriculture, but also the value of excess water that can be sold for power generation or species protection efforts. The water disputes on the eastern Snake River Plain also signal a potential shift in political power and control. Water users who have never been organized are finding a political voice with this dispute.

The primary areas of dispute are:

1. senior surface water users and spring users assert that junior ground water pumpers have injured their senior rights,
2. ground water users assert that curtailing ground water use would not deliver water in a timely fashion and thus constitutes a "futile call" for water, and
3. insufficient water has been available during the recent drought to meet the needs of river flow augmentation for salmon recovery.

Formal calls for water over the past 23 years have caused IDWR to define rules for the conjunctive administration of ground and surface water resources, to adjudicate all water rights in the river and aquifer, and to re- formulate the aquifer model for the region.

Why is Conjunctive Administration so Difficult?

There was virtually no ground water usage when the Prior Appropriation Doctrine was accepted by many western states as the legal basis for appropriating water. The Doctrine was well designed to distribute water among competing surface water demands, but "First in time is first in right" is less functional in ground water and conjunctively administered systems where the effects of pumping are distributed in small increments among nearly all other water uses in the system (where "system" should be considered the aquifer and interconnected surface water). Consequently, the effects of an individual pumper are often negligible, but collective effects of many pumpers may be considerable.

Application of the Prior Appropriation Doctrine would normally presume that one, or maybe a few, water uses need to be curtailed in order for a senior appropriator to acquire their right. This generally will not work in ground water systems because each ground water user contributes a small amount to the depletion of the senior's rights. Additionally, some of the seniors' depletion may be a result of ground water pumping that occurred months or years earlier. It is conceivable that all ground water pumpers

from an aquifer would need to curtail pumping in order for a small senior surface water right on an interconnected surface water body to be fulfilled. This shortcoming of the "First in time is first in right" concept of the Prior Appropriation Doctrine has consequently been countered by the concept of "full economic development of the water resource." The balance between these two concepts is continually being reassessed by legislatures and courts throughout the west.

Consensus Approach to Dealing with Model Uncertainty

In 1999, IDWR created the Eastern Snake Hydrologic Modeling Committee with the purpose of collaborating in the development of a new model of the eastern Snake River Plain aquifer. The committee was comprised of professional scientists and engineers with water experience or interests on the eastern Snake River Plain. Regular participants included professionals from agencies such as IDWR, the US. Geological Survey, the US. Bureau of Reclamation and US. Fish and Wildlife Service, and hydrologists and engineers representing the interests of water user groups such as ground-water users, surface-water users, spring users, and hydropower.

The Director of IDWR at that time, Mr. Karl Dreher, understood from previous experience that involving these various parties in the model re-formulation could help allay some of the future concerns about model uncertainty. The committee was formed in an attempt to re-direct the future argument away from the science and keep it focused on the administrative application of the science. Mr. Dreher felt that inviting participation of the committee members in model development would result in an understanding that the model was developed without intentional bias and is the best possible representation given the state of the science and available data.

Our experience with the Eastern Snake Hydrologic Modeling Committee was that, although the collaborative process was at times frustrating and very time-consuming, it served multiple purposes. The group of professionals that was involved from the start developed a far better understanding of the detailed model design and areas of model uncertainty. Having been party to the decisions that went into creating the model, the group was more vested in the model. Through this collaborative process, the group also gained a firmer understanding of model development decisions that were, perhaps, not ideal, but necessary due to either data or time limitations.

Outcome of Collaborative Model Development

The transparent collaborative process resulted in a model that was more clearly understood by a wider range of technical experts than would have occurred in an isolated environment. During model development, the modeling committee provided useful input and suggestions that resulted in a more technically sound model. Initially, model reliability and credibility were strengthened by the collaborative approach.

Since model completion, as the model has been applied to support water administration decisions, divisions within the team have become more apparent. Results

of modeled scenarios could be translated into administrative decisions that created perceptions of winners and losers. Those who felt administration decisions adversely impacted their situation challenged the underlying model results by scrutiny of model uncertainties. In some cases, new hydrologic consultants have been hired, with the apparent purpose of attacking model credibility.

The final outcome of this process is not yet known, but it is expected that the technical validity of the model will be challenged in court. The authors believe that the underlying reason for the challenge is not actually unreliability of the model, but because results are not favorable to some parties or that even more favorable results can be achieved through the abandonment of science, forcing a strict interpretation of the Prior Appropriation Doctrine. It seems as though this outcome may be the destiny of all models applied in support of water administration decisions, since nearly all decisions are adverse to some interests.

Conclusions

The collaborative approach to addressing uncertainty in the eastern Snake River Plain aquifer model represented an attempt to invest the disputing parties in the scientific process. Although the approach did not fully eliminate uncertainty as a target in the final disputes, the process did serve to provide the water user groups with a far greater understanding of the model design and uncertainty than they would otherwise have had. The group participation strengthened model design and calibration, making the model more technically defensible.

Realistically, one can never remove all doubts of uncertainty from a scientific model. However, the authors feel that some degree of uncertainty is acceptable as long as a) the sources of uncertainty are well understood and b) the uncertainty is not biased.

The Milk River Basin experience, documented in Cosens (2006) achieved agreement of acceptance of model results prior to model development under similar, consensus conditions. In some respects, the issues in the Milk River Basin were very complex, as the issues revolved around tribal claims and involved both State and Federal participants. However, in contrast to the eastern Snake River Plain dispute, the Milk River Basin involved less water, fewer water users and not nearly the same degree of economic impact. Olssen and Andersson (2007) confirm that achieving consensus is highly dependent on many factors including how much can be gained or lost through the acceptance or rejection of science in resolving a natural resources dispute.

In the Milk River Basin, the model was only one aspect of the settlement. The model was intended to predict the impact of a new reservoir on water resources and was intended for use as an administrative tool. In contrast, in the eastern Snake River Plain dispute, the model is being applied by IDWR to determine the degree of injury caused by the conjunctive use of ground water and surface water as well as to determine what uses to curtail in reparation. This distinction may be the basis for the ongoing dispute about the model of the Snake River Plain aquifer, despite the collaborative approach to model

development.

Although it would have been very satisfying to get a priori agreement of model acceptance from all parties, the authors feel that, on the Snake River Plain, the stakes were too high for this to have occurred. Fear of unfavorable results seemed to preclude any sort of up-front buy-in of model results. Perhaps a mediated collaborative process could work, where the participants are empowered to approve model decisions by their respective clients. However, in a dispute as complex as that of the eastern Snake River Plain, even a mediated collaborative process is likely doomed to failure because of the extraordinarily large number of water users, many of whom are not in organized groups.

As with many legal disputes, all possible areas of attack will be used if the potential gain from a legal win is high enough. Because uncertainty will always exist in scientific models, it will likely always remain a target for legal attack.

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2. Efficient and Practical Approaches to Ground-Water Right Transfers Under the Prior Appropriation Doctrine and the Snake River Example*

Gary S. Johnson, Bryce A. Contor, and Donna M. Cosgrove

Introduction

Water supply in the western United States is limited and variable while demands for water are continuously increasing and diversifying. The increase in demand causes an increase in the value of water, which has the effect of redistributing water to higher value uses. Our future environmental and economic prosperity lies in our ability to improve flexibility and efficiency in our water management. Water right transfers are one of the means by which our water distribution can adapt to these changing values, demands, and supplies. Water right transfers represent one of the best solutions to current water problems (Anderson and Snyder, 1997)

Water right transfers may involve any of a number of changes in the elements of a water right. In many cases, the transfer includes a change in the point of diversion of an individual right. This is especially true of ground-water rights where it is often desirable to change a well location to redistribute water to higher value uses.

In general, identifying and mitigating third-party effects are one of the major challenges in water right transfers. Transfers are permitted only when they cause no injury to either junior or senior appropriators (Gould, 1988, p. 13), or when those effects can be satisfactorily mitigated. With ground-water right transfers this creates a special challenge because the effects of ground-water pumping propagate throughout an aquifer and interconnected river system, varying with the distance to the pumping location (and aquifer properties). Consequently, ground-water right transfers that result in a change in the point of diversion nearly always adversely impact some other surface- or ground-water right holder. Mitigation for these impacts can create an excessive transaction cost in the form of a reduced diversion that impedes the transfer process and economic development.

The purpose of this paper was to evaluate the challenges confronting effective and efficient transfers of ground-water rights and possible approaches for dealing with those challenges. The eastern Snake River Plain in Idaho is used as a case study to illustrate application of the concepts. The eastern Snake River

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Plain is traversed by the Snake River, which is interconnected with the underlying Snake River Plain aquifer along four reaches of the Snake River (Figure 1). Conjunctive management rules in Idaho require that the river and aquifer be conjunctively managed under the Prior Appropriation Doctrine.

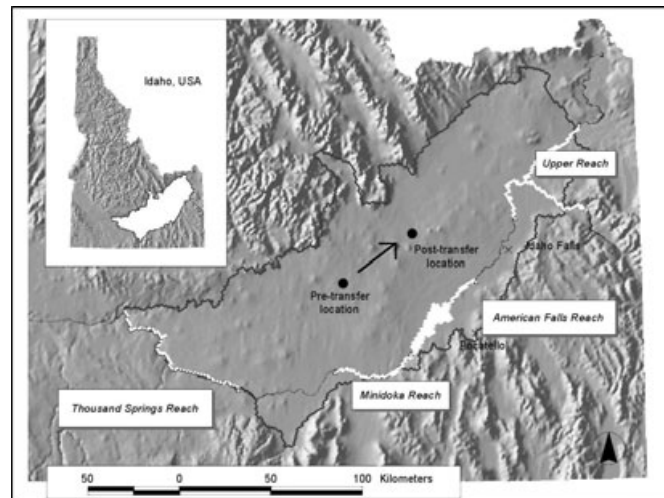


Figure 1. Map Showing Location and Features of the Eastern Snake River Plain

Efficiency Of Water Management

Because of greater and more diverse demands, water managers must be more vigilant in directing water toward explicitly identified goals and uses, where "uses" include environmental needs such as instream flows for maintaining aquatic and riparian habitat. In a sense, this relates to water management efficiency. Efficiency can be defined as the ratio of the achievement of our objectives relative to all the resources consumed (Green, 2003, p. 39). Water use efficiency can therefore be considered a measure of how well water use aligns with the needs and objectives identified by society. A highly efficient water management system could be one in which all water is being applied to those uses (economic and environmental) considered most valuable by society. Inefficient water management exists when water is not being applied to valued uses or is not producing the greatest economic and environmental benefit. An inefficient system may result from a physical, legal, or institutional system that constrains water to historic applications despite changes in market values or changes in the values of society. This inefficiency will ultimately result in an excessive level of conflict.

Although an unconstrained, free market system for water may not be desirable, some constrained ability to transfer water rights among uses and users within a system is necessary so as to achieve a water-efficient system. This ability to transfer among uses creates system flexibility to adjust to changing supplies and economic and environmental demands.

Challenges Associated With Transfers Of Ground-Water Rights

The Prior Appropriation Doctrine was originally designed to deal with distribution of water from surface-water systems in the western states. In surface-water systems, effects of a diversion are only felt in downstream locations and those effects are relatively immediate. Application of the Prior Appropriation Doctrine to ground-water systems is substantially more complicated. Those complications are a result of the following: (1) conjunctive management of surface and ground water, (2) propagation of pumping effects in all directions through an aquifer system, (3) often immeasurably small hydrologic impact of individual effects, and (4) attenuation and delays in the appearance of effects from pumping.

Conjunctive Management of Surface and Ground Water

In basins where the surface water is hydraulically connected with the ground water (not perched above the aquifer), consumptive pumping of ground water ultimately has the potential to deplete an equal volume of the surface-water system. This may appear as depleted streamflows, diminished wetlands, springs, and/or lakes. Non-consumptive pumping, that which returns to the aquifer (e.g., through septic tank leech fields) has less or possibly no depletion effects.

In general, the focus of transfer proceedings is on third-party effects. In ground-water right transfers in states employing the Prior Appropriation Doctrine, those third-party effects are often linked to surface-water depletion, which is likely adverse to existing private surface-water rights or environmental needs. Given that much of the appropriation of surface water occurred before extensive ground-water pumping, the priority date of many surface-water rights is often senior to ground-water rights.

There appears to be a dual standard applied to ground-water and surface-water rights. In many states, the law requires ground-water users to modify or replace wells to cope with declining aquifer levels to "reasonable limits (i.e., deepening of wells) that result from surrounding ground-water pumping. Surface-water users, however, generally expect to have their appropriation

delivered to their diversion structure with no requirement to pursue water by construction of a well (although there are exceptions to this). This creates a situation where the third-party effects of ground-water right transfers on surface water users are often more of a concern than the aquifer drawdown effects on neighboring ground-water users.

In the Snake River Plain, the focus of transfer proceedings has been on minimizing hydrologic impacts to surface water users rather than other ground water users. The depletion effects (i.e., reduction of river flow due to pumping at the transfer location) of ground water right transfers on all reaches of the interconnected Snake River must be mitigated to within 5% of the depletion effect (Dreher and Young, 2002). This mitigation is often provided by reducing the allowable pumping rate of the transferred right.

In Idaho, third-party effects on other ground-water pumpers are limited to maintaining a reasonable pumping lift. Perhaps the lesser concern over transfer impacts on other pumpers is a result of the more reliable nature of ground water under variable climatic conditions.

Propagation of Pumping Effects in All Directions

The Prior Appropriation Doctrine was developed for streams where the use of water physically impacted only the downstream water users. In aquifers, and aquifers interconnected with surface water bodies, the effects of ground water pumping radiates outward in all directions through the aquifer, and impact all other surface and ground water users of the system to some degree. This means that potentially all ground water and surface water users in a basin could be hydrologically impacted (although to a very small degree) by pumping at any given location. A change of pumping location through a transfer changes the degree of impacts on all users. Some users will experience less impact, but additional aquifer drawdown and surface depletion will always be suffered by some users (unless mitigated). Although the effects of transferring an individual ground water right on interconnected surface water bodies may be negligible, the collective effects of hundreds or thousands of transfers may not. Consequently, some third party effects must be considered with ground water right transfers. Unfortunately, those third party effects may be difficult to determine and may be distributed among a very large number of different water users.

The spatial distribution of pumping effects on different surface-water bodies has been determined in the Snake River Plain through application of a numerical ground-water flow model to determine steady state response functions

(Cosgrove and Johnson, 2005). Steady state response functions describe the spatial distribution of the effects of aquifer stress (pumping or recharge) on hydraulically connected reaches of the Snake River. Figure 2 shows the location of the eastern Snake River Plain in Idaho and a set of steady state response functions for the American Falls reach of the Snake River. The map of the steady state response functions illustrates the approximate proportion of ground-water pumpage at any location that ultimately appears as depletion of the American Falls reach of the river. For example, in transferring a ground-water right from Location A in the northeast portion of the plain to Location B nearer to American Falls (Figure 2), the proportion of pumping which would appear as depletion of the American Falls reach would increase from about 30 to 80%, over the long term. A transfer in the other direction would equally benefit flows of the American Falls reach but would diminish flows in the upper reaches of the Snake River. A more detailed description of this application of steady state response functions is provided by Cosgrove and Johnson (2005).

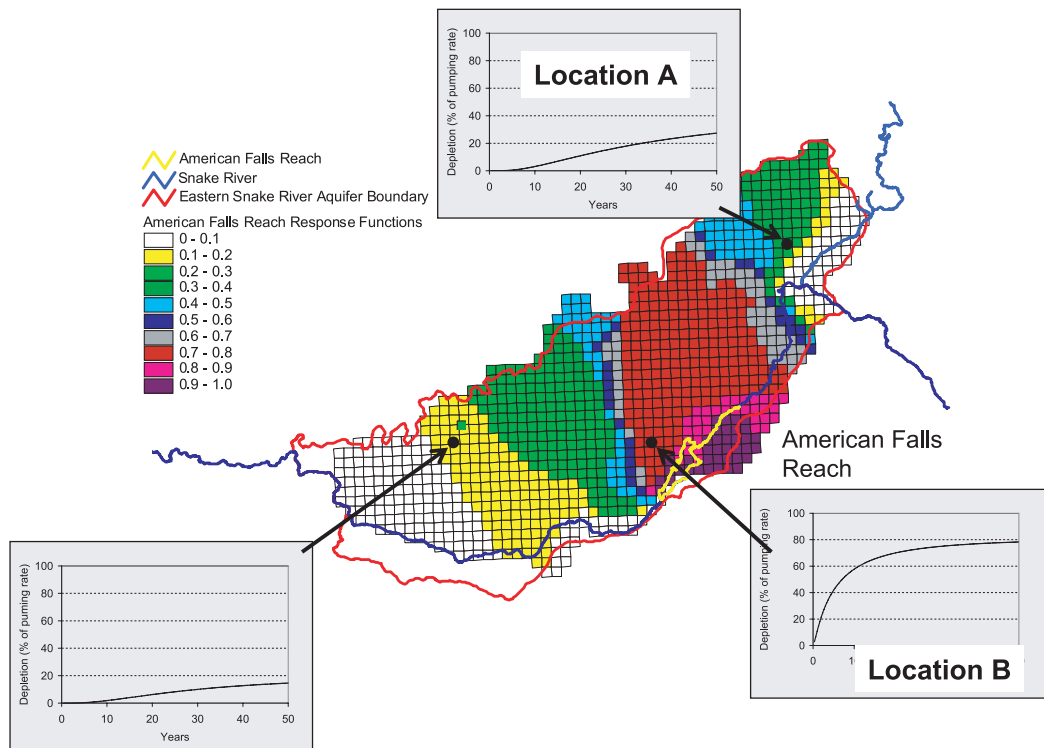


Figure 2. Steady-State and Transient Response Functions for the American Falls Reach in the Eastern Snake River Plain

The varying spatial distribution of ground-water pumping effects among all hydraulically connected surface-water bodies creates an enormous risk of cre-

ating third-party effects in a water right transfer. If no additional depletion is allowed at any reach, then substantial mitigation may be required. In the Snake River Plain, the assessment of impacts and the required level of mitigation (normally a reduction in the pumping rate of the right) are provided through a customized application of the ground-water flow model in what is called the Ground-Water Right Transfer Tool (Cosgrove and Johnson, 2003). The transfer tool is discussed in more detail later in this paper.

Immeasurably Small Effects

The individual effects of ground-water pumping (and consequently transfers) on surface-water systems may be too small to measure. Even though individually these effects are negligible, it is possible that effects of multiple changes in points of diversion may be significant.

Because the effects of a change in point of diversion are often immeasurable, it is necessary to rely on more theoretical means to determine hydrologic impacts. Those means may be through use of a simple analytical solution such as provided by Jenkins (1968) or may involve the running of a numerical model (such as Modflow). Although numerical modeling of each transfer application may seem excessive, it is possible when the model is customized and provided with a user interface specifically designed to evaluate transfers, as in the case of the Ground-Water Right Transfer Tool (Cosgrove and Johnson, 2003).

Estimating the hydrologic impact of a transfer from an equation or a numerical ground-water flow model creates issues of uncertainty. Modeling and analytical techniques inherently contain uncertainty and it may be difficult to determine and express that uncertainty. In the eastern Snake River Plain, the Idaho Department of Water Resources requires mitigation to within 5% of the model-calculated hydrologic impact of a transfer (Peppersack, 2006), partially to compensate for uncertainty in the numerical aquifer model.

Attenuation and Delays of Effects

Another complicating aspect of aquifer administration results from the dampening and lag of effects resulting from aquifer pumping. The dampening and lag are related to the size of the basin, the distance between pumping and interconnected surface water reach, and the physical properties of the aquifer and surface-water system. Jenkins (1968) defined the stream depletion factor (sdf) that controls the dampening and lagging of surface-water response to pumping.

Generally, as the sdf increases the response becomes lagged and dampened to a greater degree.

$$\text{sdf} = a^2 S/T, \quad (1)$$

where a is the distance between the pumping location and the stream (1), S is aquifer storativity, and T is aquifer transmissivity (I^2/t).

Similarly, other researchers have noted the relationship between aquifer properties, distance, and the time lag of effects. Manga (1999) applied a characteristic response time (T_h) for watersheds in the Deschutes basin in Oregon

$$T_h = SL^2/2T, \quad (2)$$

where L is aquifer length.

Numerical models provide a means to evaluate the lag of effects with fewer simplifying assumptions. The numerical model described in Cosgrove *et al.* (1999) has been used to evaluate the lagged effects of pumping on reaches of the Snake River (Figure 2). The graphs of Figure 2 show how stream depletion in the American Falls Reach changes over time as a result of pumping at three different locations. At each location, the graph shows response of the reach to a continuous pumping activity. It is evident from the graphs of Figure 2 that hydrologic impact varies with location, and that the full effects of pumping may not be evident in surface-water bodies until decades after the pumping has been initiated. In situations where Jenkins' sdf is large, conjunctive administration of water rights may be awkward because even relatively brief pumping events may have depletion effects that persist for years into the future. Consequently, a ground-water right transfer that causes additional depletion of surface water will almost certainly result in depletion during a water-short year when supplies are fully allocated to senior surface-water users. As we are generally not capable of predicting surface-water shortages much more than a few months in advance, ground-water pumping curtailment (at significant distances from the impacted surface water) is often ineffective in delivering more water to senior surface-water rights.

Although time lags add a considerable complication to the conjunctive administration of water rights, they need not encumber ground-water right transfers. The future effects of changing the location of pumping can be evaluated through the use of assumption intensive analytical expressions such as those of Jenkins (1968), or through numerical modeling. In the Snake River Plain, the

numerical aquifer model employed in the Ground-Water Right Transfer Tool makes assessments of the hydrologic impacts of a transfer for decades into the future. Mitigation must be provided for impacts at any time in the future that are greater than the 5% *de minimis* level. The following section describes the Transfer Tool and its use in the Snake River Plain.

Description Of The Snake River Plain Experience

The Transfer Tool runs the ESPA model to simulate the effects of (1) continued pumping at the original (pre-transfer) well location and historic pumping rate, and (2) pumping at a new (post-transfer) location and pumping rate. The model calculates the impact of both pumping situations on each of the four hydraulically connected reaches of the Snake River, and determines the difference in impact (i.e., change in river gains and losses) between the pre-transfer and post-transfer situations. Locations are specified based on each nine square-mile model grid cell and pumping rates can be varied every four months if necessary. The Transfer Tool is used by hydrologic consultants proposing transfers and by the Idaho Department of Water Resources to evaluate effect of ground-water right transfers within the eastern Snake River Plain. The Transfer Tool has recently been updated to a new version of the aquifer model (Cosgrove et al., 2006) that has a more refined grid (one square mile) and river reaches (11 reaches); however, the revised version has not yet been fully adopted in practice. A hypothetical example is provided below using the original, four reach, version of the Transfer Tool.

Transfer Tool Example

Consider a situation in which it is desired to transfer a hypothetical ground-water right from the Pre-transfer Location 22 miles to the northeast to the Post-transfer Location in the eastern Snake River Plain (Figure 1). The proposed change in pumping location will decrease the depletion in the Thousand Springs and Minidoka reaches and increase depletion in the American Falls and Upper Reach. The Transfer Tool will be employed to assess the magnitude of the changes in hydrologic impacts.

For the sake of simplicity, assume that the historic pumping of 3 l/s associated with this right is 100% consumptive (lost by evaporation) and that it occurs continuously throughout the year. Also assume that it is desired to use the new right in the same manner. If this water right has been in use for the past 30 years, then there are depletion effects associated with the past usage. Depending

upon the situation these effects may be seasonal (not in this case with continuous pumping) and changing over time and should be accounted for in an analysis of the hydro logic impacts of a transfer. The Transfer Tool is first applied to assess the impacts of the past 30 years of continuous pumping at 3 l/s and an assumed continuation of that pumping (a "no-transfer" scenario) into the future on each of the four reaches of the Snake River. It is apparent from the graph of Figure 3 that continuation of historic pumping at the original point of diversion results in a maximum depletion of about 2.3 l/s on the American Falls reach with less impact to the Thousand Springs Reach. The impact to the other two reaches are less and not presented in Figure 3 (although they would be considered in a transfer). Although the user may be required to mitigate for historic pumping impacts through the general conjunctive management procedure, the transfer process is only concerned with mitigation for additional impacts resulting from the transfer. Mitigation for transfer impacts in some cases may come from other water sources including surface-water storage. Unfortunately, it is difficult to guarantee surface water availability every year and in some cases it is not possible to deliver surface water to impacted springs.

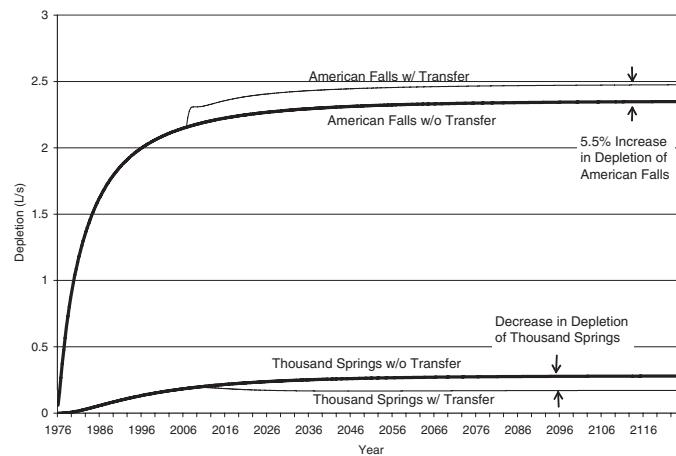


Figure 3. Hypothetical Transfer Effects (no mitigation) on the Thousand Springs and American Falls Reaches of the Snake River

The Transfer Tool is also employed to determine the hydrologic impacts of pumping the same rate and timing at the proposed Post-transfer Location (Figure 3). A comparison of the effects for the two locations shows that there is an additional depletion of 0.13 l/s (5.5% of the depletion) in the American Falls reach resulting from the transfer, but that flows in the Thousand Springs reach increase. Mitigation rules state that additional depletion cannot exceed 5% of the no-transfer effects (2.45 l/s in this example). Mitigation is commonly accomplished by reducing the pumping rate. Reducing the depletion rate from

2.47 to 2.45 l/s requires less than a 1% reduction in pumping rate because effects are proportional to the pumping rate (Cosgrove and Johnson, 2004).

In the example case, the 1% reduction in pumping would not be sufficient to mitigate for the smaller absolute, but greater relative impact to the Upper reach shown in Figure 4. With no change in pumping rate, the proposed transfer is expected to result in an additional 0.046 l/s of depletion of the Upper Reach, or 24% more than the depletion would be without the transfer (Figure 4). The 1% reduction in pumping rate to mitigate the greater absolute effects on the American Falls reach would not mitigate the Upper Reach to within 5% (the requirement of the present rules) of the non-transfer depletion. It would be necessary to reduce pumping by about 15% to keep the additional depletion of the Upper Reach to within 5% of that which would occur without the transfer. The net effect is that 15% of the 3 l/s water right (0.45 l/s) would be required to mitigate for the 0.046 l/s of impact to the Upper Reach. The mitigation requirement is 10 times greater than the impact.

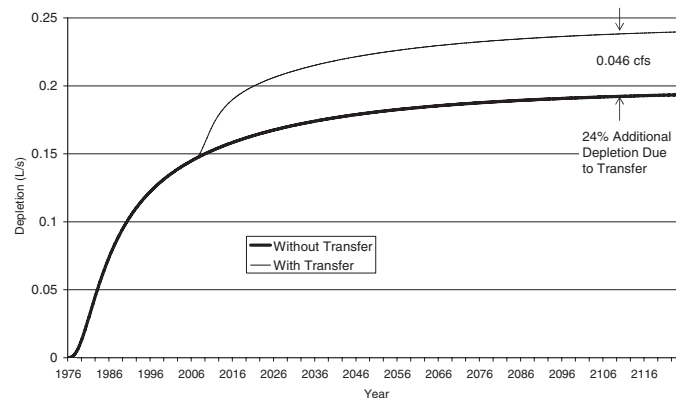


Figure 4. Hypothetical Transfer Effects on the Upper Reach of the Snake River

Use of the Transfer Tool provides a strong scientific basis for ensuring that individual transfers do not result in adverse third-party effects on any reaches of the Snake River. Unfortunately, mitigation by reducing pumping rates is highly inefficient. That is, only a portion, and possibly a small portion, of the mitigation actually benefits the reach of the river that is adversely impacted. The remainder of the mitigation results in increased flows in other reaches. This is apparent in the example transfer discussed above. In transferring from the Pre-transfer Location to the Post-transfer Location, mitigation was provided by decreasing the right from 3 to 2.55 l/s. The long-term effect on the Snake River as a whole is that the 0.45 l/s reduction in pumping rate will cause a 0.45 l/s increase in river flow. That is, unintended benefits are provided to reaches that required little or no

mitigation (Figure 5). This has the effect of unmanaged redistribution of water that can be viewed as a decrease in water use efficiency.

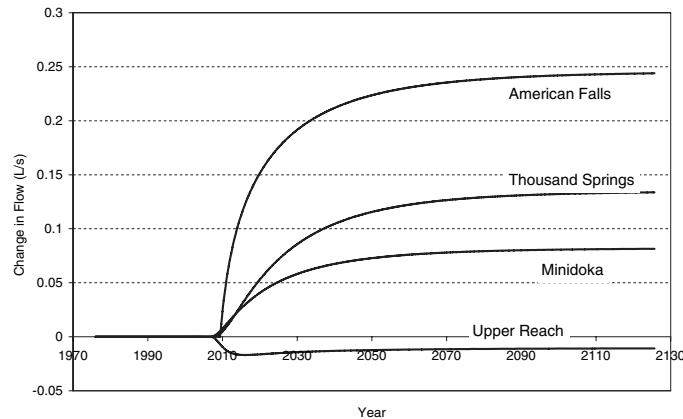


Figure 5. Net Effects of Hypothetical Transfer on the Four Reaches

Mitigation for third-party effects can be expected in all transfers. This mitigation for third-party effects is the internalization of what otherwise might be external costs. Internalization promotes economic efficiency (Gould, 1988). If, however, the required mitigation occurs by decreasing pumping rate, as in the example application of the Transfer Tool, then efficiency is lost because water is provided to unintended destinations. This is a failure to internalize all the benefits of the mitigation. This may be similar to surface-water transfer where a redistribution of return flow resulting from transfer may provide external benefits to other users.

This example highlights one of the difficulties of using hydrologic impact assessments as a basis for ground-water right transfers. Movement of a right in a basin that has multiple river reaches interconnected with the aquifer will always have some impact on some reach of river. Although the individual effects may be small, there is concern that cumulative effects may be significant. It has been proposed that in the Snake River Plain, a minimum additional impact (i.e., resulting from the transfer) of 2467 m³/year (2 acre-feet/year) be tolerated to reduce this barrier to transfers (Peppersack, 2006). This proposal is presently being implemented.

Requiring a substantial reduction in pumping rate as transfer mitigation inhibits ground water right transfers. During the past several years in the Snake River Plain, many transfer applications have been withdrawn rather than incur a permanent reduction in the rate or volume of pumping. Requiring that each individual transfer result in no depletion of any surface water body is inefficient

(in the context provided earlier) in that (1) it creates an excessive transaction cost on transfers that inhibit appropriate movement of water to higher economic and environmental value uses, and (2) it leaves water in the system that ultimately goes to unintended uses. The transaction cost of a transfer (perhaps measured as the amount of water sacrificed in a transfer) is more than the external cost of depletion to adversely impacted river reaches.

Alternative Approaches

Given the unintended redistribution of water discussed above, an alternative is not to disregard hydrologic impacts, but balance impacts among multiple transfers. That is, the negative impact from a water right being moved closer to a given river reach may be offset by other transfers moving away from the same reach. If the direction of movement of the point of diversion (pumping location) is random, then there should be no net effect of a large number of transfers.

In the eastern Snake River Plain, an evaluation was made of the net effect that 187 ground-water right transfers would have on the four reaches of the Snake River. These applications totaled about 247 million m³/year (200,000 AF/year or 275 ft³/s continuous pumping) and were made over a period of two years, between 2000 and 2002, before implementation of the Transfer Tool (and therefore not biased by Transfer Tool mitigation requirements). Using the Snake River Plain ground-water flow model, it was determined that if no mitigation were provided (no reduction in pumping rate within the transfer), the maximum collective long-term impact to any of the river reaches was about 5.7×10^{-2} m³/s (2 ft³/s). In this case, impact is referring to the impact of the transfer itself, that is the change in pumping location, and not to the total impact of pumping. The minimal effects of moving such large amounts of pumping result from a near random pattern in the direction of movement of the transfers. If the 5% rule were applied to this pool of transfers, then no mitigation would be required. It should be noted, however, that this population of transfers might be biased toward shorter distance transfers since applicants were concerned about protests from other users. (J. Peppersack, IDWR, personal communication).

Description of a Transfer Accounting System

Individually, ground water right transfers (change in point of diversion) will have a depletion effect on a surface water body at some location. Collectively, however, multiple transfers may have less of a depletion effect if there is some random component to the direction of movement. In contrast, if new

water development is influenced by economic growth over a specific section of an aquifer then it should be expected that more transfers will be into the area of growth than out of that area.

If transfers are generally offsetting, as data suggest in the Snake River Plain, then a transfer accounting system may allow pooling transfer applications for a six month or one year period and analyzing and assigning mitigation for the pool as a whole. This could have the following three effects:

1. Pooling mitigation would allow non-target reach benefits created by the population of transfer applicants to be enjoyed by those applicants. This would internalize these benefits, reduce transaction costs, and promote efficiency.
2. A standard evaluation and mitigation protocol could greatly expedite transfer processing (currently transfers in the Snake Plain take months to years to process, in part due to the necessity of individual evaluation of mitigation plans that are at times novel and complex).
3. Expedited processing and reduced mitigation requirements could facilitate economic activity and allow water to move to its highest economic and environmental uses.

In the sample of 187 transfers described above about half of the combined net effect on surface water was contributed by a single transfer. Therefore, to avoid benign transfers from carrying the burden of potentially harmful transfers, it may be desirable to limit entry to the pool by criteria such as a maximum annual diversion volume, minimum distance to the river, and a maximum distance between the "old" and "new" point of diversion locations. Alternately, a standard mitigation could be required of all ground water right transfers. The mitigation, in terms of foregone pumping may be weighted to be proportional to the pumping rate and to the distance the point of diversion is moved, and inversely with the distance to critical locations within the surface-water system.

To prevent injury due to uncertainty and unforeseen complexities, an across-the-board transaction cost of perhaps 5-10% reduction in annual extraction volume could be imposed as buffer. For the sample of Snake River Plain transfers evaluated, a 5% buffer would have resulted in a net benefit to all reaches of the river and there would have been no need to allocate additional mitigation. Informal polling of consultants who prepare transfer applications suggests that applicants would gladly accept a fixed penalty, if the result were to create more

certainty in outcome and more timely processing of transfer applications. The benefits of the buffer would accrue to the enjoyment of all users of the aquifer, well users, holders of water rights in springs, and users of river water below hydraulically connected reaches.

Transfers may not be offsetting, that is, there may be a directional bias to transfers due to increased water demand in one portion of an aquifer. In such a situation, it seems likely that penalties may be imposed (loss of a portion of a transferred ground-water right) for transfers to the area of increased demand.

Additional protections could be employed to protect all aquifer users, such as triggers (perhaps total cumulative annual volume or numbers of applications) that cause evaluation prior to the designated pool period, or annual limits on the volume or number of applications allowed to enter the pool. Another protection could be a limited trial period with a sunset date whereupon the program would continue only if renewed.

Ground-Water Banking System Description

To some degree, an aquifer provides a common pool of water accessible to many users and uses. The pool provides storage that carries water from wet years and seasons over to dry seasons and drought years. The storage volume is manageable to the degree that recharge can be increased or discharge reduced. This capacity is used in the development of aquifer storage and recovery systems.

One concept of water banking is an accounting system that tracks the hydrologic effects of human activities that increase recharge or reduce discharge, and assigns ownership to these hydrologic effects. The ownership may be represented by credits in the accounting system, and withdrawals or required mitigation may be represented by accounting debits. An additional feature that may be incorporated into a ground water banking system is a mechanism to facilitate exchanges of owned credits. The fundamental benefit of accounting is that by assigning ownership to hydrologic impacts, effects are internalized and efficiency may be improved.

Application of numerical ground-water models or response functions allows accounting for the migration and eventual depletion (from increased outflow to springs and rivers) of credited volumes of water. An individual model evaluation (such as with the Transfer Tool) would be required of all credits and debits. Basic financial accounting tools (double-entry accounting) can be adapted to manage water credits, debits, and depletion that occur due to propagation

through the aquifer. An example of such a system has been prepared for the Snake River Plain and is accessible online at (select demonstration software) <http://www.if.uidaho.edu/johnson/hydroweb/reports>.

Ground water banking or ground water accounting has two potential applications for transfers. One is that a ground water banking system that incorporates exchange mechanisms may provide a pool of temporary water to mitigate for new economic development while the cumbersome process of locating, purchasing, and transferring a water right continues. The largest transaction cost in some cases is the months to years required to complete the water right transfer. The second application of ground water banking to transfers is that ground water banking would provide a ready mechanism to provide credit for the unintentional excess benefit that transfer mitigation nearly always creates in non-target reaches. This credit would provide two important economic functions. First, it would provide a tangible ownership to the applicant who creates the benefit, internalizing the benefit and reducing transaction costs. Second, it would provide a source for mitigation that other applicants may be able to purchase, reducing their transaction costs and promoting the movement of water to higher economic and environmental uses.

The use of numerical ground-water models and protections such as those suggested for transfer accounting (buffers, limits, and sunset clauses) can guarantee that the net effect of ground-water banking (and the transfers it may facilitate) would be a benefit to all river and spring reaches and all aquifer users.

Conclusions

Water right transfer rules must strike a balance between third party protection and minimizing transaction costs and processing delays. The Snake River Plain experience has been one in which a high level of hydrologic evaluation has been applied to proposed transfers to ensure that there are no adverse third party effects. The high level of scientific scrutiny identifies even small hydrologic impacts that may be considered to require mitigation. This seems like a reasonable approach, except that mitigation in the form of a diminished flow rate becomes larger than the total impact to interconnected surface water bodies. The magnitude of mitigation is sufficient to impede transfer transactions and therefore economic development. Continuing to apply the same level of hydrologic evaluation to a collection of transfer applications (perhaps an annual collection) should reduce mitigation requirements while expediting the application process.

The experiences of Idaho in the Snake River Plain may help guide the evolution of ground water right transfer rules in other basins. We need to maintain an awareness of third party effects. However, evaluating and mitigating for those effects on a case by case basis may not only be unnecessary, but may actually be counter productive.

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3. Idaho Conjunctive Use: Idaho Supreme Court Upholds Conjunctive Water Rights Administration Rules*

Jeffrey C. Fereday

Introduction

In *American Falls Reservoir District No.2 v. Idaho Department of Water Resources*, 143 Idaho 862, 154 P.3d 433 (American Falls), the Idaho Supreme Court upheld the facial validity of Idaho's Conjunctive Management Rules (Rules), IDAPA 37.03.11, et seq. The Rules, adopted by the Idaho Department of Water Resources (Department) in 1994, set forth the process by which ground and surface water rights in Idaho are to be administered together.

In addition to validating the Rules, the decision confirmed, in the context of water rights administration, several foundational principles of Idaho's Prior Appropriation Doctrine each of which is referenced in the Rules - such as: the continuing requirements of beneficial use and reasonable means of diversion; the State policy of full economic development of water resources; the prohibition of waste; and others. The court held that the Rules are consistent with State constitutional principles in allowing the Department to consider the amount of storage water available to a senior surface water right holder before ordering the curtailment of a junior water right. The decision underscores the importance of administrative fact-finding before the State will shut off diversions under junior water rights alleged to be causing material injury to seniors. The procedure or body of law by which the State uses its power to shut off a junior water right so that a more senior right might obtain its water supply is commonly referred to as water right administration. The senior's request is referred to as a "delivery call."

The Plaintiffs who challenged the Rules are: five canal companies and irrigation districts (Canal Companies) with Snake River diversions above Twin Falls; Idaho Power Company, which maintains hydroelectric facilities on the river; and holders of water rights in springs flowing from canyon walls in the river reach below Twin Falls (Spring Users). Each of these Plaintiffs asserts its water rights are dependent, at least in part, on Idaho's vast Eastern Snake Plain Aquifer (ESPA or the Aquifer). The Aquifer is understood to be connected to the Snake River in various places and to varying degrees across southern Idaho. The ESPA's western edge is truncated by the deep Snake River canyon along an approximately 40-mile long section downstream from Twin Falls. The Aquifer's water, flowing westward, encounters the canyon and literally spills out of the basalt canyon walls through innumerable fissures and springs in the Buhl-Hagerman area. The Aquifer discharges in this reach collectively are several thousand cubic feet per second. Large amounts of this cold, clean water are collected to serve, primarily, the water rights offish farms and irrigated tracts on benchlands situated between the cliffs and the river below (the Spring Users). By the time the Spring Users had joined with the Canal Companies in filing the Rules litigation, they too had filed their own delivery calls against ESPA ground water pumpers. These delivery calls also are still pending.

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The Plaintiffs in American Falls had criticized the Rules in various ways since their adoption. This litigation finally brought their theories to court. Plaintiffs' central premise over the years had been that when a senior water right holder alleges a water shortage and demands curtailment of junior-priority water rights, the Department's job is immediate and ministerial- watermasters should be directed to shut off ground water pumps without the Director first considering any facts other than the quantity of the senior's water right and the existence of shortage. Plaintiffs' position became even more emphatic once the bulk of ground water rights on the ESPA had been decreed in the ongoing Snake River Basin Adjudication and brought into water districts for which watermasters were appointed.

The Rules do not describe a summary curtailment model for conjunctive administration, and instead require fact-finding on various issues. Because of this, Plaintiffs claimed that the Rules violate a number of water law principles, including: the "first in time" admonition of Idaho's Constitution; Idaho's water delivery statutes; Idaho Code § 42-601 et seq (setting forth, among other things, watermaster duties in water districts); and the common law. Plaintiffs further asserted that it was illegal for the Rules to allow the Director, when responding to a delivery call, to consider such issues as: the seniors' actual beneficial use (such as the number of acres actually being irrigated); whether their means of diversion are reasonable; and how the Department's action would serve the concept of "full economic development of underground water resources." I.e. § 42-226. Plaintiffs took the position that any such matters had been resolved in the process wherein their water rights were licensed or decreed and could not be revisited in a delivery call. The Plaintiffs maintained that engaging in these inquiries under the Rules would cause a "readjudication" of their water rights that was not allowed. In American Falls, the Idaho Supreme Court rejected all of these theories.

Background

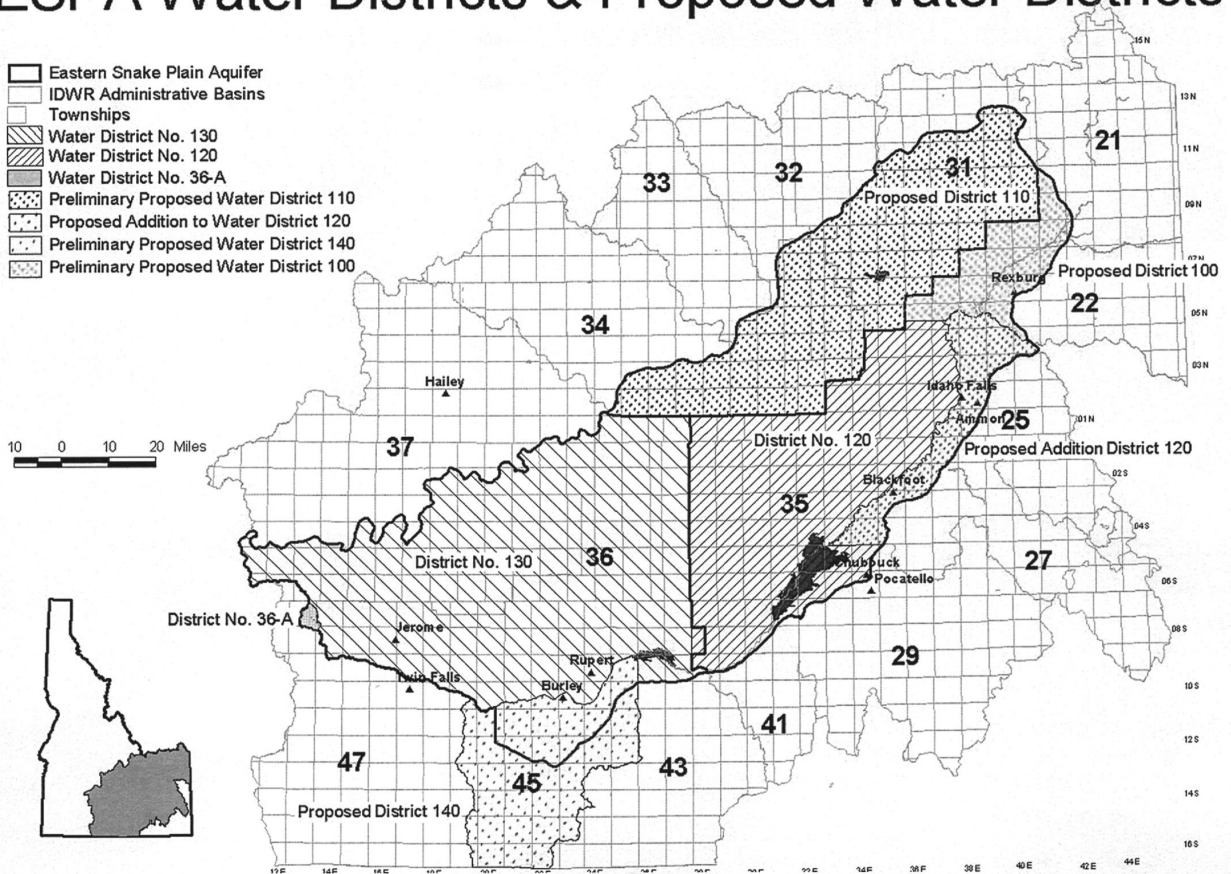
The dispute giving rise to American Falls began in early 2005 when the Canal Companies, acting under Rules' delivery call procedures, formally asked the Department to curtail diversions of thousands of unspecified ESPA ground water rights. The Canal Companies believe ESPA ground water pumping is reducing spring inflows to the river upstream from their headgates and injuring their surface water rights.

The Department responded immediately. Applying various provisions of the Rules, the Director issued emergency orders in February through May 2005 that, on a preliminarily basis, determined it reasonably likely that pumping would cause material injury to the water rights of two of the seven Canal Companies in the upcoming irrigation season. The five Canal Companies who were plaintiffs in the American Falls case were joined by two others in these initial delivery calls, North Side Canal Company and Milner Irrigation District. These two declined to become parties to the American Falls challenge to the Rules. In this section of this article, the term "Canal Companies" refers to all seven, not just the five who filed the separate suit challenging the Rules. The emergency orders sought additional information from the Canal Companies, but in the meantime required ground water users to provide the Canal Companies with certain amounts of replacement water.

Both sides filed objections to the preliminary orders. The Department established a discovery schedule and scheduled a hearing. Meanwhile, the ground water users provided mitigation water as required by the orders, primarily by renting storage water from upper Snake River reservoirs to provide to the Canal Companies and by fashioning means to idle ground water wells. A final determination in the matter, including any mitigation requirement, would come after the facts could be sorted out at the hearing - where both sides could present evidence on various factors enunciated in the Rules. As of this writing, the hearing still has not been held, although the Department has resumed its analysis of the delivery calls and is expected to issue new preliminary orders or other communications informing certain ground water right holders that they will be subject to curtailment unless they provide replacement water for 2007. Absent a settlement, these issues almost certainly will go to hearing.

The Canal Companies took the position that there should be no further fact-finding, that their water right decrees were proof enough of their entitlements, and that their delivery call sufficiently explained to the Director that they were not receiving water to which they are entitled. They maintained that, under the Idaho Constitution's "first in time" mandate, the Department was obligated to shut off ground water pumps in the ESPA, and to do so immediately. The Canal Companies also contended that the various Rule provisions on which the Director relied, and under which he intended to receive evidence at hearing, were unconstitutional or otherwise in violation of Idaho water law.

ESPA Water Districts & Proposed Water Districts



However, rather than wait to raise these claims in the administrative hearing on the delivery call, in August 2005 five of the seven Canal Companies, joining with Idaho Power Company and a group of aquaculture interests in the Thousand Springs area (collectively Plaintiffs), filed a separate action in Judge Wood's district court asking for a declaration that the Rules violate the Prior Appropriation Doctrine as established by the Idaho Constitution.

Plaintiffs' Arguments Were As Follows:

- The Rules allow inquiry into several principles other than "first in time" that Plaintiffs believed should not come into play in water right administration, including such concepts as: "reasonable means of diversion;" whether a senior right can be satisfied using alternate points and/or means of diversion; whether the senior actually is suffering "material injury;" and whether the administration is consistent with "full economic development" of the ground water resource.
- The Rules allow the Department to evaluate a senior's storage water account, including projected "carryover storage," in determining whether senior rights are suffering material injury.
- The Rules invite factual inquiry that impermissibly "looks behind," "readjudicates," or otherwise gives insufficient legal effect to the senior's water right decrees.
- The Rules impermissibly shift the burden to the senior user to prove injury in a delivery call.
- The Rules are illegal in allowing junior right holders to provide mitigation in lieu of curtailment.

The Plaintiffs' complaint asked Judge Barry Wood of Idaho's Fifth Judicial District Court in Gooding County for a declaratory judgment that the Rules are unconstitutional both on their face and as the Director sought to apply them in the delivery calls. Normally, a district court would dismiss such an action for failure to exhaust administrative remedies as: the parties had not yet produced evidence in the administrative case; the Department had not yet applied law to facts; and there was no final Department action or factual record for court review. However, Plaintiffs convinced Judge Wood that their action should be heard because Idaho's declaratory judgment statute, I.e. § 67-5278, refers to the statute's applicability where rules are "threatened" to be applied. Plaintiffs argued, in essence, that the Director's current process under the Rules was the "best evidence" of how the Department aimed to apply the Rules. The Department and the ground water users argued against this interpretation, but Judge Wood sided with Plaintiffs and heard their challenge.

The District Court's Decision

After motion practice over many months, lengthy briefing, and oral argument, the District Court issued a 127-page opinion granting Plaintiffs' summary judgment motions, relying on "the underlying facts in this case" - that is, the actions that had occurred under

the delivery calls at the Department (Order at 25; Order on Plaintiffs' Motion for Summary Judgment in *American Falls Res. Dist #2 v. Idaho Department of Water Resources*, Case No. CV-2005-600, Idaho District Court for the Fifth Judicial Dist., County of Gooding (June 2, 2006)). The judge construed the declaratory judgment statute as vesting the court with jurisdiction over the action based on the "threatened application" of the Rules that Plaintiffs alleged in their briefing. The District Court thus adopted a hybrid approach that considered the Rules constitutionality, both facially and as the Department intended to apply them (Order at 25).

In its Order, the District Court found that the Rules are unconstitutional for several reasons, including: 1) they fail to include express directives as to five "tenets and procedures" that the court believed are constitutionally required; 2) they exempt domestic and stock water rights from conjunctive administration (conjunctive administration refers to regulation of surface water and ground water under an integrated priority system to determine which users are entitled to receive water (senior) and which users must be curtailed (junior); and 3) they allow the Director, in determining material injury, to consider a senior's right to store water in reservoirs for potential future use (so-called "carryover storage").

Press reports of Judge Wood's decision stated simply that he had declared the Rules unconstitutional. However, the District Court's ruling actually upheld the bulk of the Rules, finding them unconstitutional only on narrow, mostly procedural, grounds. For example, the District Court rejected Plaintiffs' central premise that the numerous factors the Rules allow the Director to consider "are on their face contrary to the prior appropriation doctrine." (Order at 83) Judge Wood held that a "decree is not conclusive as to any post-adjudication circumstances" (Order at 92), and in a delivery call "the Director has the duty and authority to consider" whether the senior is "irrigating the full number of acres decreed under the right." (Order at 92) The District Court rejected Plaintiffs' argument that junior users cannot use mitigation or replacement water to avoid curtailment (Order at 90 and 102). The court agreed with defendants that the "concept of 'reasonableness of diversion' is also a tenet of the prior appropriation doctrine." (Order at 88) Judge Wood specifically noted that the Prior Appropriation Doctrine allows the State "to compel a senior to modify or change his point of diversion under appropriate circumstances." (Order at 89)

In a portion of the order that could have particular relevance to the injury claims of the Spring Users in the Hagerman Valley area, the District Court stated that, in a delivery call, the Director is entitled to "take into account whether the senior is protected to historical diversion levels or reasonable aquifer levels." (Order at 102) The judge ruled that "a water user may not command the entirety of a volume of water of a ground or surface source to support his appropriation for a beneficial use involving less than the entire volume," and that "a senior spring user cannot tie up the entire volume of water of an aquifer in order to maintain the natural flow of a spring." (Order at 88-90) The District Court referred to this as the "bath tub" example, wherein "the only time the 'over-flow' produces water is when the bath tub is full." (Order at 90; n.21.)

The ESPA actually exhibits greater spring discharges in this area today than it did

before any significant water development began on the Snake River Plain. This is due to incidental recharge to the Aquifer, and increases in aquifer storage, that resulted from surface water irrigation on the Plain beginning in the early 1900s. Between 1902 and 1953, the spring discharges in this fabled “Thousand Springs” reach increased by approximately 3,700 cubic feet per second, nearly doubling the 1902 discharges. Most of the rights appropriated by the Spring Users were established when the Aquifer was in this enhanced state. Since 1953, spring discharges have gradually decreased (although they still are above 1902 levels), due in part to the use of increasingly efficient surface irrigation practices on the Eastern Snake River Plain that have reduced the historical incidental recharge. Ground water pumping and cyclical droughts also are seen as causes of spring flow declines.

The District Court acknowledged that juniors subject to a delivery call are entitled to a hearing, and may offer evidence to show, among other things, that the senior is “wasting water” or “to establish a futile call.” (Order at 101) The lower court agreed that “the policy of the state is to secure the maximum use and benefit and least wasteful use of its resources,” and the Rules’ “integration of this policy” “is not necessarily inconsistent with Idaho’s version of the prior appropriation doctrine.” (Order at 86) The District Court ruled that a ‘senior user cannot call for water if the water is not, or will not, be put to a beneficial use, irrespective of whether the right is decreed,” (Order at 86), and acknowledged “that most of the issues pertaining to the principles comprising the prior appropriation doctrine have developed in the context of surface water only. Applying these same principles to the integration of surface and ground water presents an entirely new set of complexities.” (Order at 91)

Plaintiffs’ arguments to the District Court essentially took the position that in water right regulation and administration there is no place for any of the several tenets of Idaho’s Prior Appropriation Doctrine except the “first in time” rule. They ended up with a decision from the District Court that disagreed with this theory and with most of their substantive claims. As the Idaho Supreme Court (Supreme Court) was to note in its decision, the “district court rejected [Plaintiffs’] position ... that water rights in Idaho should be administered strictly on a priority in time basis.” American Falls, 154 P.3d at 441. The upshot is the unremarkable proposition that all of the doctrine’s tenets remain in play throughout all periods when the right is being exercised - not just at the appropriation stage, or at the time a water right is scrutinized in an adjudication. This is especially relevant when a water right owner asks the State to curtail another’s water diversion to supply their own. Plaintiffs did not appeal the District Court’s rulings on these issues, although they continued to argue about several of these points in their briefs to the Supreme Court.

The District Court rejected Plaintiffs’ core contentions about Idaho water law, but did conclude that the Rules are unconstitutional primarily with regard to certain procedural points. As the Supreme Court put it, “[while the district court largely rejected [Plaintiffs’] arguments, it did grant summary judgment based on its finding that the CM [Conjunctive Management] Rules are facially unconstitutional on a different basis: a lack of ‘procedural components’ of the prior appropriation doctrine that the court viewed as constitutionally mandated.” American Falls, 154 P.3d at 439. The District Court

perceived constitutional infirmities in the Rules' failure: 1) to describe burdens of proof and evidentiary standards applicable in a delivery call; 2) to give proper legal effect to senior water right decrees; 3) to describe objective criteria necessary to evaluate these factors; and 4) to establish a time frame in which the delivery call process must be completed.

The District Court had believed that “[s]uch components are necessary to protect and prevent diminishment to vested senior property rights,” and that without these elements in place, “seniors are put in the position of re-defending their adjudicated water right every time a call is made for water.” (Order at 90 and 97) Judge Wood had concluded that while “some minimal due process is required” in carrying out a delivery call, “setting up a procedural labyrinth of requiring a senior water right holder to initiate a contested case proceeding ... which cannot be completed during the irrigation season prevents timely administration to a growing crop and was not what either the framers of the constitution had in mind or what the legislature had in mind in adopting” Idaho’s water administration statutes. (Order at 97-98)

As to substantive issues, the District Court concluded that the Rules’ exclusion of domestic and stock water rights from administration amounts to a taking of the senior’s water right without compensation. It also struck down the Rules’ treatment of a senior’s carryover (reservoir) storage in a delivery call.

The carryover storage ruling could be seen as the central substantive water law question in the case on appeal. The question was whether it is constitutional for the Director to ascertain whether “the requirements of the holder of a senior-priority water right could be met with the user’s existing facilities and water supplies” before curtailing junior well owners, as specified by the Rules. IDAPA 37.03.11.42.0 19 (the “Carryover Rule”).

The Carryover Rule defines reasonable carryover as the water an appropriator would have left in his reservoir account at year’s end “under comparable water conditions” without restricting his ability to divert water to storage and fill his reservoirs when water is available: “In determining a reasonable amount of carry-over storage water, the Director shall consider the average annual rate of fill of storage reservoirs and the average annual carry-over for prior comparable water conditions and the projected water supply for the system.” IDAPA 37.03.11.42.0 l.g. Plaintiffs claimed, and the District Court agreed, that it was unconstitutional for the Department ever to require an appropriator to use some of its storage before curtailing junior rights.

The State and the ground water users appealed to the Idaho Supreme Court. The Plaintiffs essentially did not appeal. (One of the plaintiffs, Clear Lakes Trout Co., had raised an equal protection argument below, and did appeal it, halfheartedly, to the Supreme Court. The Supreme Court, however, did not address it.) The Idaho Supreme Court took up the matter on an expedited schedule. As to their delivery calls, Plaintiffs technically could have gone forward with the administrative hearing during the court challenge and appeal. Indeed, the Plaintiffs successfully resisted the State’s motion that the Supreme Court stay the Department’s administrative action until after it rules.

Nonetheless, Plaintiffs did not press for action before the Department, and the calls effectively were placed on hold while the Rules challenge went through the appeal process.

Presumably, now that the Idaho Supreme Court has made its decision, the surface water users' allegations of injury will resume as contested cases before the Department. American Falls makes clear that the Rules set forth correct legal standards under which the Department will hear these cases. Plaintiffs have sought rehearing before the Idaho Supreme Court on the carryover storage issue. As of this writing, the Court has not acted on the rehearing petition. Plaintiffs also have refiled their delivery calls for 2007, and the Department is expected to take emergency action on them soon.

The Supreme Court's Decision

Ruling on Facial vs. "As Applied" Constitutionality

To begin with, the Idaho Supreme Court held that the District Court erred in considering a lawsuit that evaluated aspects of the Rules "as applied." The high court held, as Defendants had argued below, that the reference to a rule's "threatened application" in Idaho's declaratory judgment statute is intended "to permit standing to challenge a rule, but does not eliminate the need for completion of administrative proceedings for an as applied challenge." American Falls, 154 P.3d at 442-43. The Supreme Court noted that "a district court cannot properly engage in an "as applied" constitutional analysis until a complete factual record has been developed." American Falls, 154 P.3d at 443. Rather than simply reverse on this single point and dismiss the case as premature, the high court took up, and ultimately reversed, the balance of the District Court's opinion. However, the Supreme Court did affirm the District Court on one ruling not germane to the water law issues - i.e. whether the lower court erred by revoking the City of Pocatello's intervention as a party in the case. The Supreme Court agreed that the District Court had properly exercised its discretion in that regard.

Holding on the Rules - Lack of Certain Procedural Components

The Supreme Court analyzed each of the "tenets and procedures" the District Court had concluded the Constitution requires be set out in the Rules. As a starting point, the Court noted that the Rules expressly incorporate all applicable Idaho law, and found that "it is unnecessary to incorporate every extant law unless specifically necessary to a clear understanding of the particular Rule." American Falls, 154 P.3d at 444. This is particularly the case, the Supreme Court found, in a constitutional challenge where a court is required to seek an interpretation of a rule that upholds its constitutionality.

As to the specific rulings, the Supreme Court first reversed the District Court's conclusion that the Rules must specify burdens of proof and evidentiary standards. These procedures "have been developed over the years and are to be read into the Rules," and the Rules "do not permit or direct the shifting of the burden of proof." American Falls, 164 P.3d at 445. The Supreme Court expressed no opinion as to what those burdens are in connection with particular claims, defenses, or factual allegations in a water delivery

call.

Second, the Supreme Court rejected the District Court's conclusions about "timely administration" of water rights. "Even if this Court embarked on an analysis of an as applied challenge to the Rules, the facts developed thus far do not support American Falls" contention that it was deprived of timely administration in response to the Delivery Call." American Falls, 154 P.3d at 445.

Clearly it was important to the drafters of our Constitution that there be a timely resolution of disputes relating to water. While there must be a timely response to a delivery call, neither the Constitution nor the statutes place any specific time frames on this process, despite ample opportunity to do so. Given the complexity of the factual determinations that must be made in determining material injury, whether water sources are interconnected and whether curtailment of a junior's water right will indeed provide water to the senior, it is difficult to imagine how such a timeframe might be imposed across the board. It is vastly more important that the Director have the necessary pertinent information and the time to make a reasoned decision based on the available facts. American Falls, 154 P.3d at 446.

Third, the Court took up the question whether the Rules violated a constitutional principle for failing to enunciate "objective standards." The high court noted that the Rules catalogue numerous factors the Director may consider "in determining material injury and whether the holders of water rights are using water efficiently and without waste." The Court held that these "are decisions properly vested in the Director." American Falls, 154 P.3d at 446.

Those factors, of necessity, require some determination of "reasonableness" and it is the lack of an objective standard - something other than "reasonableness"- which caused the district court to conclude the Rules were facially defective. Given the nature of the decisions which must be made in determining how to respond to a delivery call, there must be some exercise of discretion by the Director [T]he Rules are not facially deficient in not being more specific in defining what is "reasonable" in any given case. American Falls, 154 P.3d at 446.

Fourth, the Supreme Court addressed the District Court's conclusion that the Rules "allow the Director to, in essence, re-adjudicate water rights by conducting a complete re-evaluation of the scope and efficiencies of a decreed water right in conjunction with a delivery call." American Falls, 154 P.3d at 447. The Supreme Court noted, with evident approval, that the District Court had ruled that "even with decreed water rights, the Director does have some authority to make determinations regarding material injury, the reasonableness of a diversion, the reasonableness of use and full economic development." American Falls, 154 P.3d at 447. The Court found that the Rules allow the Director to consider factors such as "the system, diversion, and conveyance efficiency, the method of irrigation water application and alternate reasonable means of diversion." American Falls, 154 P.3d at 447. Plaintiffs had argued that "the Director is not authorized to consider such factors before administering water rights" and "is "required to deliver the full quantity of decreed senior water rights

according to their priority” rather than partake in this re-evaluation.” (emphasis in original brief) American Falls, 154 P.3d at 447.

Clearly, even as acknowledged by the district court, the Director may consider factors such as those listed above in water rights administration. Specifically, the Director “has the duty and authority” to consider circumstances when the water user is not irrigating the full number of acres decreed under the water right. If this Court were to rule the Director lacks the power in a delivery call to evaluate whether the senior is putting the water to beneficial use, we would be ignoring the constitutional requirement that priority over water be extended only to those using the water. Additionally, the water rights adjudications neither address, nor answer, the questions presented in delivery calls; thus, responding to delivery calls, as conducted pursuant to the CM Rules, do not constitute a re-adjudication. American Falls, 154 P.3d at 447-48.

Ruling on Carryover Storage

Judge Wood had concluded that the Rules are unconstitutional in allowing the Department to consider a senior’s carryover storage in determining whether to curtail juniors. The Supreme Court also reversed Judge Wood on this issue.

Concurrent with the right to use water in Idaho “first in time,” is the obligation to put that water to beneficial use. To permit excessive carryover of stored water without regard to the need for it would be in itself unconstitutional. The CM Rules are not facially unconstitutional in permitting some discretion in the Director to determine whether the carryover water is reasonably necessary for future needs. American Falls, 154 P.3d at 451.

The Court further held: Neither the Idaho Constitution, nor statutes, permit irrigation districts and individual water right holders to waste water or unnecessarily hoard it without putting it to some beneficial use. At oral argument, one of the irrigation district attorneys candidly admitted that their position was that they should be permitted to fill their entire storage water right, regardless of whether there was any indication that it was necessary to fulfill current or future needs and even though the irrigation districts routinely sell or lease the water for uses unrelated to the original rights. This is simply not the law in Idaho. American Falls, 154 P.3d at 451.

Ruling on Domestic and Stock Water Rights

The District Court had held that the Rules’ exemption of domestic and stock water rights from administration in a delivery call amounted to a taking of the seniors’ water rights (the Rules provide an exemption from administration for domestic and stock water rights. IDAPA 37.03 .11.20.11). Neither side attacked this ruling in its briefs, but the Supreme Court took it up anyway, reversing the District Court. The Supreme Court’s position was that the Constitution allows those diverting water for domestic purposes to have “preference” over those using for any other purpose, provided that the domestic right owner provide compensation to the rights taken.

The right to divert and appropriate the unappropriated waters of any natural stream to beneficial uses, shall never be denied, except that the state may regulate and limit the use thereof for power purposes. Priority of appropriations shall give the better right as between those using the water; but when the waters of any natural stream are not sufficient for the service of all those desiring the use of the same, those using the water for domestic purposes shall (subject to such limitations as may be prescribed by law) have preference over those claiming for any other purpose; and those using the water for agricultural purposes shall have preference over those using the same for manufacturing purposes. And in any organized mining district those using the water for mining purposes or milling purposes connected with mining, shall have preference over those using the same for manufacturing or agricultural purposes. But the usage by such subsequent appropriators shall be subject to such provisions of law regulating the taking of private property for public and private use, as referred to in section 14 of article I of this Constitution. Idaho Const. art. XV, § 3.

Even though the Rule exempting domestic and stock water rights does not reference the “take, but compensate” authority, the Court reasoned that because the Rules incorporate all applicable Idaho law and do not prohibit use of this authority, this provision is constitutional.

The Supreme Court did not explain how a stock water right - presumably an “agricultural” entitlement within the constitutional provision - might be able to have preference over another agricultural water right, such as the irrigation rights the Canal Companies assert in the pending delivery calls. The constitutional provision does not mention stock water rights as such, but expressly provides agricultural rights a preference only over those using water for “manufacturing purposes.”

Conclusion

Conjunctive administration of ground and surface water in Idaho is in its early stages, but to those of us who have been involved in a variety of ESP A controversies for many years, it already seems to have a long history. Since 1994, the State’s Conjunctive Management Rules have been the subject of speculation, debate, and commentary, but no direct litigation. With American Falls, the Idaho Supreme Court finally has spoken, definitively, on the fundamental question of the Rules’ constitutionality. In doing so, the Court again validated the bedrock principles of Idaho’s Prior Appropriation Doctrine, this time in the still- developing context of administering ground and surface water rights together. The decision does not mean that conjunctive administration will not occur, or that junior water rights shown to cause material injury to seniors will not be subject to curtailment. But it does underscore the principle that before the Director shuts off water diversions, particularly in situations of complicated hydrology and huge economic implications, the Department must “have the necessary pertinent information and the time to make a reasoned decision based on the available facts.”

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V. Case Studies

This chapter illustrates the incremental and innovative adaptation of the “social contract” between multiple water users and the citizens of Idaho over the past century. Ray Rigby examines the legal context, negotiations, and ultimate settlement of the Nez Perce tribal claims on Snake River flows through former tribal lands. Those claims arose from the Snake River Adjudication, which itself was initiated as a result of the initial Swan Falls Agreement. One aspect of the mediation illustrates a core theme of this work, that on the Snake parties with very divergent interests have frequently had to find a common negotiated solution:

“The mediation process, however, resulted in the United States actually speaking with one voice, instead of the sometimes disparate voices of its numerous agencies. The State and the majority of the water users knew that the chance to have most of their federal issues resolved in one package might not arise again. This opportunity was one of the main reasons why the mediation continued to function.” (*Rigby*, p. 3)

Jeff Fereday et al. examine the course of the Swan Falls controversy, the dispute that gave rise to the Snake River adjudication and in turn the Nez Perce claims mentioned above. Idaho Power’s water rights at the Swan Falls dam, downstream from Milner, were the only non-subordinated hydro rights on the river. Due to early 20th century water rights at Milner, the minimum flow below the dam was zero, leading to a legal fiction (the “Two Rivers” concept) that the river below the dam was a different source than the river above the dam. Agricultural uses from water above Milner Dam continued to grow, and even though Idaho Power owned storage in the American Falls Dam, it could no longer be certain of moving that water past Milner for hydro generation at Twin Falls, Shoshone, and Swan Falls. Idaho Power ratepayers brought an action before the Idaho Public Utilities Commission in 1977 to require Idaho Power to enforce its water rights at Swan Falls. An agreement was reached in 1984, though there continued to be dispute over a key element of the agreement, the provision that the State would keep an amount of non-appropriated flow “in trust” for future development. The remaining issues were finally settled in a “Framework Reaffirming the Swan Falls Settlement” in March 2009 (See Appendix C).

1. Snake River Water Rights: The Nez Perce Agreement*

Jerry R. Rigby

Brief History of the Snake River Adjudication

The State of Idaho has been involved in an adjudication of all water rights in the Snake River and its tributaries for almost twenty years. The initial impetus for the Snake River adjudication was the State of Idaho's settlement of a major lawsuit with Idaho Power over the water rights of its power plant located at Swan Falls on the Snake River (the "Swan Falls Agreement"). Included in the settlement terms was the requirement for Idaho to proceed with the adjudication of the entire Snake River and its tributaries, including those rights held or claimed by the federal government and the Native American Tribes.

A single State court action was filed by the State of Idaho in the State's district court authorized to hear all associated adjudication claims - i.e., the Snake River Basin Adjudication (SRBA) Court. Beginning in 1987, all claimants of water rights were required to file claims with the SRBA Court. The water right or claim made by each water right holder was deemed a sub-case to the State's original action. The federal government was included in the adjudication and filed nearly 6,000 claims for all of its agencies, including claims for certain tribes under its duty as trustee. Since these claims were filed at the end of the 1980s, the court has been involved in a basin-by-basin adjudication of approximately 180,000 claims. The cost to the State for this adjudication is approaching a half-billion dollars.

One-by-one, the federal claims were either litigated or negotiated to a resolution. These included federal claims under the Wilderness Act, the Organic Act, the Multiple Use Act, the Wild and Scenic Act, the Deer Flat Federal Refuge and the National Recreation Area Acts. Several of these claims required a decision of the Idaho Supreme Court before the appeals ended.

The Nez Perce Tribe's (Tribe's) largest claims, filed in 1993, presented issues that were significantly different from most other claims. Not only were the tribal claims for most of the flow in the Snake River, they also claimed a priority date of "time immemorial." The Tribe's claims were primarily based upon the Tribe's treaties of 1855 and 1863, which the Tribe asserted granted it off-reservation instream flows. Had those claims been decreed as initially filed, virtually every existing, longstanding use of water would have been facing total curtailment. From the beginning, it was quite apparent to all parties involved in the SRBA that the Tribe's claims would have to be litigated (or settled) because the impacts of off-reservation instream flows with "time immemorial" priority dates would have resulted in unacceptable impacts for all junior water users.

Since most non-tribal rights would be similarly impacted, as was the case with other federal claim actions, those with common interests joined together to defeat the Tribe's claims - including any off-reservation instream flow rights in the Snake River.

*Reprinted by permission from *The Water Report* #18 (August 2005), pp. 18-22.

The State of Idaho was represented by the Attorney General's office (working with the Governor's office) and the Idaho Water Resource Board (the state's agency authorized to negotiate on behalf of the state on water issues). The other significantly organized group was known as the Federal Claims Coalition (Coalition). The Coalition was primarily comprised of irrigation, industrial and municipal interests. Following the standard initial discovery and motions, an application for summary judgment was filed by the State and the Coalition in July of 1998. The SRBA court held by summary judgment that nowhere in the treaties, federal law or state law was there any support for granting the Tribe an off-reservation instream flow water right in the Snake River (November 10, 1999). Not surprisingly, the decision was appealed to the Idaho Supreme Court.

Brief History of the Term Sheet (The "Agreement")

As is common in Idaho's adjudication, prior to any trial on a contested water right the water court consistently requires the parties to mediate. In the Tribe's sub-case, the state court had previously encouraged the parties to do so. Nevertheless, the initial mediation resulted in little, if any success. However, once the summary judgment was granted in 1998 and the appeal made, mediation took on a whole new life for both sides. For the Tribe, it provided a forum in which to mediate its claim against the United States for breach of its fiduciary duty as trustee of the Tribe's interests. For the State and the Coalition, it was a forum in which to also mediate their future roles and obligations under the federal Endangered Species Act (ESA) and federal Clean Water Act (CWA) with the United States. It seemed clear to most water right holders that prevailing against the Tribe in the adjudication process would do little good if the same water claimed by the Tribe would later be required to be left undiverted in the river in order to fulfill a biological opinion requiring instream flows for endangered species in the Snake River. In other words, the water quantities being discussed by some within the federal agencies would have resulted in similar, unacceptable impacts to the State and Coalition's water rights as would the Tribe's claims had they been granted.

It became clear to those involved that enlisting the expertise of a mediator with experience in getting large groups with divergent interests to work together was necessary. Francis McGovern, a law professor from Duke University and Stanford, was agreed upon by all parties. The Court then ordered mediation. A gag order was placed on all parties as to any of the terms proposed or discussions held in the mediation. The mediation continued for over five years. It initially involved virtually all the parties to the original case. However, as the mediation progressed certain groups dropped out, most notably the Idaho Power Company. Idaho Power left the mediation mainly due to issues related to its re-licensing of its Hells Canyon Complex of dams on the Snake River. It seemed clear that certain re-licensing issues could not be mediated and would be faced again in re-licensing in any event.

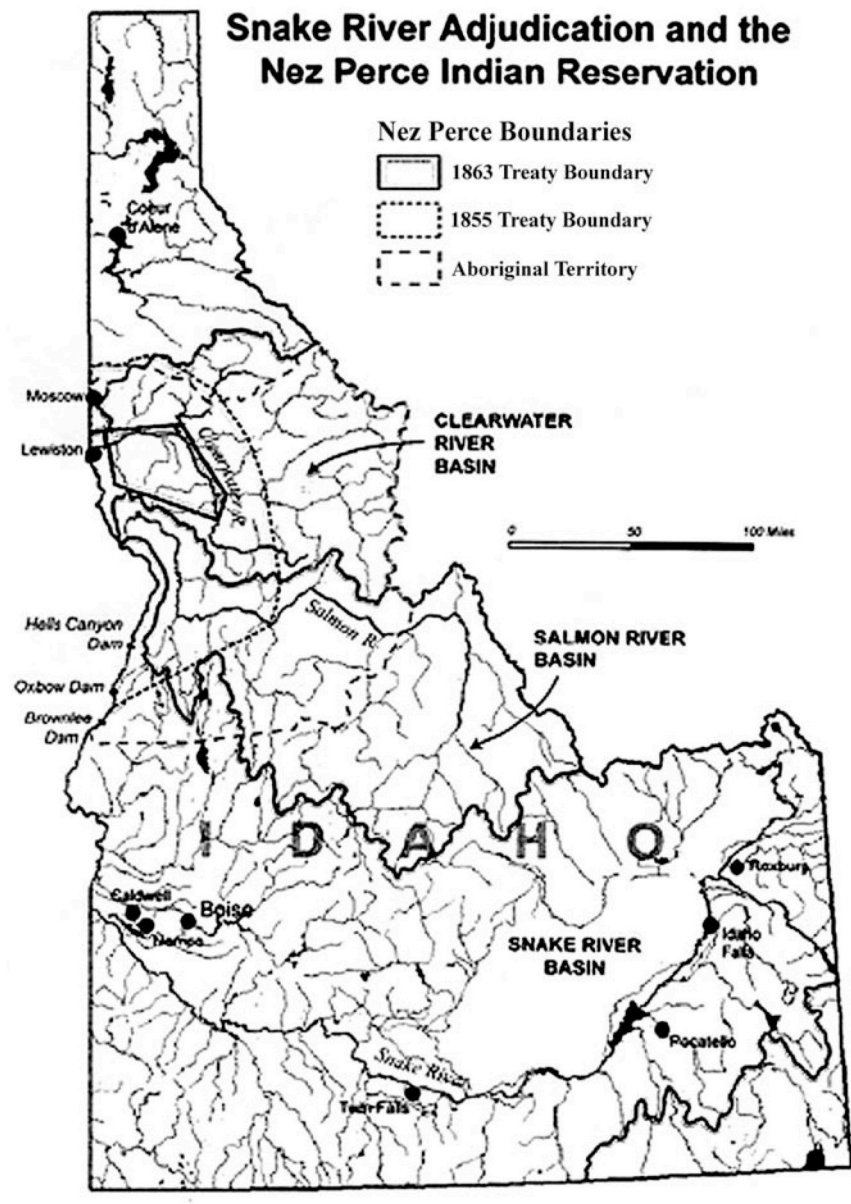
The mediation was fraught with perils and hidden agendas. There were many occasions where each side came away believing that a consensus was absolutely impossible. Because there were so many issues to mediate, many of which had nothing to

do with some parties but everything to do with others, many times one camp didn't even know or understand where a certain issue stood within another camp.

The mediation process, however, resulted in the United States actually speaking with one voice, instead of the sometimes disparate voices of its numerous agencies. The State and the majority of the water users knew that the chance to have most of their federal issues resolved in one package might not arise again. This opportunity was one of the main reasons why the mediation continued to function.

Interestingly, one of the times when the mediation came closest to resolving many of the Coalition and State's interests was at the end of the Clinton Administration immediately prior to President Bush's inauguration. The chief government negotiators were desperately trying to finalize the mediation prior to leaving their posts. Unfortunately, the process stalled at the last moment. Once the new federal team came in the mediation once again bogged down, even taking on many new issues not addressed by any of the parties in the pre-Bush mediation.

The mediation was at its lowest ebb just before it was finalized in the spring of 2004. Various parties resorted to contacting each other directly without going through the mediator. Finally, it appeared that everything might come together. Granted, there were still those who wouldn't ever agree. A few Coalition members never did sign the mediation agreement. However, a settlement was reached. The agreement was entitled the Mediator's Term Sheet (April 20, 2004). Term sheets are generally two- or three-page documents setting forth agreed upon terms, leaving unresolved details which then need to be worked out by the parties. However, this term sheet actually embodied most of what generally would be considered the full "agreement" and contained most of the details as to the terms.



Agreement Components

The Term Sheet is basically comprised of four components:

- Nez Perce Tribal Component
- Salmon/Clearwater Component
- Snake River Flow Component
- General Conditions Applicable to Entire Agreement and to all Parties Component.

Although by no means comprehensive, the following sets forth the primary terms to the Agreement:

Nez Perce Tribal Component:

- Provides \$50 million in trust to Tribe for natural resource and economic development
- Provides \$23 million to Tribe for sewer, domestic water supply system and water quality lab
- Provides \$10.1 million to Tribe in lieu of providing for 45,000 acre-feet (AF) of Payette River (a tributary to the Snake River) storage space in Cascade Reservoir for a 30-year rental term (as claimed by the Tribe)
- Grants the right to the Tribe, in concert with the US and Idaho, to determine the use of 200,000 AF of water in Dworshak Reservoir (on the Clearwater River above Lewiston, ID) for flow augmentation • Grants Tribe a multiple-use water right of 50,000 AF per year (most from the Clearwater River) to be used on Tribal lands with protection built in for injury to other existing water rights
- Grants Tribe a right to a decree to continue its nonexclusive use of "springs and fountains" on federal lands within the 1863 treaty ceded area only; all other such claims upon non-federal lands were waived
- Conveyed federal Bureau of Land Management (BLM) lands within boundaries of reservation valued at \$7 million to Tribe
- Transfers management of Kooskia federal hatchery on the Clearwater River to the Tribe and creates a co-management relationship with the government for the Dworshak hatchery

Salmon/Clearwater Component:

- Instream flows are to be established and held by the Idaho Water Resource Board in trust for the state of Idaho on selected streams of importance to the Tribe. All present uses were protected and the instream flows are subordinated to all future domestic, commercial, municipal and industrial uses. Furthermore, in particular reaches of the streams, the instream rights will also be subordinated to certain future agricultural and other uses
- State of Idaho will administer a cooperative agreement under the ESA to enhance riparian habitat and protect existing and future state-permitted uses
- Riparian/stream bank protection measures will be modified under the Forestry component to improve habitat for aquatic species on all enrolled lands. However, enrollment is not mandatory. This supplements the Forest Practice Rules presently in place for Idaho for all state and private landowners within the basins

- Habitat Trust Fund will be established to provide funding for habitat improvement projects for the programs established under this agreement within the Salmon/Clearwater basins.

Snake River Flow Component:

- Biological Opinion will be issued for the term of the Agreement (thirty years with opportunity for renewal upon mutual agreement) which will provide incidental take coverage, if necessary, for all federal actions and related private actions including US Bureau of Reclamation (Bureau) actions in the Upper Snake River and all private depletions above Hells Canyon Complex as they affect listed anadromous fish and listed resident species (with qualifications). The Biological Opinion is required to be separate from any Federal Columbia River Power System Biological Opinion
- Minimum stream flows established by the Swan Falls Agreement must be decreed in the SRBA court and held by the Idaho Water Resource Board (IWRB) with SRBA injunctive relief granted to any party who seeks to enforce the required flows
- State of Idaho is required to extend the provisions contained in Idaho Code 42-1763B for the term of the Agreement to allow the Bureau to lease up to 427,000 AF of water from willing lessors for flow augmentation from the Idaho water banks procedures established pursuant to the IWRB rules. Although prices are set forth within the Agreement, the Term Sheet recognizes that changes to those prices may occur under certain conditions
- The Bureau is also allowed to "rent" or "acquire on a permanent basis" up to 60,000 AF of consumptive natural flow water rights diverted and consumed below Milner Dam and above Swan Falls from the mainstem of the Snake River
- United States will partially mitigate the impacts of the 60,000 AF of water allowed to be acquired by it under the Term Sheet by paying a one-time payment of \$2 million to the local governments.
- Under certain restrictions, the Bureau would be allowed to use its powerhead water to increase the reliability of the 427,000 AF for flow augmentation
- The Bureau shall make its uncontracted space in reservoirs available to irrigation delivery entities provided the equivalent amount of replacement water from subbasins within the Upper Snake is used for flow augmentation. 30,000 AF of water from the Payette River will be made available for irrigation subject to certain triggers and conditions
- Bottom line is that the United States was granted the right to no more than a total of 487,000 AF in anyone year.
- Water acquired by the US for flow augmentation will "to the maximum extent practicable" be managed to meet the needs of all species covered by the Term Sheet; not result in a violation of the CW A or result in jeopardy to other

species in Idaho; and not result in significant adverse impacts to recreational uses of the waters of the Snake River and its tributaries within Idaho

- Because no pre-decision can be made to a Biological Opinion, specific off-ramps were granted to the State and Coalition which allowed them to terminate the settlement upon written notice should the Biological Opinion differ significantly from the terms of the Agreement. Also, other conditions with appropriate off-ramps are in place should such items such as re-initiation of consultation be required, a jeopardy opinion is issued on the Upper Snake River Bureau projects, or a party fails to implement any provision of this component
- Neither the State of Idaho nor the private parties concede: that Bureau flow augmentation actually benefits the listed species; that Bureau operations require ESA consultation or modification; and that diversion, storage or use of water in the State of Idaho is subject to modification to meet ESA requirements or concerns

General Conditions Applicable to Entire Agreement and to all Parties:

- Requirement to enact necessary laws by federal, state and tribal governments to effectuate and implement the Agreement consistent with its provisions to provide ESA and CW A protection for the State of Idaho and the private parties to the Agreement
- Agreement to negotiate mitigation of impacts caused by management of water by Federal agencies
- ESA and CW A compliance assurances for the term of the Agreement
- Tribes' claims for water rights in the SRBA court will be forever waived and released (except for those specifically granted in the term sheet). Furthermore, the Tribes claims for injuries to such water rights or to its treaty rights relating to water flow rights will also be forever waived and released
- Supreme Court of Idaho must remand the pending Nez Perce appeal to the SRBA court for entry of an order consistent with the Term Sheet
- Drop-dead date for most of the actions required of the parties of March 31, 2005

Term Sheet Agreement Implementation Status

On May 15, 2004, a formal agreement announcement was made. Executives and administrators representing the parties who signed the mediation held the photo-op news release. Those attending understood that the battle was far from over, however. The Term Sheet required, among other things, that the three major governmental players would have to pass legislation (or in the case of the Tribe, obtain its Executive Counsel's approval) in order to provide the necessary authority that the Term Sheet required. In addition, an ESA-related biological opinion which didn't unravel the necessary terms of the Agreement would have to be issued and approved.

Agreement activities to date:

The federal Snake River Water Rights Act of 2004 was enacted into law as Public Law 108-447 in November 2004 (see Title X of the Omnibus Appropriations Act, H.R. 4818). It ratifies the SRBA Agreement and authorizes the necessary funding appropriations. Prior to waiving the claims by the US and Tribe, the Act requires an appropriate finding by the Secretary of Interior that: (a) the necessary prerequisite actions have been completed, including issuance of a judgment and decree by the SRBA court from which no appeal may be taken; and (b) the US, the Tribe and the State of Idaho have each determined that all required actions consistent with the Term Sheet have been taken.

From the beginning of the federal legislation, all parties traveling to Congress were told how difficult the task would be to accomplish within the short time required. Many were amazed at how all of the necessary votes and key elements fell into place to bring about passage of the legislation. Idaho's delegation worked as an organized team and, with their federal counterparts, brought forth this unprecedented legislation.

The Idaho legislative effort also proved daunting. The Idaho Farm Bureau vigorously opposed the legislation. Unprecedented hearings were held in both the Idaho House and Senate prior to an overwhelming vote of support by the Legislature. House Bill 152 which ratified and confirmed the Snake River Water Rights Agreement of 2004 (the Term Sheet) was passed and signed into law on March 24, 2005, requiring the Governor's proclamation certifying all conditions of the Term Sheet had been satisfied. In other words, the Legislature wanted to insure that its law was effective only so long as the Term Sheet Agreement was effective.

The Idaho Legislature also passed House Bill 153. This bill extended the right of Bureau flow augmentation for the duration of the Term Sheet Agreement. It was signed by the Governor on March 24, 2005 and made effective from January 1, 2005. It was further corrected by House Bill 399, signed by the Governor on April 14, 2005, which provided that HB 153 should only become effective upon certification by the Governor that the Biological Opinions have been issued as required by the Snake River Water Rights Agreement.

Following extensive work with the Tribe and the State, recommendations approving the minimum stream flows for specific reaches were made by the Idaho Water Resource Board (IWRB). In addition, the Legislature passed House Bill 154 (signed into law by Idaho's Governor on March 24, 2005). This legislation provides for legislatively decreed minimum stream flows for almost 200 streams, some of which have multiple reaches with specific minimum stream protection.

The Nez Perce Tribal Executive Committee approved the Term Sheet Agreement within days of the Governor's signing the Idaho legislation into law.

Since the passing of the federal legislation, the Bureau has signed-on to the rental pool procedures in the Upper Snake River above Milner. These procedures establish under what conditions flow augmentation water would be available to rent to the Bureau (dependant on weather and storage conditions).

Effective May 10, 2005, IWRB entered into a purchase agreement (the "Bell Rapids Project") to acquire up to 74,119.5 AF per annum of water useable for flow augmentation from "high lift" water rights below Milner and above Swan Falls. "High lift" refers to the existing rights which had to be pumped a considerable distance up from the Snake River canyon to serve irrigation purposes on the higher-altitude Snake River plain. Sixty thousand AF of these water rights are intended to be leased to the Bureau under a long-term prepaid lease. This lease's revenue will reimburse the IWRB for a substantial amount of the cost it has incurred to acquire the 60,000 AF allowed to be leased or acquired by the Bureau under the Term Sheet. IWRB recently finalized the purchase of most of the Bell Rapids water (press release at IDWR website: www.idwr.idaho.gov/about/rels2005/2005-53.pdf). The total price paid by IWRB will be up to \$24.375 million should it acquire all of the useable water rights. The money was appropriated up-front by the Idaho Legislature to insure that title to the water continues to be held by the State of Idaho and only leased to the Bureau. The Bureau and IWRB are presently negotiating the terms of this lease.

The Supreme Court of Idaho has recently remanded the Nez Perce appeal back to the SRBA court pursuant to its order of June 27, 2005. Hearings are now being held on motions made by the parties to the Term Sheet asking the SRBA court for approval of a Consent Decree consistent with the Term Sheet.

Conclusion

Although much has been accomplished to implement the actions required of the parties and others under the Term Sheet, much more work lies ahead before this matter can be finalized. The full implementation of the Upper Snake Biological Opinion has yet to occur. All parties recognize that even if the Opinion comports with the Term Sheet, judicial challenge to the Opinion will most certainly proceed in Judge Reddin's court (US District Court in Oregon). There will undoubtedly be an update to this article written by those following this case.

Whether-or-not a Biological Opinion on the Upper Snake based upon the Term Sheet survives for only five years or for the full thirty years, many believe that it was a risk worth taking in order to provide some certainty to Idaho's future as it relates to its most precious resource: it's water. To have proceeded with the Nez Perce appeal and won would have provided little more than what will occur at a minimum under the Term Sheet - i.e., the Nez Perce instream flow claims in the Snake River will be forever gone and threaten Idaho and its water users no more.

2. Swan Falls: An Examination of Idaho's Biggest Water Rights Controversy*

Jeffrey C. Fereday and Michael C. Creamer

Introduction

Ask 'most any irrigator in Southern Idaho: bar none, the most aggravating water rights dispute in anyone's memory was the Swan Falls controversy, in which the State of Idaho, Idaho Power Company, Idaho Power ratepayers, and Snake River Basin irrigators were cast into a seven-year legal and legislative battle. In its simplest terms, the controversy was about whether Idaho Power Company, holding senior rights for its Swan Falls power plant on the Snake River, would be able to block future diversions by junior upstream irrigators. After various court actions and two inconclusive legislative sessions, the dispute was settled on terms that many saw as representing significant changes in Idaho water policy.

Under the arrangement, Idaho Power retained all of its Swan Falls water rights, although a portion was deemed subordinate to existing irrigators and another portion was made subject to subordination in the future as the State might grant new rights upstream. Idaho Power also secured assurance that those proposed new rights that would have a significant effect on its hydropower production would be granted only after the Idaho Department of Water Resources (Department) subjected them to additional "public interest" scrutiny. As to a third portion of Idaho Power's Swan Falls water rights—the amount remaining after an agreed limit on new development was reached—there is no subordination, and Idaho Power would maintain its prerogative to assert its senior priority. These terms were ratified by the Idaho Legislature in what the authors refer to as the Swan Falls statutes.¹

This article tells the story of the Swan Falls controversy and describes its effects on Idaho water policy. The article does not elaborate on what is undeniably one of the most significant outcomes of the controversy, the institution of the adjudication of all water rights in the Snake River Basin.² Rather, it focuses on how the Swan Falls statutes and the Department's rules affect both flows in the Snake River and the granting of new water rights. The central conclusion of this article is that the Department is implementing the Swan Falls statutes in ways that involve novel approaches to water law and policy that are not compatible with either the Swan Falls statutes, the traditional principles of the prior appropriation doctrine or, in all likelihood, the expectations of irrigators and other appropriators whose new appropriations are made possible by the settlement. The

¹ IDAHO CODE §§ 42-203B, 203C, 2030 (1990).

² The Idaho Legislature ordered this massive adjudication by means of a 1985 act, which also rightly could be called one of the Swan Falls statutes. H.B. 70, 1985 Idaho Sess. Laws 27 (codified at IDAHO CODE § 42-1406A (1990).

* This article is excerpted from "Swan Falls in 3-D: A New Look at the Historical, Legal, and Practical Dimensions of Idaho's Biggest Water Rights Controversy," IDAHO L.REV. 573 (1992). Reprinted by permission. Some subheadings have been omitted and footnotes may refer to citations not in this excerpt. For that material the reader is referred to the original article in the IDAHO LAW REVIEW.

authors also point out that the Swan Falls arrangement ratified past understandings that the Snake River should be operated so as to administer water rights situated above Milner dam separately from those situated below Milner dam. They conclude that new irrigation development made possible by the Swan Falls settlement likely will not have significant effects on river flows supplying Idaho Power's rights at Swan Falls, at least not within the foreseeable future.

... [Break from p. 574 to p. 589]

The Two-Rivers Concept

Any attempt to describe the historical underpinnings of the Swan Falls controversy must include at least a brief discussion of how, over the decades, the Upper Snake Basin effectively came to be treated as separate from the portion located downstream from Milner for purposes of water delivery and administration of rights. Idaho Power's rights at Swan Falls and other power plants are senior to many above-Milner natural flow rights and most of the storage rights, but the Company never took any action to curtail above-Milner rights to serve these priorities. As indicated above, at least until the changes in aquifer discharge that began in the 1950s, the Company likely would have had no reason to do so. Furthermore, substantial amounts of flow actually did pass Milner during most irrigation seasons. However, by the time of the Swan Falls controversy the Company would have found it difficult to compel the continuation of these post-Milner flows, partly because of the Company's own actions.

Milner Dam was built in 1905 at the western most point in the upper Snake at which significant amounts of water could be diverted from the river by gravity systems. The large canals on the north and south sides of the river at Milner divert under water rights carrying priorities ranging from 1900 to 1939.⁸⁴ Over the period from 1914 to about 1923, these diversions had drastically reduced the average August flows past Milner from over 2,000 cfs to less than 100 cfs.⁸⁵ Still, some water almost always passed American Falls, where Idaho Power had an early power plant, and Milner during the irrigation season.⁸⁶ But the long list of senior natural flow appropriations on the Upper Snake River guaranteed that these amounts would be small in most years.⁸⁷ From 1924 through the late 1970s the average August flows were as low as approximately fifty cfs in the irrigation season, and overall averages during that period were about 150 cfs.⁸⁸ By the time the high-lift pumping technology arrived that would allow irrigation of the fertile

⁸⁴ The Milner Dam diverters include A & B Irrigation District, Milner Low Lift Canal Company, American Falls Reservoir District No. 2, Northside Canal Company (a/d/a Northside Twin Falls Canal Company), and Twin Falls Canal Company. Of this group, Norside and Twin Falls hold rights carrying the earliest priorities – October 11, 1900. WATERMASTER'S REPORT, WATER DISTRICT NO. 1 at A-28, A-49 (1986).

⁸⁵ See Idaho Response to FERC, *supra* note 26, Figure 3 (in original document).

⁸⁶ Idaho Dept. of Water Resources River Discharge Reports for the Snake River show that on the average, anywhere from 0.5 to 3.8 MAF of water was measured past Milner between 1910 and 1940. IDAHO DEPT. OF WATER RESOURCES, HISTORIC DISCHARGE, SNAKE RIVER AT MILNER (1990) [hereinafter IDWR SNAKE RIVER HISTORIC DISCHARGE – MILNER] (data on computer file with Idaho Department of Water Resources).

⁸⁷ According to the District 1 Watermaster's records, there are 395 water rights, comprising several thousand cfs, with priority dates earlier than 1900. WATERMASTER'S REPORT A-28 (1986), Water District 1

⁸⁸ IDAHO DEPT. OF WATER RESOURCES, TRENDS IN SUMMER FLOWS AND INDICATORS OR CAUSES, SNAKE RIVER NEAR MURPHY (SWAN FALLS), AS ILLUSTRATED BY FIVE YEAR RUNNING AVERAGES OR AUGUST FLOWS (chart on file with the Idaho Dept. of Water Resources).

plateau lands above the Snake River Canyon downstream from Milner, other physical and institutional barriers to the delivery of water below Milner already were in place. These barriers have resulted in what one commentator has referred to as the "fractured river syndrome."⁸⁹

One of the institutional barriers to below-Milner deliveries arose out of an arrangement that Idaho Power entered with the federal government in the 1920s. After having endured several years of drought in that era, Upper Snake irrigators were determined that the federal government build a reservoir at American Falls as insurance against the water shortages.⁹⁰ When the Bureau of Reclamation received authorization to build American Falls Dam and Reservoir in 1923, Idaho Power entered into a contract with the Bureau that effectively subordinated the Company's American Falls hydropower right to the federal government. The contract specified that, in exchange for one million dollars, Idaho Power would relinquish much of its right to exercise its American Falls priority against the government's junior storage rights provided that Idaho Power would have the right to generate power at the new American Falls Dam and would be provided 45,000 acre-feet of primary storage space in the reservoir.⁹¹

The 1923 contract provided some security for Idaho Power's hydroelectric base by entitling the Company to call for non-irrigation season deliveries of its American Falls storage to serve its hydropower projects at Shoshone Falls and Twin Falls, both of which are below Milner.⁹²

Another motivation for the contract probably was Idaho Power's desire to avoid a confrontation with the irrigators. Although the 1923 contract did not purport to affect the Company's rights and priorities at Swan Falls, it undoubtedly helped give rise to a view that, except for its rights under the 1923 contract, Idaho Power had no claim on any flows in the Snake River above Milner Dam.⁹³ It also helped further the pattern of cooperation between Idaho Power and upstream irrigators. In any event the arrangement had the physical effect of limiting irrigation season flows past Milner, and is one of the factors that discourages the delivery of Upper Snake River flows to rights diverting below Milner Dam. Waters that otherwise would have flowed past Miner to support

⁸⁹ TIM PALMER, *THE SNAKE RIVER: WINDOW TO THE WEST* 163 (1990).

⁹⁰ STACY, *supra* note 29, at 74.

⁹¹ See Contract between the United States and Idaho Power Company Relative to Power Rights at American Falls, Idaho (June 15, 1923) [hereinafter 1923 Contract]. Idaho Power reserved, among other rights, a summer power right for use at American Falls of up to 2,500 cfs of water from May 1 through September 15 each year. Idaho Power also was granted 45,000 acre-feet of primary storage and 225,000 acre-feet of secondary storage in American Falls Reservoir to be used for power generation downstream from Milner. Idaho Power subsequently obtained the right to use all the water that passed American Falls for power generation. See U.S. Dept. of Interior, Bureau of Reclamation Contract with Idaho Power Company (Oct. 1, 1934).

⁹² 1923 Contract, *supra* note 80, at 21-22.

⁹³ Arguably, this view, if it actually had been taken by Idaho Power, was not correct. The Company's deal with the Bureau of Reclamation did not mention Swan Falls, nor did it purport to affect Idaho Power's right to call for, or litigate to assure natural flow deliveries under its Swan Falls rights. Again, the Company simply was choosing not to enforce its rights as against upstream irrigation development. In any event, the 1923 agreement represents perhaps Idaho Power's earliest expression of a de facto policy of conciliation to upstream irrigation development. Had Idaho Power not followed this policy, it surely would have had a showdown with irrigators early on, undoubtedly in court, over whether additional irrigation development, including important storage projects, could occur upstream.

Idaho Power's hydroelectric rights now are held as far upstream as possible to serve upper Snake irrigation and power generation at American Falls.

Indeed, Bureau of Reclamation policy in the late 1940s was to develop new irrigation projects in the Upper Snake River Basin so as to ensure that their return flows would be tributary to the Snake River *above* Milner.⁹⁴ In addition, to obtain the additional storage needed above Milner to provide power to run the irrigation pumps in the Minidoka Project, the Bureau negotiated agreements with, among others, the water users from the North Side and South Side Twin Falls Carey Act project lands whereby the irrigators would curtail their traditional winter domestic and stockwater diversions. These agreements resulted in an estimated 435,000 acre feet of water saved overwinter that then could be stored upriver. Coincidentally, this amount approximated the 433,000 acre feet of storage proposed for the Palisades Project that was built in 1957 on the South Fork of the Snake River near the Wyoming border.⁹⁵ The winter water saved at Milner became, in effect, new storage in Palisades.⁹⁶

While these developments were aimed at holding more water upstream for diversion and use above Milner, some water continues to flow past Milner, but the amount is quite variable. From 1981 through 1991, flows past Milner have ranged from about 20,000 acre feet to 100,000 acre feet in each of the peak irrigation season months of June through September. The amounts of flow past Milner are difficult to predict or interpret because substantial portions of these probably are attributable, not to natural flow, but to storage releases delivered to Idaho Power downstream.⁹⁷

Subsequent state policies have further institutionalized the two rivers concept. One of these is the State Water Plan. For example, Policy 5A of the version of the plan approved by the Idaho State Legislature in 1987 states that "[i]t is the policy of Idaho that

⁹⁴ USBR, COMPREHENSIVE PLAN, *supra* note 24, at 119.

⁹⁵ See U.S. BUREAU OF RECLAMATION, WATER SUPPLY FOR PALISADES RESERVOIR PROJECT, IDAHO: A GENERAL PLAN FOR THE ELIMINATION OF WINTER DIVERSIONS, COORDINATED OPERATION OF RESERVOIRS AND DEVELOPMENT OF NEW LAND, PROJECT PLANNING REPORT 1-5.17-1 at 10 (Oct. 1946).

⁹⁶ Under a traditional application of water law, this new storage would have been junior to, and subject to call by, Idaho Power's Swan Falls water rights, at least to the extent of any return flows or aquifer discharge that resulted historically from the Milner diverters' winter use. See, e.g., *Jenkins v. State Dept. of Water Resources*, 103 Idaho 384, 647 P.2d 1256 (1982). Nonetheless, there is no indication that Idaho Power objected to the arrangement.

⁹⁷ State records indicate that the average annual flow past Milner is some 2.5 MAF. ALAN ROBERTSON ET AL., IDAHO DEPT. OF WATER RESOURCES, STREAM FLOWS IN THE SNAKE RIVER BASIN, 1989 CONDITIONS OF USE AND MANAGEMENT 8 (June 1991). See also IDWR SNAKE RIVER HISTORIC DISCHARGE-MILNER, *supra* note 75. This latter table, which does not distinguish between natural flow and storage releases, shows that the lowest monthly flow ever recorded past Milner was about 100 acre-feet in June 1990, which is less than 2 cfs on a daily basis and which, in the rocky river bed downstream from Milner Dam, looks like the proverbial "zero flow." This amount is inadvertent seepage through or around the dam, not an amount that is purposely released. The Milner Dam recently has been rehabilitated so that it likely allows even less seepage than this. However, the average June volume past Milner for the years 1928-1990 is 214,000 acre-feet, and was nearly 18,000 acre-feet in June of 1989. For this 62 year period, the average volumes past Milner in August, the driest month on average, is over 20,000 acre-feet, or about 326 cfs of flow on an average daily basis. Compared to the capacity of the river in that reach, this amount also is meager. Before the delivery of flows below Milner from the District 1 rental pool in 1979, August flows past Milner in the post-war period ranged from 200 acre-feet (virtually "zero flow" on an average daily basis) up to about 36,000 acre-feet. *Id.*

the ground water and surface water of the [Snake River] basin be managed to meet or exceed a minimum average daily flow of zero at the Milner gauging station ...”⁹⁸

More recently, and in anticipation of the Snake River Basin Adjudication, the State of Idaho and Upper Snake River irrigators negotiated an agreement with the Shoshone-Bannock Indian Tribes of the Fort Hall Indian Reservation that honors the two-rivers concept by restricting the transferability of a substantial portion of Indian reserved water rights. Under the Agreement, the Tribes' storage entitlements may be placed in a tribal water bank, but those stored in Palisades Reservoir may not be rented or delivered for use anywhere below Milner Dam.”⁹⁹

Another recent manifestation of the two-rivers concept appears in the current procedures for the Water District 1 water rental pool, which is a creature of Idaho's water bank statute and whose operation is facilitated by the Committee of Nine.¹⁰⁰ These rules place restrictions on, or impose sanctions to discourage, the rental of rights from the water bank for uses below Milner.¹⁰¹

Without question the most significant act toward solidifying the concept was the Legislature's 1986 amendment to Idaho's water appropriation statutes.¹⁰² This new language forbids the consideration of above-Milner waters in the determination or administration of any Snake River water rights downstream from Milner.¹⁰³

⁹⁸ State of Idaho, State Water Plan (1987). The Idaho Water Resource Board since has adopted the following new language in this respect:

It is the policy of Idaho that the Swan Falls Agreement between the State and Idaho Power Company establishes the framework for water management in the basin. Central to the agreement is the assumption that the Snake River is fully appropriated upstream from Swan Falls Dam except for trust water held by the State and occasional flood waters. The State recognizes that the exercise of water rights above Milner Dam has and may reduce the flow at the dam to zero.

IDAHO WATER RESOURCE BOARD, STATE WATER PLAN—DRAFT PROPOSED POLICY CHANGES 17. (released November 5, 1991, adopted by the Idaho Water Resource Board January 3, 1992). This latest version of the State Water Plan became final in 1992 by the legislature's failure to take action on it within 60b days. Idaho Const. art. XV, § 7.

⁹⁹ 1990 Fort Hall Indian Water Rights Agreement, By and Between the Shoshone-Bannock Tribes of the Fort Hall Indian Reservation, The State of Idaho, The United States, and Certain Idaho Water Users § 73.4(i) (1990). This Agreement also provides in Article 7.9 that “[e]xcept as provided in Article 7.3, no Tribal water rights or water may be sold, leased, rented, transferred or otherwise used off the Reservation.” Similarly, Article 7.5 of the Agreement limits transfer of tribal water rights “to any place of use within the Reservation.” The lands of the Fort Hall Reservation are located above Milner.

¹⁰⁰ Idaho's water bank statute in IDAHO CODE §§ 42-1761 TO 1786 (1990). The Committee of Nine is comprised of representatives of nine of the large irrigation water delivery organizations in the Upper Snake who have contracts with the Bureau of Reclamation for storage water in Upper Snake reservoirs. The Committee of Nine has been designated by the Idaho Water Resource Board, pursuant to IDAHO CODE § 42-1765 (1990), as the “local committee” whose job is “to facilitate the rental of stored water” from the District 1 rental pool.

¹⁰¹ Rental Pool Procedures for Water District 01, Rule 3.6. The local rules also provide that “(t)he operation of the rental pool shall in no way recognize any obligation to maintain flows below Milner Dam or to assure the minimum stream flows established at the USGS gaging [sic] station on the Snake River near Murphy unless specific arrangements to do so are made under these procedures.” Rule 3.3. A higher rate is charged for water leased from the rental pool for use below Milner. *Id.* Rule 8.2

¹⁰² IDAHO CODE § 42-203B(2) (1990).

¹⁰³ This issue is discussed further in section C(4) below.

A detailed analysis of the two rivers concept is beyond the scope of this article, but this brief background is necessary to understand why various interests, including the Idaho Legislature, responded as they did to the Swan Falls controversy.

The Swan Falls Controversy

There is no shortage of opinions regarding the efficacy or propriety of the two-rivers approach to managing the Snake River. But regardless of how one might view this management scheme, or Idaho Power's role in furthering it, one thing is clear: by the time the various phases of Snake River irrigation development had been played out, Idaho Power could expect little in the way of guaranteed flows from above Milner, particularly during the summer, which was the Company's peak electricity demand period. Rather, it would have to look primarily to discharges from the Snake Plain Aquifer in the Milner-to-Swan Falls reach and to surface inflows from below-Milner tributaries. By the early 1970s, Idaho Power thus faced a new challenge to its ability to provide adequate electricity in its service area: new agricultural development, particularly that relying on high-lift pumps in the reach downstream from Milner, would increase water diversions and diminish power-producing flows in the River.

Idaho Power's response, at least in part, was its proposal to build the Pioneer coal-fired power plant near Boise. The debate over Pioneer led to serious scrutiny of the connections between agricultural land development, water flows and hydroelectric power, and the implications of a continuation of substantial new agricultural diversions from the river. Perhaps the most important of these implications was the higher electrical rates that would occur if the Company encouraged irrigation pumping, allowed its hydroelectric base to be diminished, and began to rely more on substantially more expensive thermal power, such as Pioneer.¹⁰⁴

These were the elements that provided the foundation for the Swan Falls dispute, when for the first time, Idaho's irrigators, state government and Idaho Power found themselves embroiled in what appeared to most observers as a desperate conflict to determine how, or whether, irrigation water development would continue to occur on the Snake River Plain. To paraphrase then-Governor Evans, the question was whether Idaho Power would control the Snake River upstream from Swan Falls.¹⁰⁵

The Swan Falls controversy formally began when several Idaho Power ratepayers, their positions informed by the just completed Pioneer controversy,¹⁰⁶ brought a complaint in June 1977 against the Company before the Idaho Public Utilities Commission (PUC) alleging that the Company had failed to protect its water rights at

¹⁰⁴ The Pioneer plant controversy is documented in PAT FORD, *During the Boom, Idaho Succumbed to Good Sense*, High Country News, Sept. 12, 1988, at 19, and n STACY, *Supra*, note 29, at 177-189.

¹⁰⁵ "I want Idaho to become the Snake River water master, not the Idaho Power Company." *Quoted in* STACY, *supra* note 29, at 197.

¹⁰⁶ The leaders in this effort were State Senator John Peavey, a rancher from Carrey, Idaho, and Boise lawyer Matt Mullaney, former legal counsel to Governor Cecil Andrus. The Idaho Public Utilities Commission [hereinafter PUC] denied a certificate of public convenience and necessity for Pioneer in September 1976. Much information about river flows and Idaho Power's Swan Falls rights emerged in the PUC proceedings on Pioneer.

Swan Falls.¹⁰⁷ The matter ultimately found its way to court in what was without question the most controversial water rights litigation in the state's history.

The Swan Falls Litigation

When confronted with the ratepayers' petition at the PUC, Idaho Power effectively took the side of the petitioners as to the seniority of its water rights. In January 1978, in an effort to block approval of new water rights that would further deplete flows at Swan Falls, Idaho Power filed with the Department a protest against "all past and future water applications filed with the Department which contemplate diversion and consumptive use of waters from the surface and subterranean tributaries of the Snake river . . . between Milner Dam, the Snake River east of Twin Falls and the Hells Canyon Dam"¹⁰⁸ Thus, in its blanket protest, Idaho Power remained true to the tradition of not attempting to call for deliveries past Milner.

Idaho Power then filed a declaratory judgment action in district court asserting that its Swan Falls water rights were unsubordinated and valid as against upgradient juniors.¹⁰⁹ The defendants, including the Department and several water right holders or applicants,¹¹⁰ responded by claiming, among other things, that Idaho Power's Swan Falls water rights had been subordinated to junior rights as part of federal licensing of Idaho Power's Hells Canyon complex. The district court ruled in favor of the defendants, but in a 1983 decision the Idaho Supreme Court reversed, finding that Idaho Power's senior rights at Swan Falls were not affected by the subordination of its Hell's Canyon water rights.¹¹¹ The court remanded the case for a determination of the defendants' arguments that Idaho Power had abandoned, forfeited or waived that portion of its Swan Falls rights that effectively had been taken by junior diversions upstream, or that in any event Idaho Power should be estopped from asserting any right to protect these rights because it had acquiesced to upstream depletion over the course of many years.¹¹²

In 1983, Idaho Power filed a second lawsuit in state court against the State and several thousand water right holders upstream, asserting that its Swan Falls water rights

¹⁰⁷ *Mullaney v. Idaho Power Co.*, No. U-1006-124, Idaho Public Utilities Commission (filed June 15, 1977).

¹⁰⁸ Protest of Idaho Power Company to Applications for Permit to Divert and Consumptively Use Water. In the Matter of Applications Filed for Water Diversions for Consumptive Use on the Surface and Subterranean Tributaries of the Snake River Between Milner Dam and Hell Canyon (Dec. 30, 1977, filed with the Idaho Dept. of Water Resources Jan. 5, 1978). Deposition of Thomas G. Nelson, *Higginson v. United States*, No. 39576, district Court of the Fifth Judicial District in and for the County of Twin Falls 53 (1987) [hereinafter T. Nelson Deposition]. Mr. Nelson, who since has become a judge on the Ninth Circuit Court of Appeals, was Idaho Power's outside counsel for many years, and was a principal player in the Swan Falls controversy.

¹⁰⁹ Amended Complaint, *Idaho Power Co. v. State of Idaho*, No. 62237, in the District Court for the Fourth Judicial District, in and for the County of Ada (filed Nov. 8, 1977). Idaho Power, realizing the potential power impacts of continued large depletions, reportedly had prepared such a lawsuit even before the ratepayers' petition, but "[t]he ratepayers beat us to the courthouse, in the sense that they got to the PUC before we got to district court." T. Nelson Deposition, *supra* note 97, at 17.

¹¹⁰ The water right holders all apparently were high-lift pumpers, or applicants for such water rights, located downstream from Milner. The ratepayer petitioners also were defendants, but their position was the same as that of Idaho Power as to the un-subordinated nature of the Company's Swan Falls rights.

¹¹¹ *Idaho Power Co. v. State of Idaho*, 104 Idaho 575, 586, 661 P.2d 741, 752 (1983).

¹¹² *Id.* At 588, 661 P.2d at 754.

were senior to those of the defendants, and seeking injunctive relief.¹¹³ This second suit, which came to be known as "Idaho Power versus the World" or the "7,500 suit" because of the approximate number of defendants that had been joined, completed the picture of what at least appeared to be the full face-off between Idaho Power and Snake River irrigation interests, including the State. A great deal of debate ensued, in the public press and elsewhere.¹¹⁴

...

The 1984 Settlement

Rather than press the controversy in the district court actions [Ed: pursuant to provisions of Senate Bill 1180, passed in 1983, authorizing the Governor and Attorney General to negotiate a settlement with Idaho power], the parties entered into negotiations pursuant to the Legislature's invitation in S.B. 1180¹¹⁵ and eventually reached a conceptual basis for settlement. The core of the arrangement was that Idaho Power would agree to subordinate a portion of its Swan Falls rights so that new appropriations could be approved that would be entitled to deplete that portion. The deal would be based on increasing the 3,300 cfs minimum stream flow at Murphy gauge, established pursuant to the 1976 State Water Plan, to new average daily minimums of 3,900 cfs during the irrigation season and 5,600 cfs during the non-irrigation season. Applications for new rights would be evaluated as to their likely effect on hydropower production and, in some cases, on certain "public interest" factors.

However, the parties still were at loggerheads about how the subordination should be achieved. Attorney General Jim Jones, who was a party to the negotiations, was adamant that the subordination should be immediate and complete, that it simply should state that the Company's water rights at Swan Falls are fully and instantaneously subordinated down to 3,900 cfs.¹¹⁶ The Company vigorously resisted this approach, wanting instead an arrangement where the rights would remain unsubordinated until declared so in favor of specific permits, essentially on an application-by-application basis as new rights were permitted.¹¹⁷

The reason for this point of contention is not entirely clear. Part of the problem was residual distrust between the parties.¹¹⁸ In addition, it appears that Idaho Power was concerned that an instantaneous subordination as to the "future development" component would reduce the State's resolve, or even its legal ability, to scrutinize each new right as

¹¹³ Idaho Power Co. v. Idaho Dept. of Water Resources, No. 81375 (Ada County District Court, filed Mar. 30, 1983). This suit did not state claims against any above-Milner diverters, permittees or applicants. It attacked only those diversions from the river itself between Milner and Swan Falls, and from sources, such as large portions of the Snake Plain Aquifer, that were tributary below Milner.

¹¹⁴ See, e.g., *Swan Falls Issue Rightly Not Added to Special Session*, THE POST-REGISTER (Idaho Falls, Idaho), April 26, 1983, at A4.

¹¹⁵ See *Supra* note 107. [1983 Idaho Sess. Laws 689 (codified at Idaho Code § 61-540 (1990)).]

¹¹⁶ Interview with Jim Jones, former Attorney General for the State of Idaho, in Boise, Idaho (Feb. 18, 1992).

¹¹⁷ T. Nelson Deposition, *supra* note 97, at 53.

¹¹⁸ Interview with Patrick Costello, in Boise, Idaho (December 4, 1991).

to its impact on hydropower or its consistency with the new public interest concerns that the parties were willing to promote as part of the Swan Falls arrangement.¹¹⁹

In the late summer of 1984, the parties were running out of time on a self-imposed "agree or fight" deadline.¹²⁰ Amid some indications that the Governor might sign an agreement without the Attorney General's participation, Mr. Jones sought the assistance of Rexburg attorney Ray Rigby, a member of the Governor's Swan Falls Advisory Committee.¹²¹ The two conferred, and Mr. Rigby suggested a solution to the Governor: the State should hold in trust that portion of Idaho Power's water rights in excess of the new minimum flows, and the subordination could be recognized application-by-application with the state acting as both trustee and administrator of the application process.¹²² With this additional element in place, the parties proceeded toward formal settlement.¹²³

The Framework for Final Resolution

On October 1, 1984, Idaho Power, the Governor and the Attorney General signed the Framework for Final Resolution of Snake River Water Rights Controversy.¹²⁴ In the Framework – which could be described as a listing of goals toward which the parties agreed to work in good faith – the parties stated their mutual desire to avoid the uncertainties, costs and "diminishing returns" of further litigation,¹²⁵ and generally

¹¹⁹ *Id.*, See also T. Nelson Deposition, *supra* note 97, at 52, 54.

¹²⁰ The deadline is described in Patrick Costello and Paatrick Kole, *Commentary on Swan Falls Resolution*, Western Nat. Resources L. Dig. 11 (Summer 1985) [hereinafter Costello & Kole]. Costello and Kole then were attorneys for the governor and the attorney general, respectively. They, along with Idaho Power's outside counsel, Thomas G. Nelson, did most of the negotiating in crafting the Swan Falls settlement.

¹²¹ The Swan Falls Advisory Committee, one of several committees set up by various interests to address the Swan Falls crisis, was a group of individuals experienced in water law and policy which was set up to advise then-Governor John V. Evans.

¹²² Interview with Patrick Costello, in Boise, Idaho (Dec. 4, 1991); Telephone Interviews with Jim Jones, in Boise, Idaho (Feb. 18, 1992) and Ray Rigby, in Boise, Idaho (Jan. 15, 1992).

¹²³ The parties never explained by what documents the trust was to be evidenced. Presumably, the trust's existence is embodied in the various documents executed by the parties, as well as the Swan Falls statutes.

¹²⁴ Framework for Final Resolution of Snake River Water Rights Controversy 1 (Oct. 1, 1984) [hereinafter Framework]. A copy of the Framework is on file with the Idaho Dept. of Water Resources, Boise, Idaho.

¹²⁵ The arrangement providing for the eventual and sequential subordination of the Swan Falls rights down to a guaranteed summertime minimum of 3,900 cfs doubtless appeared to Idaho Power as preferable to protracted legal battles and uncertain outcomes. In an Oct. 31, 1990 deposition given in connection with a dispute in the Snake River Basin Adjudication, Thomas G. Nelson explained the Company's position as to its risks in continuing to litigate the Swan Falls suits:

Q. When you say adverse risks, what do you view as adverse risks in [the Swan Falls litigation]?

A. No. 1, [the Company] could have lost. It could have gotten a court decision that said that its conduct through the years had resulted in a complete estoppel to protest future development of agricultural land. It could have had an erosion of [its] political base in the legislature to the point where it got a subordination bill passed, which would have shifted the focus then from the case as structured to a probably log running issue in the courts on the constitutionality of the subordination legislation. It had the attendant financial risks that would follow from complete subordination of its water rights in the depletion of the river, together with the costs of the litigation.

Q. Were the negotiations friendly?

A. Not particularly.

T. Nelson Deposition, *supra* note 97, at 40. Mr. Nelson also observed that

What the company got was absolute protection to 3,900 . . . , plus the ability to be a major player in presenting facts on the impacts of future development. In other words, it wasn't automatic. So that

described those "judicial, legislative and administrative actions which we agree should be taken in the public interest, and which would resolve the outstanding legal issues to our mutual satisfaction."¹²⁶

The Framework, which for some reason does not mention subordination, sets forth the rationale the parties used to arrive at new seasonal minimum flow levels at Murphy gauge. "The best available hydrologic data indicate that existing uses result in a potential irrigation season low flow of approximately 4,500 cfs at Murphy gauge on an average daily basis."¹²⁷ The Framework provides that the State's previously established minimum stream flow at the Murphy gauge, 3,300 cfs,¹²⁸ would be increased to 3,900 cfs during the summer.¹²⁹ This split the difference between 3,300 and 4,500, and gave rise to the presumption that the Swan Falls deal made possible the establishment of new rights equivalent to 600 cfs of flows measured at the Murphy gauge.¹³⁰

In the Framework, the parties referred to the starting point figure of 4,500 cfs as the "current actual minimum."¹³¹ While this amount certainly was a potential irrigation season low flow, it actually was thirty cfs below a very briefly felt, "lowest ever" average daily flow at the gauge that occurred June 28, 1981.¹³² The average monthly low flows during the irrigation season actually were substantially greater than that – in the

development would not come all at once. It would be staged and the company and other people would have an opportunity to go in and say, this development is not in the best interest of the state. That was felt to be an adequate compromise for the company to accept the 3,900.

Id. At 53. A subordination also would be consistent with the Company's long-standing practice and public position.

¹²⁶ Framework, *supra* note 124, 15 1.

¹²⁷ *Id.* At 2.

¹²⁸ The Department had established 3,300 cfs as the minimum flow at the Murphy gauge as a result of the recommendation of such levels in the Idaho Water Resource Board's State Water Plan, adopted in 1976 and approved by the Legislature in 1978. In the Water Plan the Board had acknowledge that 3,300 cfs was "less than the amount identified as needed for fish, wildlife and recreational purposes at Swan Falls or downstream." *Id.*

¹²⁹ Framework, *supra* note 124, at 3.

¹³⁰ Some may conceive of this as a 600 cfs "block of water" that was made available by the Swan Falls settlement. However, such a conception is not particularly useful. The calculation of 600 cfs of flow at the Murphy gauge does little to indicate what volume of water rights may be established in the aquifer. Although the parties settled on what they agreed was a "lowest ever" summer flow of 4,500 cfs, the actual average July-August flows past the Murphy gauge are substantially in excess of that, as are most daily mean flows. As a practical matter, this implies that the room for development may be greater than 600 cfs measured at the gauge. Furthermore, calculating how much water can be consumptively used upgradient, and when, likely is a dauntingly complex task that will defy and easy presumptions about how much water was "made available" for future development under the Swan Falls settlement.

¹³¹ Framework, *supra* note 124, at 1.

¹³² The lowest mean daily flow ever recorded at the Murphy Gauge was 4,530 cfs, which occurred on June 28, 1981. The mean daily flow had increased to above 5,000 cfs by July 5, 1981. United States Geological Survey, Water Resources Data: Idaho, Water Year 1981 at 117 (1982) [hereinafter U.S.G.S. Water Resources Data]. A rounded figure of 4,500 cfs evidently came to be regarded in the negotiations as the amount that Idaho Power had not "already lost" to upstream development, even though normal irrigation season flows past the gauge were substantially in excess of that. Interestingly, the lowest *instantaneous* flow ever recorded at Murphy gauge was 3,900 cfs on July 9, 1949. UNITED STATES GEOLOGICAL SURVEY, SURFACE WATER SUPPLY OF THE SNAKE RIVER BASIN, U.S.G.S. WATER SUPPLY PAPER NO. 1153 at 33 (1952). However, the *mean* daily flow on that same date was 6,640 cfs; evidently the river had been held back that day by an upstream facility—probably by Swan Falls Dam itself or by Idaho Power's C.J. Strike Dam, which was then under construction. *Id.*; Interview with Alan Robertson, Idaho Dept. of Water Resources, in Boise, Idaho (Feb. 18, 1992). The average flow for the month of July 1949, was 7,702 cfs, and the minimum daily mean was 6,640 cfs.

neighborhood of 7,000 cfs.¹³³ Although there may have been good arguments for recognizing a seasonal low flow based on a monthly average,¹³⁴ the parties clearly intended that the benchmark be established on the basis of the daily average.

Using the 4,500 cfs figure had additional rationale in light of numerous undeveloped permits and pending applications which, if developed, could have been expected to reduce the average daily flows to levels at or even below that amount.¹³⁵ Furthermore, as discussed above, there was some question as to whether Idaho Power could have protected anything above the historical low flow incident of 4,530 cfs as a daily average. In any event, the parties portrayed 4,500 cfs as the current status quo at the Murphy gauge during the irrigation season, and this became the driving number in the remainder of the calculations. The use of a daily average or mean to measure required minimum flows at the Murphy gauge actually is one of the most significant, if subtle, outcomes of the Swan Falls settlement—and one that favored Idaho Power's interest in maximizing protection for in-river flows. Obviously, a system of control that aims to meet a daily average or mean flow at the gauge will subject the river, and other water rights, to much tighter control than if flows are measured according to weekly or monthly figures.

The Framework states the parties' intent that new irrigation storage projects below Milner and above the Murphy gauge should not be allowed unless they could be operated so as to mitigate depletions to hydro-producing flows.¹³⁶ However, the Framework provides that "[d]evelopment of new domestic, commercial, municipal and industrial¹³⁷ uses should proceed without further impediment because of their minimal effect on total water supply," and called for amendment of the State Water Plan "to reserve a block of water for future consumptive DCMI development."¹³⁸

¹³³ IDWR, SNAKE HISTORIC DISCHARGE—MURPHY, *supra* note 31. The lowest average daily flows, of course, would have been less than 7,000 cfs. Even in the drought of 1988, the average July flow was 5,917 cfs. In July 1984, one of the wetter years in recent times, the average monthly flow was 11,361 cfs; in July 1990 the average monthly flow was 6,032 cfs. *Id.*

¹³⁴ The parties did not attempt to spell out, in the Framework or elsewhere, how administration of rights would be carried out so as to avoid violating the minimum flow requirements at Murphy gauge. However, it seems obvious that it would be extremely difficult to administer rights in the Snake Plain Aquifer so as to avoid going below a particular daily mean flow at Murphy gauge—the task perhaps is analogous to trying to stop an oil tanker under full steam on short notice and at a specific spot. A minimum based on a monthly average might allow more flexibility in administration and be more feasible to meet. In addition, since the Swan Falls flows are used to produce a commodity, hydroelectric power, that is relatively fungible (except for frequent price fluctuations on some markets), it might be feasible to shape the administration of rights in the aquifer so as to go below the minimum daily mean on occasions and make it up by curtailing rights so as to deliver, as a monthly average, what the minimum requires.

¹³⁵ SUTTER STUDY, *supra* note 62, Table 2 and Figure 2. Nonetheless, by the time of the settlement, it was clear that much of the net agricultural growth anticipated in the 1970s, such as that which would occur from new land conversions in the below-Milner reach, was not likely to happen, at least not in the foreseeable future, due to questionable economic feasibility. *See* Agricultural Development ES, *supra* note 65, at 8-44 through 8-45.

¹³⁶ Not surprisingly, the Framework did not mention new storage projects above Milner, which also might deplete winter flows that normally pass Milner and provide hydroelectric flows.

¹³⁷ These uses became known by the acronym "DCMI."

¹³⁸ Framework, *supra* note 124, at 4. The concept of "reserving a block of water" is discussed below in section IV.

If the calculation of new minimum flows at Murphy gauge was the most important substantive element of the Framework, probably the second most important was the provision calling for the enactment of new public interest criteria in Idaho's water appropriation statutes to apply to the granting of new water rights that would affect Idaho Power's rights at Swan Falls.¹³⁹

The right to develop the remaining water resources on the Snake river system should be allocated in a manner which will maximize long-term economic benefits to all sectors of society. Priority should be given to projects which promote Idaho's family farming tradition and which will create jobs. Because maintenance of inexpensive hydropower resources contributes to a positive economic climate for the creation of new jobs for Idahoans, future water rights allocation decisions should weigh the benefits to be obtained from each development against the probable impact it will have on the Company's hydropower resources.¹⁴⁰

The Agreement

Later that month, on October 25, 1984, the State and Idaho Power signed a contract, entitled simply Agreement, by which the parties committed themselves to at least some of the ideas in the Framework.¹⁴¹ The Agreement names all eleven of Idaho Power's hydroelectric projects¹⁴² and their associated water rights on the mainstem Snake River and various tributaries in the reach from Shoshone Falls to Swan Falls, and provides that these rights together entitle Idaho Power to exercise fully its rights to the agreed upon 3,900 cfs and 5,600 cfs at Murphy gauge in the irrigation and non-irrigation seasons, respectively.¹⁴³ The Agreement states that these water rights in excess of these minimum flows would be "subordinate to subsequent beneficial upstream uses upon approval of such uses by the State in accordance with State law"¹⁴⁴ In other words, the Agreement recognizes that the Company's rights exceeding the minimum flows are not instantly subordinated, but are subject to becoming so upon state approval of "subsequent beneficial upstream uses."

¹³⁹ The public interest review procedure that arose out of the Framework is codified at IDAHO CODE § 42-203C(2) (1990).

¹⁴⁰ Framework, *supra* note 124, 15 2-3. The Framework also called for a general adjudication of the Snake River, State encouragement of "an effective water marketing system," State funding of hydrologic and economic studies "to determine the most cost-effective and environmentally sound means to implement the state water plan and to augment flows in the Snake River," and legislation to clarify that proceeds from any sale of hydropower water rights by a utility would be accounted to the benefit of rate-payers. Of these additional goals, only the adjudication and the sale of utility water rights have received legislative attention.

¹⁴¹ Agreement Between the State of Idaho, Attorney General of Idaho and Idaho Power Company (Oct. 25, 1984) [hereinafter the Agreement]. The parties also signed a second agreement that day, entitled "Contract to Implement Chapter 259, Sess. Laws, 1983," which provided, among other things, for dismissal of the pending lawsuits in accordance with the provisions of Senate Bill 1180, IDAHO CODE § 61-540. Chapter 259 is S.B. 1180, Ch. 259, 1983 Idaho Sess. Laws 689 (codified at IDAHO CODE §§ 42-639 and 640 (1990)).

¹⁴² Thousand Springs, Lower Malad, Upper Malad, Clear Lake, Sand Springs, Upper Salmon, Lower Salmon, Bliss, Twin Falls, Shoshone Falls, and Swan Falls. Of these, the map herein shows only Swan Falls Dam. The others in this list are located in the Snake River reach from Milner to King Hill.

¹⁴³ Agreement, *supra* note 141, at 3.

¹⁴⁴ *Id.* at 4.

The Agreement recites that Idaho Power is entitled to use the entire flow of the river at these facilities up to the extent of its water rights. This is entirely proper. Logically, even if an appropriator has subordinated his water right to upstream users, he is entitled to exercise the full right when it is available and when doing so will not deny water to one in whose favor the subordination is given. The Agreement also states that the Company retained its "right to contest any appropriation of water in accordance with State law."¹⁴⁵

The Agreement provides that the Company's water rights at these projects are subordinate to the water rights of all parties to Idaho Power's "7,500" lawsuit and also to those of upstream appropriators that had been placed to beneficial use before October 1, 1984, and for which a claim had been filed by June 30, 1985.¹⁴⁶ The parties also outlined proposed legislation¹⁴⁷ needed to implement the settlement, including proposed water code amendments that would increase the minimum stream flow from 3,300 cfs to the seasonal levels to which the parties had agreed.¹⁴⁸

[Skip from p. 607 to p. 635]

Looking Forward: Reconciling intentions with results

...

Snake River Flows at Murphy Gauge

The Idaho Power ratepayer/petitioners who initiated the controversy sought to protect the Company's rights at Swan Falls. On the face of the settlement, they fell short of that goal. Idaho Power agreed to a process by which it could be stripped of its right to defend Murphy gauge flows above the 3,900 and 5,600 cfs minimums. However, the reality is that flows in this reach are not likely to reach these minimums on any sustained basis, even with substantial new development.

¹⁴⁵ *Id.* This, too, is an appropriate feature of this type of prospective subordination arrangement. Even though Idaho Power was agreeing to a process that would subordinate its rights as to qualifying future appropriators, it was not agreeing to remain passive in the process.

¹⁴⁶ *Id.* at 3-4.

¹⁴⁷ Six legislative bills, including the proposed addition of IDAHO CODE §§ 42-203B, 203C, 203D, were exhibits to the Agreement.

¹⁴⁸ At the time, a minimum flow of 3,300 cfs with a 1976 priority was in effect at the Murphy gauge. See IDAHO WATER RESOURCES BOARD, STATE WATER PLAN (1976).

The presumed low flow of 4,500 cfs that was the basis for the Swan Falls settlement calculations arguably is not an accurate measure of the effect of existing agricultural development on Idaho Power because river flows approaching that level are uncommon, short-term events. As shown previously, the 4,500 cfs flow that was used as a starting point for the negotiations reflected a one-time mean daily flow that occurred in the summer of 1981.²⁴¹ But through the years 1985 to 1990, which were below-normal water years, the average monthly flows at Swan Falls during July and August averaged 6,529 cfs and 7,077 cfs respectively.²⁴² These can be compared to the years 1919 to 1940 in which the average monthly flows for July and August averaged 7,900 cfs and 7,171 cfs, respectively.²⁴³

Indeed, from 1919, when Idaho Power made its final, and by then somewhat junior, appropriation of 4,000 cfs at Swan Falls, through 1940, which is the approximate beginning of the period of renewed agricultural expansion relying on groundwater development, average July flows at the Murphy gauge equaled or exceeded 8,400 cfs in only three years. During that same period, average August flows never exceeded 7,904 cfs. In other words, when Idaho Power made its 1919 appropriation there was insufficient water in the Snake River to fill that right during July and August of an average year.

Since 1914 the average July flows have never fallen below approximately 5,300 cfs, and average August flows have never fallen below 5,900 cfs.²⁴⁴ Again, although average daily and instantaneous flows at the Murphy gauge occasionally approach 4,500 cfs, historically they average well above that and compare closely with average monthly flows experienced at the time Idaho Power made its most junior appropriation at Swan Falls.

Thus, one could assert that after all the collective heartburn caused by the Swan Falls dispute, Idaho Power, its ratepayers, agricultural interests and the river at Murphy gauge now find themselves in much the same position they were in seventy years ago. But such a conclusion would be overly simplistic. An informed review of the situation would show that natural flows past Miler have decreased significantly over the years while consumptive use of water in the Snake River Basin above Swan Falls has increased, that discharges from the Thousand Springs area have declined and that a portion of the flows measured today at Swan Falls are attributable to storage releases from American Falls and other reservoirs under the auspices of the Upper Snake Water Supply Bank-water whose delivery is paid for by Idaho Power and its ratepayers.

But whatever the complexities and qualifying factors, the fact remains that Idaho's Snake River water supply system has absorbed the development of over a million acres of irrigated farmland since the 1920s while still producing flows in the Snake River below Miler that resemble predevelopment levels. This remarkable fact surely is testimony to the sheer vastness of the Snake Plain Aquifer and the magnitude and flexibility of the

²⁴¹ U.S.G.S. Water Resources Data, *supra* note 132.

²⁴² IDWR SNAKE HISTORIC DISCHARGE-MURPHY, *supra* note 31.

²⁴³ *Id.*

²⁴⁴ *Id.* Both of these low monthly averages occurred in 1981 when the average July flow was 5,292 cfs and the average August flow was 5,915 cfs, *Id.*

river's surface water storage system. Additional flexibility arises from the responsiveness of agriculture to market demands that have given rise to the new technologies and increased efficiencies employed by Snake River Plain irrigators.

The notion that "there ain't enough to go around" that pervaded Idaho's thinking in the 1980s now seems somewhat premature in hindsight, and it might remain so for years to come if this dynamic system continues to operate through proper management and institutional foresight. Certainly Idaho Power will have to continue to purchase storage releases from the Upper Snake to maintain desirable flows at Swan Falls, but the evidence suggests that at least for the foreseeable future the amount purchased need not be much and it likely will be available. The fact that Idaho Power can purchase water from the Upper Snake Water Supply Bank for delivery below Miler suggests that the two-rivers concept, while officially declared, is not an irresistible barrier to delivering water where it is needed in the market.

[Skip B, C. Public interest criteria, Direct diversions curtailed] p. 636 – 640]

4. The Snake River Adjudication

Another palpable result of the Swan Falls dispute was the commencement of a basin-wide adjudication of all Snake River Basin water rights which was instituted by the Idaho Legislature as part of the statutory implementation of the Swan Falls Framework and Agreement (the SRBA).²⁵⁹ An estimate 135,000 claims to water rights in the Snake River Basin are expected to be filed and considered by the District Court in Twin Falls County.²⁶⁰ Among the rights quantified in the SRBA will be the federal reserved and Indian water rights.²⁶¹ These federal and Indian water rights may well have remained unquantified for many years to come if the SRBA had not been commenced.

In response to the SRBA the Department has developed new procedures for acquiring and processing information on the thousands of claims that have been filed. The Swan Falls dispute served as a catalyst which prompted the Department to develop more sophisticated means of identifying and quantifying water rights management techniques. The Department now has a comprehensive and accessible computer database of water rights that allows the public and the Department to obtain information about water rights in the Snake River Basin quickly. Also, the Department now is able to classify current land use and determine beneficial use acreages throughout the basin with

²⁵⁹ The Framework states that:

the key to effective management of the Snake River lies in a comprehensive determination of the nature, extent and priority of all of the outstanding claims to water rights. Only through a general adjudication will the state be in a position to effectively enforce its minimum streamflow rights, protect other valid water rights and determine how much water is available for further appropriation.

Framework, *supra* note 124, at 5. The legislative authorization for the Director to commence the SRBA is codified at IDAHO CODE § 42-1406A (1990)

²⁶⁰ Phillip Rassier, *Idaho Adjudication Presumption Statutes*, 28 Idaho L. Rev. 509 (1992).

²⁶¹ The SRBA statutes were specifically drafted with the intention of satisfying the McCarran Amendment, 42 U.S.C.A. § 666 (1986), which allows the United States to be joined in any suit for the adjudication of rights "to the use of water of a river system or other source . . . where it appears that the United States is the owner of or is in the process of acquiring water rights by appropriation under State law . . . and is a necessary party to such suit."

a combination of LANDSAT imagery, color-infrared aerial photographs and orthophotographic quadrangle maps. This prodigious catalogue of information will be used by the Department in making its recommendations to the court regarding each water right claim and undoubtedly will be valuable to the Department long after a final decree is entered. It remains to be seen how this information will be used to effect better management of the River and its tributary aquifer.

Many prior decrees issued in general stream adjudications for tributaries in the basin failed to state the requisite elements of the water rights such as the place of use or the duty of water.²⁶² The SRBA decree itself should establish these water rights and all previously un-adjudicated claims with more certainty. This result would enhance the State's ability to administer water rights and minimize potential conflict among water users.

In these respects, the SRBA has the potential to provide a higher degree of certainty for Idaho's water right holders, including Idaho Power, and state administrators. If so, then it will be one of the real fruits of the Swan Falls dispute. Whether the SRBA's promise becomes a reality, and at what cost to the State, remains to be seen.

Conclusion

Over the course of several decades, irrigators and Idaho Power Company both expanded their uses of Idaho's Snake River and its tributary aquifer. Some of the irrigation development caused measurable depletions to Idaho Power's senior water rights at Swan Falls Dam. Nonetheless, irrigation and power interests coexisted in harmony until events in the 1970s gave rise to serious discord. The resulting face-off between irrigation and hydropower became by far the biggest water rights dispute Idaho had ever seen. When the Idaho Supreme Court determined that the Company's Swan Falls rights were not subordinate to upstream appropriations, irrigators were presented with no less a question than whether there could be further agricultural development in large portions of southern Idaho. The Governor, the Attorney General and the Legislature sided with the irrigators, but they faced the formidable obstacle of Idaho Power's property rights. For its part, Idaho Power faced risks that its rights would be seen as having been waived by past practices, or at least that it would be estopped from asserting them against upstream juniors and new appropriators.

After much legal and political volleying, the dispute was settled. The Legislature ratified the arrangement by enacting several new statutes; the Water Resource Board amended its water plan; and the Department instituted new rules and policies. The compromise involved the subordination of a portion of Idaho Power's Swan Falls water rights to existing upstream appropriators and established a process by which another portion of these rights could be subordinated to future appropriations after consideration of certain factors designed to provide some protection to Idaho Power. The Company received assurance that its Swan Falls rights would not be depleted during the irrigation season below an amount that is about sixty percent of its historically-available

²⁶² See e.g., *Owen v. Nampa & Meridian Irr. Dist.*, 48 Idaho 680, 285 P. 464 (1930); *Farmers Coop. Ditch Co. v. Riverside Irr. Dist.*, 16 Idaho 525, 102 P. 481 (1909).

flows. The Swan Falls compromise generally was consistent with Idaho Power's tradition of deference to upstream irrigation development and its hands-off approach to waters above Milner. Indeed, in the Swan Falls statutes the Legislature included language declaring, in effect, that the Snake River actually is two unconnected rivers, divided at Miler.

The settlement is not likely to have much effect on flows at Murphy gauge, at least for the foreseeable future. Idaho Power should continue to enjoy flows at its Swan Falls power plant in amounts well in excess of 4,500 cfs during all but the most extreme periods of water shortage. Development of irrigated acreage in southern Idaho will continue to be driven, not by the availability of water under the Swan Falls arrangement, but by the dictates of agricultural economics. Indeed, to the extent the availability of water is an issue in any proposed new "trust water" diversion, the tension is most likely to arise between the proposed new appropriation and the rights of existing irrigators, not between the applicant and Idaho Power.

One of the controversy's most significant outcomes likely is its effect on the legal stature of new water rights that are recognized pursuant to the Swan Falls statutes. Pursuant to rules and policies adopted in response to its interpretation of the Swan Falls statutes, the Department has imposed an unexpected level of control on new water rights in the "trust water" area. The Swan Falls statutes do not reveal an intent to subject new appropriators to the guiding hand of a permanent, separate and "continuing management" as the Department seeks to do by rule or policy. Nor is there justification for concluding that new non-hydropower permits or licenses, such as the hundreds issued to irrigators in the last few years, be burdened with the "reopener" or term limit conditions that the Department has imposed on each of these new entitlements. These novel conditions, which call into question whether the certainties of the traditional prior appropriation doctrine continue to apply to such rights, could be particularly injurious to irrigators. This is perhaps the ultimate irony of the Swan Falls settlement. While the State sided with agricultural interests throughout the dispute, the Department now has saddled new irrigation rights with limitations that are unprecedented in Idaho water law and indeed are unknown to the prior appropriation doctrine.

The Swan Falls statutes frame a "gateway" through which certain new appropriations must pass, but once through, these water rights have a stature equal to all other water rights in Idaho and are subject to the same obligations and limitations of priority and beneficial use, and to the State's inherent authority as the trustee of all of Idaho's water resources. With the exception of their entitlement to benefit from the subordination of Idaho Power's rights, the new rights should be recognized, used and managed according to the traditional rules of western water law.

With the exception of the additional conditions the Department has placed on "trust water" rights-and the commencement of the Snake River Basin Adjudication-the Swan Falls dispute actually did not seriously reshape the day-to-day world for irrigators or for Idaho Power. New irrigation can occur, and the Snake River and the Snake Plain Aquifer will continue to be the fulcrum of southern Idaho's economy as they yield up their water to farms, ranches and industry. The hydroelectric generators at Swan Falls will continue their steady hum from the depths of the Snake River Canyon.

Appendices


Appendix A	IDWR Rule No. 24
Appendix B1	Nez Perce Agreement Summary
Appendix B2	Exceedence Flows
Appendix B3	Mediator's Term Sheet
Appendix C1	Swan Falls Press Release
Appendix C2	Swan Falls Framework, 2009
Appendix D	Supreme Court Opinion, American Falls

Appendix A

IDWR Rule No. 24

ADMINISTRATOR'S MEMORANDUM

Transfer Processing No. 24

To: Water Management Division Staff
From: Gary Spackman 
RE: **TRANSFER PROCESSING POLICIES & PROCEDURES**
Date: January 21, 2009

This memorandum supersedes Transfer Processing Memorandum No. 24 dated October 30, 2002.

The purpose of this memorandum is to provide policy guidance for processing applications for transfers of water rights pursuant to Section 42-222, *Idaho Code*, and other applicable law. The revisions to the October 30, 2002 memorandum are provided to recognize statewide application of this memorandum, to clarify the guidance based on updates to statutes and Department policy, and to streamline transfer processing to reduce application processing time and existing application backlogs. These policies and procedures are to be followed until rescinded or amended, or superseded by statute or rule or court decision, to assure that applications are processed efficiently and with consistency.

Regardless of whether or not an application for transfer is protested, Section 42-222, *Idaho Code*, requires that the department evaluate whether there would be injury to other water rights, there would be an enlargement in use of the original right, the proposed use would be a beneficial use, the proposed use would be in the local public interest, the proposed use would be consistent with the conservation of water resources within the State of Idaho, and whether the proposed change would impact the agricultural base of the local area. In the case where the place of use is outside of the watershed or local area where the source of water originates, the department must also evaluate whether the change would adversely impact the local economy of the watershed or local area. The department must also evaluate the validity of the right (or part thereof) being changed and must assure that the applicant owns the right or otherwise has the authority to apply for the transfer.

1. When a Transfer is Required.

Section 42-222, *Idaho Code*, requires the holder of a water right to obtain approval from the department prior to changing: (1) the point of diversion, (2) the place of use, (3) the period of use, or (4) the nature of use of an established water right. An established water right is a licensed right, a decreed right, or a right established by diversion and beneficial use. Approval is sought by filing an application for transfer with the department. A claim in an adjudication or a statutory claim must be filed to allow a transfer application to be processed for a right based upon diversion and beneficial use.

Changes to Elements of a Water Right. An application for transfer is required if a proposed change would alter any of the four elements of the water right listed above that can be changed pursuant to Section 42-222, *Idaho Code*, as recorded with the department or by decree. Conditions or other provisions of a water right may further define or limit a recorded element of a water right; an application for transfer is required for a proposed change that could alter such a condition. For example, a proposed change of use under a water right for an industrial use, which includes a condition limiting the quantity of water that can be consumptively used, to a different industrial use that would increase the quantity of water that would be consumptively used can not be made unless enlargement is prevented.

If a proposed change has the potential to injure other rights or the potential to enlarge the right, even when there would be no change in any of the recorded elements of the right, an application for transfer should be filed to provide for evaluation of injury and enlargement issues before the change is made. For example, if the point of diversion from a fully appropriated creek is proposed to be moved where additional water would be available for diversion or if the proposed point of diversion as changed would move upstream of the points of diversion for other rights, the change can not be made unless other conditions are imposed, such as mitigation, to prevent injury.

Changes to Points of Diversion. If a point of diversion is proposed to be moved to a different tract than described as an element under an established water right, then a transfer application is required. This includes a change from one 10-acre legal subdivision to another if the point of diversion has been previously described as a 10-acre legal subdivision. An application for transfer is also required when a point of diversion is proposed to be added for a water right, even when the existing authorized point of diversion is recorded as a 10-acre legal subdivision and the additional diversion would be within the same 10-acre legal subdivision.

If a point of diversion is proposed to be moved from a tributary to a location downstream from the confluence of the tributary and the surface water stream to which the tributary is joined, then an application for transfer is required. If a point of diversion is proposed to be moved from a stream to the stream to which it is tributary at a location upstream of the confluence between them, or moved from one tributary to another tributary, an application for exchange is required pursuant to Section 42-240, *Idaho Code* rather than an application for transfer.

Changes in Place of Use. An application for transfer is required if a change in the location of use between 40-acre legal subdivisions is proposed that would result in an increase in the number of acres within a 40-acre legal subdivision or in use of water at a new 40-acre legal subdivision that is not included within the recorded place of use element for the right. An application for transfer is also required for a proposed change in location of use under a water right for irrigation to a location outside of prescribed boundaries such as those provided under Section 42-219, *Idaho Code*, with or without a proposed change in purpose of use, except for those rights held by irrigation districts or municipal providers, even when the change in location would be included within the same 40-acre legal subdivisions existing prior to the proposed change. A proposed change to any water right held for irrigation involving a change in the number of irrigated acres of less than one acre at the original place of use or at a proposed new place of use is not approvable unless the proposed change involves a new purpose of use within the original place of use or the applicant provides a verification procedure approved by the Director that can be practically administered to prevent injury or enlargement.

Consolidation of Acreage. An application for transfer is required for proposed consolidation of water use for irrigation by permanently reducing the number of acres authorized for irrigation under a water right, while maintaining the original diversion rate or annual diversion volume.

Land Application of Wastewater. An application for transfer is required for a proposed change in the place of use under a water right for uses such as industrial, dairy, or confined animal feeding operations that would allow land application of wastewater from that use or change the location of lands used for application of wastewater, when there is not a full existing water right for irrigation of the place of use receiving wastewater.¹

Correction of Errors. An application for transfer may also be required to correct errors in licenses or decrees. For example, a transfer application may be required to correct the location of the place of use of a water right decreed by a court if the decree is later determined to be in error. However, a transfer action is not always required to correct such errors. For example, if a water right claim is determined to be in error, the claim can be amended to correct the error. Similarly, some clerical errors in a license or decree may be corrected by issuance of an amended license or decree (by the jurisdictional court) without using the transfer process. Also, a change to a description of the location of the place of use or point of diversion, as used by the department for administration of water rights, resulting from improved methodology does not require an application for transfer, as described below. In addition, conditions that are no longer applicable may be modified or removed from a license without a transfer, provided other rights are not materially affected. For decrees, conditions that are no longer applicable should be noted in comments on the department's electronic record for the right. However, a change to any element of a decreed water right requires filing an application for transfer, unless the appropriate court makes the change by amending the decree.

¹ The guidance provided here effectively revises the guidance to staff for filing an application for transfer as provided in Application Processing Memorandum No. 61 concerning wastewater from industrial uses.

2. When a Transfer is not Required.

An application for transfer is not required if a proposed change will not alter any of the elements of a water right as licensed or decreed, except that even when the recorded elements of a water right are not changed an application should be filed under such circumstances described in Section 1 above. In addition, an application for transfer is not needed when an accomplished change to a water right or an enlargement of a right has been claimed in an adjudication in accordance with the provisions of Sections 42-1425 or 42-1426, *Idaho Code*.

Changes in Consumptive Use. Consumptive use of water under a water right is not, by itself, an element of the water right subject to the requirements to file an application for transfer. Unless there is a specific condition of the water right limiting the amount of consumptive use, changes in water use under a water right for the authorized purpose of use that simply change the amount of consumptive use do not require an application for transfer provided that no element of the water right is changed. However, when determining the amount of water that can be transferred pursuant to an application for transfer proposing to change the nature or purpose of use, and for certain other circumstances as described herein, historical consumptive use is considered.

Change in Ownership. An application for transfer is not required to change the owner of record for a water right or address of record for a right holder. Changes in ownership or address are to be filed in accordance with Section 42-248, *Idaho Code*, or for adjudication claims in accordance with Section 42-1409(6), *Idaho Code*. However, a transfer application filed pursuant to Section 42-222, *Idaho Code*, accompanied by evidence documenting a change in ownership for a water right, or showing a change in the address of the owner of a water right, satisfies the requirements of Section 42-248, *Idaho Code*.

An application for transfer is not required to change the owner of record of one or more water rights, or portions thereof, that are part of a larger group of water rights authorized for use within and appurtenant to a permissible place of use² if the conveyance documents provide evidence of the change in ownership and appurtenance of each of the rights and if other elements of the rights will not be changed.

An application for transfer is not required to eliminate one or more points of diversion authorized under a water right through a change in ownership if the conveyance

² A permissible place of use is defined as a legal description of the authorized location where water may be applied under a water right for irrigation use, but the use in any year is limited to a specified number of acres which is less than the larger described location. For example, a water right may describe a permissible place of use as four 40-acre legal subdivisions totaling 160 acres, but the water right also limits the acreage that may be irrigated to 40 acres. The water right owner cannot irrigate more than 40 acres in a given year under the right. A permissible place of use is typically, but not always, irrigated by multiple rights with separate acreage limitations that, when used together, provide for irrigation of the entire permissible place of use in the same year.

documents provide evidence of the limitation and if other elements of the rights will not be changed.

Partial Relinquishment. An application for transfer is not required to relinquish a portion of a water right such as elimination of a purpose of use or a point of diversion or a reduction in acres and proportional rate. The water right owner should provide a notarized statement of relinquishment including specific identification of the water right(s) and the specific reduction(s).

Split Rights. An application for transfer is not required when a water right for irrigation is proposed to be split, with notice to the department pursuant to the provisions of Section 42-248, *Idaho Code*, such that a disproportionate per acre share of the right would be conveyed to another party provided that the resulting diversion rates do not exceed 0.02 cfs per acre, the amount of water historically applied per acre, or the amount of water diverted at a particular point of diversion, whichever is greater, for that part of the right conveyed or retained, and provided no other changes are made.

Changes to Points of Diversion within Recorded Location. An application for transfer is not required if a change in point of diversion is proposed to be moved to a location within the same legal public land survey subdivision as currently recorded on the water right and the change will not enlarge the right or injure other rights (if within a recorded legal public land survey subdivision, a transfer is required if injury is likely when moving the point of diversion to bypass another point of diversion or when moving a well significantly closer to another well or surface water source).

An application for transfer is not required for the situation described in the preceding paragraph, even when the point of diversion is described by a shapefile in the department's GIS database. The department will not initiate an enforcement action against the water right owner due to a discrepancy between the department's shape file and the physical location of use within the recorded legal subdivision if the discrepancy is limited to the situation described in the preceding paragraph. The department may update the shapefile in its GIS database from its own information or information provided by the water right owner.

Replacement of Point of Diversion. An application for transfer is not required to replace a point of diversion if the new point of diversion is constructed at the same location as described in the license or decree for the water right, and the change will not enlarge the right or injure other rights.

Refined Descriptions. An application for transfer is not required when a change in the description of the location of the point of diversion or place of use is only the result of improved methodology for referencing and displaying the location, which results in a more accurate description of the same physical location. The department will not initiate an enforcement action against the water right owner due to the discrepancy between the water right record and the referenced location if the discrepancy is created by better methodology and is not due to a change in the physical location. However, if the water right owner wishes to correct the water right record, an application for transfer

or an appropriate amendment will be required, as previously described for correction of errors.

Changes in Place of Use within Recorded Location. An application for transfer is not required if a change in the location of use within 40-acre legal subdivisions is proposed that would not result in an increase in the number of acres within any 40-acre legal subdivision nor use of water at a new 40-acre legal subdivision (except for a proposed change in location outside of prescribed boundaries such as those provided for irrigation use under Section 42-219, *Idaho Code* or by court decree, even when the change in location would be included within the same 40-acre legal subdivisions existing prior to the proposed change).

An application for transfer is not required for the situation described in the preceding paragraph, even when the place of use is described by a shapefile in the department's GIS database. The department will not initiate an enforcement action against the water right owner due to a discrepancy between the department's shape file and the physical location of use within the 40-acre legal subdivisions if the discrepancy is limited to the situation described in the preceding paragraph. The department may update the shapefile in its GIS database from its own information or information provided by the water right owner.

Generally Described Place of Use. As provided in Section 42-219, *Idaho Code*, an application for transfer is not required to change the place of use within a generally described place of use. A generally described place of use may be by court decree or as provided in Section 42-219(5) and (6). Pursuant to Section 42-219(7), any change within a generally described place of use can not result in an increase in the diversion rate, or in the total number of acres irrigated under the water right, and can not cause injury to other water rights. Any change to the boundaries of a generally described place of use requires an application for transfer, except for a municipal provider as described below or for an irrigation district where changes in boundaries must be documented by a map of the revised boundaries filed with the department in accordance with Section 43-323(2), *Idaho Code*.

Municipal Places of Use. An application for transfer is not required to change or add a place of use for "municipal purposes" within the "service area" of a "municipal provider." See Sections 42-202B and 42-222(1), *Idaho Code*, for appropriate definitions and provisions governing use of municipal water rights. The ownership of a portion of a municipal water right held by a municipal provider for reasonably anticipated future needs can be changed to a different municipal provider subject to the provisions of Section 42-248, *Idaho Code*. However, the right can not be changed to a place of use outside the service area of a municipal provider or to a new nature of use, and an application filed for such a change is to be returned and any associated application fee refunded.

In-stream Stock Watering. An application for transfer is not required to divert water away from a stream for stock watering purposes provided the diversion is added and used in conjunction with an in-stream stockwater right and provided the diversion meets

certain conditions pursuant to Section 42-113(3), *Idaho Code*. See guidance memorandum for in-stream stock diversions dated June 26, 2000, for additional information.

Intensified Use of Water. An application for transfer is not required to increase production under an authorized use of water, unless the proposed change would also result in a change to one or more of the elements of the water right(s) as licensed or decreed. For example, an application for transfer is not required to increase the number or volume of raceways in a fish propagation facility, increase the number of cows at a dairy, change irrigation to a more water consumptive crop, or increase the generating capacity of hydroelectric generators, so long as none of the elements of the associated water rights are changed.

Mitigation Through Non-Use of a Right. An application for transfer is not required to mitigate for the diversion and use of water under another right if the mitigation is accomplished through non-use of water under an existing valid water right, except under specific circumstances where a transfer is required as part of the Department's approval of the mitigation plan (see Section 42-223 (10), *Idaho Code* for reference to mitigation approvals where non-use of water may apply).

Land Application of Wastewater to Replace Existing Supply. An application for transfer is not required for a proposed change in the place of use under a water right for uses such as industrial, dairy, or confined animal feeding operations that would allow land application of wastewater from that use or change the location of lands used for application of wastewater, when there is a full existing water right for irrigation of the place of use receiving wastewater.¹

3. Requirements for an Acceptable Application for Transfer.

The department is a public service oriented agency, and department employees traditionally have helped applicants complete transfer application forms. The existing transfer backlog, together with the increasing number and complexity of new applications for transfer, requires that staff focus their time on processing existing acceptable applications. Department employees are encouraged to provide general assistance to applicants but should refrain from completing application forms on behalf of applicants.

An applicant or qualified consultant must prepare and submit an application for transfer in accordance with the minimum requirements enumerated below to be acceptable for initiating the processing of the application by the department. An application that does not comply with these minimum requirements is to be considered incomplete and is to be returned to the applicant along with a letter or checklist identifying the deficiencies. The letter shall state that unless the application is resubmitted within 30 days of its return, the application fee will be refunded. An application for transfer that satisfies the minimum requirements will be processed in accordance with Section 5, Information Needed to Complete Processing of a Transfer Application.

- (1) Application Forms. An application for transfer must be submitted on a current form provided by the department entitled, "Application for Transfer of Water Right." The current form is available from the department's Internet homepage at:

http://www.idwr.idaho.gov/water/rights/water_rights_forms.htm

- (2) Name and Address. An application for transfer must include the name and address of the applicant. In addition, the application must include the name and address of any new right holder(s) for the water rights (or parts thereof) being transferred, if different than the applicant. The applicant's name must match the department's current record of ownership for the water rights (or parts thereof) being transferred. Otherwise, adequate documentation must be included to show that a change in ownership or authority to make the change has legally occurred. Adequate documentation can be a warranty or other deed, title policy, contract of sale or option for purchase by applicant (if the contract or option allows the transfer), or other similar document confirming ownership of the water right(s) or the authority to change the water right. See Records Memorandum No. 9 for additional guidance on water right ownership documentation.
- (3) List of Water Rights to be Changed. An application for transfer must list all water rights for use in a common system of diversion and distribution for which the point of diversion, place of use, period of use, or nature of use are proposed to be changed (the water rights to be transferred). Proposed changes which involve separate diversion and distribution systems must be filed as separate applications. A proposed change to the remaining portion of an existing water right subsequent to a proposed transfer requires a separate application for transfer.
- (4) Associated Water Rights or Water Supply. The application must include a separate list of individual water rights, other than those proposed to be changed, and a description of water supplied by a canal company, irrigation district, or municipality, that provide water currently used in the same diversion system or at the same place of use as the right(s) proposed to be transferred (associated water rights or water supply). In addition, the application must include a separate list of associated water rights or water supply proposed to be used in the same system or at a new place of use. If the associated water rights or water supply are not owned by the applicant and changes to conditions for those rights are necessary, documentation must be submitted confirming that the applicant has the legal authority to make such changes on behalf of the current owner of the other rights.

Changes to conditions or remarks for associated water rights that are necessary as a result of an approved transfer and that do not affect the

rights of other persons or entities can be made without a separate transfer application or process. Such changes usually result from a division in ownership and should be included in the transfer approval document.

- (5) Reason for Change. The application must list the purpose for and a general statement of the reason for the proposed change.
- (6) Description of Proposed Change. The application must describe in writing the proposed changes, which must include the following:
 - a. The right number(s) assigned by the department for the right(s) proposed to be changed must be identified. If the right was established by a beneficial use for which a claim has not been filed, a claim must be filed before or together with the transfer application. If the right is represented by a decree and the department has not assigned a number to the right, a copy of the decree must be included with a description of the right that is proposed to be changed.
 - b. The amount of water proposed to be diverted, as a rate of flow in cubic feet per second and as acre-feet per year, if the transferred water right has a volume limitation, for natural flow and ground water rights must be set forth. The amount of any stored water involved in a transfer must be identified in terms of acre-feet per year for each purpose of use listed.
 - c. The proposed nature or purpose of use must be stated. For non-irrigation uses such as "industrial" or "commercial," a more detailed description of the proposed use(s) must be provided under the "Remarks" section of the application, or as an attachment to the application. For applications proposing to change the nature of use to municipal purposes for reasonably anticipated future needs (RAFN), the applicant shall provide information to establish that the applicant qualifies as a municipal provider and that the RAFN, service area, and planning horizon are consistent with the definitions and requirements specified in Section 42-202B, *Idaho Code*.
 - d. The period of each year during which water is proposed to be diverted, or diverted and stored, and beneficially used must be set forth for each use listed.
 - e. The source of water for the proposed changes must be listed. An application proposing a diversion, injection, and re-diversion of water must list the source for the original diversion as the source for the injection and re-diversion. An

application proposing to change the point of diversion to a location resulting in a change from ground water to surface water or from surface water to ground water shall include an analysis confirming a direct and immediate hydraulic connection (at least 50 percent depletion in original source from depletion at proposed point of diversion in one day). See Section 5c. (7) for further details.

- f. The legal description of the point(s) of diversion must be described. The description must be to the nearest 40-acre subdivision or U. S. Government Lot of the Public Land Survey System. Existing point(s) of diversion should be described to the nearest 10-acre tract, if based on a previously recorded 10-acre description or other accurate means such as GPS or a detailed and accurate map. Proposed point(s) of diversion need only be described to the nearest 40-acre tract. The location of springs must be described to the nearest 10-acre tract. Subdivision names, lot and block numbers, and any name in common usage for the point of diversion should be included in the "Remarks" section of the application form.
- g. Except as provided herein, the legal description of the place of use must be set forth to the nearest 40-acre subdivision or U. S. Government Lot of the Public Land Survey System. Subdivision names, block and lot numbers, and any name in common usage for the place of use should be included in the "Remarks" section of the application form. For water rights held by irrigation districts, municipal providers, and others included under the provisions of Sections 42-202B or 42-219, *Idaho Code*, the place of use may be generally described even if previously described to the nearest 40-acre subdivision or government lot.
 - i. If irrigation is a purpose of use, the number of acres in each 40-acre tract of the place of use or within a generally described place of use must be shown. The location of uses, other than for municipal providers or for irrigation, must be identified in the appropriate 40-acre tract(s).
 - ii. Except for wastewater when there is a full existing water right for irrigation of the place of use receiving wastewater, if a proposed change includes disposal or use of wastewater by land application to growing crops the application must identify the location of the waste

disposal area by legal description under the use from which the wastewater originates.

- h. An adequate description of the proposed diversion, delivery and application system(s) must be provided. This may include preliminary sizes and dimensions of pumps, pipelines, headgates, ditches, dams, impoundments, and application equipment. The type and location of measuring devices might also be required for applications providing for measurement of water to address specific injury or enlargement concerns. For large existing systems, such as those owned by municipal providers, irrigation districts, and canal companies, only those features proposed to be added or modified need to be described.
- (7) Map of System. A map corresponding to the written description above must be included showing the location of points of diversion, reservoirs, dams, canals, ditches, pipelines, and other works proposed to be used in the diversion and conveyance of water. The map must clearly show the location of the place of use including lands to be irrigated, if any. If only a part of the water right(s) is proposed to be changed, the map must include the location of the part of the existing recorded right(s) proposed to be removed (or changed). Legal descriptions including townships, ranges, sections, quarter-quarters, and government lots must be evident or labeled unless other reference information is evident on the map to identify the specific location. In lieu of creating a map, a copy of a published map, such as a U. S. Geological Survey quadrangle map, or an aerial photograph, can be attached to the application with the required identification shown thereon. For large existing systems, such as those owned by municipal providers, irrigation districts, and canal companies, only those features proposed to be added or modified need to be shown.
- (8) Response to Questions on the Form. The application for transfer must include responses to the questions on the application form concerning the validity of the right, the proposed use of the land from which the right is proposed to be removed (if applicable) and the existence of mortgages or liens. In addition, the application should address any agreements or commitments not to divert water under the right(s) proposed for transfer such as a lease to the water supply bank (WSB), enrollment in the federal Conservation Reserve Enhancement Program (CREP) or dedication of the right(s) for mitigation purposes.
- (9) Changes to Part of a Right. If only a part of a right is being changed, the application for transfer must define that part by describing each of the elements, as currently licensed or decreed or otherwise recorded, for the part of the right being changed.

- (10) Signature. The application for transfer must include the signature of the applicant or the applicant's authorized representative. If a representative signs the application, evidence of authority to sign for the applicant must accompany the application. An application in more than one name must be signed by each applicant unless the right is held in the name of one joint owner "or" other joint owner(s), or the right is held in the name of one joint owner "and/or" other joint owner(s).
- (11) Filing Fee. The filing fee provided in Section 42-221, *Idaho Code*, must be submitted with the application for transfer. If the applicant is a governmental agency, a purchase order for the required amount is acceptable. (See the memorandum titled "Guidance on SB 1337 Amending Section 42-221, I.C.," dated June 26, 2000, and Transfer Processing Memorandum No. 23 for further guidance on application fees.)
- (12) Changes to Point of Diversion from Eastern Snake Plain Aquifer. Except as provided below, if the application for transfer proposes to move the point of diversion for a water right to divert and use ground water from one location to another within the Eastern Snake Plain Aquifer (ESPA) including any modeled tributary aquifers, the applicant must submit an attachment with the application that sets forth the time series of calculated depletions (transient to steady-state) to reaches of the Snake River that are hydraulically-connected to the ESPA using or based on the department's current ground water model for the ESPA, or other equivalent analysis acceptable to the department. When using results from or based on the department's ground water model, the time series of calculated depletions must be for the cells containing the points of diversion both before (initiating at the date of priority of the water right) and after (ending at future steady state condition) the proposed transfer, if different (if the same, the attachment is not required except as described below). A copy of the department's ESPA ground water model, or associated transfer spreadsheet can be obtained by contacting the department or visiting the department's web site.

The purpose of the time series of depletion attachment is to provide a basis for evaluating whether the proposed transfer will increase depletions to hydraulically-connected reaches of the Snake River. Increases in such depletions are presumed to cause injury to existing water rights because all of the hydraulically-connected reaches of the Snake River (including tributary springs) have water rights that are not fully satisfied at certain times. Increased depletions greater than 10 percent for any reach are presumed to cause injury and must be fully mitigated such that there are no increases in depletion except as described below. This 10% threshold for mitigation reflects the

percentage of error in measuring flows of water, one of the factors in model accuracy.

For increased transient-state depletions, the mitigation provided must be within plus or minus 5% of the simulated depletion to allow for periods of static mitigation within the period of change. Because the mitigation provided can not exactly follow the changing simulated depletions, fixed mitigation quantities provided over a period of time when depletions are changing must provide approximately as much excess mitigation as deficient mitigation within the plus or minus 5% range.

For the proposed transfer, increases in depletion to hydraulically-connected reaches of the Snake River where the reach, at steady-state conditions, is not depleted by an amount greater than 10% of the total depletion caused by diversion at the proposed point of diversion will not require mitigation for the transfer to be approvable.³

Increases in depletion to hydraulically-connected reaches of the Snake River in the amount of two acre-feet or less per trimester is considered insignificant and will not require mitigation for the proposed transfer to be approvable. Similarly, an application for transfer proposing a change where the total depletion (all reaches) is not more than two acre-feet per trimester will not require the document described above.

If the application for transfer proposes to move or add a point of diversion within or adjacent to the model cell for the existing point(s) of diversion, the attachment described above is not required when the application is submitted. However, if the department determines that the proposed change may significantly increase depletions to a hydraulically-connected reach of the Snake River (including tributary springs), the attachment will be required to complete processing of the application for transfer. See the Department's August 13, 2007 memo entitled, "ESPA Transfer Spreadsheet Version 3.1 – Implementation and Use" for further guidelines on use of the ESPA transfer spreadsheet.⁴

³ This exclusion from the mitigation requirement is consistent with the Department standard in various delivery calls against ground water users diverting water from the ESPA that establishes a minimum percentage of 10% below which ground water users are not required to mitigate or replace simulated depletions to the reach.

⁴ This memorandum supersedes portions of the Department's August 13, 2007 memo entitled, "ESPA Transfer Spreadsheet Version 3.1 – Implementation and Use" related to mitigation within 5 percent for transient and steady-state increases. The changes are being implemented to be consistent with use of the current ground water model for administration of water delivery calls in the ESPA. The remaining portions of the memo are still applicable.

If the applicant offers reduced ground water withdrawals as mitigation, any proposed schedule for adjusting reduced withdrawals must also be set forth in the application for transfer.

- (13) Historic Beneficial Use. If the application for transfer proposes to change the nature or purpose of use or the season of use, the applicant must include an attachment documenting the historic extent of beneficial use under the right. For a transfer seeking to change a water right from irrigation, the attachment must provide sufficient data and information to determine historic consumptive water use. This can be satisfied by submitting records of cropping pattern or rotation, or records of water diverted and system efficiency, for at least the most recent, five consecutive years as described in Sections 5d.(5) and (6). If the application for transfer proposes to change the place of use for a supplemental water right, the applicant must include information to demonstrate that the supplemental right will not be enlarged (see Sections 5d.(3), (4) and (5) for definition and further discussion of supplemental rights).

- (14) Electronic Shape Files or Photographs Documenting Place of Use Changes. If the application for transfer proposes to change the purpose of use for a water right from irrigation to another use, or change the place of use for a water right for irrigation to another location, either of which requires the drying up of acres at the original place of use, the applicant must submit an attachment to the application for transfer. The attachment must provide a clear delineation of the location and extent of the irrigated acres prior to the proposed transfer, and must also provide a clear delineation of the location and extent of the irrigated acres, if any, after the transfer, if it is approved. This attachment may either consist of two electronic shape files in a format that is compatible with the department's GIS system or aerial photographs of sufficient detail acceptable to the department with the boundaries of the irrigated areas clearly shown and referenced to the Public Land Survey System. If a place of use involved with the application for transfer currently consists of a permissible place of use or a generally described place of use (see section 3(6)g above), then the applicable attachment is not required provided the application contains a clear statement that the boundaries for that place of use are not proposed to be changed by the transfer and the total number of irrigated acres within the place of use before and after the transfer is clearly set forth.

- (15) Applications Involving Water Rights for Domestic Purposes. An application for transfer involving multiple water rights for domestic purposes as defined in Section 42-111, *Idaho Code*, even when evidenced by a decree, that proposes to establish a use, which itself would not be included within the scope of the definition for domestic

purposes in Section 42-111, *Idaho Code*, is not approvable. *Idaho Code* specifically prohibits the diversion and use of water under a combination of domestic uses to provide a supply of water for a use that does not meet the exemption of Section 42-227, *Idaho Code*, and is required to comply with the mandatory application and permit process for appropriating a right to the use of water pursuant to Chapter 2, Title 42, *Idaho Code*. An application for transfer filed for such a change is to be returned together and any associated application fee refunded.

4. Changes to Applications for Transfer.

Amendment of Application. An applicant may revise or amend an acceptable application for transfer to clarify or correct information on the application. Significant changes to the place, period, or nature of the proposed use, amount of water, method or location of diversion, or other substantial changes from those shown on a pending application for transfer, will require filing a new application for transfer to replace the original application. If the revisions are not substantial, the application may be revised or amended with an initialed, dated endorsement by the applicant, or by the applicant's representative, on the original application, or by a letter describing the amendments in sufficient detail. Changes initialed or signed by the applicant's representative must be accompanied by evidence providing authority to sign for the applicant if not previously provided. Changes to the application or supporting information are not to be made by staff under any circumstances. A replacement application must be identified as "changed," "amended" or "revised" on its face so that it can be distinguished from the original application, and the original application must be marked as "superseded." An additional filing fee may be required if the revised or replacement application involves more water than proposed in the original application for transfer. A re-advertisement fee, as provided in Section 42-221F, *Idaho Code*, will be required if notice of the original application has been published and changes to the original application are significant and warrant re-notice. (See Transfer Processing Memorandum No. 20 for additional information regarding changes to applications.)

Assignment of Application. An applicant may assign, in writing (must be notarized), an application for transfer to another entity while the application is pending before the department. An assignment does not require additional notice of the application to be published, and there is no fee for an assignment of an application. The assignment will change the name of the transfer applicant, but ownership of the water right(s) involved in the transfer cannot be changed without proper notice and documentation. Section 42-248, *Idaho Code*, provides that a transfer application can substitute for a notice of change in water right ownership if adequate documentation is provided with the application.

5. Processing an Application for Transfer Prior to Hearing.

Processing of an application for transfer consists of the steps outlined below. Flexibility is provided for some steps with the intent to streamline or expedite processing of routine

or non-complex applications. Regional Managers have been delegated authority to sign routine water right approvals and denials and should continue to implement their signature authority as outlined in the Department's June 7, 2007 memo entitled, "Delegation of Authority for Water Right Approval/Denial" and other delegation that may be provided.

- (1) Initiating Processing – Data Entry. Once an application has been accepted and the application fee receipted pursuant to Section 3, Requirements for an Acceptable Application for Transfer, the Regional Office shall complete data entry of the basic information contained in the application and initiate working in parallel with the State Office to process non-routine or complex applications.
- (2) Additional Information. For those applications to be processed in parallel, the Regional Office and the State Office will determine what, if any, additional information is necessary to complete or supplement the application. For all applications, the Regional Office will correspond with the applicant to obtain the additional information, obtain watermaster recommendation as described below, and perform any field review that is also necessary in coordination with staff from the Adjudication Bureau if the water right is claimed in a pending adjudication.
- (3) Administrative, Hydrologic, and Legal Review. For those applications to be processed in parallel, the Regional and State Offices will complete a review of all information submitted, in coordination with the Adjudication Bureau as needed, and forward appropriate information to the Hydrology Section and Administration for additional hydrologic, policy, and legal review as necessary.
- (4) Preparation of Staff Memorandum. Once the review is complete, the Regional Office will prepare a memorandum, with the concurrence of the State Office if necessary for parallel review, that documents the review and evaluation of the sufficiency of the information submitted and whether processing of the application can continue because there is no clear inconsistency with the criteria set forth in Section 42-222, *Idaho Code*. If it is determined that processing of the application can continue, the Regional Office will complete necessary GIS descriptions, finalize data entry, and draft conditions for entry into Work Flow.
- (5) Rejection or Denial of Application. If it is determined that the application for transfer should be rejected or can not be approved pursuant to Section 42-222, *Idaho Code*, the Regional Office or State Office (for parallel review) will prepare and issue a preliminary order rejecting or denying the application. An application for transfer may be rejected if the applicant fails to provide additional or adequate information pursuant to the requirements in this Section 5. An application for

transfer that clearly does not satisfy the criteria set forth in Section 42-222, *Idaho Code*, must be denied. A rejected application may be re-filed when adequate information can be provided; a denied application can not generally be re-filed for substantially the same proposed transfer, unless a showing is made that substantial changes have subsequently occurred such that the criteria set forth in Section 42-222, *Idaho Code*, can potentially be satisfied. In either case, application fees will be retained. Note that notice of a rejected or denied application shall be sent to the applicant by certified mail pursuant to Section 42-222, *Idaho Code*.

- (6) Applicant Contest of Rejection or Denial. If the applicant contests the preliminary order rejecting or denying the application and requests a hearing pursuant to Section 42-1701A, *Idaho Code*, the Regional Office will publish notice of the application for transfer pursuant to Section 42-222, *Idaho Code*, including notice of the contested case, and provide opportunity to protest the application and intervene in the contested case unless published notice is not required for the application as described below.
- (7) Public Notice. If it is determined that processing of the application can continue consistent with the criteria set forth in Section 42-222, *Idaho Code*, the Regional Office will publish notice of the application for transfer. In some cases, published notice of the application may not be required. Pursuant to Section 42-222, *Idaho Code*, the Department has discretion to provide notice as deemed appropriate for applications proposing to change only the point of diversion or place of use in a manner that will not change the effect on the original or hydraulically-connected source or affect other water rights.

The timing of the public notice in these steps should remain flexible in order to streamline or expedite processing of the application. For example, processing time may be reduced by preparation of draft documents during the notice period. However, notice should not be provided prior to determining that the application meets the minimum requirements described in Section 3 and that there is a clear understanding by staff regarding the purpose of the transfer. Premature notice could result in the requirement to republish notice due to changes to an application or could result in unnecessary publication costs where an application is likely to be rejected or denied.

- (8) Preparation of Approval Document. If no protest to the application for transfer is filed under step (7) above, or all protests filed are withdrawn prior to hearing, the Regional Office will finalize an electronic approval document and issue an approved transfer, subject to appropriate conditions, as a preliminary order and complete data updates in Work Flow. For those applications processed in parallel, the Regional office

will finalize an electronic approval document and forward the document to the State Office for final approval and data updates.

- (9) Contested Case Proceedings. If protest to the application for transfer is filed under either step (6) or (7) above, a contested case process will be completed. The hearing officer will forward electronically any final order that results from the contested case to appropriate staff to complete data updates in Work Flow.

Gathering Information Needed for Processing. In completing the steps outlined above, additional information may be needed for clarification of the purpose and intent of the proposed change, to further document the information on the application, or to provide a sufficient basis for determining whether the proposed change satisfies the statutory criteria for approval. **The applicant bears the burden of providing sufficient information.** However, staff should locate and assemble information available in the department's records that does not require compilation, interpretation, or analysis by an engineer, geologist, or other technical specialist.

Requests for Additional Information. Correspondence shall be prepared requesting any additional information needed and providing a reasonable period of time for response (generally 30 days). When additional information is requested from the applicant, the applicant shall be informed of the need for a timely response to avoid delays in processing. The applicant shall also be informed that the application may be rejected if the additional information requested from the applicant is not timely received or is inadequate. The department can grant additional time to submit the required information if the applicant submits a written request for additional time and sufficient justification is provided.

Watermaster Recommendation. Section 42-222, *Idaho Code*, requires that the department shall advise the watermaster of any water district in which the water is used of any proposed change. The department shall not take final action on an application for transfer until the watermaster's recommendation has been received and considered.

Delays or non-response from watermasters results in delays in processing applications. The watermaster shall be informed that a non-response will be considered by the department to be the watermaster's recommendation not objecting to approval of the proposed transfer. Department staff should ensure that all watermasters understand their responsibility to provide recommendations.

Staff to Exercise Judgement. **Department staff has discretion to adapt the requirements set forth herein according to the nature and complexity of a proposed transfer.** While it is important that the information and documentation requirements are consistently applied, **staff is to use sound judgement to avoid asking the applicant for unnecessary information or seeking unnecessary review and comment from other state or local governmental entities as these guidelines are applied.**

5a. Evaluation of Authority to File an Application for Transfer.

- (1) Presumption Based Upon Department Ownership Records. For any application for transfer, the department must have sufficient information to determine that the applicant has the authority to seek the proposed change in use of the water right(s). The department can presume, absent information to the contrary, that the applicant is the owner of the right(s) if the department's ownership records maintained pursuant to Sections 42-248 or 42-1409(6), *Idaho Code*, list the applicant as the current owner. The department may need to seek documentation regarding ownership if there is reason to believe that the department's ownership records may be inaccurate.
- (2) Other Acceptable Documentation. If the applicant's name does not match the name in the department's records for the current owner of the right(s) sought to be transferred, the applicant must provide evidence of current ownership or authority to make the proposed change(s). Adequate documentation can be a warranty or other deed, title policy, contract of sale or option for purchase by applicant (if contract or option allows the transfer), or other similar document confirming ownership of the water right(s) or the authority to change the water right. See Records Memorandum No. 9 for additional guidance on water right ownership documentation.
- (3) Applicant Does Not Own New Place of Use. If the application for transfer proposes to change the place of use authorized under the water right(s), and the applicant does not own the land at the proposed new place of use, then the applicant must provide documentation that authorizes the change on behalf of the current owner of the proposed new place of use, except when the applicant is a municipal provider, irrigation district, canal company, or other similar entity. Such entities may only need to provide evidence of their authority to provide water for the proposed place of use in instances where evidence of such authority is necessary.
- (4) Conditions on Associated Rights. If an application for transfer proposes a change from or to a system where there is an associated water right that is not listed on the application as a right being transferred, a change to conditions for that right is required (other than changes to conditions resulting from an ownership split), and that right is not owned by the applicant, then the applicant must provide documentation authorizing the change on behalf of the current owner of the associated right.
- (5) Authority to Sign on Behalf of an Applicant. If the application for transfer is signed by someone other than the applicant(s) as listed on the application, documentation is needed to establish that the signatory

is a representative of the applicant and is authorized to sign on the applicant's behalf. The documentation can be a copy of a current "power of attorney" authorizing signature on behalf of the applicant, or other similar documentation. An application could also be signed by an officer of a corporation or company, an elected official of a municipality, or any individual authorized by an organization to sign the application for a corporation, company, or municipality (if accompanied by documentation confirming authorization). The signatory's title must be shown with the signature.

- (6) Corporation, Partnership, Joint Venture, Association, or other Business Entity. If the application for transfer is in the name of a corporation, partnership, joint venture, association, or other business entity, department staff must verify that the organization is a viable and legally recognizable entity. Department staff will conduct a Business Entity Search at the Idaho Secretary of State's website: <http://www.sos.idaho.gov/>. If the Business Entity Search does not confirm that the corporation, partnership, joint venture, association, or other business entity is properly registered in the State of Idaho, department staff will request further clarification from the applicant. The intent of this search is to ensure that the organization is properly identified, including identification of individuals with signature authority and responsibility to conduct the organization's activity. Department staff may utilize other available resources to obtain the necessary information.
- (7) Approval of Irrigation Entity or Legislature. Section 42-108, *Idaho Code*, requires that if the right(s), diversion works, or irrigation system is represented by shares in a corporation, or owned by an irrigation district, no change can be made without the consent of such corporation or irrigation district. This includes the use of such right(s), diversion works, or irrigation system for mitigation purposes related to a proposed transfer. Any permanent or temporary change in period of use or nature of use, in or out-of-state, involving a quantity of water greater than fifty (50) cfs or a storage volume greater than five thousand (5,000) acre-feet must also be approved by the legislature if approved by the department, except that any temporary change within the State of Idaho for a period of less than three (3) years does not require legislative approval.
- (8) Liens, Mortgages, or Contract Restrictions. The department is required to provide notice to the holder of a security interest in any water right(s) proposed to be changed if the security interest holder has filed a request for notice pursuant to Section 42-248(6), *Idaho Code*. If the transfer proposes a change that might impact the value of the land such as moving the place of use or diversion facility to other land or changing the nature of use and the land from which the water right is proposed to

be transferred is subject to liens, mortgages, or other contract restrictions affecting the right to transfer the water, a notarized statement or a statement on official letterhead signed by an authorized representative of a mortgage company or similar entity is required from the holder of each such lien, mortgage, or contract (see Transfer Processing Memorandum No. 10).

- (9) Municipal Provider. If an application for transfer proposes to change the nature of use of a water right to municipal purposes in the name of a municipal provider for reasonably anticipated future needs, the applicant must provide documentation to establish its qualifications as a municipal provider as defined in Section 42-202B, *Idaho Code*.
- (10) Agreement not to Divert. The applicant must describe any agreement or commitment not to divert water under the right(s) proposed for transfer such as a lease to the water supply bank (WSB), enrollment in the federal Conservation Reserve Enhancement Program (CREP) or dedication of the right for mitigation purposes.

5b. Evaluation of Water Right Validity.

For any application for transfer, the department must determine the validity of the water right(s), or part thereof, proposed to be changed. The following factors must be considered when processing an application for transfer and may require additional information from the applicant.

- (1) Department Records. For any application for transfer, the department must determine that a right, or part thereof, proposed to be transferred is valid and has not been lost by forfeiture or partial forfeiture. The department will presume, absent other information indicating forfeiture, that the right has not been forfeited if the department's water measurement records, aerial photography, remote sensing, or other information, shows use of water during the previous, consecutive, five-year period. The department will also presume that the right has not been forfeited when it is claimed in a pending adjudication or initially decreed in an adjudication within the previous five-year period. If staff makes a field inspection (all transfers seeking a change to a right evidenced only by a claim are to be field inspected or otherwise reviewed, see Transfer Processing Memorandum No. 1 as revised in Section 5b.(4) below), information must be gathered concerning the current status of diversion and delivery facilities and the apparent recent use of water.
- (2) Other Acceptable Documentation. If the records available to the department do not establish that a right has been used within the previous, consecutive, five-year period (except as provided in (1) above or for a right held by a municipal provider for reasonably anticipated

future needs pursuant to Section 42-223(2), *Idaho Code*), the applicant must be asked to provide written documentation demonstrating that the right has been used within that time period. Examples of appropriate documentation include power records for pumps used to divert water under the right, Farm Service Agency (FSA) crop production records, receipts or other evidence of expenditures or revenue from the use of water under the right, and adequate affidavits of objective persons having actual knowledge of the uses of water under the right. Alternatively, if the right has not been used within the previous, consecutive, five-year period, then the applicant must be asked to provide information showing that exceptions or defenses to forfeiture are applicable. Exceptions or defenses to forfeiture include those set forth in Section 42-223, *Idaho Code*; extensions provided for in Section 42-222, *Idaho Code*; and case law relating to factors such as resumption of use, unavailability of water when needed, or non-use when other water is available. Note that filing an application for transfer does not toll the statutory period for forfeiture of a water right due to non-use.

- (3) Validity of Unchanged Parts of a Water Right. For applications for transfer proposing to change part of a water right or rights, the remaining part(s) of the right(s) that are not involved in the proposed transfer are subject to a finding of forfeiture as part of the transfer action by the department. However, department staff is not required to perform a comprehensive forfeiture analysis for the remaining part(s) of the right(s), unless the information submitted by the applicant or gathered by the department clearly shows that forfeiture of the remaining part(s) has occurred. In addition, the remaining part(s) of the right(s) are not subject to any additional conditions beyond the requirements of the original right(s). When there has not been a comprehensive forfeiture analysis performed for the remaining, unchanged part(s) of the right(s), a remark will be included for any remaining part(s) of the right(s) to indicate that an approved transfer does not confirm the validity of the remaining, unchanged part(s) of the right(s).
- (4) Statutory or Beneficial Use Claims. Applications for transfer proposing to change a water right based on a statutory or beneficial use claim must be reviewed to determine the validity, priority date, and extent of beneficial use established under the claimed right. Review must include field verification or other means to verify the right. This memo effectively revises the means of verification as required in Transfer Processing Memorandum No. 1. In addition, the applicant must be asked to provide information confirming the priority date of the claim. Adjudication staff must also be consulted for questions regarding review of the priority date if the claim is filed in a pending adjudication. A transfer approval for the water right (or part thereof) based on a claim

shall incorporate the department's findings regarding the validity of the right. If a statutory or beneficial use claim is the basis for a pending claim in an adjudication, adjudication staff shall be notified of the results of the validity review, and the claimant shall be informed of the findings.

5c. Injury to Other Water Rights

For any application for transfer, the department must determine whether the proposed change will injure any other rights, whether junior or senior in priority to the right being changed. The following factors must be considered when processing a transfer and may require additional information from the applicant.

- (1) Reduction in Quantity of Water Available to Other Water Rights. Whether the amount of water available under an existing water right, senior or junior in priority, will be reduced below the amount recorded by permit, license, decree, or valid claim, or the historical amount beneficially used by the right holder, whichever is less. Consideration of this factor may require an analysis of the timing and location of return flows both before and after a proposed change to determine if the change will reduce the supply available to other water rights.
- (2) Rotation. Whether a proposed change in the point of diversion of a water right that has been delivered in rotation with delivery of other water rights will result in significant additional losses borne by the water rights remaining in rotation.
- (3) Unreasonable Effort or Expense. Whether the holder of an existing water right will be forced to an unreasonable effort or expense to divert water under the existing water right.

Existing ground water rights are subject to reasonable pumping level provisions of Section 42-226, *Idaho Code*, as well as applicable court decisions (e.g., *Parker v. Wallentine*, 103 Idaho 506, 650 P.2d 648 (1982), regarding in part the obligation to pay increased costs to divert an existing right).

- (4) Unusable Water Quality. Whether the quality of water available to the holder of an existing water right would be made unusable for the purposes of the existing right.
- (5) Mitigation. Whether mitigation would be needed to prevent injury to an existing water right that would be injured otherwise.

Unless agreed to in writing by the holder of an existing right, the only mitigation that can be considered acceptable by the department is the

provision of replacement water in the full amount of the injury, at the same time injury would otherwise occur, and of acceptable water quality at the point of diversion for the existing right. For applications that propose to move the point of diversion for a water right to divert and use ground water from the ESPA, including any modeled tributary aquifers, if (a) the depletion to a hydraulically connected reach is greater than 10% of the total depletion resulting from diversion at the proposed point of diversion; (b) increases to depletions in a reach is greater than 2 acre-feet per trimester; and (c) the transfer would result in increased depletions greater than 10%), to any reach of the Snake River; the transfer is not approvable without mitigation. When greater increases in such depletions would occur, acceptable mitigation includes reduction in the quantity of ground water diverted and depleted such that there is no increase in depletions (within 10 percent for transient increases) for any hydraulically-connected reach of the Snake River. When this form of mitigation is proposed, the quantity of ground water diverted may be increased periodically (no more frequently than annually) if supported by an analysis of the timing of calculated depletions (transient to steady-state) to reaches of the Snake River (except those reaches, at steady-state conditions,) that are hydraulically-connected to the ESPA for the points of diversion both before and after the proposed transfer. However, the proposed schedule for increased diversions must be set forth in the application for transfer.⁵

- (6) Ground Water Management Area or Critical Ground Water Area. Whether the point of diversion for a ground water right would move from outside the boundaries of a critical ground water area (CGWA) or ground water management area (GWMA) to within the boundaries of a CGWA or GWMA, or whether the point of diversion would move from within the boundaries of a GWMA to within the boundaries of a CGWA.

An application for transfer proposing such a change in the location of the point of diversion for a ground water right is not approvable unless the applicant proposes acceptable mitigation to prevent injury to other water rights. For cold water (85° F or less) GWMA's over the ESPA, mitigation beyond that satisfying condition (4) above will not be required at this time as a condition of approval, unless injury would occur to a water right to divert ground water or injury would occur to a water right to divert surface water that has not been offset by stipulated agreement or through a mitigation plan approved by the department,

⁵ If the transfer is approved with mitigation by reducing the amount of ground water withdrawn, and as a result the reach gains to one or more other hydraulically-connected reaches of the Snake River increase, then the applicant shall retain the right to receive credit for the increased reach gains. Such credits can not currently be used because there is no administrative system in place to recognize such credits. In the event that an administrative system is created in the future whereby such credits available at that time can be recognized, the applicant shall retain the right to the possible future use of such credits, which shall be reflected in a condition of approval for the transfer.

- (7) Change of Source. Whether the source would be changed from ground water to surface water, or from surface water to ground water.

Section 42-222, *Idaho Code* does not provide for a change from a ground water to surface water source, or from a surface water to ground water source. An application for transfer proposing such a change in source is not approvable unless the ground water and surface water sources are so interconnected that they constitute the same source for purposes of a proposed change in point of diversion. The ground water and surface water sources must have a direct and immediate hydraulic connection (at least 50 percent depletion in original source from depletion at proposed point of diversion in one day). The existing point of diversion and proposed point of diversion must be proximate such that diversion and use of water from the proposed point of diversion would have substantially the same effect on the hydraulically-connected source as diversion and use of water from the original point of diversion. If such application for transfer is approved, the changed water right shall be administered no differently than any other water right from the surface water source. If approved, the source for a change from a surface water source to a ground water source should be listed as ground water tributary to the surface water source.

- (8) Changing Aquifer Source. Whether a proposed change in point of diversion for a ground water right is from one aquifer to another aquifer.

An application for transfer proposing to change the point of diversion from one distinct aquifer to a totally separate aquifer is not approvable, just as an application for transfer proposing to change the point of diversion for a surface water right from one distinct surface water source to a totally separate surface water source is not approvable.

- (9) Conveyance Losses. Whether the proposed change would move part or all of a right from a canal impacting conveyance losses associated with the delivery of multiple water rights in the canal.

If such application for transfer is otherwise approvable, the approval must require that the applicant retain an appropriate amount of water in the canal to prevent any additional reduction in the amount of water available from the canal to fill other water rights because of the portion of the conveyance losses that, prior to the transfer, were attributable to the right being transferred.

Additional Considerations. In addition to the considerations above, the following information may be needed to evaluate injury involving an application for transfer for a ground water right, depending on the specific circumstances of the proposed transfer. If

the information is not available in the department's records, the applicant must provide the following information that department staff determines is necessary:

- (1) Location of Nearby Wells. The location of the nearest production well, including domestic wells, to the proposed point of diversion, and if different, the nearest production well down gradient from the proposed point of diversion (the location of other nearby production wells may also be required);
- (2) Location of Nearby Springs. The location of nearby springs from which water is diverted under existing rights, including domestic uses, that could be affected by ground water diversions from the proposed point of diversion;
- (3) Ground Water Levels. The depth to water, the stability of ground water levels, or the stability of confined aquifer pressures, in the area of the proposed point of diversion; and
- (4) Water-Bearing Zones. The depth and thickness of water-bearing zones, including identification of the zone or zones sought for the proposed use.

5d. Enlargement of Use

For any application for transfer, the department must determine whether the proposed change will enlarge the use of water under the water right(s). Enlargement will occur if the total diversion rate, annual diversion volume, or extent of beneficial use (except for nonconsumptive water rights), exceeds the amounts or beneficial use authorized under the water right(s) prior to the proposed transfer. The following factors must be considered when processing an application for transfer, which may require that additional information be provided by the applicant:

- (1) Diversion Rate, Annual Diversion Volume, and Number of Acres Licensed or Decreed. The authorized diversion rate, annual diversion volume (ground water rights only and certain surface water rights), and number of acres authorized for irrigation (if applicable), as licensed or decreed for the water right, shall not be increased. If the annual diversion volume is not specifically stated on the license or decree for a ground water right, then the amount will be based on the most current standards adopted by the department unless the applicant can show a larger amount has been reasonably diverted and beneficially used.
- (2) Beneficial Use. An application for transfer proposing to change the place of use or nature of use for all or part of a water right or water rights, which change would not result in an equivalent reduction in beneficial use under the original right(s), will be presumed to enlarge the water right(s). For example, hydropower use cannot be added to a

right used for irrigation, even though no additional water would be diverted for the hydropower use. The irrigation use, or part thereof, could be changed to hydropower use by reducing the irrigation use by an equivalent amount, or the new use could be provided without reducing the irrigation use by obtaining a new permit to appropriate water for hydropower use.

- (3) Stacked Water Rights. Water rights are “stacked” when two or more water rights, generally of different priorities and often from different sources, are used for the same use and overlie the same place of use. Water rights for irrigating a permissible place of use are not necessarily stacked when the water rights in total provide for irrigating up to the maximum acreage authorized within a permissible place of use. An application for transfer proposing to “unstack” one or more water rights used for irrigation or other use, without changing all the rights for the same use, is presumed to enlarge the water right. However, the place of use for a supplemental irrigation right may be changed for continued use as a supplemental irrigation right at a different place of use without, by definition, enlarging the original right or the supplemental right proposed for transfer, so long as the primary rights at the original and proposed places of use provide comparable water supplies. In other words, use of the supplemental right at the proposed place of use can not materially exceed use of the supplemental right at the current place of use.
- (4) Changing Supplemental Right to Primary Water Right. A supplemental irrigation right is a stacked water right authorizing the diversion of water for irrigation from a secondary source to provide a full supply for crops when used in combination with a primary right. A supplemental right can provide additional water in conjunction with a primary source, or at times when the primary source is unavailable. The use of a supplemental right is dependent on the supply available under the associated primary right and can be highly variable from year to year. An application for transfer proposing to change a supplemental irrigation right to a use as a primary water right for irrigation or other use will be presumed to enlarge the supplemental right. An exception is when the applicant can clearly demonstrate, using historic diversion records for the supplemental right as described in (5) below, or other convincing water use information, that there would be no enlargement of the water right being changed or other related water rights. Evidence of the quantity of water beneficially used under the primary right must be accompanied by some evidence of the quantity of water used under the supplemental right to qualify as “convincing water use information.” The supplemental right must have been used on a regular basis (used more than 50 percent of the time). Insufficient data will be grounds to reject the application because the department will not be able to ascertain if the right will be enlarged.

If an application proposes to change only a portion of a supplemental irrigation right to a use as a primary water right, the application is not approvable unless the extent of beneficial use under all associated rights prior to the transfer will be proportionately reduced or transferred to another place of use to avoid enlargement of the remaining portion of the supplemental right. The associated right(s) will not need to be reduced if the entire supplemental right will be changed through the transfer.

A general exception to the presumption of enlargement when changing a supplemental right to a primary right applies when the supplemental right is a storage right. Section 42-222(1), *Idaho Code*, provides that a transfer of a water right for the use of stored water for irrigation purposes does not constitute an enlargement in the use of the original water right, even when more acres are irrigated, provided that no other water rights are injured.

- (5) Historic Beneficial Use. For an application for transfer seeking to change the nature or purpose of use, or season of use, including for a supplemental water right, the historic extent of beneficial use under the right must not be enlarged. The extent of historic beneficial use may also have to be considered for other proposed changes in the place of use under some circumstances when there are other sources of water, such as natural subirrigation, even when the purpose of use or period of use are not proposed to be changed. For a transfer seeking to change a water right for irrigation, the consumptive water use based on the cropping pattern or rotation, or estimated from records of water diverted and system efficiency, for the most recent, five consecutive years is presumed to provide a reasonable basis to establish historic use under the water right proposed for transfer, unless information provided by the applicant supports using a longer historic period. Exceptions or defenses to forfeiture may also justify extending the time period considered in establishing the historic use prior to the proposed transfer. The highest-year historic consumptive use (i.e. highest-use crop rotation using a climatic average for crop water use estimates), except for supplemental rights, will be the basis for the annual volume of consumptive use available for transfer. When it is necessary to determine the historic consumptive use under a supplemental right, the average annual historic consumptive use, over an appropriately representative time period not less than five years but that may require greater than five years, will be the basis for the volume available for transfer. For supplemental irrigation rights, a representative time period will include years with both good and bad surface water supplies for the area. In some rare instances, the diversion rate, the annual diversion

volume, and season of use could also be limited based on the extent of historic use.

For an application for transfer seeking to change the place of use under a supplemental water right for use in conjunction with a different primary right, the historic extent of beneficial use under the right must not be enlarged. For such changes, information regarding the historic availability or reliability of supply of the rights being supplemented (primary rights), both before and after the proposed change, is presumed to provide a reasonable basis to establish historic use under the supplemental right proposed for transfer.

- (6) Period of Use. An application for transfer, which proposes an increased period of use in connection with a changed nature of use for ground water, is presumed not to be an enlargement in use if the rate of diversion, total annual volume diverted, and annual volume of consumptive use are not increased. However, a change to an increased period of use for a surface water right is presumed to be an enlargement and would cause injury where there are junior priority rights that rely on surface water during the time period outside of the historic period of use for the right proposed to be changed.
- (7) Confined Animal Feeding Operations. For the purpose of quantifying the amount of water needed or used in connection with a confined animal feeding operation, such as a feedlot or dairy, the water use will be considered fully (100 percent) consumptive.
- (8) Fish Propagation. An application for transfer, which proposes to increase the number or volume of raceways in a fish propagation facility, will not be presumed to be an enlargement of the water right, unless the diversion rate or annual volume of water diverted are proposed to be increased.
- (9) Disposal of Waste Water. An application for transfer filed to provide for the disposal of wastewater, by land application on cultivated fields or other beneficial use disposing of the wastewater, resulting from use of water under non-irrigation uses such as a dairy or other confined animal feeding operation, or "municipal" or "industrial" water rights where the use of water is considered to be fully consumptive, is not considered an enlargement of the commercial, municipal, or industrial water right. While not an enlargement of the water right, such use of wastewater must not injure other water rights (see Application Processing Memorandum No. 61 as revised under Section 1 of this memorandum) and must comply with best management practices required by the Idaho Department of Environmental Quality, the U. S. Environmental Protection Agency, or other state or federal agency having regulatory jurisdiction.

- (10) Enhanced Water Supply. An application for transfer, which proposes to change a point of diversion from a surface water source to a new location where the water available is greater or more reliable, such as moving from the tributary of a stream downstream to the mainstem of the stream, is presumed to enlarge the water right, unless the proposed change is subject to conditions limiting diversion of water at the proposed new point of diversion to times when water is available and in priority at the original point of diversion.
- (11) Water Held for Reasonably Anticipated Future Needs. Section 42-222, *Idaho Code*, provides that when a water right, or part thereof, to be changed is held by a municipal provider for municipal purposes, that portion of the right held for reasonably anticipated future needs can not be changed to a new place of use outside the service area of the municipal provider or to a new nature of use. See Section 42-202B, *Idaho Code* for applicable definitions related to municipal water use.
- (12) Changing the Purpose of Use for a Water Right to Municipal Purposes. An application for transfer, which proposes to convey an established water right to a municipal provider and change the nature of use to municipal purposes, as defined in Section 42-202B, *Idaho Code*, shall not be approved without limiting the volume of water divertible under the right to the historic consumptive use under the water right prior to the proposed change. If the proposed transfer involves a surface water right, the transfer shall not be approved without also limiting the right to the historic period of use under the right prior to the proposed change.
- (13) Historic Use Recognized for Municipal Purposes. An application for transfer, which proposes to change the nature of use to municipal purposes for a water right established and held by a municipality that lists the purpose(s) of use as some combination of domestic, commercial, industrial, or irrigation, where those uses have historically been essentially for municipal purposes, as defined in Section 42-202B, *Idaho Code*, will not be presumed to be an enlargement of the right and will not require limitation to the historic consumptive use under the right. However, the change will be subject to the annual diversion volume, if specifically stated on the water right license or decree.
- (14) Stored Water. Section 42-222(1), *Idaho Code*, provides that a transfer of a water right for the use of stored water for irrigation purposes does not constitute an enlargement in the use of the original water right, even when more acres are irrigated, provided that no other water rights are injured.
- (15) Conveyance Losses. An application for transfer, which proposes to change the purpose of use for a portion of a water right covering

conveyance losses to a use that would provide for irrigating additional acres, or other additional use, is presumed to be an enlargement of the water right.

(16) Measuring Requirements for Ground Water Diversions in the ESPA and Modeled Tributaries. Any water right transfer authorizing one or more changes to the diversion and use of ground water approved subsequent to the date of this memorandum shall include a condition of approval that requires the installation and maintenance of one or more measuring devices or means of measurement approved by the department. Until and unless changed pursuant to Section 42-701, *Idaho Code*, the following flow meter installation is required for the transferred right prior to diverting and using ground water under the transferred right:

- a. One or more magnetic flow meters shall be installed, as required by the department, having an accuracy of 0.5 percent of rate of flow for flow velocities between 0.1 and 33 ft/sec in pipe sizes up to 4 inches in diameter and for flow velocities between 0.1 and 20 ft/sec in pipe sizes greater than 4 inches in diameter;
- b. Each magnetic flow meter must be installed and maintained in accordance with the manufacture's specifications and equipped with an LCD backlit display unit that displays instantaneous flow rate and total volume of water diverted in accordance with the department's requirements;
- c. Each magnetic flow meter must provide analog output for flow rate, scaled pulse frequency for total volume of water diverted, and an RS232 port for communications.

In any transfer approval, the department may require, prior to diversion under the approved transfer, that each magnetic flow meter must be equipped with a data logger specified by the department and capable of storing 120 days of data including dates and cumulative volume of ground water diverted updated daily, as a minimum. If installation of a data logger is not required at the time of transfer approval, the department will condition the transfer approval that installation of a data logger may be required in the future.

Detailed specifications for the above requirements will be provided by the Water Distribution Section of the department upon request. A municipal provider subject to other measurement provisions that satisfy the department's measuring and reporting requirements are exempt from the above condition. Wells used solely for domestic use as defined under Section 42-111, *Idaho Code* or stockwater use under

Section 42-1401A, *Idaho Code* are also exempt from the above condition. Water use for domestic and/or stockwater purposes in addition to any other purpose (e.g. commercial use) in a common system is not exempt from the above condition. Holders of ground water rights seeking approval of a transfer for diversion through existing systems or for irrigation systems may request a variance from the above requirements (at any time before or after approval), which may or may not be granted.

5e. Local Public Interest

For any application for transfer, the department must consider whether the proposed change(s) are in the local public interest as defined in Section 42-202B(3), *Idaho Code*. Consistent with earlier guidance herein regarding use of discretion and sound judgement, department staff is to address pertinent items from the following list, as well as other issues that are pertinent to specific circumstances, in considering whether sufficient information has been provided regarding local public interest issues and effects on the public water resource. When there are one or more significant questions about whether a particular transfer would be in the local public interest, additional information from the applicant or comments from other state or local governmental entities that have germane expertise on local public interest issues must be sought. In most cases, the applicant should gather the information and submit it to the department rather than department staff sending a form letter to other agencies seeking comment, unless the local agency requests direct contact with the department. Staff should inform the applicant of their responsibility to provide the information to the department.

- (1) Recreation, Fish, and Wildlife Impacts. The effect the proposed transfer could have on the public water resource in relation to recreation, fish, and wildlife resources in the local area that would be affected by the proposed change (Transfer Processing Memoranda Nos. 19 and 21 provide guidance related to state protected river reaches and minimum stream flow reaches);
- (2) Water, and Hazardous Substance Standards. Whether the proposed transfer would comply with applicable water and hazardous substance standards designed to protect the public water resource;
- (3) Local and State Requirements. Whether the proposed transfer would comply with local government and state government, if any, planning and zoning ordinances, regulations, records of decisions, or policies affecting the public water resource (e.g. requirement of a local government to use surface water for irrigation for developments involving land use changes pursuant to Section 67-6537, *Idaho Code* is considered an expression of local public interest);
- (4) Neighboring Jurisdictions. Whether the proposed transfer would comply with existing requirements for land use and other uses of natural

resources affecting the public water resource, if any, adjacent to the place of use proposed by the transfer but beyond the jurisdiction of the local government having authority or control over the proposed place of use; and

- (5) State Water Plan. Whether the proposed transfer would be compatible with the objectives and policies of the State Water Plan pertaining to the local public interest.

5f. Beneficial Use and Conservation of Water Resources

For any application for transfer, the department must consider whether the proposed use of water is a beneficial use consistent with the conservation of water resources within the State of Idaho. The following factors must be considered when processing a transfer and may require additional information from the applicant:

- (1) Efficiency of Diversion and Use. Whether the water delivery and distribution/application systems for the use proposed by the transfer would be consistent with contemporary standards for reasonably efficient use of water.
- (2) Diversion Rates for Irrigation Use. Whether the proposed transfer, if involving irrigation, proposes a diversion rate in excess of 0.02 cfs per acre of land irrigated (see Section 42-220, *Idaho Code*), and if the application for transfer proposes a higher diversion rate, whether the higher rate would be justified based on soils, crop types, irrigation system, climate, and reasonable conveyance losses from the point of diversion to the place of use. A higher diversion rate may also be justified for irrigating lands that because of public access can only be irrigated during certain times of the day (see Application Processing Memorandum No. 60). For the irrigation of five acres or less, justification is not necessary for a diversion rate of up to 0.03 cfs per acre (see Application Processing Memorandum No. 17). If the right proposed for transfer is based on a decree or license authorizing a diversion rate greater than 0.02 cfs per acre, then additional justification is not necessary unless:
 - a. The proposed transfer would change the place of use to a new place of use, rather than simply rearranging acreage at the general location of the existing place of use;
 - b. The proposed transfer would change the point of diversion with the intent to abandon the existing conveyance system and replace it with a new conveyance system that would reduce conveyance losses; or

c. The proposed transfer would add additional rights to an existing place of use from the same source as the existing water right(s) at the place of use.

- (3) State Water Plan. Whether the proposed transfer would be compatible with the objectives and policies of the State Water Plan pertaining to beneficial use and conservation of water resources.

5g. Effect on Economy of Local Area

In the case where the proposed place of use is outside of the watershed or local area where the source of water originates, the department must consider whether the overall effects of the change proposed by the transfer would adversely impact the economy of the watershed or local area. The economic effect of the proposed transfer should be measured by assessing the following factors resulting from the change in use of water:

- (1) Changes in Employment. Estimated changes in current and projected short-term and long-term employment;
- (2) Changes in Economic Activity. Estimated changes to short-term and long-term changes in economic activity; and
- (3) Stability of Economic Activity.

5h. Effect on Agricultural Base of the Local Area

Section 42-222(1), *Idaho Code*, provides that a change in nature of use from agricultural use shall not be approved if it would significantly affect the agricultural base of the local area. Department staff should presume the phrase “change in nature of use from agricultural use” can only be significant if the application for transfer proposes a change in nature of use for irrigation rights. Other water rights may authorize use in a process that is related to agriculture, such as commercial use for a dairy or an industrial use for a potato processing plant, but these uses are usually small enough compared to irrigation uses that a proposed change in these uses is presumed to not be significant. It is possible that a change in nature of use of a fish propagation water right authorizing diversion of a large flow rate might invoke this provision if fish propagation is interpreted to be an agricultural use.

The boundaries of the “local area” may be determined by considering one or any combination of the following:

- (1) the boundaries of local government or the combined boundaries of local governments that cooperatively share plans for transportation, recreation, environmental quality, and similar water uses;

- (2) the boundaries of any taxing entities or districts created, including school districts, that rely directly upon tax receipts for businesses that might be affected by a reduction in agricultural production;
- (3) areas of common socio-economic values and operations, including those created by a) water delivery entities, b) similar agricultural crops grown, or c) the areas where agricultural processing facilities derive the agricultural products processed, or;
- (4) natural geographic features that separate various areas, particularly hydrologic basin separations.

Whether the change would significantly affect the local agricultural base may be determined by considering one or any of the following factors:

- (1) Financial Impacts on Local Governments. The financial impact the change will have on local governments, combinations of local governments, taxing entities, or districts within the local area that derived income from the agricultural use;
- (2) Financial Impacts on Others. The financial impact the change will have on water delivery entities, the ability of farmers to continue to grow and harvest the crops previously grown, and the ability of processors of agricultural products to obtain the products necessary for business viability;
- (3) Agricultural Job Displacement. The degree to which those working in agriculture will be displaced or will lose income resulting from the proposed change;
- (4) Agrarian Lands. The degree to which agrarian lands are taken out of production; or
- (5) Financial Impact on Overall Economy. The financial impact on the overall agricultural economy of a local area.

Appendix B1

Agreement Summary



AGREEMENT SUMMARY

May 2004

Background of the Agreement

The Snake River Basin Adjudication (SRBA) is a water rights adjudication of the Snake River within the State of Idaho. As a part of that adjudication, the Nez Perce Tribe and the United States, as trustee for the Tribe, filed a variety of claims to water rights, based on treaties entered into between the United States and the Nez Perce Tribe. Among these, water rights were claimed for instream flows to protect the Tribe's treaty-reserved fisheries. Those claims were contested by the State of Idaho and certain Idaho water users because they could have affected the rights of Idaho water users to continue to divert water. By order of the SRBA Court in 1998, the parties have been attempting to resolve the issues. Negotiations to resolve the instream flow water right claims have focused on finding ways to protect fish habitat, including both flow and non-flow related issues, while preserving existing water uses.

The claims for the Tribe include not only the instream flow water right claims, but also claims to support the Tribe's consumptive water needs and claims to springs in the area ceded by the Tribe in 1863. The proposed settlement includes provisions resolving all of the issues relating to the Tribe's water right claims.

The parties to the mediation included the United States and the Tribe as claimants, as well as parties to the SRBA who filed legal objections to the Tribal claims. These objectors include the State of Idaho, Idaho Power Company, and water users throughout the Snake River basin within Idaho. After several years of negotiations, the parties have developed a framework for a proposed settlement agreement (although not a party to the settlement, Idaho Power participated in the mediation and is expected to continue working with others on issues associated with the Hells Canyon Complex).

Specifically, the framework, or "term sheet," is divided into three separate components: (1) the Nez Perce Tribal component to resolve issues on and near lands ceded by the Tribe in the 1863 Treaty, (2) the Salmon/Clearwater component to protect flows and habitat within the Salmon and Clearwater River basins, and (3) the Snake River flow component to resolve issues involving the use of the Snake River above the Hells Canyon Complex.

The proposed settlement agreement would (1) finally and fully determine the Tribal claims to water rights, (2) set out the understandings and criteria necessary to provide long-term ESA compliance for water use in the Snake River basin in Idaho and for timber land management activities on state and private lands, and (3) protect existing water uses.

Nez Perce Tribal Component

The Tribal component resolves water and other natural resource concerns raised by the Tribe in the SRBA. These resource concerns include water rights, development of water resources, hatchery management, certain BLM lands, and fisheries habitat. In exchange for the Tribe's agreement to resolve their water right claims, as well as to resolve any other Tribal water-based claims, the United States will provide financial compensation to the Tribe. The specific provisions of this component include:

- The Tribe's multiple-use water rights will be decreed in the amount of 50,000 acre-feet per year, primarily from Clearwater River sources. Water from other sources will be decreed only to the extent water is unappropriated and existing water rights are not injured.
- The Tribe's "springs or fountains" water rights claims on federal lands within the 1863 Nez Perce Treaty ceded area will be decreed, while similar rights claimed on nonfederal lands will be waived.
- BLM lands valued at \$7 million will be transferred to the Tribe. BLM's recreational lands along the Clearwater River corridor will be excluded from this transfer.
- The United States and the Tribe will enter into agreements providing for tribal management of the Kooskia National Fish Hatchery and tribal co-management of the Dworshak National Fish Hatchery.
- The United States, the Tribe, and the State of Idaho will enter into an agreement regarding use of 200,000 acre-feet of water in Dworshak Reservoir as part of a flow augmentation plan for fish.
- The United States will establish a \$50 million water and fisheries trust fund for use by the Tribe in acquiring lands and water rights, restoring and improving fish habitat, fish production, agricultural development, cultural preservation, and water resource development.
- The United States will provide \$23 million for design and construction of sewer and water system projects for local Nez Perce tribal communities.
- In lieu of contracting 45,000 acre-feet of Payette River storage space for a 30-year rental term, the United States will pay to the Tribe the \$10.1 million rental value of that storage space.
- The agreement does not resolve, but looks to separate discussions for a potential resolution of issues relating to the Bureau of Reclamation's Lewiston Orchards Irrigation District water diversion system.

Salmon/Clearwater Component

Many of the parties believe the Salmon/Clearwater component of the agreement will provide benefits for ESA listed species in several ways: improved instream flows, habitat, and passage.

- Instream flows will be established and held by the Idaho Water Resources Board for selected streams of importance to the Nez Perce Tribe. These flows will provide for future domestic, commercial, municipal, and industrial uses and will allow for a certain level of future development of other water uses. The State will administer a cooperative agreement(s) under the Endangered Species Act to enhance riparian habitat and protect existing and future State-permitted uses.
- Under the Forestry Component of the agreement, riparian/streambank protection measures will improve habitat for aquatic species on enrolled lands. This voluntary program supplements existing Idaho Forest Practice Rules and all State and private landowners in the Salmon/Clearwater River basins will be encouraged to participate.
- A Habitat Trust Fund will be established to provide funding for habitat improvement projects under both the flow and forestry programs described above.

Snake River Flow Component

The Snake River flow component anticipates 30-year Biological Opinions (BO) from NOAA Fisheries and USFWS under the Endangered Species Act on continued operation of the Bureau of Reclamation's projects in the upper Snake River basin. These BOs would address issues relating to flows from the Snake River above Brownlee Reservoir and the use of water for flow augmentation. The significant provisions of this component include the following:

- Minimum flows defined by the Swan Falls Agreement will be decreed by the SRBA Court to the Idaho Water Resources Board.
- The State of Idaho will extend the provisions of State water law (*Idaho Code 42-1763B*) for the term of the agreement to allow Reclamation to lease up to 427,000 acre-feet of water from Idaho water banks for flow augmentation.
- Reclamation will be allowed to rent or acquire up to 60,000 acre-feet of consumptive natural flow water rights from the Snake River between Milner and Swan Falls for flow augmentation purposes. When added to the other rentals, this water may increase the total water available for flow augmentation to 487,000 acre-feet. The United States will compensate local governments for impacts caused by Reclamation's acquisition of this additional 60,000 acre-feet.

Appendix B2

Exceedence Flows

Exceedence Flows

"Exceedence" is a way to describe the percentage of time for which an observed stream-flow is greater than or equal to a defined stream-flow. Exceedence is used when stream-flow data are not normally distributed (i.e. on a bell-shaped curve). Most streams flows are not normally distributed because high flow events can skew the data making the mean flow greater than the median flow.

Low-flow events have high exceedence percentages, and high-flow events have low exceedence percentages. Low-flow events have a high exceedence percentage because most of the time, observed flows exceed the low flow. Similarly, high-flow events have low exceedence percentages because most observed flows are lower than the high-flow levels.

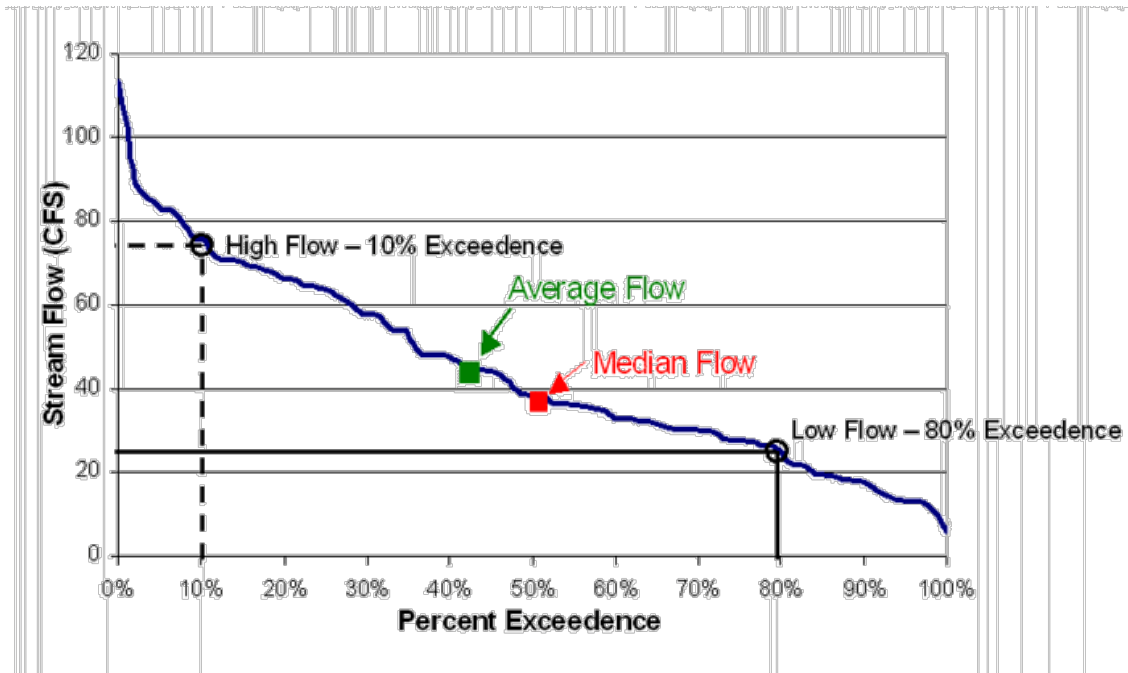


Figure 1. The mean monthly flow for the month of March for a hypothetical stream.

In the example illustrated by the Figure 1, a hypothetical stream has a mean monthly flow in March of 45 cfs, and a median monthly flow of 38cfs. The 50% exceedence flow in March is the median flow of 38cfs. This means that the median March flow 5 out of every 10 years will be greater than or equal to 38cfs.

The stream has an 80% exceedence flow of 25cfs. An 80% exceedence flow means that the median March flow will be equal to or greater than 25cfs 8 years out of 10.

The stream has an 10% exceedence flow of 75cfs. An 10% exceedence flow means that the median March flow will be equal to or greater than 75cfs 1 year out of 10.

The algorithms proposed for establishing instream flows, future allocations, and the floor flow are based on exceedence values.

The individual instream flows will be decreed as quantities in cubic feet per second (cfs) as will the future allocation for non-DCMI (non- domestic, commercial, municipal, and industrial) uses and floor flows. The administrative provisions for these in stream flows will, however, recognize they are being established based upon estimated flow unless measured flows are available or acquired. The provisions of the final decrees will provide a mechanism for changes to these decreed amounts based upon actual flows if such data become available.

To prevent dewatering streams by future non-DCMI use, future non-DCMI use would be curtailed at a floor equivalent to the unimpaired monthly 80% exceedence flow. Consequently, the flow values for the four categories will be as follows:

1. For State and private basins
instream flows would be decreed for each month of the year at the 50% exceedence level of the estimated unimpaired flow, subordinated to a future non-DCMI use in the amount of 25% of the lowest median monthly unimpaired flow value.
2. For federal, non-wilderness basins
instream flows would be decreed for each month of the year at the 40% exceedence level of the estimated unimpaired flow, subordinated to a future non-DCMI use in the amount of 10% of the lowest median monthly unimpaired flow value.
3. For federal wilderness and Wild and Scenic basins

instream flows would be decreed for each month of the year at the **30% exceedence** level of the estimated unimpaired flow, subordinated to a future non-DCMI use in the amount of 5% of the lowest median monthly unimpaired flow value.

4. **The Special Areas**

include watersheds that hold special values including high value habitat for fish resources, other special values, and areas where future development opportunities would be preserved. The instream flows and reservations for future non-DCMI use for the special areas differ from the land based formula described above.

Special Areas include:

Lower Salmon River below Long Tom Bar to the mouth:

Instream flows for the lower Salmon River downstream of the Wild and Scenic Reach would be consistent with the application filed for the lower Salmon River below Hammer Creek. The State application for the instream flow in the Lower Salmon addresses the reach from the mouth to Hammer Creek. The instream flows reach in the current application will be extended to include the reach of the Salmon below the Little Salmon. The instream flows in the reach between the Little Salmon and the Wild and Scenic River will be based on the downstream reach and adjusted for the inflow from the Little Salmon River. The State instream flow will be made consistent with the Wild and Scenic instream flow for the main Salmon River.

South Fork Salmon River and tributaries contained within the Tribal Priority Stream List:

Instream flows would be decreed for each month of the year at the 40% exceedence level of the estimated unimpaired hydrology, subordinated to a future non-DCMI use in the amount of 5% of the lowest median monthly unimpaired flow value.

Upper Salmon:

The upper Salmon basin includes a number of tributaries that meet the criteria of "B" List streams. Instream flows established for the tributaries or the mainstem Salmon will be in accord with Wild and Scenic River instream flows and future allocations, subject to the Order Approving Stipulation and Dismissing Objections in Consolidated Subcase Nos: 63-25239, 75-13316, and 75-13606, issued by Judge Daniel C. Hurlbutt, Jr., Presiding Judge, Snake River Basin Adjudication, on June 16, 1998.

Lolo Creek:

Instream flows will be decreed for each month of the year at the 40% exceedence level of the estimated unimpaired hydrology, subordinated to a future non-DCMI use in the amount of 10% of the lowest median monthly unimpaired flow value.

Bedrock Creek:

Instream flows will be decreed for each month of the year at the 40% exceedence level of the estimated unimpaired hydrology, subordinated to a future non-DCMI use in the amount of 10% of the lowest median monthly unimpaired flow value.

Upper North Fork Clearwater River, Breakfast Creek:

Instream flows would be decreed for each month of the year at the 40% exceedence level of the estimated unimpaired hydrology, subordinated to a future non-DCMI use in the amount of 10% of the lowest median monthly unimpaired flow value.

Future Uses for "A" List streams:

The future use allocations will provide water for non-DCMI uses. The parties will study the overlap of existing uses and future use to determine if additional criteria will assist the parties in allocating future use. The goal is to avoid reducing streamflows to a level where the unimpaired 80% exceedence value is the flow that normally occurs in the stream due to the combination of existing and future use.

Source: Idaho Department of Water Resources

Appendix B3

Mediator's Term Sheet

MEDIATOR'S TERM SHEET

I. Nez Perce Tribal Component.

- A. The Tribe's on-reservation, consumptive use reserved water right will be quantified in the amount of 50,000 AF per year, with a priority date of 1855. This water right will be established so as to allow for irrigation, DCMI, hatchery and cultural uses, at the discretion of the Tribe. The parties expect the source of most of this water right will be the Clearwater River; however, the source of some this water right may be from tributary streams adjacent to tribal lands to the extent unappropriated water is available and no injury to existing water rights will occur. The Tribe will administer the on-reservation use of this water right pursuant to the tribal water code. The Tribe may rent this water within the State of Idaho through the state water bank or water banks.
- B. The United States will establish a \$50 million multiple-use water and fisheries resource trust fund for the Tribe to use in acquiring lands and water rights, restoring/improving fish habitat, fish production, agricultural development, cultural preservation, and water resource development or fisheries-related projects.
- C. Subject to authority, the United States will enter into an agreement with the Tribe as to the use of 200 KAF in Dworshak Reservoir, which will include an operational MOA between the Tribe, Corps of Engineers (COE), National Marine Fisheries Service (NOAA Fisheries), the Bonneville Power Administration (BPA), and the State of Idaho implementing a flow augmentation plan beneficial to fish. Prior to the agreement implementing this term sheet,^{1/} the Tribe and the US will mutually agree that the power revenue effect of implementing this term will be either neutral or positive, or in the absence of such agreement, will revise this term so that such effect will be neutral or positive.
- D. The United States will fund the design and construction of domestic water supply and sewer systems for tribal communities on the reservation, including a water quality testing laboratory, in the total amount of \$23 million.
- E. The United States will enter into a long-term contract with the Tribe at the time of settlement, transferring management control of the federal hatchery at Kooskia to the Tribe. The United States and the Tribe will enter into an agreement for joint management of hatchery programs at the Dworshak National Hatchery.
- F. Prior to the completion of the agreement, the United States and the Tribe will agree to a quantity of BLM lands within the reservation to be transferred from the United States to the Tribe, to be selected by the Tribe from within the 11,000 acres identified as available for selection by the BLM, up to a total value of \$7 million as determined by mutual agreement or, in the absence of mutual agreement, by an independent appraisal report based upon the fair market value that is prepared in accordance with the *Uniform Standards of Professional Appraisal Practice* (USPAP) and the *Uniform Appraisal Standards for Federal Land Acquisitions*. The BLM and the Tribe, under the authority of the Federal Land Policy and

^{1/}Implementation of this Term Sheet will involve drafting of a number of implementation documents including federal and state legislation, a consent decree, biological assessments and opinions in accordance with the Endangered Species Act, and other documents. References in this Term Sheet to "agreements" refer to those implementation documents.

Management Act of 1976, will enter into a cooperative agreement to coordinate and cooperate in management of BLM lands within the reservation which will include a right of first refusal for the Tribe to purchase any BLM lands that the United States may choose in the future to sell, transfer, or exchange.

- G. Any non water-based claims the Tribe may have against the United States for the construction and operation of the Dworshak Dam will not be waived as a part of this agreement, nor will any compensation for such alleged claims be a part of the agreement. The United States understands that the Tribe intends to pursue such claims, moral or legal, separately from this agreement, and, without admitting any liability, agrees to meet in good faith with the Tribe to attempt to resolve such claims.
- H. In lieu of contracting 45,000 AF of uncontracted storage space in the Payette River system to the Tribe, the United States will pay the Tribe the present value of \$10.1 million of the 30-year rental value of that space based on the rental charges set in section III.C.8.
- I. The Tribe's treaty right of access to and use of water from springs and fountains on Federal public lands within the 1863 Nez Perce Treaty ceded area shall be recognized and established under the agreement.
- J. Lewiston Orchards Irrigation District (LOID)/City of Lewiston. This term sheet does not address any of the issues surrounding the proposed transfer of the LOID/Bureau of Reclamation water diversion system to the Tribe or funding by the United States of a replacement water intake system on the Clearwater River for LOID. The intention of the parties is to allow any discussions that may take place in the future among LOID, the Tribe, the Bureau of Reclamation (BOR), the City of Lewiston, and other affected water right holders to occur separately from and unaffected by this term sheet.

II. **Salmon/Clearwater Component**

A. **Instream Flows To Be Established As Part of Settlement of Nez Perce Claims.**

- 1. Idaho will establish, pursuant to state law, instream flow water rights, to be held by the Idaho Water Resource Board (IWRB), on the streams within the Salmon and Clearwater Basins listed in Appendix I, List A in accordance with the protocol set forth as part of Appendix I. Such water rights will be established by March 31, 2005.
- 2. By March 31, 2005, the IWRB will establish pursuant to state law instream flow water rights for the streams within the Salmon and Clearwater River Basins on the streams listed in Appendix I, List B, in amounts that are negotiated by the parties in consultation with local communities. In conjunction with the establishment of instream flows for the streams listed in Appendix I, List B, the parties will seek legislation from the Idaho Legislature to permit the IWRB to protect from diversion water to satisfy such instream flows, where needed, under state laws, regulations, and water bank rules. In negotiation of the quantification of instream flows, the parties will take into consideration the present hydrograph and the status of state-granted water rights on each stream.
- 3. The instream flows will be subordinated to water rights existing on or before the date of this agreement and to future domestic, commercial, industrial and municipal water rights. In issuing any new water rights for future uses that may affect the instream flows, IDWR will consider the local public interest under Idaho Code § 42-203(A)5, including but not limited to the protection of fish and wildlife habitat, aquatic life,

- recreation, aesthetic beauty, transportation and navigation values, and water quality.
4. The SRBA court will decree the instream flows established by the IWRB on the streams listed in Appendix I, Lists A and B. In the event the State proposes to change any instream flow listed in Appendix I, Lists A and B, the State agrees to: 1) provide 6 months advanced written notice to the parties of any proposed change, including the basis for the proposed change and an analysis of the impacts, if any, resulting from the proposed change to fish and wildlife resources; and 2) to consult with the Nez Perce Tribe on a government-to-government basis prior to making the change.
 5. Federal reserved water rights for the Selway, Lochsa, Middle Fork Clearwater, Rapid River, Main Salmon and Middle Fork Salmon River will be decreed under the Wild and Scenic Rivers Act to the United States pursuant to a separate settlement in the SRBA.
 6. Existing state instream flows on the mainstem Clearwater, the mainstem Salmon, the Lemhi and the Pahsimeroi Rivers will be maintained as presently quantified, subject to I.C. § 42-1504.
 7. The parties will study the relationship of the IWRB instream flows on the Clearwater River with the potential future operations of Dworshak Reservoir including evaluations of the existing rule curve and proposed future integrated rule curves to provide for operation of Dworshak consistent with anadromous and resident fishery objectives, and other information as appropriate. The parties will complete the study by December 31, 2004.
 8. In the Lemhi and Pahsimeroi, additional habitat actions will be developed by the Parties in consultation with the local community and stakeholder groups in the course of developing the proposed Section 6 Cooperative Agreement (see Section II.D). The Parties' anticipation is the development of the actions will be specifically directed toward (1) assembling by March 31, 2005 sufficient agreement on actions to ensure settlement of the Nez Perce instream water right claims, and (2) maximizing the consistency between those actions and all provisions of any proposed Section 6 Cooperative Agreement that may relate to the Lemhi or Pahsimeroi basins.
 9. Enforcement. In accordance with Idaho Code Title 42, Chapter 6, or other applicable law, IDWR will regulate the delivery of the instream flow water rights and protect from diversion water to satisfy such instream flows through the designated stream reaches, subject to priority and to the subordinations specified in section II.A.3.
- B. **Salmon/Clearwater Habitat Management and Restoration Initiative.** The State of Idaho will implement a Salmon and Clearwater Habitat Management and Restoration Initiative for the conservation and restoration of habitat within the Salmon and Clearwater River Basins. The Initiative will consist of three components: 1) instream flow program, 2) forest practices program, and 3) a habitat restoration program.
1. Instream Flow Program.
 - a. The State will identify as part of the development of a Section 6 Cooperative Agreement(s) as provided for in Section II.D a list of streams for which it desires incidental take coverage. Within 60 days of this notice, the State will provide existing and expected future water depletions, including quantity and location (basin) for those streams that are to be included in the Section 6 Cooperative Agreement. Streams determined by the Services to be flow limited will be

addressed in collaboration among the parties and local communities in order for the Section 6 Cooperative Agreement described in section II.D to satisfy the requirements of section 7(a)(2) of the ESA. Any state instream flows established under this section will not be decreed by the SRBA court nor will such instream flows be subject to the notice and consultation process described in section II.A.4 above.

- b. **Monitoring.** The parties will negotiate a monitoring plan and method for determining compliance with the instream flow program.
- c. **Enforcement.** IDWR will regulate the delivery of the instream flow water rights and protect from diversion water to satisfy such instream flows through the designated stream reaches, subject to priority and to the subordinations specified in section II.A.3 above.

- 2. **Idaho Forestry Program.** [Appendix II contains the figures and other references in this section.] Owners or operators who participate in the following State of Idaho Section 6 forest practices program will receive incidental take coverage under the ESA for any incidental take that may occur of listed species covered by this Agreement due to forest practices conducted in accordance with this Agreement. The forest practice program will be based on the Idaho Forest Practices Act (“IFPA”), Idaho Code §§ 38-1301 et seq. Owners and operators participating in the forest practices program voluntarily commit to implement the following prescriptions, in addition to the IFPA, to provide additional short-term and long-term conservation benefits for listed species. The Section 6 Agreement to be negotiated by the parties will not vary materially from the following terms, but may explain and define these terms, including establishment of standards relating to subsequent administrative decisions by the Idaho Department of Lands, as mutually agreed by the parties. This forestry program is a cooperative agreement between the State and the Services pursuant to Section 6(c) of the ESA, and neither applies to Nez Perce tribal lands nor impairs Nez Perce treaty fishing, hunting, pasturing, or gathering rights.

a. **DEFINITIONS:**

- i. **Bank Full Depth:** The average depth of the stream when the flow is at the ordinary high water mark. This is used to determine the average depth of the stream for the reach adjoining management activities.
- ii. **Class I Stream:** For purposes of this Agreement, Class I streams are those that contain habitat which is used by fish at any life stage at any time of the year including potential habitat likely to be used by fish which could be recovered by restoration or management and includes off-channel habitat. Where it is unknown whether the stream may contain fish, fish habitat or potential habitat, the current IFPA rules based on upstream drainage area will be used to determine the Class I-Class II boundary. The Class I-Class II boundary may be determined from other, analytically-based or empirical methods, as approved by the IDL.
- iii. **Class II Stream:** For purposes of this Agreement, Class II streams are headwater streams or minor drainages that do not contain habitat likely to be used by fish at any life stage at any time of the year. The principle value of Class II streams lies in their influence on ecological functions, water

- quality and water quantity downstream in Class I streams.
 - iv. Cumulative Watershed Effects Process (CWE): Forest Practices Cumulative Watershed Effects Process for Idaho, as amended.
 - v. Distances: All distances referenced in these supplement measures are slope distances, unless otherwise provided herein.
 - vi. Flood Prone Width: Flood prone width is defined as the width of the water's surface at twice the bank full depth.
 - vii. Idaho Department of Lands (IDL): The administering agency of the IFPA.
 - viii. Hot spot: (as defined in the Native Fish Habitat Conservation Plan (NFHCP)).
 - ix. Large Woody Debris (LWD): Live or dead trees and parts or pieces of trees that are large enough or long enough or sufficiently buried in the stream bank or bed to be stable during high flows.
 - x. Multiple Unconfined Channel: Valley bottom contains multiple (braided) channels that are active or relic.
 - xi. Ordinary High Water Mark: That mark on all water courses in respect to vegetation, which will be found by examining the beds and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years as to mark upon the soil a character distinct from that of the abutting upland.
 - xii. Riparian Protection Zone (RPZ): The combined widths of the no harvest and buffer zones defined in these measures.
 - xiii. Single Confined Channel: Bank full flow is contained within a single channel and the flood prone width is less than four times the bank full channel width.
 - xiv. Single Unconfined Channel: Bank full flow is contained within a single channel and the flood prone width is greater than four times the bank full channel width.
 - xv. SPZ: Stream Protection Zone as defined in the IFPA.
- b. **RIPARIAN MANAGEMENT MEASURES**
- i. Because of the diversity of terrain and forest types in Idaho, it is difficult to design a "one-size fits all" set of riparian management measures. Thus, while the supplemental measures set forth below are designed for application to all enrolled forest lands, the program to be included in the Section 6 Agreement will also provide a mechanism for enrollees to design site-specific stream protection measures that must be reviewed and approved by the IDL forest practices coordinator or designee and a fisheries biologist as appropriate prior to implementation. An approved site-specific stream protection plan shall provide for equivalent or better results than these supplemental conservation measures.
 - ii. **RIPARIAN MEASURES FOR CLASS I STREAMS.** -- On Class I streams the following measures shall apply to the RPZ.
 - (a) No Harvest Zone Measures
 - i) The No Harvest Zone is defined as:
 - a) Twenty-five (25) feet (each side) of the ordinary high

- water mark where the stream is contained in a Single Confined Channel (Figures 1, 4).
- b) Twenty-five (25) feet (each side) of the ordinary high water mark where the stream is contained in a Single Unconfined Channel (Figures 2, 5).
 - c) The entire flood prone width where the stream is contained in Multiple Unconfined Channels (Figures 3, 6). Where the current channel, or any relic channel is within 25 feet of the valley sidewall, the No Harvest Zone will be extended upslope twenty-five (25) feet from the ordinary high water mark of that channel.
- ii) Harvest will not occur in the No Harvest Zone unless determined by the IDL, on a site-specific basis, that harvest is necessary to maintain or improve riparian function, which may include reduction of the risk of forest fires, disease, or insect infestation. An enrollee who believes harvest is necessary to maintain or improve riparian function must submit a site-specific plan for IDL review and approval prior to implementation. Such harvest plan must describe how riparian function will be protected.
 - iii) Yarding corridors will not be placed through the No Harvest Zone unless required to minimize road construction, for operator safety, or to achieve sound forestry practices in the adjacent area. Any such yarding corridor shall be placed in a No Harvest Zone only to the minimum extent necessary, and only as approved by the IDL forest practices coordinator or designee, with advice from a fisheries biologist as appropriate. Any approved plan authorizing a yarding corridor within the No Harvest Zone must still ensure the minimum stocking levels are retained within the RPZ. Yarding corridors that affect more than ten (10) percent of the RPZ will be mitigated as approved by IDL.
 - iv) When harvesting in areas adjacent to Class I streams, LWD may be added (through active placement of LWD) from the buffer zone, in accordance with an approved site-specific plan (II.B.2.b.i). This may alter the leave tree requirements.
- (b) Buffer Zone Measures
- i) The buffer zone is defined as:
 - a) Fifty (50) feet (each side) of the No Harvest Zone where the stream is contained in a Single Confined Channel (Figures 1, 4).
 - b) The entire flood prone width beyond the No Harvest Zone where the stream is contained in a Single Unconfined Channel (Figure 2, 5). Where the channel is within twenty-five (25) feet of the valley sidewall, the

- buffer zone will be extended fifty (50) feet upslope of the No Harvest Zone.
- c) Where the stream is contained in Multiple Unconfined Channels, and the current channel, or any relic channel is within twenty-five (25) feet of the valley sidewall, the buffer zone will be extended fifty (50) feet upslope from the No Harvest Zone (Figures 3, 6).
- ii) During development of the section 6 agreement, the parties will work to evaluate the appropriateness of the LWD instream target and the leave trees per acre target and make revisions as mutually agreed. Absent such agreement, within the buffer zone an average of 88 trees per acre of trees larger than 8 inches diameter breast height (DBH) will be retained, selected as follows;
- a) Trees leaning toward the stream or flood plain will be favored for retention,
 - b) Trees retained will be lineally distributed along the length of the stream segment even though they may be concentrated closer to the stream,
 - c) Trees with the highest crown to height ratios (crowns from the tip to the ground) will be favored for retention to enhance stream shading,
 - d) Native species leave trees will be selected based on their suitability to survive and thrive in the RPZ.
 - e) All snags will be retained in the No Harvest Zone (where they do not interfere with logger safety), with no more than 9 snags to be included in the total tree count per acre. Snags must be over 10 feet tall to be included in the total tree count,
 - f) Trees less than 8 inches DBH and shrubs will be retained to the extent possible,
 - g) The diameter distribution of the live leave trees in the buffer zone will match a forest stand diameter distribution consistent with the age of the stand in its pre-harvest condition. The Parties envision that the section 6 agreement will include provisions that will encourage recruitment of large, older trees to the RPZ.
- iii) Because Idaho forest ecology varies tremendously from north to south, it may not be possible to maintain 88 trees per acre of trees larger than 8 inches DBH on all forest lands. Thus, in the event an enrollee demonstrates that the site productivity within the riparian zone cannot support an average of 88 trees per acre of trees larger than 8 inches DBH, then IDL will work with the enrollee(s) to determine an appropriate site-specific tree retention policy that ensures protection of riparian habitat. In

no event will the tree retention be less than 60 trees per acre of trees larger than 8 inches DBH.

- (c) Measures Applicable to Entire Riparian Zone
 - i) Operation of ground-based equipment shall not be allowed within the RPZ.
 - ii) The outer perimeter of the RPZ will be designated on the ground/trees prior to the commencement of logging activities.
- iii. **RIPARIAN MEASURES FOR CLASS IIa STREAMS.** Class IIa streams are Class II streams that contribute surface stream flow directly into a Class I stream.
 - (a) There will be a fifty (50) foot buffer zone adjacent to the main stem of Class IIa streams. Within this zone a minimum of thirty-five (35) trees per acre larger than 8 inches DBH will be retained. This corresponds to an average thirty-five (35) foot spacing. Trees retained must be representative of the size of trees that existed in the stand prior to harvest.
 - (b) The buffer zone of perennial Class IIa streams that contribute, based on contributory acres, more than twenty (20) percent of the flow to a Class I stream will extend one-thousand (1000) feet above the confluence. Above this point, Class II SPZ requirements in the IFPA will apply.
 - (c) The buffer zone of perennial Class IIa streams that contribute, based on contributory acres, less than twenty (20) percent of a perennial Class I stream flow will extend five-hundred (500) feet above the confluence. Above this point, Class II SPZ requirements in the IFPA will apply.
 - (d) The riparian management of intermittent Class IIa streams will be covered by the IFPA Class II rules.
- iv. Removal of LWD from Class I and Class IIa streams shall be prohibited unless necessary to maintain or improve riparian function, which may include reduction of the risk of forest fires, disease or insect infestation. A site-specific management plan approved by IDL will be required for the removal of any LWD prior to implementation.
- v. As part of these Supplemental Measures, participating enrollees commit to mapping all stream segments on their ownerships as Class I and Class II within 15 years from the date of enrollment. Enrollees also agree to participate in any efforts by IDL, USFWS, NOAA Fisheries, and Idaho Department of Fish and Game to update mapping of stream segments on their ownerships.
- vi. As part of these Supplemental Measures, the parties will cooperate in developing and undertaking a series of research projects designed to compare the effectiveness of these Supplemental Measures with alternative management strategies in enhancing native fish habitat and populations. These projects would include examples of active management within riparian areas.

- c. **ROAD MANAGEMENT MEASURES.** The road management measures set forth herein will constitute the measures to be included in the Section 6 Agreement. Additional road measures may be included in the Section 6 Agreement only with the consent of all parties.
- i. New Road Construction:
- (a) An attempt will be made to find a suitable alternative location for new roads that are proposed for construction on side slopes greater than sixty (60) percent and/or in unstable or erodible soils. Unstable or erodible soils are those defined as “high” in the Idaho CWE Process for Idaho (Table B-1) or other agreed upon hazard-rating analysis process. Where an alternative location is not feasible, the road will be full benched without fill slope disposal.
 - (b) Where road grades slope toward stream crossings, the enrollee will install drivable drain dips and/or ditch relief pipes at the nearest practicable location to streams so that an adequate filtration zone exists to minimize sediment delivery to streams;
 - (c) Road fills over stream crossings will be grass seeded and straw-mulched concurrent with construction. Other road cuts and fills on newly constructed roads will be seeded within one operating season. The tread on native-surface roads will also be grass seeded within one operating season following construction unless the road will be used for hauling within two (2) years of construction;
 - (d) New road construction will be minimized in stream RPZs. If road construction occurs in an RPZ, slash filter windrows or suitable alternative measures will be installed at the toe of all fill slopes;
 - (e) Fills at culvert inlets on stream crossings where the culvert is 24-inch-diameter or larger will be well-armored with rock or other erosion control measures. A flared inlet structure may be used as an alternative;
 - (f) Stream crossing culvert installations will be designed to accommodate at least the fifty (50) year peak flow as determined by U.S. Geological Survey flood magnitude prediction procedures. As an alternative, the culvert size for a fifty (50) year flow may be calculated by an IDL hydrologist based on an analysis of channel dimensions;
 - (g) New roads will be minimized where the potential for erosion is high. If roads are built in an area where soils are identified in the CWE process surface erosion hazard ratings as high (Table B-2), the road tread over stream crossings will be rocked or otherwise stabilized to prevent sediment transport.
 - (h) Road cross-drainage will be provided as frequently as necessary to control road tread erosion. On active native-surfaced roads, road drainage features will be located such that road runoff distances generally do not exceed three-hundred (300) feet (and will not exceed four-hundred (400) feet) along the road centerline. On

erodible soil types, or on road grades steeper than eight (8) percent, this spacing will be reduced from the specifications listed above; alternatively a localized IDL approved method to adequately control road tread erosion will be applied.

- (i) Road right of way clearings will be minimized where roads cross streams.
 - (j) Seeps or springs will be avoided during road design and construction, if possible. If roads cross seeps or springs, drainage features will be installed that pass accumulated surface water across the road prism and return it to the forest floor as close to the point of origin as reasonably practicable;
 - (k) New roads will be minimized in the RPZ. Roads located in RPZs will be constructed with appropriate fill depths and will include properly sized drainage features at all active channels;
 - (l) Stream crossing culvert installations must be designed to accommodate fish passage on Class I streams (an inspection program for culvert failures following significant hydrologic events will be negotiated as a part of the Section 6 agreement);
 - (m) The enrollee will inspect roads to determine their status and condition in comparison to these supplemental measures and results will be included in the periodic update of the road database.
 - (n) Road surface drainage will keep drainage within the source watershed.
- ii. Road Reconstruction and Upgrading:
- (a) A prioritization of road upgrades will be developed through CWE and/or an enrollee inventory of roads within five years of enrollment in this program. The prioritization schedule shall set forth a time frame for upgrading roads within fifteen years of the date of enrollment to the standards listed in the Supplemental Measures below. To the extent practicable, roads that have the potential to deliver sediment to Class I and Class II streams will receive priority for upgrading.
 - i) Within an operation area (Timber Sale) when the haul routes cross Class I streams, the Class I stream crossing culverts will be upgraded to meet the Supplemental Measures listed below no later than one year after completion of harvesting operations.
 - ii) For all roads, using the data from the CWE and/or enrollee inventory, enrollees will identify "hot spots." Hot spots will be addressed within five years from the date of identification. Hot spots will be upgraded to the standards in these Supplemental Measures when indicated by the CWE and/or enrollee inventory. An incentive program to encourage early response to hot spots will be included.

- (b) Supplemental Measures for Reconstructing and Upgrading Existing Roads:
 - i) Road Tread Erosion—Within the RPZ of Class I streams, road cross-drainage will be provided as frequently as necessary to control road tread erosion. On active native-surfaced roads, road drainage features will be located such that road runoff distances generally do not exceed three hundred (300) feet (and will not exceed four-hundred (400) feet) along the road centerline. On highly erodible soil types, or on road grades steeper than eight (8) percent, this spacing will be reduced from the specifications listed above; alternatively, a localized method to adequately control road tread erosion from providing sediment to Class I streams will be applied. Procedures for alternative methods will be agreed upon.
 - ii) Culvert Replacement and Upgrading—Where existing stream crossing culverts do not pass the fifty (50) year flow, or where blockage of fish passage is documented, replacements will be designed and constructed to carry the fifty (50) year peak flow as determined by U.S. Geological Survey flood magnitude prediction procedures (as an alternative, the culvert size for a fifty (50) year flow may be calculated by a IDL hydrologist based on an analysis of channel dimensions and/or drainage size);
 - iii) Filtration—When the outlet of road drainage features are too close to streams for effective forest-floor filtration, supplemental sediment filtration will be provided (such as slash filter windrows, straw-bales, silt fences, etc.) and/or drainage feature spacing will be decreased to minimize sediment delivery;
 - iv) Relocation—For stream-adjacent/parallel roads or where there is a high density of stream crossings, simple/inexpensive relocation will be utilized in addition to (or in lieu of) road drainage improvements where possible.
- iii. Other Road Management. Site-specific access restriction commitments currently in place in cooperation with the Idaho Department of Fish and Game and/or other cooperators will be continued (and updated as necessary for new road construction and road abandonment) to protect riparian habitats and listed species.
- iv. Road Management Database
 - (a) The enrollee will commit to tracking the status of road conditions on enrolled lands. The methods for this will be either an updateable geographic information system (GIS), or a system of hand or computer aided drawing (CAD) maps, and tabular data suitable for periodic audits. It will show the road network spatially and facilitate estimation of road miles by road class. Additionally there is a

commitment to periodically (ten (10) year cycle) re-inspect roads that have been constructed or upgraded to the supplemental standards and to perform any maintenance necessary to preserve the upgraded function.

- (b) The inspection process will be performed using several methods including but not limited to: Forestry personnel reviewing roads for use in management activities, personnel knowledgeable about such road inspection, and through the Cumulative Watershed Effects Analysis (CWE) field review activities.
 - (c) The checklist for inspection will include all the elements necessary to ensure roadbed integrity, sediment management, and drainage structure function in regard to protecting streams.
- d. **VARIANCE COMMITMENTS.** All variances to these Supplemental Measures that affect fish habitat shall be reviewed by the IDL Forest Practices Coordinator or designee in consultation, as defined in the IFPA, with a fisheries biologist and approved and signed by the IDL Area Supervisor.
- e. **IMPLEMENTATION MONITORING.**
- i. IDL will monitor implementation and effectiveness of the IFPA and these additional conservation measures in protecting riparian function.
 - ii. Implementation Monitoring Plan. Each enrollee will be monitored separately within the program. Management Responses generated by the various methods listed below will be tailored to the landowner. Standards, criteria, and methods for implementation monitoring will be agreed upon.
 - (a) Three basic methods of implementation monitoring will occur to ensure the IFPA and these supplemental conservation measures are being applied on the ground. The first will be the routine on-site inspections carried out by IDL Forest Practice Advisors in the course of their work. These inspections are reviewed by staff and trends noted and reported on a yearly basis. The second is by periodic audits of management activities by an Interdisciplinary Team to review IFPA rule implementation and effectiveness. The third is by systematic implementation of CWE, which provides a framework to assess all the elements that may affect habitat and water quality, and provide a feedback loop for implementation of corrective measures and further assessment.
 - (b) For each of these methods, a report will be generated and sent to the landowner(s) with specific corrective action options presented and a timeframe in which the action is to be completed. An Interdisciplinary team will be available for consultation in reviewing the site if necessary and offering inputs on the corrective action.
 - i) Nonperformance issues documented in yearly reports may result in an increased rate of inspection and a revision of the enrollee's implementation plan.
 - ii) Nonperformance issues identified in periodic IFPA audits and CWE analyses will lead to adjusting inspection cycles and

instituting programmatic changes in these measures is as follows:

- (a) A trigger can be tripped by findings from any level of reporting (yearly, periodic IFPA, or CWE) or scientific study conducted as part of this program.
- (b) When a trigger is tripped, an assessment of the biological relevance of the findings between expectations and results will be performed and a determination made as to whether there is a causal linkage, or an unforeseen circumstance.
- (c) Depending on the determination above, a management response will be crafted to address the issue and enrollee implementation plans will be modified accordingly.

g. **ADMINISTRATION AND IMPLEMENTATION OF SECTION 6 PROGRAM**

- i. **IDL Administration:** IDL shall be responsible for administering and ensuring compliance with the Idaho Forestry Program.
- ii. **Enrollment and Commitment:** A landowner may enroll in this program by submitting a written request to IDL. IDL shall develop an enrollment form for use by landowners. The enrollment form shall require, at a minimum, that the enrollee:
 - (a) Identify all lands for which enrollment is sought;
 - (b) Agree to abide by the supplemental measures set forth in this program;
 - (c) Set forth a detailed schedule for implementation of the commitments required by these supplemental measures on the enrollee's forest lands;
 - (d) Authorize IDL access to the enrollee's land for purposes of monitoring compliance with this program;
 - (e) Provide IDL with an explanation of the landowners system for record keeping; and
 - (f) Provide a plan for how the enrollees' personnel will implement the supplemental measures and report actions to the landowner for compliance with these supplemental measures. This plan will include:
 - i) What internal auditing procedures will be used to check compliance with the supplemental measures;
 - ii) How hot-spot reporting and repair will be handled;
 - iii) How the schedule for tracking road condition and stream class will be accomplished; and
 - iv) Procedures for reporting changed circumstances.
- iii. **Noncompliance:** In the event that IDL determines that an enrollee is not in compliance with these supplemental measures, IDL shall work with the enrollee to cure any noncompliance or take action to revoke the enrollee's participation in the program.
- iv. **Administration Methods:** The IDL, as the administrator of the supplemental measures program, will undertake the following actions to

implement this program and to ensure enrollee compliance:

- (a) **Field Manual:** The IDL will create a field implementation manual for all enrollees to the plan within 3 months.
 - (b) **Participant Training:** IDL will create a standardized training workshop program, including field and office procedures, to be utilized by enrollees within 6 months of signing an enrollment agreement. This program will be utilized to certify that field personnel understand the supplemental measures and can apply them on the ground.
 - (c) **Inspections:** As part of the normal process of IFPA notification and inspection, the IDL will conduct field inspections of enrollee operations. All inspection items relevant to the Supplemental Measure will be reported separately, with copies sent to the operator and landowner as standardized in the Field Manual.
 - (d) **Enrollee Annual Audits:** IDL will require the enrollee to file an annual report. This report will include a summation of performance on all program activities, and progress on items such as hot-spot location and repair, stream classification and road system mapping, and road construction, upgrading, repairs and obliterations.
 - (e) **IDL Annual Audit:** IDL will prepare an annual report to NOAA Fisheries and the U.S. Fish and Wildlife Service (FWS, or collectively “Services”) summarizing all program activities and detailing the performance of enrollees. This report will also include all applicable data from periodic IFPA audit results and CWE report summations on conditions and trends for enrolled lands that occurred during the preceding year. Also, any final or interim results from adaptive management activities will be reported.
 - (f) **IDL Five Year Audit:** Within 5 years of enrolling in the program the IDL will conduct an audit of all enrollee activities and prepare a report that documents a summary of those activities and compliance/non-compliance with the Supplemental Measure terms. This report will also state the total enrollee statistics as to acres of activity, miles of streams and roads surveyed and/or on which action has been taken. A comparison of the total acres enrolled and the trends of activity will also be included. These periodic audits will also include any accomplishments in adaptive management projects and any changes in procedures or standards brought about from adaptive management projects.
- h. **Forest Landowner Program.** The parties will explore the development of a landowners incentive program as a part of the Section 6 agreement.
 - i. **General Provisions**
 - i. The measures set forth in this document are the product of good faith negotiations for the purpose of resolving legal disputes, and all parties agree that no offers and/or compromises made in the course thereof shall be construed as admissions against interest or be used in any legal

proceeding. Nothing in this document shall be read as an admission or determination by the parties that any of the actions anticipated by this document are necessarily required in order to comply with the Endangered Species Act. Nothing in this document shall be interpreted as suggesting that the FPA standards as they presently exist are insufficient to avoid take of listed species.

- ii. By entering into this Agreement, neither the State of Idaho nor the private parties to this component concede that the present FPA standards are insufficient to avoid take of listed species.

3. **Habitat Improvement Program.** The State will develop a program to provide incentives for improving fish habitat. The habitat program will include the following types of measures:
 - a. Correcting existing man-made passage barriers such as unscreened diversions, stream crossings, or instream structures;
 - b. Consolidation of diversions to minimize the number of screens and bypasses;
 - c. Development and construction of suitable alternatives to push-up dams;
 - d. Projects that will restore large organic debris (LOD) in streams and riparian zones, repair or remove structures that degrade fish habitat, stabilize or abandon roads, and other habitat improvement projects identified through the Cumulative Watershed Effects process;
 - e. Incentives to private landowners to undertake projects or implement other measures to enhance riparian habitat;
 - f. Habitat improvement or protection projects, such as land acquisition, conservation easements and the development of best management practices designed to provide for water quality for resident and anadromous fish;
 - g. Improving or protecting flow conditions to augment streamflows; and
 - h. Planning and monitoring.
4. Purpose. These measures are expected to protect and restore listed fish and their habitat in the Salmon and Clearwater basins and downstream basins.
5. Funding. Funds from the Habitat Trust Fund, in part (and without judgment or conclusion as to whether the amount available from the fund is, by itself, sufficient to adequately implement the Initiative), will be used to implement the Salmon/Clearwater Habitat Management and Restoration Initiative.

C. **Habitat Trust Fund.**

1. As part of the settlement agreement, the parties will establish a trust fund to which the United States will contribute \$38 million (in 2004 dollars) according to a schedule determined by Congress in legislation implementing this Agreement.
2. The purpose of the fund is to supplement monies otherwise available for habitat protection and restoration in the Salmon and Clearwater basins through projects, purchases, and investments such as those specified in section II.B.3 above.
3. The fund will be divided into two accounts: (1) one-third of the contribution of the United States to the fund will be placed into an account for which the Nez Perce Tribe will develop a process for administration (“tribal account”), and (2) the remainder will be placed into an account for the which primary purpose will be implementation of a

Section 6 Cooperative Agreement(s) anticipated by this Agreement (see section II.D below) (“Section 6 account”). The State will collaborate with the Nez Perce Tribe and the United States to determine how to direct use of the Section 6 account. If any part of the Section 6 account is available beyond that needed for implementation of any Section 6 Cooperative Agreement(s) anticipated by this Agreement, remaining funds may be used for other habitat purposes as directed by the State, the Nez Perce Tribe, and the United States. In administration of the Section 6 account, the State of Idaho will contribute a value of no less than 33% of the contribution of the United States (*i.e.*, Idaho and the United States will provide 25%/75% matching contributions). If any portion of the fund is used to implement a Section 6 Cooperative Agreement(s), the proportional federal contribution to that portion of the fund will be considered to be a federal contribution towards implementation of the Section 6 agreement.

D. Section 6 Cooperative Agreement.

1. The State of Idaho will submit the Salmon and Clearwater Habitat Management and Restoration Initiative or components thereof to the Services as a proposed cooperative agreement(s) under Section 6 of the Endangered Species Act, 16 U.S.C. § 1535(c). The Services will enter into a Cooperative Agreement(s) with the relevant state agencies under Section 6(c) of the Endangered Species Act for the purpose of assisting the State in implementation of components of the Initiative for a thirty-year period. This Section 6 Cooperative Agreement(s) will be limited to the matters set forth in this settlement agreement. The Section 6 Cooperative Agreement(s) between the Services and the State is intended to satisfy the requirements of section 7(a)(2) of the ESA, while at the same time providing sufficient incentives to private landowners to encourage their participation in the Initiative.
2. The Parties will commit sufficient resources to complete drafting of a Section 6 Cooperative Agreement for the State Forestry Program by March 31, 2005 in accordance with the provisions of this section. The Services are committed to collaborate with the State during development of the proposal to maximize the likelihood that the submission satisfies the requirements of Section 6 and Section 7 of the ESA.
3. Federal Procedures
 - a. Endangered Species Act.
 - i. The Services will consult on any Section 6 program submitted by the State under Section 7 of the Endangered Species Act, 16 U.S.C. § 1536(a)(2), regarding the federal approval and implementation of a Section 6 Cooperative Agreement(s). Incidental take authorization shall be extended to all state-authorized diversions and uses of water that are identified and analyzed from those streams identified by the State for inclusion in the Section 6 Cooperative Agreement upon issuance of a Biological Opinion on the Section 6 Cooperative Agreement(s).
 - ii. Similarly, the owners of state and private lands in Idaho (“owners”), and those undertaking timber management activities on such lands (“operators”) who enroll in the forest practices program shall be entitled to incidental take coverage upon issuance of the Biological Opinion on the Section 6 Cooperative Agreement for the State Forestry Program so long as

such owners or operators are employing timber management practices that meet or exceed mandatory best management practices (BMPs) set forth in the Idaho Forest Practices Act (IFPA), Idaho Code §§ 38-1301 et seq. and are implementing the program.

- iii. A Biological Opinion(s) on any Section 6 Agreement(s) also will provide incidental take authorization for those who participate in the habitat program when they implement measures (including some of those found in section II.B.3) in accordance with the findings that derive from an analysis in the biological opinion(s) on a Section 6 Cooperative Agreement(s).
 - b. National Environmental Policy Act. The Services will prepare appropriate environmental documents and comply with the procedural requirements of the National Environmental Policy Act associated with the review and approval of a Cooperative Agreement(s).
 - c. In issuing biological opinions on a Section 6 Cooperative Agreement(s), the federal agencies shall allow the State and the parties to this Agreement to participate in the consultation and comment on the draft biological opinion.
 - d. Reinitiation of consultation on the NOAA Fisheries or the FWS FCRPS or the other component biological opinions shall not automatically trigger reinitiation of consultation on any Section 6 Cooperative Agreement(s) biological opinion.
 - e. Consultation on a Section 6 Cooperative Agreement(s) biological opinion may be reinitiated only under the following circumstances:
 - i. The State or the participants fail to comply with the terms and conditions of this agreement;
 - ii. To reduce the obligations of the parties in the event the measures in the agreement are determined to no longer be necessary; or
 - iii. Pursuant to 50 C.F.R. § 402.16.
 - f. Nothing in this section is intended to limit the use of habitat conservation plans, landowner incentives, or other habitat protection and restoration programs under the Endangered Species Act, the Fish and Wildlife Coordination Act, the Fish and Wildlife Act, or other federal or State laws.
 - g. The federal agencies may only seek additional Endangered Species Act measures in the Salmon and Clearwater Basins for the covered activities and covered species if:
 - i. The federal agencies have implemented relevant RPA actions set forth in all other biological opinions intended to benefit Snake River Basin listed species; and
 - ii. All other discretionary measures, including but not limited to, reinitiation of consultation on other relevant BiOps and the component biological opinions, that provide the reasonable potential for achieving necessary reductions in the mortality of the Snake River listed species have been implemented, to the maximum extent practicable.
- E. **Termination.** If the United States reinitiates consultation on or revokes incidental take authorization, the State may terminate the Cooperative Agreement.

III. Snake River Flow Component.

- A. General Principle: Biological Opinions will be issued for the term of this agreement which will provide incidental take coverage, if necessary, for all federal actions and related private actions including: (1) all BOR actions in the upper Snake River basin, (2) all private depletionary effects in the Snake River basin above the Hells Canyon Complex² to the extent they affect listed anadromous fish, and (3) all private depletionary effects above the Hells Canyon Complex to the extent that they are related to the federal action and affect listed resident species. These Biological Opinions shall be separate from any Federal Columbia River Power System (FCRPS) Biological Opinion. Separate biological opinions will be prepared for other components as necessary. Additionally, the parties will use their best efforts to seek enactment of state and federal legislation consistent with the terms of the general conditions to provide the necessary ESA and CWA protection for this component of the agreement and to provide statutory authority necessary to implement the agreement. The flows provided in this agreement set forth the flow contribution from the upper Snake above the Hells Canyon Complex for the benefit of listed species covered by this agreement as they travel throughout the Columbia River system, including through the FCRPS. The biological opinion on this component to be prepared by NOAA Fisheries will directly address and evaluate the expected effects of BOR's proposed operations in the Upper Snake, including any beneficial effects on anadromous fish from the flow augmentation program established in this component.
- B. Tier 1–Minimum Flow. The minimum instream flows established by the Swan Falls Agreement shall be decreed in the SRBA to the Idaho Water Resource Board (IWRB). If the Idaho Department of Water Resources fails to regulate these minimum instream flows in accordance with the Swan Falls Agreement, then any party to this agreement shall be entitled to seek injunctive relief through the state district court responsible for the SRBA.
- C. Tier 2–Flow Augmentation. The parties will establish a term-of-the-agreement flow augmentation program containing the following elements:
1. All flow augmentation from waters of the State of Idaho pursuant to Idaho Code § 42-1763B shall be done in compliance with Idaho state law and regulations, existing water bank rules and existing local rental pool procedures of the appropriate local committee, including but not limited to last to fill rule and the procedures for priorities among renters and lessors, unless changes are agreed to by the spaceholders within the water district(s) in which the reservoirs are located, the State of Idaho, and BOR. Unless otherwise agreed by the parties to give effect to sections III.D and III.E, all parties agree that they will refrain from exercising the procedures for priorities among renters and lessors the specific uncontracted storage space now held by BOR assigned for flow augmentation and powerhead available for flow augmentation as shown on Appendix III as long as this agreement has not been terminated or has not expired. Except as otherwise provided, nothing in this component shall be construed or interpreted as affecting or in any way interfering with the laws of the State of Idaho relating to the control, appropriation, use, or distribution of water or any vested rights created thereunder, or as conferring new authority to, or modifying existing authority of the

² “Above the Hells Canyon Complex,” when used in this term sheet, means the Snake River basin above the Complex, including any tributaries which drain into the Complex.

- federal government.
2. The flow augmentation program above the Hells Canyon Complex is designed to assist fish survival downstream of Hells Canyon Dam. The parties understand that the flow augmentation program provides maximum amounts of flow augmentation delivered from the upper Snake and that no guarantee can be provided, beyond the terms of this agreement, that any particular amount of water will be provided in any particular water year.
 3. Sources shall include, but are not limited to contracted and uncontracted storage, powerhead, Oregon natural flow water, Sho-Ban water bank water, rentals pursuant to the IWRB Water Bank, and natural flow acquisitions herein provided.
 4. Idaho Code § 42-1763B will be reenacted to authorize the rental of up to 427,000 acre-feet (AF) of water annually for flow augmentation for the term of the agreement. Reauthorization shall also provide for the rental of water from storage or natural flow sources from the Snake River and its tributaries at or above Lewiston.
 5. If necessary to implement the flow augmentation program of this section III, the BOR will negotiate a lease with Idaho Power pursuant to Idaho Code § 42-108A to rent uncontracted and powerhead space in the Boise Project, Arrowrock Division, for power production. In the event powerhead water is released pursuant to this section, it shall be the last of the last space to refill.
 6. The United States may also acquire on a permanent basis or rent up to 60,000 acre-feet of consumptive natural flow water rights diverted and consumed below Milner and above Swan Falls from the mainstem of the Snake River. The United States may rent said rights for flow augmentation through the IWRB Water Bank pursuant to the Board's water bank rules and I.C. Sec. 42-1763B as amended (to include up to 60,000 acre-feet of consumptive natural flow acquisition and to allow its use pursuant to this section). The 60,000 acre-feet may be rented through the water bank as long as the total rentals in III.C.4, III.C.5 and this III.C.6 do not exceed 487,000 acre-feet.
 7. Powerhead water in BOR storage facilities may be used only to increase the reliability of 427,000 acre-feet for flow augmentation and is subject to the following limitations:
 - a. After utilization by the United States of all water described in sections III.C.4 through 6, above, if the total amount of water released for flow augmentation is less than the 427,000 acre-feet, the Palisades Reservoir powerhead water may be utilized by the United States to attain 427,000 acre-feet for flow augmentation;
 - b. Use of powerhead shall not at any time interfere with the currently established minimum conservation pools or hereinafter established minimum conservation pools;
 - c. Powerhead space used for flow augmentation shall be the last space to refill after all other space in reservoirs in that water district, including other space used to provide flow augmentation, in the basin has filled;
 - d. Use of water from powerhead space shall be in compliance with state law;
 - e. Use of powerhead space shall not interfere at any time with the operating levels required for diversions of water by spaceholders in the reservoir pool, with the ability of spaceholders to refill and use active storage of the reservoir, or with the diversion of natural flow.
 8. Rental charges for stored water.

- a. A uniform rate will apply to all stored water released for flow augmentation:
 - i. \$14 per acre-foot through 2012,
 - ii. \$17 per acre-foot from 2013-2017,
 - iii. \$20 per acre-foot from 2018-2022,
 - iv. \$23 per acre-foot from 2023-2030.
 - b. The above rates are comprehensive. They include administrative fees and all other charges.
 - c. The administrative fee on BOR storage will equal the administrative fee applicable to other rentals within the basin in question.
 - 9. All water released from BOR projects in the irrigation season after April 10 shall be treated as releases for flow augmentation except for releases (1) for delivery to or use by spaceholders, contract holders, or rentals from the water bank for purposes other than flow augmentation; (2) pursuant to established water rights; (3) in accordance with existing project operation criteria or other subsequent project operation criteria agreed to by the spaceholders and contract holders within the water district in which the reservoirs are located, the State of Idaho, and BOR; or (4) pursuant to duly adopted flood control rule curves.
 - 10. Regulation of the delivery of rental water shall be the responsibility of the IDWR and appointed state watermasters. The timing of the release of water shall be determined by a process involving the State, the spaceholders, contract holders, and the United States.
- D. Water District 01 Rental Pool. The State of Idaho, BOR, and the spaceholder contractors in Water District 01 agree, to consider changes to rental pool procedures in Water District 01 as part of the flow augmentation program outlined in section III.C above. The State and the spaceholder contractors acknowledge that BOR, in negotiating a final agreement, will require that any rental pool provide BOR with an acceptable opportunity, as determined by it, to rent water for flow augmentation.
- E. The United States shall make its Upper Snake basin uncontracted space available to irrigation delivery entities, if the United States or irrigation delivery entities obtain the rights to an equivalent amount of replacement water from subbasins within the Upper Snake to be used for flow augmentation. Details regarding the exchanges anticipated in this section will be defined in the final settlement agreement.
- F. Reclamation will make available for irrigation, subject to the triggers and conditions in this section III.F, 30,000 acre-feet of water from the Boise Project, Payette Division. This water will be from sources exclusive of the 95,000 acre-feet of storage currently used for flow augmentation.
 - 1. Triggers. Water under this section will be made available only under the following water year conditions, based on the April 1 forecast used by Reclamation of April through July runoff for the Payette River at Horseshoe Bend and the Boise River at Lucky Peak. For the Payette basin, this provision will be triggered when the April 1 forecast at Horseshoe Bend is less than 700,000 acre-feet. For the Boise basin, this provision will be triggered when the April 1 forecast at Lucky Peak is less than 570,000 acre-feet.
 - 2. Conditions of use.
 - a. The maximum volume of water to be provided by Reclamation under this provision in any given water year will be 30,000 acre-feet.

- b. Water may be used directly by Payette River water users and through exchange by Boise River water users within irrigation entities signatory to this agreement. The Boise exchange will be effected by Reclamation making water available to Boise River water users from the Boise Project in lieu of releasing that water for flow augmentation. An equivalent amount of water from the Payette storage identified above would then be released for flow augmentation.
 - c. When the Payette trigger is met, Reclamation will consign 30,000 acre-feet of Payette Division water to the Water District 65 Rental Pool, for one-year rental by irrigation water users in the Payette basin. The price for Payette rentals will be 50% of the price applicable to flow augmentation rentals or the price applicable to irrigation rentals in the basin, whichever is greater.
 - d. When the Boise trigger is met, Reclamation will consign 30,000 acre-feet of Arrowrock Division water to the Water District 63 Rental Pool, for one-year rental by irrigation water users in the Boise basin. Reclamation will then deliver a like amount of water from the Payette Division for flow augmentation, over and above the volume otherwise available from Reclamation-held storage. The price for Boise basin rentals will be the price applicable to flow augmentation rentals or the price applicable to irrigation rentals in the basin, whichever is greater.
 - e. When both triggers are met, Reclamation will consign a total of 30,000 acre-feet to be divided between Water Districts 63 and 65. Water Districts 63 and 65 will meet within 30 days of the publication of the April 1 forecasts at Lucky Peak and Horseshoe Bend, and determine how much water will be made available in each basin, with the understanding that irrigation entities in Water District 65 have the first right to rent the water consigned, up to the full amount consigned. As divided, the water rentals will be subject to the exchange conditions and prices applicable to that basin, as defined in sections c and d above. The water users will negotiate a process for implementation of this provision.
 - f. Once water is consigned to a rental pool, water users will have until July 15 to rent the water. Water not rented by July 15 will return to Reclamation.
- G. The United States will mitigate local impacts identified by the State of Idaho that may result from the rental of water for flow augmentation. The scope and amount of mitigation will be negotiated. Mitigation shall be based on the following understandings:
- 1. Powerhead: In setting rates for power and energy provided by BOR for project purposes entitled to the use of reserved power, BOR will insure that reserved power rates are neither increased nor decreased as a result of the leasing and release of water from powerhead space under the terms and conditions set forth in this agreement.
 - 2. 60,000 acre-feet: The federal legislation drafted to authorize the agreement will include a provision to authorize and seek appropriations for a one-time payment of \$2 million to the local governments in which the water rights accruing up to 60,000 acre-feet are currently used to mitigate for the change in use of the acquired water.
- H. The minimum evacuation reservoir levels for flood control shall not be altered for reasons other than flood control purposes.
- I. The Milner Agreement shall be renewed for the term of this agreement. The parties agree, however, to modify the flow limitation contained in the agreement to the extent practical to facilitate the water rental program, while still protecting the interests of the parties.

- J. To the maximum extent practicable, the United States shall be responsible for managing water acquired or rented pursuant to this agreement to meet needs of all species covered by this agreement. To the maximum extent practicable, all water acquired or rented by the United States under this agreement shall be delivered and managed: (1) in a manner that will not result in the violation of any permit, applicable water quality rule and regulation or other requirements of the Clean Water Act; (2) in a manner that will not cause jeopardy to other species in the State of Idaho; and (3) in a manner that will not result in significant adverse impacts to recreational uses of the waters of the Snake River and its tributaries within the State of Idaho. During the development of the Biological Assessment by BOR, the parties, to ensure that all water acquired or rented by the United States under this agreement does not result in the type of impacts listed above, will address the concerns that can be identified and analyzed and will develop a mutually acceptable process to address the type of impacts listed above that arise after implementation of the agreement. The State agrees that it will not require any restriction, modification, or condition on the diversion, storage, use, discharge of water, or land use to remedy or address violations of water quality standards or other Clean Water Act requirements to the extent the use of water acquired or rented by the United States pursuant to this agreement causes the violations.
- K. The term of this component of the agreement shall be for a period of thirty (30) years with opportunity for renewal upon mutual agreement.
- L. The proposed federal action for consultation will describe the agreement, including the minimum instream flows, the water rental program, and BOR operations as of the date of the agreement and during the term of the agreement, subject to the general principle contained in the agreement. In the event that the BOR fails to describe the proposed federal action consistent with this component, or it fails to issue a Biological Assessment based upon the proposed federal action which concludes that the action is not likely to jeopardize the continued existence of any listed species addressed by this consultation nor will it result in destruction or adverse modification of the critical habitat of the species, this component of this agreement shall be terminated upon written notice by the State or private parties to this component of the agreement.
- M. Consistent with the Snake River Flow Component general principle (section III.A), the Services will evaluate this component as a proposed federal action under section 7 of the Endangered Species Act. 16 U.S.C. § 1536. In the event that the Services fail to issue no jeopardy biological opinions and provide incidental take coverages as described in section III.A, or if the Services require terms or conditions inconsistent with or not contained in this Upper Snake component of the agreement, this component of the agreement shall be terminated upon written notice by the State or private parties to this agreement.
- N. Reinitiation of Consultation
 - 1. If the United States is unable to rent flow augmentation water under the terms of this agreement because of a change to state law, regulations or water bank rules, or because of an arbitrary or capricious decision by the Director of IDWR or IDEQ, the United States may reinitiate consultation on this component of the agreement. If the United States reinitiates consultation, this component of the agreement may be terminated, including any necessary statutory components, at the option of the State of Idaho or the private parties to this component of the agreement.
 - 2. Reinitiation of consultation on any NOAA Fisheries or FWS FCRPS biological

opinions (hereinafter “FCRPS BiOps”), or on the biological opinions on other components of this agreement shall not automatically trigger reinitiation of consultation on the Upper Snake BOR biological opinion. Rather, consultation on the Upper Snake BOR biological opinion may be reinitiated only a) if the State or the water users fail to comply with the terms and conditions of this agreement or the United States is unable to rent flow augmentation water under the terms of the agreement because of a change to state law, regulations, or water bank rules; b) to reduce the obligations of the parties in the event the measures in the agreement are determined to no longer be necessary for any reason, including, but not limited to, the delisting of the species; or c) pursuant to 50 C.F.R. § 402.16.

3. The federal agencies which are parties to this agreement may only seek additional Endangered Species Act flow measures from the Snake River basin above the Hells Canyon Complex for the benefit of anadromous fish if: a) a jeopardy biological opinion is issued on the Upper Snake River BOR projects after utilization of all of the measures in this agreement; b) the relevant actions set forth in all other biological opinions intended to benefit Snake River basin listed species have been implemented; c) substantially all water made available under the terms and conditions of this agreement has been rented; and d) all other discretionary measures, including reinitiation of consultation on other relevant BiOps, that provide the reasonable potential for achieving necessary reductions in the mortality of the Snake River listed species have been or are being implemented, to the maximum extent practicable. In issuing any future biological opinions on Upper Snake River BOR projects, the federal agencies shall provide all parties to this agreement an opportunity to comment on the draft biological opinion. The provisions concerning reinitiation of consultation for the Upper Snake BOR projects shall remain effective so long as this component is effective.
 4. Nothing in this agreement shall be used or construed to determine or interpret in any manner what obligations, if any, the federal agencies charged with operating the FCRPS may have under the 2000 FCRPS BiOps, or other biological opinions addressing FCRPS operations or the Endangered Species Act or its implementing regulations as applied to the FCRPS, provided that no additional flows shall be required from the upper Snake above the Hells Canyon Complex except as provided for in this agreement.
- O. Subject to section IV.G of this agreement, if any party fails to implement any provision of this component, this component may be terminated at the option of any other party to this component of the agreement. By entering into this agreement, neither the State of Idaho nor the private parties to this component concede that the flows identified under section III.C benefit the listed species; that BOR operations require ESA consultations; that BOR operations are subject to modification to meet ESA requirements or concerns; or that the diversion, storage, or use of water in the State of Idaho is subject to modification to meet ESA requirements or concerns.

IV. **General conditions applicable to the entire agreement and to all parties.** Unless otherwise specified, each of the following general conditions applies jointly and severally to each component of this agreement.

- A. Implementation and enforcement – There will be enactment of necessary laws by federal,

- state, and tribal governments to effectuate and implement the settlement agreement including legislation consistent with provisions of the agreement to provide the necessary ESA and CWA protection for the State and the private parties to this agreement.
- B. Mitigation of impacts caused by the management of water by the Federal agencies pursuant to this agreement on local and private interests (sideboards to be negotiated).
- C. ESA and CWA Assurances – (1) The water provided under this settlement shall fully satisfy any ESA requirements for the diversion and use of water, as specifically provided in each of the components of this agreement. Compliance with this agreement satisfies all CWA obligations for flows for the benefit of such species for the term of this agreement. No party shall use, during the term of this agreement, the CWA or any other theory to seek additional flows for the benefit of such species based on reduced water quality resulting directly from flow modifications or reductions in the quantity of water available in the Snake River Basin above the Hells Canyon Complex and in the Salmon and Clearwater basins in Idaho.^{3/} (2) The Services shall evaluate each component of this agreement as separate proposed federal actions under the Endangered Species Act, 16 U.S.C. § 1536. Term-of-the-agreement (thirty (30) years) Biological Opinions will be issued on each component of this agreement. The specific provisions relating to these Biological Opinions are contained in the respective sections of this agreement. These Biological Opinions shall be separate from the FCRPS Biological Opinion. In the event that the Services fail to issue no jeopardy biological opinions or if the Services require terms or conditions inconsistent with or not contained in the component of the agreement which corresponds to the biological opinion, that component of the agreement shall be void upon written notice by the State or private parties to this agreement. If the State or private parties do not concur with the biological assessment prepared for the consultation on a particular component, that component of the agreement shall be terminated upon written notice by the State or private parties.
- D. Waivers and releases.
1. Except as otherwise provided in the Settlement Agreement, the United States, on behalf of the Nez Perce Tribe, and the Nez Perce Tribe waive and release (1) all claims for water rights within the Snake River Basin in Idaho; (2) injuries to such water rights; and (3) injuries to the Tribe's treaty rights to the extent that such injuries result or resulted from flow modifications or reductions in the quantity of water available in the Snake River Basin in Idaho that accrued at any time up to and including the effective date of the Settlement Agreement, and any continuation thereafter of any such claims, against the State of Idaho, any agency or political subdivision thereof, or any person, entity, corporation, municipal corporation, or quasi-municipal corporation. The Tribe agrees that it will not assert any claim, under any treaty theory, based on reduced water quality resulting directly from flow modifications or reductions in the quantity of water available in the Snake River Basin in Idaho, against any party to the agreement. No water rights claims the Tribe has asserted or may in the future assert outside of the Snake River Basin in Idaho shall require water to be supplied from the Snake River

^{3/} Nothing in this agreement is intended to affect in any way the development, approval, modification, implementation, or enforcement of Clean Water Act Total Maximum Daily Load (TMDL) requirements for Brownlee Reservoir.

Basin in Idaho to satisfy such claims. Allottee language will be developed by the parties for inclusion in the decree to reflect the concept that the allottees' water comes from the overall tribal right.

2. "Water rights" means rights under state and federal law to divert, pump, impound, use or reuse, including for instream use, or permit others to divert, pump, impound, use or reuse, including for instream use, water. This includes all water right claims filed by or on behalf of the Nez Perce Tribe in the Snake River Basin Adjudication. "Injuries to water rights" means the loss, deprivation, or diminution of water rights.
 3. The Nez Perce Tribe hereby waives and releases the United States from: (1) all claims for water rights within the Snake River Basin in Idaho, injuries to such water rights, or breach of trust claims for failure to protect, acquire, or develop such water rights that accrued at any time up to and including the effective date of the Settlement Agreement; (2) all claims for injuries to the Tribe's treaty fishing rights to the extent that such injuries result or resulted from reductions in the quantity of water available in the Snake River Basin in Idaho; (3) all breach of trust claims for failure to protect Nez Perce "springs or fountains" treaty rights reserved in Article 8 of the 1863 Treaty with the Nez Perce; and (4) all breach of trust claims arising out of or resulting from the adoption of this Settlement Agreement. Provided, however, that waivers described in this section shall not be effective until all Federal funds described in the term sheet are appropriated and paid to the Nez Perce Tribe.
 4. Nothing in this agreement shall waive the Tribe's right to pursue claims against the United States relating to non-water-related injuries resulting from the construction of the Dworshak Project. Nothing in this agreement shall be interpreted to prevent the Nez Perce Tribe or the United States as trustee for the Tribe from purchasing or otherwise acquiring water rights in the future to the same extent as any other entity in accordance with Idaho state law. Nothing in this agreement shall be interpreted to impair the treaty fishing, hunting, pasturing, or gathering rights of the Nez Perce Tribe except to the extent expressly provided in this agreement. The Nez Perce Tribe shall retain all rights not specifically satisfied, waived, or released in this agreement.
 5. The waiver and releases by the federal government and the Nez Perce Tribe shall take effect and be permanent once the agreement is effective and enforceable pursuant to section IV.L. Waivers, once effective, will survive any subsequent termination of any component(s) of the agreement.
- E. This agreement, the decree, and the order approving this agreement may not be modified in any manner except as herein provided or with the joint written consent of the duly authorized representatives of the parties and the consent of the court approving this agreement, which court shall have the sole jurisdiction to modify its decree. The parties further recognize that the law dealing with federal reserved Indian water rights is a subject of ongoing litigation and agree that subsequent changes, developments, or interpretations in such law shall not change the enforceability of this agreement as written in the decree relating to such rights. Nothing in this agreement shall otherwise be construed or interpreted to restrict, enlarge, or otherwise determine the subject matter jurisdiction of any state, tribal or federal court.
- F. If any party believes that another party has failed to perform or implement a provision of this agreement, the party will inform the other party, and the parties will meet to seek to resolve the dispute. If the dispute cannot be resolved, one or more parties may request that the SRBA

- court (or any successor court) appoint a mediator, provided that the mediation will not be binding and will not be prejudicial to any jurisdictional issues raised by the dispute.
- G. A breach of one component of this agreement shall not constitute a breach of any other component of the agreement.
 - H. Nothing in this agreement shall be so construed or interpreted: (1) to establish any standard to be used for the quantification of federal reserved water rights or any other Indian water claims of any other Indian Tribes in any judicial or administrative proceeding or (2) to limit in any way the rights of the parties or any person to litigate any issue or question not resolved by this agreement. This agreement has been reached in the process of good faith negotiations for the purpose of resolving legal disputes, including pending litigation, and all parties agree that no offers and/or compromises made in the course thereof shall be construed as admissions against interest or be used in any legal proceeding and nothing in this agreement shall be read as an admission or determination by the parties that any of the actions anticipated by this agreement are necessarily required under the Endangered Species Act.
 - I. Implementation of this Agreement by the federal or state agencies is subject to the requirements of the Anti-Deficiency Act, 31 U.S.C. §§ 1341-1519, similar requirements of state law, and the availability of appropriated funds. Nothing in this Agreement is intended or shall be construed to require the obligation, appropriation, or expenditure of any money from the U.S. Treasury or the State General Fund. The Parties acknowledge that the federal or state agencies shall not be required under this Agreement to expend any appropriated funds unless and until an authorized official of the relevant agency affirmatively acts to commit to such expenditures in writing.
 - J. No member of or delegate to Congress shall be entitled to any share or part of this Agreement or to any benefit that may arise from it.
 - K. The parties will jointly move the Idaho Supreme Court to remand the pending appeal in Case Nos. 26042 and 26128 for entry of an order consistent with the final settlement agreement.
 - L. The agreement shall be effective when all of the following have occurred prior to March 31, 2005 (this list is not intended to determine the proper sequencing of these actions):
 - 1. Execution of the necessary component documents which will make up the agreement;
 - 2. Congressional approval of agreement and authorization of all federal expenditures required under agreement;
 - 3. State legislature approval of agreement and enactment of all required state legislation;
 - 4. Nez Perce Tribe approval of agreement;
 - 5. SRBA Court entry of judgment and decree incorporating agreement;
 - 6. Issuance of the Biological Opinions anticipated by the upper Snake component of this agreement.

Appendix I

This appendix to Section II of the term sheet describes an implementation plan to assign instream flows and reserve opportunities for future use in the Tribal Priority Streams in the Salmon and Clearwater Basins by March 31, 2005. All instream flow water rights established pursuant to the Agreement and this Appendix I will be junior to all existing water rights and subordinate to all future domestic, commercial, municipal, and industrial (DCMI) water rights.

The Tribal Priority Streams are listed in the attached Lists “A” and “B.” Some of the streams on these lists are included in the Wild and Scenic Settlement Agreement between the State of Idaho and the U.S. Forest Service. Because this implementation plan is intended to be consistent with the Wild and Scenic federal reserved water rights, where Wild and Scenic stream reaches are involved, the plan adopts the future development subordinations in the Wild and Scenic reserved water right decrees.

The Tribal Priority Streams have been divided into “A” and “B” List groups based on the level of existing use. The “B” List streams include those streams where instream flows and other non-flow-related actions will be developed by the parties, in conjunction with local stakeholders and communities. The “A” List Tribal Priority Streams will have instream flows and future non-DCMI use levels assigned based on land classification except in those cases specifically set forth below where the parties have agreed to address certain special resource value areas, or areas of special concern relative to local uses. Land classification will be established based upon the predominant land ownership and where appropriate, federal land classification, existing in particular stream’s basins.

For the “A” List Tribal Priority Streams, instream flows would be determined based on categories assigned using ownership of the lands within the basin. The ownership classification in a given basin would be recognized as falling into one of four categories: 1) State and private, 2) federal non-wilderness, 3) wilderness/Wild and Scenic, and 4) special areas as set forth below.

For each of these four categories, instream flows will be set by month based on estimated hydrology of unimpaired flows, and a reservation for future non-DCMI use equal to a percentage of the minimum monthly median flow value from the estimated hydrology.⁴ To prevent dewatering streams by future non-DCMI use, future non-DCMI use would be curtailed at a floor equivalent to the unimpaired monthly 80% exceedence flow. Consequently, the flow values for the four categories will be as follows:

1. For State and private basins, instream flows would be decreed for each month of the year at the 50% exceedence level of the estimated unimpaired flow, subordinated to a future non-DCMI use in the amount of 25% of the lowest median monthly unimpaired flow value.

⁴ The algorithms proposed here for establishing instream flows, future allocations, and the floor flow are based on exceedence values. The individual instream flows will be decreed as quantities in cubic feet per second (cfs) as will the future allocation for non-DCMI uses and floor flows. The administrative provisions for these instream flows will, however, recognize they are being established based upon estimated flow. The provisions of the final decrees will provide a mechanism for changes to these decreed amounts based upon actual flows if such data become available.

2. For federal, non-wilderness basins, instream flows would be decreed for each month of the year at the 40% exceedence level of the estimated unimpaired flow, subordinated to a future non-DCMI use in the amount of 10% of the lowest median monthly unimpaired flow value.

3. For federal wilderness and Wild and Scenic basins, instream flows would be decreed for each month of the year at the 30% exceedence level of the estimated unimpaired flow, subordinated to a future non-DCMI use in the amount of 5% of the lowest median monthly unimpaired flow value.

4. The Special Areas include watersheds that hold special values including high value habitat for fish resources, other special values, and areas where future development opportunities would be preserved. The instream flows and reservations for future non-DCMI use for the special areas differ from the land-based formula described above.

Special Areas include:

Lower Salmon River below Long Tom Bar to the mouth: Instream flows for the lower Salmon River downstream of the Wild and Scenic Reach would be consistent with the application filed for the lower Salmon River below Hammer Creek. The State application for the instream flow in the Lower Salmon addresses the reach from the mouth to Hammer Creek. The instream flows reach in the current application will be extended to include the reach of the Salmon below the Little Salmon. The instream flows in the reach between the Little Salmon and the Wild and Scenic River will be based on the downstream reach and adjusted for the inflow from the Little Salmon River. The State instream flow will be made consistent with the Wild and Scenic instream flow for the main Salmon River.

South Fork Salmon River and tributaries contained within the Tribal Priority Stream List: Instream flows would be decreed for each month of the year at the 40% exceedence level of the estimated unimpaired hydrology, subordinated to a future non-DCMI use in the amount of 5% of the lowest median monthly unimpaired flow value.

Upper Salmon: The upper Salmon basin includes a number of tributaries that meet the criteria of “B” List streams. Instream flows established for the tributaries or the mainstem Salmon will be in accord with Wild and Scenic River instream flows and future allocations, subject to the Order Approving Stipulation and Dismissing Objections in Consolidated Subcase Nos: 63-25239, 75-13316, and 75-13606, issued by Judge Daniel C. Hurlbutt, Jr., Presiding Judge, Snake River Basin Adjudication, on June 16, 1998.

Lolo Creek: Instream flows will be decreed for each month of the year at the 40% exceedence level of the estimated unimpaired hydrology, subordinated to a future non-DCMI use in the amount of 10% of the lowest median monthly unimpaired flow value.

Bedrock Creek: Instream flows will be decreed for each month of the year at the 40% exceedence level of the estimated unimpaired hydrology, subordinated to a future non-DCMI use in the amount of 10% of the lowest median monthly unimpaired flow value.

Upper North Fork Clearwater River, Breakfast Creek: Instream flows would be decreed for each month of the year at the 40% exceedence level of the estimated unimpaired hydrology, subordinated to a future

non-DCMI use in the amount of 10% of the lowest median monthly unimpaired flow value.

Future Uses for “A” List streams.

The future use allocations will provide water for non-DCMI uses. The parties will study the overlap of existing uses and future use to determine if additional criteria will assist the parties in allocating future use. The goal is to avoid reducing streamflows to a level where the unimpaired 80% exceedence value is the flow that the normally occurs in the stream due to the combination of existing and future use.

Appendix C1

Swan Falls News Release



C.L. "BUTCH" OTTER
GOVERNOR

NEWS RELEASE

FOR IMMEDIATE RELEASE:

March 26, 2009
09:018

CONTACT: Jon Hanian
(208) 334-2100

STATE, IDAHO POWER SIGN PROPOSED SETTLEMENT OF SWAN FALLS LAWSUIT

(BOISE) – Governor C.L. "Butch" Otter, Attorney General Lawrence Wasden, and IDACORP and Idaho Power President and Chief Executive Officer LaMont Keen announced today that the 1984 Swan Falls water agreement was reaffirmed this week in a proposed legal settlement between the State of Idaho and Idaho Power Co.

In 1984, the Swan Falls agreement resolved a struggle between the State and Idaho Power over the company's water rights at its Swan Falls hydroelectric facility on the Snake River. The agreement provided that Idaho Power's water rights at its hydroelectric facilities between Milner Dam and Swan Falls – south of Boise – entitled the company to a minimum flow at Swan Falls of 3,900 cubic feet per second (cfs) during the irrigation season and 5,600 cfs during the non-irrigation season.

The 1984 agreement placed the portion of the company's water rights beyond those minimum flows in a trust established by the Idaho Legislature for the benefit of Idaho Power and the citizens of the state. Legislation establishing the trust granted the state the authority to allocate the trust water to future beneficial uses in accordance with State law. Idaho Power retained the right to use water in excess of the minimum flows at its facilities for hydroelectric generation until it was reallocated to other uses.

Idaho Power filed suit in the Snake River Basin Adjudication in 2007 as a result of disputes about the meaning and application of the Swan Falls agreement. The company asked that the court resolve issues associated with the ownership of Idaho Power's water rights and the application and effect of the trust provisions of the Swan Falls agreement. In addition, Idaho Power asked the court to determine whether the agreement subordinated the company's hydropower water rights to aquifer recharge.

The proposed settlement signed this week resolves the litigation by clarifying that the water rights held in trust by the State are subject to subordination to future upstream beneficial uses, including aquifer recharge. It also commits the State and Idaho Power to further discussions on important water management issues concerning the Swan Falls agreement and the management of water in the Snake River Basin.

In addition, the proposed settlement recognizes water management measures that enhance aquifer levels, springs and river flows – such as aquifer recharge projects – benefit both agricultural development and hydropower generation. The parties anticipate that the role of such water management measures will be developed in the implementation of the Comprehensive Aquifer Management Plan (CAMP) recently approved by the Idaho Water Resource Board. Idaho Power also is cooperating in the development and implementation of a recharge project below American Falls Reservoir.

“There are very few limits to what people of good will can accomplish when they sit down and reason together,” Governor Otter said. “Clearing up these issues sets the stage for continued cooperation and collaborative improvement of our water resources for the benefit of all Idahoans.”

“Today’s settlement provides the certainty needed by all water users while reaffirming the state’s sovereignty over its water.” Attorney General Wasden said. “It makes it possible for agricultural users and Idaho Power Company to focus on their business plans, rather than on protracted litigation in which there are always risks of an adverse outcome to all parties.”

“Water is an important resource to maintain our economic vitality and quality of life in the communities throughout our state, and it is a key piece of our company’s strategy to provide adequate energy supplies,” said IDACORP and Idaho Power’s Chief Executive Officer and President LaMont Keen. “Protecting this resource requires cooperation, and this settlement demonstrates Idaho Power and the State’s commitment to work together in the management of Idaho’s water resources for the benefit of all Idahoans. I thank the Governor for acting as an honest broker in this process and for keeping the parties at the table to achieve a negotiated solution.”

Certain aspects of the proposed settlement require changes to Idaho Code and approval by the Idaho Water Resource Board and the SRBA Court. The legislative process is expected to begin later this week.

The full settlement agreement is available to the public on the Idaho Department of Water Resources website at www.idwr.idaho.gov.

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Appendix C2

Swan Falls Framework 2009

Framework Reaffirming the Swan Falls Settlement

Article I

Over twenty years ago, the Governor, Attorney General and Idaho Power Company entered into the historic Swan Falls Settlement to resolve the nature and extent of water rights for the use of water for hydropower production at the Company's hydropower projects on the Snake River and its tributaries between Milner Dam and the Murphy Gaging Station. At the heart of that Settlement was the recognition that Idaho's water resources are the life-blood of Idaho's agricultural, industrial, municipal, recreational, and environmental values and that the effective management of those resources benefits all of Idaho's citizenry. The parties to that Settlement also recognized that Idaho's water, by providing a firm and consistent hydropower base, kept Idaho's electrical rates among the lowest in the nation and Idaho's economy robust.

The Swan Falls Settlement recognized that the resolution of the Company's water rights together with the State Water Plan provide for a comprehensive plan for the management of the Snake River watershed. It also recognized the need to develop further information to permit the State to make informed decisions on methods to enhance and manage the water supply in the Snake River for the benefit of agriculture, hydropower and other beneficial uses.

Since the Swan Falls Settlement, the underlying value of water to Idaho has remained unchanged. The effective management of Idaho's water resources remains critical to the public interest of the State by sustaining economic growth, maintaining reasonable electric rates, protecting and preserving existing water rights, and protecting

water quality and environmental values. Balancing these objectives is a fundamental public policy issue.

While the underlying principles of the Swan Falls Settlement have remained unchanged, questions concerning the intent and interpretation of certain aspects of the Swan Falls Settlement have resulted in litigation between the State and Idaho Power. One such question involves whether the Settlement's subordination provisions extended to the use of water for aquifer recharge, a question that is related to broad public policy issues related to the management of southern Idaho's water resources. The parties recognize and agree litigation is not the best starting point for exploring the resolution of such issues.

Through this Framework, and attached Exhibits, the Parties reconfirm the continuing validity of the Swan Falls Settlement and commit to resolving the questions raised in the litigation in accordance with the terms set forth herein. The parties also agree to cooperate in exploring approaches to resolving other matters of mutual concern to the parties regarding the management of southern Idaho's water resources, including the relicensing of Idaho Power's Hells Canyon Complex ("HCC"), and defining the nature and extent of Idaho Power's right to water from American Falls Reservoir.

Article II

The parties therefore agree as follows:

1. That due to the timing of pending litigation, the parties will jointly request that the SRBA Court enter an order that withholds any ruling on pending motions in Consolidated Subcase No. 00-92023 (92-23); for a period of ninety (90) days

from the date of entry of said order, and will submit with their joint request the proposed order attached hereto as Exhibit 1.

2. That upon execution of this Framework, the parties will jointly, expeditiously and in good faith propose and support execution of the Memorandum of Agreement attached hereto as Exhibit 2 by the Idaho Water Resource Board, the Idaho Power Company and the Governor.
3. That upon execution of this Framework and the Memorandum of Agreement, the parties will jointly, expeditiously and in good faith propose and support passage by the Idaho Legislature of the proposed legislation attached hereto as Exhibits 3, 4 and 5.
4. That within fifteen days after the passage of the proposed legislation attached hereto as Exhibits 3, 4 and 5, the parties will: a) jointly submit to the SRBA Court the proposed forms of partial decrees attached hereto as Exhibit 6, with such technical or clerical modifications as mutually agreed to, as full and final resolution of the hydropower water rights at issue in Consolidated Subcase No. 00-92023 (92-23); b) jointly move for and support immediate entry of the partial decrees for the Basin 02 and Basin 37 hydropower water rights at issue in Consolidated Subcase No. 00-92023 (92-23); c) jointly move to correspondingly modify the partial decrees for the Basin 36 hydropower water rights at issue in Consolidated Subcase No. 00-92023 (92-23); and d) jointly file the stipulation and motion to dismiss Idaho Power's "Complaint and Petition for Declaratory and

Injunctive Relief’ in Consolidated Subcase No. 00-92023 (92-23) in the form attached hereto as Exhibit 7.

5. That either party shall have the option in its sole and absolute discretion to declare this Framework void and without any effect if, within sixty days of the execution of this Framework: the SRBA Court does not enter the proposed order attached hereto as Exhibit 1 in the same form as proposed therein; or if the Idaho Water Resource Board, the Governor or Idaho Power Company do not execute the Memorandum of Agreement attached hereto as Exhibit 2 in the same form as proposed therein; or if the Idaho Legislature does not pass the legislation attached hereto as Exhibits 3, 4 and 5 in the same form as proposed.
6. That either party shall have the option in its sole and absolute discretion to declare this Framework void and without any effect should the SRBA Court: deny the parties’ joint motions for entry and modification of partial decrees; or enter or modify partial decrees that are different from the form of partial decrees attached hereto as Exhibit 6; or deny the parties’ joint motion to dismiss the “Complaint and Petition for Declaratory and Injunctive Relief”; or enter a dismissal order that is different from the form of dismissal order proposed by the stipulation and joint motion attached hereto as Exhibit 7.

Article III

The parties recognize that the relationship established by the Swan Falls Settlement is important to the State of Idaho and Idaho Power Company, and that it is in their mutual long-term interest to cooperate regarding management of the water resources

of the Snake River basin. In furtherance of that mutual interest the parties will endeavor, with good faith and comity, to cooperatively explore the resolution of issues associated with the subjects described below, and other issues that may arise, to the parties' mutual satisfaction, while also expressly recognizing and agreeing that nothing in this Framework limits or conditions the parties' rights to seek executive, administrative or judicial resolution of any such issues:

1. Development of a mutually acceptable program to monitor and measure the spring and surface flows for the reach of the Snake River from Milner Dam through the Murphy Gaging Station, and to account for water delivered to or past the Murphy Gaging Station that is in addition to the average daily flows at the Murphy Gaging Station, including but not limited to the Company's interest in water stored in American Falls Reservoir, and water purchased, leased, owned or otherwise acquired by Idaho Power Company from sources upstream of Milner Dam and conveyed to and past its power plants below Milner Dam;
2. Development of appropriate means and/or mechanisms to enable the State to meet its obligation under the Swan Falls Settlement to take reasonable steps to insure that the average daily flows established at the Murphy Gaging Station are maintained;
3. Development of procedures for re-evaluating term permits approved under the provisions of Idaho Code § 42-203C;
4. Resolution of water management issues associated with the "trust" and "non-trust" water areas;

5. Establishment of an effective water marketing system consistent with state law and existing water rights to accommodate the purchase, lease or conveyance of water for use at Idaho Power's hydroelectric facilities, including below Milner Dam, in addition to the average daily flows at the Murphy Gaging Station, while also optimizing use of the waters of the Snake River basin;
6. Resolution of the State's objections to Idaho Power's water right claims for the American Falls hydropower project, including clarification of the extent to which the use of water at the American Falls hydropower project for generation of hydropower is incidental to upstream irrigation and other uses authorized by state law;
7. In conjunction with the United States, clarification and resolution of the storage rights inuring to Idaho Power in the American Falls Reservoir; and
8. Discussion and resolution of any remaining issues associated with the relicensing of the HCC, including exploration of opportunities for integrating portions of the watershed improvement program proposed as a component of relicensing with other water management efforts to sustain and enhance water resources in the Snake River basin.
9. Resolution of any water right issues associated with the expanded hydropower production capacity at the Swan Falls hydroelectric plant installed after the execution of the Swan Falls Agreement. The resolution of any such issues will be without prejudice to either party with respect to permit no. 02-7379, SRBA notice of claim no. 4420 or any other basis for a water right for the additional

capacity; provided, however, both parties expressly agree that any water rights for the expanded production capacity of the Swan Falls hydroelectric plant will carry a priority date junior to the Swan Falls Agreement and will be subordinated to existing and future upstream uses established pursuant to state law.

Article IV

The parties through this Framework and its Exhibits reaffirm all aspects of the Swan Falls Settlement. This Framework and its Exhibits are consistent with the Swan Falls Settlement and clarify the original intent of the Swan Falls Settlement. Nothing in this Framework or its Exhibits changes, modifies, amends or alters any aspect of the Swan Falls Settlement.

The parties agree to actively and in good faith support any action by the SRBA Court or the Idaho Legislature or the Idaho Water Resource Board that by this Framework and the attached Exhibits the parties have agreed to propose or support. The parties shall not take any position before the Idaho Legislature or any State or Federal court, board or agency which is inconsistent with the Swan Falls Settlement, this Framework, and the referenced Exhibits. The parties agree to cooperate in good faith to implement and to support actions that are consistent with the Swan Falls Settlement, this Framework and the referenced Exhibits.

The parties agree that this Framework constitutes an attempt to compromise pending litigation, and it shall not be considered an admission, waiver or abandonment of any issue of fact or law by any party, and no party will assert or contend that this Framework has any legal effect until the SRBA Court, the Governor, the Idaho

Legislature and the Idaho Water Resource Board have taken the actions described above in Article II.2-II.5.

The parties agree that this Framework shall not be construed to waive, limit, condition or interfere with the authority or duty of the Idaho Department of Water Resources or the Idaho Water Resource Board to enforce or administer any of the laws of the State which either is authorized to enforce or administer, and does not modify the Swan Falls Settlement.

The parties further recognize that like the Swan Falls Agreement, this Framework is contingent upon certain enactments of law by the State and action by the Idaho Water Resource Board. Within this Framework as in the Swan Falls Agreement, reference is made to state law in defining respective rights and obligations of the parties. Therefore, upon implementation of the conditions contained in Article II of this Framework, any subsequent order by a court of competent jurisdiction, legislative enactment or administrative ruling shall not affect the validity of this Framework or the Swan Falls Settlement. This Framework does not confer or create any additional vested, compensable or enforceable rights or interest of any kind whatsoever in any legislative enactments passed pursuant to this Framework beyond those rights otherwise available under applicable law. The parties recognize and agree that the Idaho Legislature may, in accordance with state law, subsequently modify, amend, repeal or otherwise alter the enactments of law contemplated by Article II of this Framework without violating any right or interest of the parties, and that no party is entitled to judicial relief of any kind for any such modification, amendment, repeal or alteration.

The Swan Falls Agreement and this Framework, together with their referenced Exhibits, set forth all the covenants, promises, provisions, agreements, conditions and understandings between the parties and there are no covenants, promises, provisions, agreements, conditions, or understandings, written or oral, between the parties other than are herein set forth.

This Framework is executed in quadruplicate. Each of the four (4) Frameworks with an original signature of each party shall be an original.

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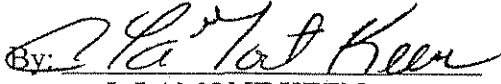
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In witness hereof, the parties have executed this Framework at Boise, Idaho, this
25th day of March, 2009.

STATE OF IDAHO

IDAHO POWER COMPANY

By: 
C.L. "BUTCH" OTTER
Governor of the
State of Idaho

By: 
J. LAMONT KEEN
President
and Chief Executive Officer

By: 
LAWRENCE G. WASDEN
Attorney General of the
State of Idaho

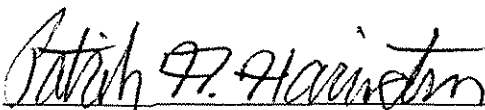
ATTEST:


BEN YURSA
Secretary of State
State of Idaho

(Seal of the State of Idaho)

ATTEST:

(Corporate Seal of Idaho Power Company)



PATRICK A. HARRINGTON
Secretary of Idaho Power Company

CERTIFICATE OF SECRETARY

PATRICK A. HARRINGTON, as secretary of Idaho Power Corporation, an Idaho corporation, hereby certifies as follows:

- (1) That the corporate seal, or facsimile thereof, affixed to the instrument is in fact the seal of the corporation, or a true facsimile thereof, as the case may be; and
- (2) That any officer of the corporation executing the instrument does in fact occupy the official position indicated, that one in such position is duly authorized to execute such instrument on behalf of the corporation, and that the signature of such officer subscribed thereunto is genuine; and
- (3) That the execution of the instrument on behalf of the corporation has been duly authorized.

In witness thereof, I, PATRICK A. HARRINGTON, as the secretary of Idaho Power Company, an Idaho corporation, have executed this certificate and affixed the seal of Idaho Power Company, an Idaho corporation, on this 25 th day of MARCH 2009.



PATRICK A. HARRINGTON,
Secretary of Idaho Power Company

CERTIFICATE OF SECRETARY OF STATE
OF THE STATE OF IDAHO

BEN YSURSA, as Secretary of State of the State of Idaho, hereby certifies as follows:

1. That the State of Idaho seal, or facsimile thereof, affixed to the instrument is in fact the seal of the State of Idaho, or a true facsimile thereof, as the case may be; and
2. That the officials of the State of Idaho executing the instrument do in fact occupy the official positions indicated, that they are duly authorized to execute such instrument on behalf of the State of Idaho, and that the signatures of such officials of the State of Idaho subscribed thereunto are genuine; and
3. That the execution of the instrument on behalf of the State has been duly authorized.

In Witness Whereof, I, BEN YSURSA, Secretary of State of the State of Idaho, have executed this certificate and affixed the seal of State of Idaho on this 25 th day of March 2009.

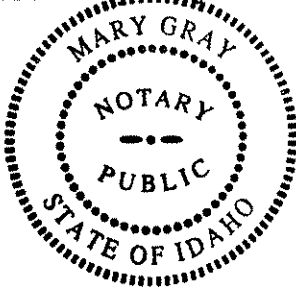


BEN YSURSA
Secretary of State
State of Idaho

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

On this 25 th day of March 2009, before me, a Notary Public, in and for said County and State, personally appeared J. LAMONT KEEN, and PATRICK A. HARRINGTON, known or identified to me to be the President and Secretary, respectively, of Idaho Power Company, the corporation that executed the foregoing instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal that day and year in this certificate first above written.



Mary Gray
NOTARY PUBLIC FOR IDAHO
Residing at 7-17-2010

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

On this 25 th day of March 2009, before me, a Notary Public, in and for said County and State, personally appeared C.L. "BUTCH" OTTER, known or identified to me to be the Governor of the State of Idaho, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal that day and year in this certificate first above written.

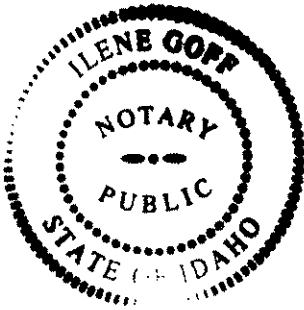


Ilene Goff
NOTARY PUBLIC FOR IDAHO
Residing at Ada County

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

On this 25 th day of March 2009, before me, a Notary Public, in and for said County and State, personally appeared LAWRENCE G. WASDEN, known or identified to me to be the Attorney General of the State of Idaho, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal that day and year in this certificate first above written.

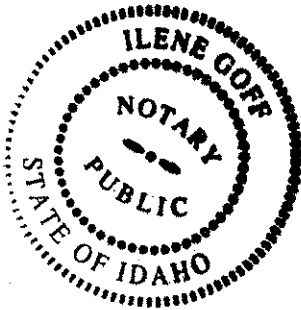


Ilene Goff
NOTARY PUBLIC FOR IDAHO
Residing at Ada County

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

On this 25 th day of March 2009, before me, a Notary Public, in and for said County and State, personally appeared BEN YSURSA, known or identified to me to be the Secretary of State of the State of Idaho, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal that day and year in this certificate first above written.



Ilene Goff
NOTARY PUBLIC FOR IDAHO
Residing at Ada County

EXHIBIT 1

**IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS**

In Re SRBA) **Consolidated Subcase No. 00-92023 (92-23)**
)
Case No. 39576) **ORDER RE: RULINGS ON PENDING**
) **SUMMARY JUDGMENT MOTIONS**
)
)
_____)

Currently pending before the Court is the State of Idaho's and Idaho Power Company's *Joint Motion To Enter Order Temporarily Withholding Rulings On Pending Summary Judgment Motions*. The *Joint Motion* states that the State and Idaho Power have finalized a proposed settlement of this consolidated subcase and requests that this Court withhold ruling on the pending summary judgment motions for a period of ninety (90) days to allow time for review and implementation of the proposed settlement.

The *Joint Motion* states that the proposed settlement contemplates the passage of certain legislation and the execution of a memorandum of agreement by the Idaho Water Resource Board, the Governor and Idaho Power Company, to be followed by submission to this Court of the proposed forms of the partial decrees for the hydropower water rights at issue in this consolidated subcase and a dismissal stipulation. For purposes of the proposed settlement, the parties have agreed upon and finalized the form of the proposed legislation, the memorandum of agreement, the partial decrees and the dismissal stipulation.

The proposed settlement allows ninety (90) days for passage of the legislation, execution of the memorandum of agreement, and submission to this Court of the partial decrees. The State and Idaho Power would jointly support passage of the legislation, execution of the memorandum of agreement, and entry of the partial decrees. Should the

legislation not be passed, the memorandum of agreement not be executed, or the proposed partial decrees not be entered, both the State and Idaho Power would have the option of unilaterally declaring the proposed settlement void.

The *Joint Motion* also states that the State and Idaho Power have provided copies of the proposed settlement (including the proposed legislation, memorandum of agreement, partial decrees and dismissal stipulation) to the other parties to this consolidated subcase.¹ The Court heard the *Joint Motion* on ___[date]___.

The pending summary judgment motions raise a number of complex and important issues. Amicable settlements of disputed issues are generally favored, the parties have been working diligently towards settlement, and the proposed settlement presents an opportunity to amicably settle this consolidated subcase. The Court finds that there is good cause to temporarily withhold ruling on the pending summary judgment motions.

Accordingly, IT IS HEREBY ORDERED that this Court will withhold issuing or entering any ruling on the summary judgment motions currently pending in this consolidated subcase for a period of ninety (90) days, commencing the day following the date of entry of this order. If the parties have not submitted proposed partial decrees and dismissal motion prior to the expiration of the ninety (90) day period, the Court will enter rulings on the pending summary judgment motions at an appropriate time in the normal course of the Court's work.

DATED _____

JOHN M. MELANSON
Presiding Judge
Snake River Basin Adjudication

¹ The City of Pocatello, Aberdeen-Springfield Canal Company, Fremont Madison Irrigation District, Egin Bench Canals, Inc., Idaho Irrigation District, New Sweden Irrigation District, and The United Canal Company.

EXHIBIT 2

MEMORANDUM OF AGREEMENT

WHEREAS, the Swan Falls Settlement recognized that the resolution of Idaho Power Company's water rights and the recognition thereof by the State of Idaho, together with the State Water Plan, provided a sound comprehensive plan best adapted to develop, conserve, and utilize the water resources of the Snake River in the public interest; and

WHEREAS, the Swan Falls Settlement provided that the State shall enforce the State Water Plan and shall assert the existence of water rights held in trust by the State; and

WHEREAS, the Swan Falls Settlement reconfirmed that the minimum daily flow at Milner Dam shall remain at zero, and that for the purposes of the determination and administration of rights to the use of the waters of the Snake River or its tributaries downstream from Milner Dam, no portion of the waters of the Snake River or surface or ground water tributary to the Snake River upstream from Milner Dam shall be considered; and

WHEREAS, the Swan Falls Settlement recognized that the establishment of a zero minimum flow at Milner Dam allowed existing uses above Milner to continue and for some additional development above Milner, and further recognized that the zero minimum flow means that river flows downstream from Milner Dam to Swan Falls Dam at times may consist almost entirely of ground-water discharge and that therefore the Eastern Snake Plain Aquifer (ESPA) must be managed as an integral part of the Snake River; and

WHEREAS, the Swan Falls Settlement recognized that the amount of development that can take place without affecting the average daily flows of 3,900 CFS from April 1 to October 31 and 5,600 CFS from November 1 to March 31 as measured at the Murphy Gaging Station would depend on the nature and location of each new development, as well as the implementation of new practices to augment the stream flows; and

WHEREAS, the Swan Falls Settlement recognized that maintenance of inexpensive hydropower resources contributes to a positive economic climate for the creation of new jobs for Idahoans and thus future water rights allocation decisions should weigh the benefits to be obtained from each development against the probable impact it will have on hydropower resources; and

WHEREAS, the Swan Falls Settlement recognized methods that enhance stream flows, such as in-stream storage and aquifer recharge projects, benefit both agricultural development and hydropower generation and deserve study to determine their economic potential, their impact on the environment, and their impact on hydropower generation; and

WHEREAS, flows passing Milner Dam provide opportunities for hydropower generation and under the Swan Falls Settlement the Idaho Power Company has a right to use such flows when available at its facilities; and

WHEREAS, the State, through the Eastern Snake Plain Aquifer Comprehensive Aquifer Management Plan (ESPA CAMP), a component of the State Water Plan, intends to implement managed recharge as part of a series of comprehensive measures to enhance the water supply of the ESPA and the Snake River; and

WHEREAS, it is important that the effects of implementation of managed recharge be understood in order to permit the State to make informed water management and planning decisions that are in the public interest as provided by chapter 17 title 42 Idaho Code; and

WHEREAS, the Idaho Power Company participated in the development of the ESPA CAMP and as part of the Phase I actions is cooperating with the implementation of a recharge program between Milner Dam and American Falls; and

WHEREAS, the coordination and consideration of the respective interests of the State and Idaho Power Company with regard to managed recharge furthers their mutual interest in honoring the commitments made as part of the Swan Falls Settlement.

NOW THEREFORE, the parties agree as follows:

1. It is in the mutual interest of the parties to work cooperatively to uphold and implement the principles established by the Swan Falls Settlement.
2. ESPA CAMP, as adopted by the Idaho Water Resource Board (January 2009) and approved by the Idaho Legislature as a component of the state water plan, establishes a long-term hydrologic target for managed aquifer recharge from 150,000 to 250,000 acre feet on an average annual basis. Amendment of this long-term hydrologic target for managed recharge shall constitute a change in the state water plan as contemplated by Article 15, § 7 of the Idaho Constitution and the legislation approving CAMP, and therefore must be adopted pursuant to Idaho Code § 42-1734B, as it currently exists or as it may be amended hereafter.
3. The purpose of this memorandum of agreement is to recognize that implementation of managed recharge will have an effect on the flow characteristics of the Snake River above and below Milner Dam and to confirm that the relative merits of recharge proposals in addition to or different than that provided for in Phase I of ESPA CAMP will be considered through the adaptive management process set forth in Section 4 of ESPA CAMP. If the Board proposes to increase the 100,000 acre-foot average annual ESPA CAMP Phase I target for managed aquifer recharge by more than 75,000 acre-feet prior to January 1, 2019, the Board must obtain legislative approval for such increase.

The Board and the Director will consider, in accordance with state law, any information received in determining whether a managed recharge proposal is in the public interest.

4. Further, the parties recognize it is in their mutual interest to work cooperatively to explore and develop a managed recharge program for the Snake River Basin above Swan Falls Dam that achieves to the extent possible benefits for all uses including hydropower and therefore agree that in connection with the development and consideration of proposals for managed recharge that may be in addition to or different than that provided for in Phase I of the ESPA CAMP, the State of Idaho, through the Idaho Water Resource Board (the Board):
 - a. will provide notice to Idaho Power Company of such managed recharge proposals together with an opportunity to meet and confer with the Board on the potential costs and benefits of such proposals and ways to implement managed recharge to achieve the mutual interests of the State and Idaho Power Company; and
 - b. will provide an opportunity for Idaho Power Company to appear before the Board and present information relative to any concerns the Company may have about a managed recharge proposal;
5. The State, through the Governor and the Idaho Water Resource Board, will in good faith cooperate with and support Idaho Power Company in any regulatory proceeding before the Idaho Public Utilities Commission to address any rate, or other impacts directly attributable to the implementation of managed recharge.
6. Idaho Power Company acknowledges that the decision of whether to proceed with the implementation of managed recharge is fundamentally a public policy decision of the State of Idaho and that nothing in this memorandum of agreement shall be construed to limit or interfere with the authority of the State of Idaho to authorize managed recharge in accordance with applicable state law.
7. Nothing in this memorandum of agreement shall be construed to preclude Idaho Power Company from exercising any rights it may have under state law to challenge the State's implementation of managed recharge. While Idaho Power Company retains its right under the Swan Falls Settlement to contest any appropriation of water, including but not limited to appropriations for recharge, in accordance with State law, the Company shall not have a right to assert that implementation of managed recharge is precluded by the Swan Falls Settlement.

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DATED this _____ day of _____ 2009.

STATE OF IDAHO

IDAHO POWER COMPANY

By: _____
C.L. "BUTCH" OTTER
Governor of the
State of Idaho

By: _____
J. LAMONT KEEN
President
and Chief Executive Officer

By: _____
TERRY T. UHLING
Chairman
Idaho Water Resource Board

EXHIBIT 3

TITLE 42
IRRIGATION AND DRAINAGE -- WATER RIGHTS AND RECLAMATION
CHAPTER 2
APPROPRIATION OF WATER -- PERMITS, CERTIFICATES, AND LICENSES --
SURVEY

42-234. GROUND WATER RECHARGE PROJECTS— AUTHORITY OF DEPARTMENT TO GRANT PERMITS AND LICENSES. (1) It is the policy of the state of Idaho to promote and encourage the optimum development and augmentation of the water resources of this state. The legislature deems it essential, therefore, that water projects designed to advance this policy be given maximum support. The legislature finds that the use of water projects to recharge ground water basins in accordance with Idaho law and the state water plan, may enhance the full realization of our water resource potential by furthering water conservation and increasing the water available for beneficial use.

(2) The legislature hereby declares that the appropriation and ~~underground storage~~ of water for purposes of ground water recharge shall constitute a beneficial use of ~~water and hereby authorizes~~ the director of the department of water resources is authorized to issue a permits and licenses for the purpose appropriation and underground storage of unappropriated waters in an area of ground water recharge, pursuant to the provisions of this chapter and in compliance with other applicable Idaho law and the state water plan. ~~The rights acquired pursuant to any permit and license obtained as herein authorized shall be secondary to all prior perfected water rights, including those water rights for power purposes that may otherwise be subordinated by contract entered into by the governor and Idaho power company on October 25, 1984, and ratified by the legislature pursuant to section 42-203B, Idaho Code. Any right so granted shall be subject to depletion for surface storage or direct uses after a period of years sufficient to amortize the investment of the appropriator.~~

(3) The director of the department of water resources may regulate the exercise of water rights for recharge purposes to ensure that senior priority water rights are not injured thereby. The director of the department of water resources shall have the authority to approve, disapprove, or require alterations in the methods employed to implement ground water recharge in order to achieve optimum development of water resources in the public interest.

(4) The legislature further recognizes that incidental ground water recharge benefits are often obtained from the diversion and use of water for various beneficial purposes. However, such incidental recharge may not be used as the basis for claim of a separate or expanded water right. Incidental recharge of aquifers which occurs as a result of water diversion and use that does not exceed the vested water right of water right holders is in the public interest. The values of such incidental recharge shall be considered in the management of the state's water resources.

TITLE 42
IRRIGATION AND DRAINAGE -- WATER RIGHTS AND RECLAMATION
CHAPTER 42

GROUND WATER RECHARGE

~~42-4201A. RECHARGE OF GROUND WATER BASINS — DIRECTOR'S AUTHORITY TO ISSUE PERMIT. (1) The welfare of the people of the state of Idaho is dependent upon the conservation, development, augmentation and optimum use of the water resources of this state. The legislature deems it essential therefore that every effort be made to foster and encourage water projects and water use that will augment ground water basin recharge. The legislature hereby acknowledges that certain water uses and proposed projects to recharge water basins in the state by means of the storage of unappropriated waters of the public waters of the state in underground aquifers represents a unique and innovative endeavor to further water conservation and increase the water available for beneficial use.~~

~~(2) In view of the public betterment to be achieved by the completion of aquifer recharge projects, the legislature hereby declares that the appropriation and underground storage of water by any person, aquifer recharge district, irrigation district, canal company or water district for purposes of ground water recharge shall constitute a beneficial use and hereby authorizes the department of water resources to issue a permit, pursuant to section 42-203 [42-203A], Idaho Code, for the appropriation and underground storage of the unappropriated waters of the state. The department of water resources is further authorized to issue a license confirming the right to appropriate such waters for the beneficial use herein established upon compliance with the requirements specified in chapter 2, title 42, Idaho Code. The rights acquired pursuant to any permit and license obtained as herein authorized shall be secondary to all prior perfected water rights, including those water rights for power purposes that may otherwise be subordinated by contract entered into by the governor and Idaho power company on October 25, 1984, and ratified by the legislature pursuant to section 42-203B, Idaho Code.~~

~~(3) The director of the department of water resources may regulate the amount of water which may be diverted for recharge purposes and may reduce such amount, even though there is sufficient water to supply the entire amount originally authorized by permit or license. To facilitate necessary financing of an aquifer recharge project, the director may fix a term of years in the permit or license during which the amount of water authorized to be diverted shall not be reduced by the director under the provisions of this subsection.~~

~~(4) To insure that other water rights are not injured by the operations of an aquifer recharge project, the director of the department of water resources shall have the authority to approve, disapprove, or require alterations in the methods employed to achieve ground water recharge. In the event that the director determines that the methods of operation are adversely affecting existing water rights or are creating conditions adverse to the beneficial use of water under existing water rights, the director shall order the cessation of operations until such alterations as may be ordered by the director have been accomplished or such adverse effects otherwise have been corrected.~~

IDAHO SESSION LAWS

CHAPTER ____
(S.B. No. ____)

AN ACT

RELATING TO THE PUBLIC UTILITIES COMMISSION AND ITS JURISDICTION TO
REVIEW REVENUE REQUIREMENTS AND OTHER REGULATORY IMPLICATIONS OF
THE FRAMEWORK REAFFIRMING THE SWAN FALLS SETTLEMENT.

Be It Enacted by the Legislature of the State of Idaho:

SECTION 1. FINDINGS AND STATEMENT OF PURPOSE. On October 25, 1984, the governor, attorney general and Idaho Power Company entered into a contract, known as the "Swan Falls Agreement," to memorialize and implement the settlement of a continuing controversy over electric utility water rights in the Snake River Basin above the Murphy U.S.G.S. gaging station, which was approved and implemented by the Legislature. The governor, attorney general and Idaho Power Company have executed a Framework Reaffirming the Swan Falls Settlement dated March 25, 2009, that resolves pending litigation regarding the intent of the parties with respect to certain aspects of the settlement. The Legislature finds that Article II of said Framework and the exhibits thereto are in the public interest for all purposes including, but not limited to, all purposes under the public utilities law, as amended. Implementation of the Framework will resolve continuing controversy and litigation over electric utility water rights in the Snake River Basin above the Murphy U.S.G.S. gaging station and reaffirm the terms and original purposes of the Swan Falls Settlement and further the implementation thereof.

SECTION 2. PUBLIC UTILITIES COMMISSION – JURISDICTION. The Idaho public utilities commission shall have no jurisdiction to consider in any proceeding, whether instituted before or after the effective date of this act, any issue as to whether any electric utility, including Idaho Power Company, should have or could have preserved, maintained or protected its water rights and hydroelectric generation in a manner inconsistent with the Framework Reaffirming the Swan Falls Settlement entered into by the governor, attorney general, and the Idaho Power Company dated March 25, 2009.

SECTION 3. IPUC – EFFECT OF AGREEMENT. In any proceeding before the Idaho public utilities commission including, but not limited to, a proceeding in which the commission is setting or reviewing the revenue requirement of any electric utility, including Idaho Power Company, the commission shall accept as reasonable and in the public interest for all purposes Article II of the Framework Reaffirming the Swan Falls Settlement entered into by the governor, attorney general, and the Idaho Power Company on March 25, 2009, and the exhibits thereto, including without limitation, the effects of implementation of such provisions of the Framework on the utility's revenue requirements and hydroelectric generation.

SECTION 4. EXEMPTION. Implementation of provisions of Article II of the Framework Reaffirming the Swan Falls Settlement entered into by the governor, attorney

general, and the Idaho Power Company on March 25, 2009, shall not constitute a sale, assignment, conveyance or transfer within the meaning of sections 61-327, 61-328, 61-329, 61-330 and 61-331, Idaho Code, to the extent any of those sections may apply.

EXHIBIT 5

TITLE 42
IRRIGATION AND DRAINAGE -- WATER RIGHTS AND RECLAMATION
CHAPTER 2
APPROPRIATION OF WATER -- PERMITS, CERTIFICATES, AND LICENSES --
SURVEY

42-1737. BOARD APPROVAL -- CRITERIA -- HEARINGS -- APPEALS -- DEFINING A MISDEMEANOR -- INJUNCTIONS. (a) All project proposals involving the impoundment of water in a reservoir with an active storage capacity in excess of ten thousand (10,000) acre-feet or the diversion of natural flow water appropriated pursuant to section 42-234, Idaho Code, for a managed recharge project in excess of ten thousand (10,000) acre-feet on an average annual basis shall be submitted to the board for its approval or disapproval. No construction shall be commenced on any such project nor shall any diversion be permitted prior to receipt of board approval as herein provided and the board may institute injunctive proceedings to halt such construction or diversion. In the event a project is disapproved, this fact shall be certified by the board to the director of the department and such certification shall constitute the petition for cancellation of permit required by section 42-302, Idaho Code, and, pursuant to such certification, the procedure for cancellation of permit issued for such project shall be carried forward by said director.

(b) In determining whether a project proposal shall be approved, or disapproved, the board shall be guided by the following criteria:

1. Conserving the highest use of the water for all purposes.
2. The maximum economic development of the waters involved.
3. The control of the waters of this state for all beneficial purposes, including drainage, sanitation and flood control.
4. That sufficient water is available for appropriation for beneficial use.
5. The prevention of wasteful, uneconomic, impracticable or unreasonable use of the waters involved.
6. That all vested and inchoate rights to the waters of this state or to the use thereof have been protected by the issuance of a permit for the project by the director of the department.
7. The state water plan and water policy formulated under other laws of this state.

(c) The board shall by regulation, establish procedures for notice and hearing on those project proposals which must be submitted to the board and may authorize hearings by hearing officers. The board or its hearing officer shall have power to administer oaths and to require the attendance of such witnesses and the production of such books, records and papers as it may desire at any hearing and for that purpose the board may issue a subpoena for any witnesses or a subpoena duces tecum to compel the production of any books, records or papers which shall be served and returned in the same manner as a subpoena in a civil case. In case of any disobedience or neglect to obey a subpoena or subpoena duces tecum it shall be the duty of the district court in any county of this state in which such disobedience, neglect or refusal occurs, or any judge thereof, on application by the board, to compel obedience by proceedings for contempt as in the case

of a subpoena issued by a regularly constituted court. The sponsor of a project who appears before the board shall have similar powers and shall have the right to be represented by counsel. If the sponsor does not appear at the appointed time, and his absence is without sufficient cause, the board shall have the right to proceed in his absence or may consider absence to constitute an admission of facts contrary to the position of the sponsor. The board shall make findings of fact and conclusions of law leading to its approval or disapproval.

(d) Any sponsor of a project which has been disapproved shall have the right to have the proceedings of the board reviewed by the district court in the county of his residence. With the exception that judicial review may be had by the district court of the county of the residence of the sponsor, such judicial review shall be accomplished in accordance with the provisions of chapter 52, title 67, Idaho Code.

EXHIBIT 7

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**IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS**

In Re SRBA)	
)	Consolidated Subcase No. 00-92023 (92-23)
)	
Case No. 39576)	STATE OF IDAHO’S AND IDAHO
)	POWER COMPANY’S STIPULATION
)	AND MOTION TO DISMISS
)	COMPLAINT AND PETITION FOR
)	DECLARATORY AND INJUNCTIVE
)	RELIEF
)	

STIPULATION

The State of Idaho and Idaho Power Company (“the Parties”), by and through their counsel of record, hereby stipulate and agree to the following:

1. Dismissal without prejudice of the “First Claim for Relief” alleged in the “Complaint And Petition For Declaratory And Injunctive Relief” filed by Idaho Power Company in this Consolidated Subcase on May 10, 2007 (“Complaint”) to the extent it seeks a factual declaration that when the Swan Falls Agreement was executed in 1984, the Snake River tributary to the Murphy Gage, including surface and ground water in the Eastern Snake Plain Aquifer (“ESPA”), was over appropriated; and also to the extent it seeks a factual declaration that when the Swan Falls Agreement was executed in 1984, there was no unappropriated water available on a firm, average daily basis in the Snake River Basin tributary to the Murphy Gage, including surface and ground water in the ESPA.

2. Dismissal with prejudice of the remainder of the “First Claim for Relief” alleged in the Complaint.

3. Dismissal with prejudice of the “Second Claim for Relief” alleged in the Complaint.

4. Dismissal with prejudice of the “Third Claim for Relief” alleged in the Complaint.

5. Dismissal with prejudice of the “Fourth Claim for Relief” alleged in the Complaint.

6. Dismissal with prejudice of the “Fifth Claim for Relief” alleged in the Complaint to the extent it seeks declarations that water rights 36-02013, 37-02128, 37-

02472, 37-02471, 37-20709, 37-20710, 36-02018, 36-02026, 02-02057, 02-02001A, 02-02001B, 02-02059, 02-02060, 02-02064, 02-02065, 02-02056, 02-02036, 02-02032A, 02-02032B, 02-04000A, 02-04000B, 02-04001A, 02-04001B, 02-00100 and 02-10135 are not subordinate or may not be subordinated, through the Swan Falls Settlement or otherwise, to the use of water for ground water recharge.

7. Dismissal without prejudice of the “Fifth Claim for Relief” alleged in the Complaint with regard to any other water rights held by Idaho Power Company..

8. Dismissal without prejudice of the “Sixth Claim for Relief” alleged in the Complaint.

9. Dismissal with prejudice of the “Seventh Claim for Relief” alleged in the Complaint to the extent it seeks injunctions ordering the Idaho Attorney General to repeal Idaho Attorney General Opinion 06-2.

10. Dismissal with prejudice of the “Seventh Claim for Relief” alleged in the Complaint to the extent of any challenge to the State of Idaho’s claim of legal title to the hydropower water rights held in trust by the State pursuant to the Swan Falls Settlement.

11. Dismissal without prejudice of the remainder of the “Seventh Claim for Relief” alleged in the Complaint.

12. Each of the Parties will bear its own costs and fees for this Consolidated Subcase.

13. Any remaining claims in the Complaint are dismissed with prejudice.

14. The proposed “Order Dismissing Complaint And Petition For Declaratory And Injunctive Relief” attached hereto is consistent with this Stipulation.

15. Neither party will appeal any part of the “Memorandum Decision And Order On Cross-Motions For Summary Judgment” entered in this Consolidated Subcase on April 18, 2008. The “Memorandum Decision And Order On Cross-Motions For Summary Judgment” is a final decision that is binding between the Parties and their respective successors and assigns.

14. This Stipulation is contingent upon entry of partial decrees for the hydropower water rights at issue in this Consolidated Subcase in the form proposed by the Parties, and will become effective and binding only upon entry of such partial decrees. If the SRBA District Court does not enter such partial decrees within ninety (90) days of the filing of this Stipulation, or if the SRBA District Court enters partial decrees different from those proposed by the Parties, then either Party shall have the option in its sole and absolute discretion to declare this Stipulation void and without any effect.

**MOTION TO DISMISS COMPLAINT AND PETITION
FOR DECLARATORY AND INJUNCTIVE RELIEF**

The State of Idaho and Idaho Power Company, by and through their counsel of record, hereby move this Court to dismiss the “Complaint And Petition For Declaratory And Injunctive Relief” pursuant to the Parties’ “Stipulation.” Attached hereto is the Parties’ proposed form of dismissal order.

/

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/

/

Respectfully submitted this _____ day of _____ 2009.

STATE OF IDAHO

IDAHO POWER COMPANY

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**IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS**

In Re SRBA)
) Consolidated Subcase No. 00-92023 (92-23)
)
Case No. 39576) **ORDER DISMISSING COMPLAINT**
) **AND PETITION FOR DECLARATORY**
) **AND INJUNCTIVE RELIEF**
)
_____)

Currently pending before this Court is the *State of Idaho's And Idaho Power Company's Stipulation And Motion To Dismiss Complaint And Petition For Declaratory And Injunctive Relief* ("Stipulation"), which was jointly filed by the State of Idaho and Idaho Power Company and included a proposed *Order Dismissing Complaint And Petition For Declaratory And Injunctive Relief* ("Dismissal Order"). The *Stipulation* and the *Dismissal Order* are part of the proposed negotiated resolution of this consolidated subcase and were filed simultaneously with the State's and Idaho Power Company's joint motion for entry and modification of partial decrees for the water rights at issue in this consolidated subcase.

The *Stipulation* is contingent upon entry of partial decrees in the form proposed by the State and Idaho Power Company in their joint motion for entry and modification of partial decrees. This Court has entered partial decrees for the hydropower water rights at issue in this consolidated subcase in the form proposed by the State and Idaho Power Company.

The Court held a hearing on the *Stipulation* on ___[date]___, and no party objected to the *Stipulation* or to the proposed *Dismissal Order*. Therefore, pursuant to and in accordance with the *Stipulation*, this Court orders the dismissal of the *Complaint* as follows:

1. The "First Claim for Relief"

The "First Claim for Relief" in the *Complaint* is a declaratory judgment claim seeking declarations that:

[(a)] when the Swan Falls Agreement was executed in 1984, the Snake River tributary to the Murphy Gage, including surface and ground water in the ESPA, was over appropriated; (b) on account of such over appropriation, there was no unappropriated water available in this portion of the Snake River Basin on a firm, average daily basis above the average daily minimum flows provided for in the Agreement, i.e., there was no 'Trust Water'; and (c) that because there was no Trust Water in 1984, there was no trust *res* and therefore no valid trust established under the Settlement.

Complaint at 21.

IT IS HEREBY ORDERED that the "First Claim for Relief" in the *Complaint* is dismissed without prejudice to the extent it seeks a factual declaration that when the Swan Falls Agreement was executed in 1984, the Snake River tributary to the Murphy Gage, including surface and ground water in the ESPA (Eastern Snake Plain Aquifer), was over appropriated; and also to the extent it seeks a factual declaration that when the Swan Falls Agreement was executed in 1984, there was no unappropriated water available on a firm, average daily basis in the Snake River Basin tributary to the Murphy Gage, including surface and ground water in the ESPA.

IT IS FURTHER ORDERED that the remainder of the "First Claim for Relief" in the *Complaint* is dismissed with prejudice.

2. The "Second Claim for Relief"

The "Second Claim for Relief" in the *Complaint* is a declaratory judgment claim seeking declarations that:

to the extent that the Snake River Basin above the Murphy Gage, including the ESPA, was over appropriated in 1984 as to the Swan Falls Daily Minimum Flows, the parties, who had assumed that Trust Water was available for new appropriations under the Swan Falls Agreement's trust arrangement, were acting on the basis of a mutual mistake of fact regarding the existence of Trust Water. The Swan Falls Agreement should therefore be reformed based on mutual mistake of fact regarding the existence of Trust Water available in 1984, eliminating any asserted trust while retaining provisions unrelated to the purported trust, including (i) subordination to existing uses, and (ii) Idaho Power's right to acquire additional water from sources upstream of its power plants and to convey

such water to and past its power plants below Milner Dam independent of any minimum flows established under the Agreement.

Complaint at 21-22.

IT IS HEREBY ORDERED that the “Second Claim for Relief” in the *Complaint* is dismissed with prejudice in its entirety.

3. The “Third Claim for Relief”

The “Third Claim for Relief” is a declaratory judgment claim seeking declarations:

that to the extent that there was in fact some amount of Trust Water available in 1984, and to the extent a valid trust was created under the Settlement: (i) the trust *res* is water and not water rights; (ii) the State of Idaho does not hold legal title to Idaho Power’s water rights; and (c) title to the water rights referenced in Paragraph 22 [of the *Complaint*] is therefore quieted in Idaho Power.

Complaint at 22.

IT IS HEREBY ORDERED that the “Third Claim for Relief” in the *Complaint* is dismissed with prejudice in its entirety.

4. The “Fourth Claim for Relief”

The “Fourth Claim for Relief” in the *Complaint* seeks declarations “that the State of Idaho’s claim of legal title to Idaho Power Company’s water rights is barred by the doctrines of estoppel, waiver and laches.” *Complaint* at 22-23.

IT IS HEREBY ORDERED that the “Fourth Claim for Relief” in the *Complaint* is dismissed with prejudice in its entirety.

5. The “Fifth Claim for Relief”

The “Fifth Claim for Relief” in the *Complaint* is a declaratory judgment claim seeking declarations that “Idaho Power’s water rights for hydropower generation are not, through the Swan Falls Settlement or otherwise, subordinate to use of water for ground water recharge.” *Complaint* at 23.

IT IS HEREBY ORDERED that the “Fifth Claim for Relief” in the *Complaint* is dismissed with prejudice to the extent that it seeks a declaration that water rights 36-02013, 37-02128, 37-02472, 37-02471, 37-20709, 37-20710, 36-02018, 36-02026, 02-02057, 02-02001A, 02-02001B, 02-02059, 02-02060, 02-02064, 02-02065, 02-02056,

02-02036, 02-02032A, 02-02032B, 02-04000A, 02-04000B, 02-04001A, 02-04001B, 02-00100 and 02-10135 are not subordinate or may not be subordinated, through the Swan Falls Settlement or otherwise, to the use of water for ground water recharge.

IT IS FURTHER ORDERED that the “Fifth Claim for Relief” in the *Complaint* is dismissed without prejudice with regard to any other water rights held by Idaho Power Company.

6. The “Sixth Claim for Relief”

The “Sixth Claim for Relief” in the *Complaint* is a declaratory judgment claim seeking declarations that:

the State has failed to take reasonable steps in its administration of water rights priorities in the Snake River Basin, and therefore to meet its obligation to insure and guarantee the Swan Falls Minimum Daily Flows, including failing to account for the multiple year impacts of ground water pumping, and accordingly has violated the Swan Falls Settlement.

Complaint at 23.

IT IS HEREBY ORDERED that the “Sixth Claim for Relief” in the *Complaint* is dismissed without prejudice in its entirety.¹

7. The “Seventh Claim for Relief”

The “Seventh Claim for Relief in the *Complaint* is an injunctive relief claim seeking the following preliminary and permanent injunctions:

(a) enjoining the State defendants from taking any action affecting the subject water rights on the basis of the State’s asserted legal title to such water rights; (b) ordering IDWR to re-evaluate water availability, and to take appropriate action, upon expiration of the 20 year terms of previously granted permits for new appropriations of Trust Water; (c) ordering the Idaho Attorney General to repeal Idaho Attorney General Opinion 06-2 on the basis that it is erroneous as a matter of law and a breach of the Swan Falls Settlement; and (d) ordering IDWR to take reasonable steps in the administration of water rights in the Snake River Basin, and therefore to meet its obligation to insure and guarantee the Swan Falls Minimum Daily Flows, including taking into account the multiple year impacts of ground water pumping in the ESPA.

Complaint at 25.

¹ See also *Order Dismissing Claims Pertaining To Water Availability Without Prejudice And Denying Motion To Dismiss Claim For Injunctive Relief* (Aug. 4, 2008).

IT IS HEREBY ORDERED that the “Seventh Claim for Relief” in the *Complaint* is dismissed with prejudice to the extent it seeks injunctions ordering the Idaho Attorney General to repeal Idaho Attorney General Opinion 06-2.²

IT IS FURTHER ORDERED that the “Seventh Claim for Relief” in the *Complaint* is dismissed with prejudice to the extent of any challenge to the State of Idaho’s claim of legal title to the hydropower water rights held in trust by the State pursuant to the Swan Falls Settlement.

IT IS FURTHER ORDERED that the remainder of the “Seventh Claim for Relief” in the *Complaint* is dismissed without prejudice.³

IT IS FURTHER ORDERED that any remaining claims in the *Complaint* are dismissed with prejudice, and that all parties to this consolidated subcase will bear their own costs and fees.

IT IS SO ORDERED.

DATED _____

JOHN M. MELANSON
Presiding Judge
Snake River Basin Adjudication

² See also *Order Granting in Part, Denying in Part Motion to Dismiss; Consolidating Common Issues Into Consolidated Subcase; And Permitting Discovery Pending Objection Period In Basin 02; And Notice Of Status Conference* (July 24, 2007).

³ See also *Order Dismissing Claims Pertaining To Water Availability Without Prejudice And Denying Motion To Dismiss Claim For Injunctive Relief* (Aug. 4, 2008).

Appendix D

American Falls Supreme Court Opinion

IN THE SUPREME COURT OF THE STATE OF IDAHO

Docket No. 33249/33311/33399

AMERICAN FALLS RESERVOIR DISTRICT)
NO. 2, A & B IRRIGATION DISTRICT,)
BURLEY IRRIGATION DISTRICT,)
MINIDOKA IRRIGATION DISTRICT, and)
TWIN FALLS CANAL COMPANY,)

Plaintiffs-Respondents-Cross Appellants,)

and)

RANGEN, INC., CLEAR SPRINGS FOODS,)
INC., THOUSAND SPRINGS WATER USERS)
ASSOCIATION, and IDAHO POWER)
COMPANY,)

Interveners-Respondents-Cross)
Appellants,)

v.)

THE IDAHO DEPARTMENT OF WATER)
RESOURCES and KARL J.)
DREHER, its Director,)

Defendants-Appellants-Cross-)
Respondents,)

and)

IDAHO GROUND WATER)
APPROPRIATORS, INC.,)

Intervener.)

2007 Opinion No. 40

Boise, December 2006 Term

Filed: March 5, 2007

Stephen W. Kenyon, Clerk

Appeal from the District Court of the Fifth Judicial District of the State of Idaho,
Gooding County. Hon. R. Barry Wood, District Judge.

Decision of the district court granting summary judgment to the plaintiffs, finding the
Rules for Conjunctive Management of Surface and Ground Water Resources
unconstitutional, is: Reversed.

Decision of the district court denying the City of Pocatello intervention in the case is:
Affirmed.

Honorable Lawrence G. Wasden, Attorney General, Boise, for appellant Idaho Department of Water Resources; Phillip J. Rassier argued.
Beeman & Associates, P.C., Boise, for appellant City of Pocatello.
Givens Pursley, LLP, Boise, for appellant Idaho Ground Water Appropriators, Inc.; Michael C. Creamer argued.

Arkoosh Law Offices, Chtd., Gooding, for respondent American Falls Reservoir District #2; C. Thomas Arkoosh argued.
Ling, Robinson & Walker, Rupert, for respondents A & B Irrigation and Burley Irrigation; Roger D. Ling argued.
Fletcher Law Office, Burley, for respondent Minidoka Irrigation District.
Barker Rosholt & Simpson, LLP, Boise and Twin Falls, for respondents Twin Falls Canal Company and Clear Springs Foods, Inc.
May, Sudweeks & Browning, LLP, Boise, for respondent Rangen.
Ringert, Clark Chtd., Boise, for respondents Nampa & Meridian Irrigation District and Thousand Springs Water Users Association; Daniel V. Steenson argued.

I.

NATURE OF THE CASE

This appeal is in response to a district court decision finding the Rules for Conjunctive Management of Surface and Ground Water Resources (CM Rules or Rules) facially unconstitutional based on the court's determination that the Rules lacked certain "procedural components" necessary to the proper administration of water rights under Idaho's prior appropriation doctrine. The Idaho Department of Water Resources (IDWR), together with the Intervenor, Idaho Ground Water Appropriators, Inc. (IGWA), appeal from that decision.

II.

FACTUAL AND PROCEDURAL BACKGROUND

In 1994, pursuant to statutory authority found in Idaho Code sections 42-603 and 42-1805, the Director of the Idaho Department of Water Resources (Director), promulgated the CM Rules to provide the procedures for responding to delivery calls "made by the holder of a senior-priority surface or ground water right against the holder of a junior-priority ground water right in an area having a common ground water supply." IDAPA 37.03.11.001. Thereafter, the CM Rules were submitted to the Idaho Legislature in 1995 pursuant to I.C. § 67-5291. The Legislature has not rejected, amended or modified any part of the Rules and they have, therefore,

remained in effect as written. These Rules attempt to provide a structure by which the IDWR can jointly administer rights in interconnected surface water (diverting from rivers, streams and other surface water sources) and ground water sources. It is these CM Rules, their application and their relationship to the provisions in Article XV of the Idaho Constitution which are at the center of the dispute presently before the Court.

The issues initially arose when the Respondents, various irrigation districts and canal companies, submitted a petition for water rights administration and delivery of water (Delivery Call) to the Director in January, 2005, pursuant to the CM Rules. These districts were joined in the administrative proceeding by Intervenors, Rangen, Inc., Clear Springs Foods, Inc., Thousand Springs Water Users Association, and Idaho Power Company (Respondents and Intervenors collectively referred to as American Falls). Some of the entities comprising American Falls hold surface water rights in the Snake River canyon, while others hold storage contracts for space in the Upper Snake River reservoirs. In their January, 2005 Delivery Call, American Falls asked the Director to curtail junior ground water use during the 2005 irrigation season in order to meet the water needs of American Falls. On February 14, 2005, the Director issued an initial order (Initial Order) which, among other things, requested additional information from American Falls for the prior fifteen irrigation seasons relating to: diversions of natural flow, storage water, and ground water; number of water rights holders and their average monthly headgate deliveries; total amount of reservoir storage; amounts of water leased or made available to other users; and number of acres flood or sprinkler irrigated and types of crops planted. American Falls responded with information but also objected to the scope of the information requested. In the Initial Order, the Director indicated he would make a determination of likely injury after receiving inflow forecasts for the Upper Snake River Basin for the period April 1 through July 1, 2005. Within two weeks of receiving the joint inflow forecast on April 7, 2005, the Director issued a Relief Order, which determined that water shortages were reasonably likely in 2005 and would materially injure American Falls. In the Relief Order, after making extensive findings of fact, the Director made the following conclusions of law which are pertinent to the issues presently before this Court:

...

20. Resolution of the conjunctive administration issue lies in the application of two well established principles of the prior appropriation doctrine: (1) the principle of "first in time is first

in right” and (2) the principle of optimum use of Idaho’s water. Both of these principles are subject to the requirement of reasonable use.

21. “Priority of appropriations shall give the better right as between those using the water” of the state. Art. XV, § 3, Idaho Const. “As between appropriators, the first in time is first in right.” Idaho Code § 42-106.
22. “[W]hile the doctrine of ‘first in time is first in right’ [applies to ground water rights] a reasonable exercise of this right shall not block full economic development of underground water resources.” Idaho Code § 42-226.

...

36. There currently is no approved and effectively operating mitigation in place to mitigate for injury, if any, to the water rights held by or for the benefit of the members of [American Falls].

...

45. Based upon the Idaho Constitution, Idaho Code, the Conjunctive Management Rules, and decisions by Idaho courts, ... it is clear that injury to senior priority surface water rights by diversion and use of junior priority ground water rights occurs when diversion under the junior rights intercept a sufficient quantity of water to interfere with the exercise of the senior primary and supplemental water rights for the authorized beneficial use. Because the amount of water necessary for beneficial use can be less than decreed or licensed quantities, it is possible for a senior to receive less than the decreed or licensed amount, but not suffer injury. Thus, senior surface water right holders cannot demand that junior ground water right holders diverting water from a hydraulically-connected aquifer be required to make water available for diversion unless that water is necessary to accomplish an authorized beneficial use.

...

- 45[sic]. Contrary to the assertion of [American Falls], depletion does not equate to material injury. Material injury is a highly fact specific inquiry that must be determined in accordance with IDAPA conjunctive management rule 42. [American Falls] has no legal basis to seek the future curtailment of junior priority ground water rights based on injury alleged by [American Falls] to have occurred in prior years.

...

49. The members of [American Falls] should not be required to exhaust their available storage water prior to being able to make a delivery call against the holders of junior priority ground water rights. The members of [American Falls] are entitled to maintain a reasonable amount of carryover storage water to minimize shortages in future dry years pursuant to Rule 42.01....

The Director identified and ordered the junior ground water rights holders subject to administration pursuant to the American Falls' Delivery Call, to provide "replacement" water sufficient to offset the depletions in American Falls' water supply or face immediate curtailment. Pursuant to I.C. § 42-1701A(3), the Relief Order provided that aggrieved parties were entitled to an administrative hearing on the Relief Order if requested within fifteen days, but that otherwise the Relief Order would become final. Both American Falls and IGWA requested an administrative hearing, which was set by the Director. However, before the hearing could be held, American Falls filed this declaratory judgment action in district court on August 15, 2005. Later, American Falls requested stays and continuances in the hearing schedule and to date, the administrative challenges to the Relief Order remain pending.

American Falls' complaint alleged that the CM Rules are unconstitutional, as applied to their Delivery Call, but also sought a declaration that the CM Rules are void on their face. While the district court largely rejected American Falls' arguments, it did grant summary judgment based on its finding that the CM Rules are facially unconstitutional on a different basis: a lack of "procedural components" of the prior appropriation doctrine that the court viewed as constitutionally mandated. The district court further held that the "reasonable carry-over" provision of CM Rule 42.01.g. is unconstitutional. In its decision, the district court stated that pursuant to I.C. § 67-5278, the actual and "threatened application" of the CM Rules to American Falls' Delivery Call would be considered in its analysis of the Rules' constitutionality.

III.

ISSUES ON APPEAL

1. Did the district court properly exercise jurisdiction before all administrative remedies were exhausted?
2. Did the district court err in holding that the CM Rules are facially unconstitutional based on a lack of certain "procedural components"?

3. Are the “reasonable carryover” provisions of Rule 42.01.g. of the CM Rules facially unconstitutional?
4. Are domestic and stock water rights properly exempt?
5. What is the effect of the severability clause?
6. Are the Respondents entitled to attorney’s fees?
7. Did the district court improperly revoke its order allowing the City of Pocatello to intervene?

IV.

STANDARD OF REVIEW

In an appeal from an order granting summary judgment, the standard of review is the same as the standard used by the district court in ruling on a motion for summary judgment. *State v. Rubbermaid Incorporated*, 129 Idaho 353, 355-356, 924 P.2d 615, 617-618 (1996); *Thomson v. Idaho Ins. Agency, Inc.*, 126 Idaho 527, 529, 887 P.2d 1034, 1036 (1994). Upon review, the Court must liberally construe facts in the existing record in favor of the nonmoving party, and draw all reasonable inferences from the record in favor of the nonmoving party. *Id.*; *Bonz v. Sudweeks*, 119 Idaho 539, 541, 808 P.2d 876, 878 (1991). Summary judgment is appropriate if “the pleadings, depositions, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law.” *McCoy v. Lyons*, 120 Idaho 765, 769, 820 P.2d 360, 364 (1991). If there are conflicting inferences contained in the record or reasonable minds might reach different conclusions, summary judgment must be denied. *Bonz*, 119 Idaho at 541, 808 P.2d at 878.

The constitutionality of a statute or administrative regulation is a question of law over which this Court exercises free review. *Moon v. North Idaho Farmers Ass’n*, 140 Idaho 536, 540, 96 P.3d 637, 641 (2004); *Rhodes v. Indus. Comm’n*, 125 Idaho 139, 868 P.2d 467 (1994). There is a presumption in favor of the constitutionality of the challenged statute or regulation, and the burden of establishing that the statute or regulation is unconstitutional rests upon the challengers. *Id.* “[A]n appellate court is obligated to seek an interpretation of a statute that upholds its constitutionality.” *In Re Bermudes (East Idaho Reg. Med. Ctr. v. Minidoka County)*, 141 Idaho 157, 159, 106 P.3d 1123, 1125 (2005); *Moon*, 140 Idaho at 540, 96 P.3d at 641. The

judicial power to declare legislative action unconstitutional should be exercised only in clear cases. *Id.*

“Where an administrative remedy is provided by statute, relief must be sought from the administrative body and this remedy exhausted before the courts will act.” *Dept. of Ag. v. Curry Bean*, 139 Idaho 789, 792, 86 P.3d 503, 506 (2004).

V. DISCUSSION

At the outset, it is important to commend the lengthy and scholarly opinion written by the district judge in this matter. The issues presented by the parties are extraordinarily complex and are matters of first impression. As exemplified by the Director’s 46 page Relief Order and the district judge’s 126 page decision, there are no easy answers. The district judge devoted much of his decision to a detailed analysis of Idaho’s Constitutional Convention in an effort to better understand what was intended by the drafters of our Constitution in Article XV. While the Constitution, statutes and case law in Idaho set forth the principles of the prior appropriation doctrine, those principles are more easily stated than applied. These principles become even more difficult, and harsh, in their application in times of drought. Because of concepts like beneficial use, waste, reasonable means of diversion and full economic development, the decisions are highly fact driven and sometimes have unintended or unfortunate consequences. The district judge took a very difficult issue – the constitutionality of the CM Rules – and did an exemplary job in analyzing the issues presented, documenting the historical context of the problems and articulating a reasoned basis for his ultimate conclusions. While this opinion does not reach those same conclusions, we nevertheless accept large parts of the district judge’s analysis and attempt to use his analysis to clarify our interpretation of the CM Rules.

It is also important to point out those issues which the district court decided against American Falls and from which no appeal was taken. The district court noted that the CM Rules incorporate concepts to be considered in responding to a delivery call, such as: material injury; reasonableness of the senior water right diversion; whether a senior right can be satisfied using alternate points and/or means of diversion; full economic development; compelling a surface user to convert his point of diversion to a ground water source; and reasonableness of use. The court observed that the Rules are not facially unconstitutional in having done so. The

district court rejected American Falls' position at summary judgment that water rights in Idaho should be administered strictly on a priority in time basis. Moreover, the district court noted that if the statute or rule can be construed in a manner which is constitutional, the provision will withstand a challenge. (citing *State v. Prather*, 135 Idaho 770, 773, 25 P.3d 83, 86 (2001)).

It was the failure of the CM Rules to “also integrate the concomitant tenets and procedures related to a delivery call, which have historically been held to be necessary to give effect to the constitutional protections pertaining to senior water rights” with which the district court found fault, and it is that conclusion this opinion will analyze. The district court held:

Specifically, the [CM Rules] fail: 1) to establish a procedural framework properly allocating the well established burdens of proof; 2) to define the evidentiary standards that the Director is [to] apply in responding to a call; 3) to give the proper legal effect to a partial decree; 4) to establish objective criteria necessary to evaluate the aforementioned factors; and 5) to establish a workable, procedural framework for processing a call in a time frame commensurate with the need for water – especially irrigation water.

With that background, we proceed with an analysis of the issues raised on appeal by the IDWR.

A. Did the district court properly exercise jurisdiction before all administrative remedies were exhausted?

Although both American Falls and IGWA exercised their right to request an administrative hearing within fifteen days of the Director issuing the Relief Order, American Falls filed a complaint in the district court for declaratory relief while the administrative hearing was pending. Historically, this Court has not permitted a party to seek declaratory relief until administrative remedies have been exhausted, unless the party is challenging a rule's facial constitutionality. I.C. § 67-5271; *Regan v. Kootenai County*, 140 Idaho 721, 724, 100 P.3d 615, 618 (2004). The Idaho Administrative Procedure Act (IDAPA) provides that “[a] person is not entitled to judicial review of an agency action until that person has exhausted all administrative remedies required in this chapter.” I.C. § 67-5271. Although the district court found the CM Rules were unconstitutional on their face, the district court discussed the constitutionality of the Rules “as applied” to the facts of this case. The question is whether the court wrongfully exercised its authority in declaring the Rules invalid in reference to the particulars of this case before a factual record could be developed in an administrative hearing.

A party may challenge a statute as unconstitutional “on its face” or “as applied” to the party’s conduct. *State v. Korsen*, 138 Idaho 706, 712, 69 P.3d 126, 132 (2003). A facial challenge to a statute or rule is “purely a question of law.” *State v. Cobb*, 132 Idaho 195, 197, 969 P.2d 244, 246 (1998). Generally, a facial challenge is mutually exclusive from an as applied challenge. *Korsen*, 138 Idaho at 712, 69 P.3d at 132. For a facial constitutional challenge to succeed, the party must demonstrate that the law is unconstitutional in *all* of its applications. *Id.* In other words, “...the challenger must establish that no set of circumstances exists under which the [law] would be valid.” *Id.* In contrast, to prove a statute is unconstitutional “as applied”, the party must only show that, as applied to the defendant’s conduct, the statute is unconstitutional. *Korsen*, 138 Idaho at 712, 69 P.3d at 132. A district court should not rule that a statute is unconstitutional “as applied” to a particular case until administrative proceedings have concluded and a complete record has been developed. I.C. § 67-5277 (judicial review of disputed issues of fact must be confined to the agency record for judicial review); *Lindstrom v. Dist. Bd. Of Health Panhandle Dist. I*, 109 Idaho 956, 712 P.2d 657 (1985) (court engaged in an “as applied” analysis because no factual issues remained).

An “on its face” constitutional analysis may not be combined with an “as applied” constitutional analysis. *Korsen*, 138 Idaho at 712, 69 P.3d at 132. In other words, a court may hear both types of challenges to a rule’s constitutional validity; however, it may not do a “hybridized” form of either test, in which the two tests are combined into a single analysis. *Id.*; *See Lindstrom v. Dist. Bd. Of Health Panhandle Dist. I*, 109 Idaho 956, 712 P.2d 657 (1985).

In this case, the district court recognized that parties must choose between either a facial or “as applied” constitutional challenge and that an “as applied” analysis is inappropriate before administrative proceedings have been fully completed. The court, nevertheless, went on to say that it would apply both a facial and as applied analysis because the case is “not conducive to such a rigid application.” The district court acknowledged that the Director had not yet had an opportunity to fully determine if American Falls was entitled to administration of its water rights and therefore, “a strict ‘as applied’ analysis is not technically proper.” The court explained that it planned to determine if the CM Rules were facially unconstitutional “in every application” while utilizing “the underlying facts in this case to determine whether the [CM Rules] are invalid, and to illustrate how the [CM Rules] were actually being applied.” While it appears the district court attempted to conduct an analysis based on a facial challenge only, the court also

referenced an earlier decision, the Notice of Clarification of Oral Order, dated December 16, 2005, and stated that it would apply both a facial and an as applied analysis to the extent the facts were already established and to illustrate how the court believed the Director would be applying the CM Rules.

The district judge also concluded a broader analysis was necessary because the Director had no authority to rule on the constitutionality of the Rules. Although a district court has jurisdiction to decide constitutional issues, administrative remedies generally must be exhausted before constitutional claims are raised. *Owsley v. Idaho Indus. Comm'n*, 141 Idaho 129, 134, 106 P.3d 455, 460 (2005). Other jurisdictions have also refused to excuse a party from exhausting administrative remedies merely because the party raises a constitutional issue that no official in the proceeding is authorized to decide, reasoning that “to hold otherwise would mean that a party whose grievance presents issues of fact or misapplication of rules or policies could nonetheless bypass his administrative remedies and go straight to the courthouse by the simple expedient of raising a constitutional issue.” *Foremost Ins. Co. v. Public Serv. Comm'n*, 985 S.W. 2d 793, 795 (Mo. Ct. App. 1998). Thus, raising a constitutional challenge does not alleviate the necessity of establishing a complete administrative record.

The court further justified its incorporation of this case’s facts into its analysis by asserting that I.C. § 67-5278 “contemplates the use of a factual history of a case when determining a rule’s validity.” Idaho Code section 67-5278 provides a means by which a party may gain standing before a district court, prior to exhausting administrative remedies, in order to seek a declaratory judgment on a rule’s validity. The statute requires that the rule itself or its “threatened application” interfere with or impair, or threaten to interfere with or impair, the legal rights or privileges of the petitioner. I.C. § 67-5278; *Rawson v. Idaho State Bd. Of Cosmetology*, 107 Idaho 1037, 1041, 695 P.2d 422, 426 (Ct.App. 1985). In *Rawson*, the Court of Appeals made clear that I.C. § 67-5278 is intended to establish qualifications for standing and is not a vehicle by which courts may decide factual issues prior to the completion of an administrative proceeding. *Id.* The Court of Appeals concluded that the district court erred when it “did not limit its treatment of the unlawful conduct question to a determination of standing.” *Id.* Further, the Court of Appeals held the factual question was addressed “prematurely” as the court “in essence took the issue from the Board and decided it de novo.” *Id.* This Court is persuaded by the analysis in *Rawson* that the “threatened application” language in I.C. § 67-5278 is there to

permit standing to challenge a rule, but does not eliminate the need for completion of administrative proceedings for an as applied challenge.

“Important policy considerations underlie the requirement for exhausting administrative remedies, such as providing the opportunity for mitigating or curing errors without judicial intervention, deferring to the administrative processes established by the Legislature and the administrative body, and the sense of comity for the quasi-judicial functions of the administrative body.” *White v. Bannock County Comm’rs*, 139 Idaho 396, 401-02, 80 P.3d 332, 337-38 (2003). Additionally, a district court cannot properly engage in an “as applied” constitutional analysis until a complete factual record has been developed. I.C. § 67-5277; *Lindstrom v. Dist. Bd. Of Health Panhandle Dist. I*, 109 Idaho 956, 712 P.2d 657 (1985). The district court should not blur the lines between a facial and as applied analysis by engaging in a hybrid analysis.

There are two exceptions to the rule that an as applied analysis is appropriate only if all administrative remedies have been exhausted: when the interests of justice so require and when an agency has acted outside of its authority. *Regan*, 140 Idaho at 726, 100 P.3d at 619. It has not been argued, nor did the district court find, that the interests of justice required an as applied analysis here.

As to the agency’s statutory authority, to retain its authority over a controversy, an agency must be acting within the scope of the authority conferred upon it. *Roeder Holdings, L.L.C. v. Bd. of Equalization of Ada County*, 136 Idaho 809, 813, 41 P.3d 237, 241 (2001). While the district court discussed whether the Director had exceeded his statutory authority, it is a circuitous analysis. Clearly, the Director does have the statutory authority to promulgate the CM Rules. To the extent the CM Rules do not comply with the Idaho Constitution, the Director has exceeded his authority, but that still depends on an analysis in the first instance of whether the CM Rules do indeed contradict the constitutional provisions relating to the prior appropriation doctrine. Thus, the exception for when an agency exceeds its authority does not apply unless the CM Rules are facially unconstitutional. Therefore, this Court’s review will be in terms of the CM Rules’ constitutionality on their face and not in terms of the Rules’ “threatened application” or “as applied.” The issue is whether the challenged provisions are void in all possible applications, or whether there are a set of circumstances in which they may be constitutionally applied.

B. Did the district court err in holding that the CM Rules are facially unconstitutional based on a lack of certain “procedural components”?

As indicated above, the district court found that because the CM Rules failed to articulate certain procedural components of the prior appropriation doctrine according to Idaho law, the CM Rules are facially unconstitutional. After agreeing with the IDWR that “there is a lot more to Idaho’s version of the prior appropriation doctrine than just ‘first in time,’” the district court observed:

...there are two additional primary and essential principles of Idaho’s version of the prior appropriation doctrine which are at issue in the administration of established rights but which are absent from the [CM Rules]. They are that in times of shortage there is the presumption of injury to a senior by the diversion of a junior, and the well engrained burdens of proof.

Again, later in the opinion, the district court further refined its conclusion that the CM Rules are constitutionally deficient “for failure to also integrate the concomitant tenets and procedures related to a delivery call...” and said specifically they are deficient in that the CM Rules fail:

1) to establish a procedural framework properly allocating the well established burdens of proof; 2) to define the evidentiary standards that the Director is [to] apply in responding to a call; 3) to give the proper legal effect to a partial decree; 4) to establish objective criteria necessary to evaluate the aforementioned factors; and 5) to establish a workable, procedural framework for processing a call in a time frame commensurate with the need for water – especially irrigation water.

However, as the IDWR points out, CM Rule 20.02 provides that: “[T]hese rules acknowledge all elements of the prior appropriation doctrine as established by Idaho law.” “Idaho law,” as defined by CM Rule 10.12, means “[T]he constitution, statutes, administrative rules and case law of Idaho.” Thus, the Rules incorporate Idaho law by reference and to the extent the Constitution, statutes and case law have identified the proper presumptions, burdens of proof, evidentiary standards and time parameters, those are a part of the CM Rules. Due to the changing nature of the law and rules, it is unnecessary to incorporate extant law unless specifically necessary to a clear understanding of the particular Rule. This is a facial challenge to these Rules and if it is clear there are circumstances under which these Rules may be constitutionally applied to provide adequate procedural safeguards, then the Rules withstand a facial challenge. To the extent one can bring a constitutional claim based on a particular fact

scenario that occurred and was permitted within the Rules, an “as applied” challenge is appropriate.

I. Burdens of proof and evidentiary standards

Specifically, the district court found fault because the CM Rules fail to specifically articulate the applicable burdens of proof and evidentiary standards. After stating that the burdens are “integral to the constitutional protections accorded water rights,” the court noted that “[T]he CMR’s make absolutely no reference to these relative burdens of proof.” The court also quoted the IDWR, which “acknowledged” that the Rules did not recite the burden of proof. The district court then concluded that “under these circumstances, no burden equates to impermissible burden shifting.” The district court was critical of the Rules’ failure to recite the burdens, rather than acknowledging that those standards were incorporated by reference in Rule 20.02 as part of Idaho statutory and case law. This was contrary to the court’s obligation to “seek an interpretation of a statute that upholds its constitutionality.” *In Re Bermudes (East Idaho Reg. Med. Ctr. v. Minidoka County)*, 141 Idaho 157,159, 106 P.3d 1123,1125 (2005).

American Falls asserts on appeal that specific provisions of the Rules squarely contradict Idaho case law by placing the burden on the senior rather than the junior water user. American Falls argues that the seniors “are left to initiate a series of ‘contested cases’ and prove they are suffering ‘material injury’ before the Director and the watermasters will take any action. The result is a lack of water to seniors, while juniors continue to divert unabated.” Much emphasis is placed on CM Rule 30.01, which provides:

01. Delivery Call (Petition). When a delivery call is made by the holder of a surface or ground water right (petitioner) alleging that by reason of diversion of water by the holders of one (1) or more junior-priority ground water rights (respondents) the petitioner is suffering material injury, the petitioner shall file with the Director a petition in writing containing, at least, the following...

...

c. All information, measurements, data or study results available to the petitioner to support the claim of material injury.

IDAPA 37.03.11.30.01. American Falls also cites Rule 40.01, which states that responses to calls are made when a senior files a delivery call “alleging” he is suffering “material injury” and

upon a finding by the Director that material injury is occurring. This, American Falls argues, places the burden on the senior to prove material injury. A plain reading of the CM Rules does not support that interpretation, particularly in the context of a facial challenge to the Rules. The Rules simply require that a senior who is suffering injury file a delivery call with the Director and allege that the senior is suffering material injury. This is presumably to make the Director aware that such injury is occurring and to give substance to the complaint. Additionally, the Rules ask that the petitioner include all available information to support the call in order to assist the Director in his fact-finding. Nowhere do the Rules state that the senior must prove material injury before the Director will make such a finding. To the contrary, this Court must presume that the Director will act in accordance with Idaho law, as he is directed to do under CM Rule 20.02. While it is possible the Director could apply the CM Rules in an unconstitutional manner, that would be an opportune time for an “as applied” challenge; however now, in the absence of such facts indicating the Director has misapplied the Rules in violation of Idaho law, our analysis is limited to the Rules as written, or “on their face,” and the Rules do not permit or direct the shifting of the burden of proof. Therefore, this Court does not find that the failure to explicitly recite certain procedural components such as the burdens of proof makes the CM Rules unconstitutional on their face.

The district court was also concerned that the CM Rules did not specifically articulate an appropriate standard for the Director to apply when responding to a delivery call: that is, should the required proof be clear and convincing, a preponderance of the evidence, or merely what the Director deems “reasonable.” Again, the failure to state which standard applies does not mean the CM Rules can never be applied in a constitutional fashion – and the Rules’ incorporation of the Idaho Constitution, statutes and case law would indicate to the contrary. Requirements pertaining to the standard of proof and who bears it have been developed over the years and are to be read into the CM Rules. There is simply no basis from which to conclude the Director can never apply the proper evidentiary standard in responding to a delivery call.

2. Timeliness in responding to a delivery call

As discussed above, parties must generally exhaust administrative remedies before challenging a rule’s constitutionality, particularly when asserting the rule is unconstitutional as applied to the facts, because a complete administrative record is necessary for such a determination. I.C. §67-5277; *Owsley*, 141 Idaho at 134, 106 P.3d at 460. The issue regarding

whether or not American Falls was denied due process at the administrative level due to the length of time it had to wait for a hearing is arguably an issue which has been factually established, at least as of the time this declaratory action was filed. In other words, the completion of an administrative record would not aid the Court in its determination of what has transpired so far in the application of the CM Rules to the current Delivery Call. We will address both challenges.

The district court stated that the absence of any procedural time frames in the CM Rules “at least as to curtailment for irrigation water” makes the Rules unconstitutional. The court noted that although American Falls initiated a delivery call in January of 2005, as of May of 2006, the Director had not yet entered a final order. American Falls claims the process provided by the CM Rules does not allow for timely administration of its water rights. However, as noted above with respect to the burdens of proof and evidentiary standards, it is not necessary that every procedural requirement be recited in the CM Rules, when the Rules clearly have incorporated the provisions of the Idaho Constitution, statutes and case law. We agree with the district court’s exhaustive analysis of Idaho’s Constitutional Convention and the court’s conclusion that the drafters intended that there be no unnecessary delays in the delivery of water pursuant to a valid water right. Clearly, a timely response is required when a delivery call is made and water is necessary to respond to that call. There is nothing in the Rules which would prohibit that from occurring, however. In other words, we cannot say there are no conceivable sets of circumstances under which the Rules could be constitutionally applied to provide for the timely delivery of water. Thus, the Rules are not facially defective in this regard.

The argument is also made that on the state of the record developed so far, the Rules are not being applied in a timely way to respond to American Falls’ Delivery Call. Even if this Court embarked on an analysis of an as applied challenge to the Rules, the facts developed thus far do not support American Falls’ contention that it was deprived of timely administration in response to the Delivery Call.

American Falls submitted its Delivery Call to the Director in January of 2005, fearing that shortages would occur in the upcoming year. Thus, this was not at a time when water was actually needed. IDWR received the inflow forecast in April of 2005 and the Director issued a Relief Order less than two weeks later. The Director made the Order effective immediately pursuant to I.C. §67-5247 (Emergency Proceedings), ordering juniors to provide “replacement”

water in sufficient quantities to offset depletions in American Falls' water supplies. Thus, American Falls was provided timely relief in response to the Delivery Call in the form of the Relief Order issued just months after their call and only weeks after the Director received water forecasts for the upcoming year.

Incident to the Relief Order, the parties were entitled to a hearing. A hearing was initially set by the Director for August, 2005, still within the current irrigation season and during a time when American Falls had received some relief in response to its Delivery Call. Although both IGWA and American Falls exercised their right to a hearing and one was set, American Falls filed this action with the district court on August 15, 2005, before the hearing could be held. Subsequently, American Falls requested stays and continuances in the hearing schedule, one of which requested that the hearing be reset to no sooner than June 15, 2006. It appears that American Falls preferred to have its case heard outside of the administrative process and went to great lengths, first to remove the case from the administrative process and second, to delay the hearing. While the district court acknowledged it was "led to believe" that the parties had stipulated to delay the administrative resolution of the case pending the district court's decision, the court nevertheless also appeared to hold that delay against the Director and the CM Rules by finding there had been an unacceptable delay in responding to the Delivery Call. The record simply does not support that assertion and, as indicated above, there is likewise no basis for a determination that the CM Rules are unconstitutional in this regard.

Clearly it was important to the drafters of our Constitution that there be a timely resolution of disputes relating to water. While there must be a timely response to a delivery call, neither the Constitution nor the statutes place any specific timeframes on this process, despite ample opportunity to do so. Given the complexity of the factual determinations that must be made in determining material injury, whether water sources are interconnected and whether curtailment of a junior's water right will indeed provide water to the senior, it is difficult to imagine how such a timeframe might be imposed across the board. It is vastly more important that the Director have the necessary pertinent information and the time to make a reasoned decision based on the available facts.

Absent additional evidence that the Director abused his discretion or that the delay in the hearing schedule was unreasonable despite the self-imposed extensions (both of which are appropriate to an "as applied" challenge on a fully developed administrative record), there is no

basis for setting aside the CM Rules based upon the lack of specifically articulated time standards.

3. Lack of objective standards

The district court noted that the CM Rules contain criteria for the Director to consider in responding to a delivery call, but was concerned by “the absence of any objective standards from which to evaluate the criteria.” Rule 42 lists factors the Director may consider in determining material injury and whether the holders of water rights are using water efficiently and without waste, which are decisions properly vested in the Director. Those factors, of necessity, require some determination of “reasonableness” and it is the lack of an objective standard – something other than “reasonableness” – which caused the district court to conclude the Rules were facially defective. Given the nature of the decisions which must be made in determining how to respond to a delivery call, there must be some exercise of discretion by the Director. While it may be that the Director could apply these factors in an unreasonable way, the Rules are not facially deficient in not being more specific in defining what is “reasonable” in any given case. Again, this is an instance where an as applied constitutional challenge may be appropriate, but it does not justify voiding the Rules in their entirety for lack of objective standards beyond those specifically listed in Rule 42 and elsewhere.

4. Failure to give legal effect to a partial decree

The district court stated that “with the exception of the water rights from Basin 01 (the main stem of the Snake River upstream from Milner Dam), the water rights at issue are within one or more organized water districts.... Significant to this analysis is that many of these rights have been adjudicated and decreed in the SRBA.” These water rights have already been determined by the Snake River Basin Adjudication court, which, at the time of the adjudication of these rights, considered the Director’s recommendations, which identified issues pertaining to quantity, purpose of use, point of diversion, etc. The CM Rules, the district court concluded, allow the Director to, in essence, re-adjudicate water rights by conducting a complete re-evaluation of the scope and efficiencies of a decreed water right in conjunction with a delivery call. In effect, the court stated, a senior who has an adjudicated water right through a partial decree must re-defend the elements of his adjudicated right each time he makes a delivery call.

As indicated previously, this Court can consider a facial challenge to the constitutionality of the Rules only when the challenger establishes that “no set of circumstances exists under

which the Act would be valid.” *U.S. v. Salerno*, 481 U.S. 739, 745, 107 S.Ct. 2095, 2100 (1987) (emphasis added). As stated by the district court in this case, many of the water rights have already been adjudicated in the SRBA, and some may be in the process of being adjudicated. The court recognized that “a partial decree is not conclusive as to any post-adjudication circumstances or unauthorized changes in its elements.” The district judge acknowledged that even with decreed water rights, the Director does have some authority to make determinations regarding material injury, the reasonableness of a diversion, the reasonableness of use and full economic development. Even if this Court were to conclude that the CM Rules allow for further limited analysis in some instances where, depending on the case and its specific procedural background, there has been an adjudication, this does not mean the Rules are unconstitutional in *all* applications. Rather, the Rules’ constitutionality is dependent upon the procedural background of the specific case, which would make this an “as applied” constitutional attack.

CM Rule 42 lists factors “the Director may consider in determining whether the holders of water rights are suffering material injury and using water efficiently and without waste....” IDAPA 37.03.11.42.01. Such factors include the system, diversion, and conveyance efficiency, the method of irrigation water application and alternate reasonable means of diversion. *Id.* American Falls argues the Director is not authorized to consider such factors before administering water rights; rather, the Director is “required to deliver the full quantity of decreed senior water rights according to their priority” rather than partake in this re-evaluation. (emphasis in original brief). American Falls asserts the Rules are defective in giving the Director, in essence, the authority to negotiate with the senior water right holder regarding the quantity of water he will enforce under a delivery call – a quantity that in some instances, has already been adjudicated.

Clearly, even as acknowledged by the district court, the Director may consider factors such as those listed above in water rights administration. Specifically, the Director “has the duty and authority” to consider circumstances when the water user is not irrigating the full number of acres decreed under the water right. If this Court were to rule the Director lacks the power in a delivery call to evaluate whether the senior is putting the water to beneficial use, we would be ignoring the constitutional requirement that priority over water be extended only to those using the water. Additionally, the water rights adjudications neither address, nor answer, the questions presented in delivery calls; thus, responding to delivery calls, as conducted pursuant to the CM

Rules, do not constitute a re-adjudication. For example, the SRBA court determines the water sources, quantity, priority date, point of diversion, place, period and purpose of use. I.C. §§ 42-1411(2)(a)-(j). However, reasonableness is not an element of a water right; thus, evaluation of whether a diversion is reasonable in the administration context should not be deemed a re-adjudication. *Schodde v. Twin Falls Land & Water Co.*, 224 U.S. 107, 32 S. Ct. 470 (1912). Moreover, a partial decree need not contain information on how each water right on a source physically interacts or affects other rights on that same source.

Typically, the integration of priorities means limiting groundwater use for the benefit of surface water appropriators because surface water generally was developed before groundwater. The physical complications of integrating priorities often have parallels in the administration of solely surface water priorities. The complications are just more frequent and dramatic when groundwater is involved.

Douglas L. Grant, *The Complexities of Managing Connected Surface and Ground Water Under the Appropriation Doctrine*, 22 Land & Water L. Rev. 63, 73 (1987).

Conjunctive administration “requires knowledge by the IDWR of the relative priorities of the ground and surface water rights, how the various ground and surface water sources are interconnected, and how, when, where and to what extent the diversion and use of water from one source impacts the water flows in that source and other sources.” *A & B Irrigation Dist. v. Idaho Conservation League*, 131 Idaho 411, 422, 958 P.2d 568, 579 (1997). That is precisely the reason for the CM Rules and the need for analysis and administration by the Director. In that same vein, determining whether waste is taking place is not a re-adjudication because clearly that too, is not a decreed element of the right.

American Falls argues, though, that Rule 30.01 improperly shifts the burden to the senior appropriator who has already obtained a decreed right and forces the senior right holder to re-adjudicate or re-prove his decreed right whenever he makes a delivery call. The district court agreed and held that the Rules were fatally defective in not containing a presumption that “when a junior diverts or withdraws water in times of a water shortage, it is presumed that there is injury to a senior.” The court cited *Moe v. Harger*, 10 Idaho 302, 307, 77 P. 645, 647 (1904), as support for that holding. *Moe*, however, was a case dealing with competing surface water rights and this case involves interconnected ground and surface water rights. The issues presented are simply not the same.

When water is diverted from a surface stream, the flow is directly reduced, and the reduction is soon felt by downstream users unless the distances involved are great. When water is withdrawn from an aquifer, however, the impact elsewhere in the basin or on a hydrologically connected stream is typically much slower.

Douglas L. Grant, *The Complexities of Managing Connected Surface and Ground Water Under the Appropriation Doctrine*, 22 Land & Water L. Rev. 63, 74 (1987).

While perhaps the Rules can be read in different ways, they can be read consistently with constitutional and statutory principles. The Rules require the petitioner, that is the senior water rights holder, to file a petition alleging that by reason of diversion of water by junior priority ground water rights holders, the petitioner is suffering material injury. That is consistent with the statutory provision which requires a surface priority water right holder claiming injury by junior water right holders pumping from an aquifer to file a "written statement under oath" setting forth "the facts upon which [he] founds his belief that the use of his right is being adversely affected" by the pumping. I.C. § 42-237b. The Rules further provide that the petitioner file a description of his water rights, including the decree, license, permit or claim for such right, the water diversion and delivery system he is using and the beneficial use being made. The Rules then provide three additional types of information which must be provided by the petitioner; however, the Rules are clear in saying that the additional information should be provided only if available to the petitioner.

The Rules should not be read as containing a burden-shifting provision to make the petitioner re-prove or re-adjudicate the right which he already has. We note that in the Initial Order entered in this case, the Director requested extensive information from American Falls for the prior fifteen irrigation seasons, to which American Falls objected in part. While there is no question that some information is relevant and necessary to the Director's determination of how best to respond to a delivery call, the burden is not on the senior water rights holder to re-prove an adjudicated right. The presumption under Idaho law is that the senior is entitled to his decreed water right, but there certainly may be some post-adjudication factors which are relevant to the determination of how much water is actually needed. The Rules may not be applied in such a way as to force the senior to demonstrate an entitlement to the water in the first place; that is presumed by the filing of a petition containing information about the decreed right. The Rules do give the Director the tools by which to determine "how the various ground and surface water sources are interconnected, and how, when, where and to what extent the diversion and use of

water from one source impacts [others].” *A & B Irrigation Dist.*, 131 Idaho at 422, 958 P.2d at 579. Once the initial determination is made that material injury is occurring or will occur, the junior then bears the burden of proving that the call would be futile or to challenge, in some other constitutionally permissible way, the senior’s call.

For the purposes of the facial challenge with which we are faced in this appeal, the CM Rules do not unconstitutionally force a senior water rights holder to re-adjudicate a right, nor do the Rules fail to give adequate consideration to a partial decree. In an “as applied” challenge, it would be possible to analyze on a fully developed factual record whether the Director has improperly applied the Rules to place too great a burden on the senior water rights holder. Facially, however, the Rules do not do so.

C. Are the “reasonable carryover” provisions of Rule 42.01.g. of the CM Rules facially unconstitutional?

Storage water is water held in a reservoir and is intended to assist the holder of the water right in meeting their decreed needs. Carryover is the unused water in a reservoir at the end of the irrigation year which is retained or stored for future use in years of drought or low-water. *See Rayl v. Salmon River Canal Co.*, 66 Idaho 199, 157 P.2d 76 (1945). One may acquire storage water rights and receive a vested priority date and quantity, just as with any other water right. I.C. §42-202. There is no statutory provision for obtaining a decreed right to “carryover” water. Obviously, the quantity of any water available at the end of the irrigation year is dependent upon a number of factors like the irrigators’ needs during the season, reservoir capacity and amount of water in the reservoir at the beginning of the season.

The district court held that the CM Rules’ provision allowing a “reasonable” amount of carry-over storage injures vested senior storage water rights in violation of the Idaho Constitution and water distribution statutes. The relevant provision is found in CM Rule 42, which provides:

042: DETERMINING MATERIAL INJURY AND REASONABLENESS OF WATER DIVERSIONS (RULE 42).

01. **Factors.** Factors the Director may consider in determining whether the holders of water rights are suffering material injury and using water efficiently and without waste include, but are not limited to, the following:

- ...
- g. The extent to which the requirements of the holder of a senior-priority water right could be met with the user's existing facilities and water supplies by employment reasonable diversion and conveyance efficiency and conservation practices; provided, however, **the holder of a surface water storage right shall be entitled to maintain a reasonable amount of carry-over storage to assure water supplies for future dry years.** In determining a reasonable amount of carry-over storage, the Director shall consider the average annual rate of fill of storage reservoirs and the average annual carry-over for prior comparable water conditions and the projected water supply for the system.

IDAPA 37.03.11.042.01.g. (emphasis added). In responding to a delivery call, this Rule lists factors for the Director to consider in making his determination, including the possible use of some storage water by the senior in order to avoid unnecessarily cutting off water to a junior water right holder. It is the district court's position that: "absent a proper showing of waste, senior storage right holders are allowed to store up to the quantity stated in their storage right, free of diminishment by the Director." Thus, the question is: are the holders of storage water rights also entitled to insist on all available water to carryover for future years in order to assure that their full storage water right is met (regardless of need).

The district court's decision is based on the assumption that storage rights are property rights entitled to legal protection. *Washington County Irrigation Dist v. Talboy*, 55 Idaho 382, 385, 43 P.2d 943, 945 (1935). In *Talboy*, this Court held that when water is stored, it becomes "the property of the appropriators ... impressed with the public trust to apply it to a beneficial use." *Id.* Importantly, *Talboy* did not address the issue of carryover. The Court has also held that if one appropriates water for a beneficial use, he has a valuable right entitled to protection. *Murray v. Public Utilities Comm'n*, 27 Idaho 603, 619, 150 P. 47, 50 (1915); *Bennett v. Twin Falls North Side Land & Water Co.*, 27 Idaho 643, 651, 150 P. 336, 339 (1915). Nevertheless, that property right is still subject to other requirements of the prior appropriation doctrine. The question is whether the Director's authority to limit the amount of water a surface storage water right holder can save and carryover to the next year, is an unconstitutional impairment of storage water rights. IGWA and IDWR argue that Idaho law does not allow curtailment of vested junior rights when the senior does not need additional water to achieve the authorized beneficial use.

They cite to *Schodde v. Twin Falls Land & Water Co.*, 161 F. 43 (9th Cir. 1908), which held that water rights must be exercised with “some regard to the rights of the public” and “necessities of the people, and not so as to deprive a whole neighborhood or community of its use and vest an absolute monopoly in a single individual.” *Id.* at 47. It is IGWA’s position based on *Schodde*, that even vested water rights are not absolute; rather, such rights are limited to some extent, by the needs of other water users and thus, it is in accordance with Idaho law to place a “reasonable” limit on the amount of water a person may carryover for storage. The point of the reasonable carry-over provision, argues IGWA, is to determine whether the senior has a sufficient water supply to meet its actual needs, rather than routinely permitting water to be wasted through storage and non-use.

This Court has invalidated a rule adopted by a canal company that allowed an individual shareholder of the company to hold-over his allotted share of stored water free from limitations, which reduced the allocated amount of other shareholders. *Glavin v. Salmon River Canal Co.*, 44 Idaho 583, 258 P. 532 (1927). The Court invalidated the rule based on “possible abuses,” such as a situation where a shareholder does not require the full use of his allotment, but he carries it over to the detriment of others. *Id.* at 589, 258 Pac. at 534. The Court noted:

... and we think it clear that, whatever may be the exact nature of the ownership by an appropriator of water thus stored by him, any property rights in it must be considered and construed with reference to the reasonableness of the use to which the water stored is applied or to be applied.

Id. at 588-589, 258 P. at 534.

Thus, it is argued that the same logic supports CM Rule 42, which allows the Director to refrain from curtailing junior water rights if a senior has sufficient storage rights to meet his needs. However, the Court in *Rayl v. Salmon River Canal Co.*, 66 Idaho 199, 157 P.2d 76 (1945) limited the *Glavin* holding to the facts in that case: “Quite obviously, the above opinion did not hold and was not intended to hold that irrigation organizations and/or appropriators of water could not accumulate within their appropriations and hold storage over from one season to the next.... The court merely held the particular rule offended in certain particulars.” *Rayl*, 66 Idaho at 201, 157 P.2d at 77. This is simply a recognition that it is permissible for the canal company to hold water over from one year to the next absent abuse. The Court upheld the amended rules in *Rayl* because the earlier deficiencies and possible abuses identified in *Glavin*

had been rectified. The Court also recognized the “fundamental difference” between “the diversion and use of water from a flowing stream and a reservoir.” *Id.* at 208, 157 P.2d at 80. These cases do not address situations where stored carryover water was, at the time of the litigation, being wasted by storing away excessive amounts in times of shortage. Rather, the Court foresaw abuses that could occur when one is allowed to carryover water despite detriment to others. Concurrent with the right to use water in Idaho “first in time,” is the obligation to put that water to beneficial use. To permit excessive carryover of stored water without regard to the need for it, would be in itself unconstitutional. The CM Rules are not facially unconstitutional in permitting some discretion in the Director to determine whether the carryover water is reasonably necessary for future needs.

Again, this is an area where the Rules are not facially invalid, but there is room for challenge on an “as applied” basis if the Rules are not applied in a manner consistent with the Constitution. Clearly *American Falls* has decreed storage rights. Neither the Idaho Constitution, nor statutes, permit irrigation districts and individual water right holders to waste water or unnecessarily hoard it without putting it to some beneficial use. At oral argument, one of the irrigation district attorneys candidly admitted that their position was that they should be permitted to fill their entire storage water right, regardless of whether there was any indication that it was necessary to fulfill current or future needs and even though the irrigation districts routinely sell or lease the water for uses unrelated to the original rights. This is simply not the law of Idaho. While the prior appropriation doctrine certainly gives pre-eminent rights to those who put water to beneficial use first in time, this is not an absolute rule without exception. As previously discussed, the Idaho Constitution and statutes do not permit waste and require water to be put to beneficial use or be lost. Somewhere between the absolute right to use a decreed water right and an obligation not to waste it and to protect the public’s interest in this valuable commodity, lies an area for the exercise of discretion by the Director. This is certainly not unfettered discretion, nor is it discretion to be exercised without any oversight. That oversight is provided by the courts, and upon a properly developed record, this Court can determine whether that exercise of discretion is being properly carried out. For the purposes of this appeal, however, the CM Rules are not facially defective in providing some discretion in the Director to carry out this difficult and contentious task. This Court upholds the reasonable carryover provisions in the CM Rules.

D. Are domestic and stock water rights properly exempt?

Not specifically raised by IDWR, although raised generally in its argument that the district court erred in voiding the CM Rules in their entirety, is the issue relating to the CM Rules' exclusion of domestic and stock water rights from administration. The district court concluded that the exclusion of these rights is unconstitutional and amounts to an unlawful taking of prior vested water rights. Article XV, § 3 of the Idaho Constitution gives priority to domestic water rights but requires that junior water right holders must compensate seniors for any taking of their water. Article XV, § 3 of the Idaho Constitution provides, in pertinent part:

... Priority of appropriation shall give the better right as between those using the water; but when the waters of any natural stream are not sufficient for the service of all those desiring the use of the same, those using the water for domestic purposes shall (subject to such limitations as may be prescribed by law) have preference over those claiming for any other purpose.... But the usage by such subsequent appropriators shall be subject to such provisions of law regulating the taking of private property and public use, as referred to in section 14 of article I of this Constitution.

The relevant CM Rules provision also provides domestic water rights with priority, exempting them from delivery calls; however, unlike the Constitution, the Rules do not address whether the senior user will be compensated for the taking:

20.11. Domestic and Stock Watering Ground Water Rights Exempt. A delivery call shall not be effective against any ground water right used for domestic purposes regardless of priority date where such domestic use is within the limits of the definition set forth in Section 42-111, Idaho Code, nor against any ground water right used for stock watering where such stock watering is within the limits of the definition set forth in Section 42-1401A(11), Idaho Code; provided, however, this exemption shall not prohibit the holder of a water right for domestic or stock watering uses from making a delivery call, including a delivery call against the holders of other domestic or stock watering rights, where the holder of such right is suffering material injury.

IDAPA 37.03.11.020.11. The district court concluded that this Rule permits domestic users to take senior water rights without having to provide any compensation. The question is if CM Rule 20.11 is in direct conflict with Article XV, Section 3 or if the two can be read together and

applied in accordance with the Constitution. As discussed above, a provision of this same rule, Rule 20.02, incorporates by reference all Idaho law, including the Idaho Constitution, into the CM Rules. The Rules do not exclude the possibility of a takings claim to provide such compensation. The Rules simply restate the portion of Article XV, Section 3 that gives priority to domestic water users, stating that senior non-domestic users cannot curtail their use via a delivery call.

There is no requirement that the CM Rules must incorporate every possible remedy to a senior who feels that his water right has been improperly reduced. A separate takings claim is certainly not prohibited by the Rules. The case before us is a facial challenge; until faced with an appropriate factual record complaint, we decline to speculate about whether a senior water rights holder will be properly compensated. The Rules are sufficient as they are written.

E. What is the effect of the severability clause?

The district court made no findings with respect to the severability clause found in Rule 4 of the CM Rules. IDAPA: 37.03.11.004. The trial court simply concluded that the Rules were unconstitutional in their entirety and therefore completely void. Because this Court concludes that the district court erred in that determination, we need not address the impact of the severability clause and whether some provisions could continue in effect. *See, e.g., In re SRBA No. 39576*, 128 Idaho 246, 264, 912 P.2d 614, 632 (1995). (“When determining whether the remaining provisions in a statute can be severed from the unconstitutional sections, this Court will, when possible, recognize and give effect to the intent of the Legislature as expressed through a severability clause in the statute.”).

F. Are the Respondents entitled to attorney’s fees?

American Falls has requested attorney fees on appeal if it prevails. Attorney’s fees may be awarded to the prevailing party pursuant to I.C. § 12-117 if the Court finds that “the party against whom the judgment is rendered acted without a reasonable basis in fact or law.” I.C. § 12-117. American Falls is not the prevailing party in this appeal and therefore, an award of fees is denied.

G. Did the district court improperly revoke its order allowing the City of Pocatello to intervene?

In the action below, the City of Pocatello (City) moved to intervene as a party to the litigation, either by permission or as a matter of right. The motion was granted by the district court, without indicating whether it was permissive or by right, conditioned on the City's representation that it would not take any action which would delay the proceedings. At that point in the proceedings, the district court had already heard arguments on a motion to dismiss and was drafting its opinion. There had also been motions filed for summary judgment which were noticed for hearing. The district court issued its decision denying the motion to dismiss. Ten days after the district court's ruling and eleven days before the hearing set on the pending motions, the City then moved to disqualify the judge for cause. The basis for the City's motion was an alleged conflict of interest, which the judge had disclosed to the City three months earlier. The district court ruled that the City had misrepresented its position and was taking action to delay the proceedings; therefore, the court revoked the earlier order granting intervention and denied the City's motion to disqualify. In that final order, the district court clarified that the earlier intervention had been granted on a permissive basis and not because of any determination that the City had a right to intervene. The City then appealed the decision denying intervention and also appealed the district judge's refusal to disqualify himself.

Pursuant to I.R.C.P. 24, a judge may grant either permissive intervention or intervention of right. Paraphrasing, intervention is a matter of right according to Rule 24: (1) when a statute confers an unconditional right to intervene; or (2) when the applicant claims an interest relating to the subject of the action and the applicant is so situated that disposition of the action may impair the applicant's ability to protect that interest, "unless the applicant's interest is adequately represented by existing parties." I.R.C.P. 24(a). In its order, the district court determined that the City's interests as a holder of water rights were adequately represented by other parties to this action who likewise held water rights. "[I]ntervention as of right has been considered to be a mixed question of law and fact involving the discretion of a trial judge." *Rodriguez v. Oakley Valley Stone, Inc.*, 120 Idaho 370, 377, 816 P.2d 326, 333 (1991). The district court did not err in determining that the City's interests were adequately represented by others and, therefore, the City could only intervene if granted permission to do so.

A district court's decision to grant or deny permissive intervention is a matter of discretion. *Farrell v. Bd. of Comm'rs of Lemhi County*, 138 Idaho 378, 64 P.3d 304 (2002). In determining whether the trial court properly exercised its discretion, this Court engages in a three-part inquiry to determine: whether the trial court correctly perceived the issue as one of discretion; whether the trial court acted within the outer boundaries of its discretion and consistently with the legal standards applicable to the specific choices available to it; and whether the trial court reached its decision by an exercise of reason. *Id.* "On appeal, the appellant carries the burden of showing that the district court committed error. Error will not be presumed but must be affirmatively shown on the record by appellant." *Id.* at 316, 64 P.3d at 390, quoting *Western Cmty Ins. Co. v. Kickers Inc.*, 137 Idaho 305, 306, 48 P.3d 634, 635 (2002).

In its decision revoking the prior order granting intervention, the district court indicated that this was a discretionary decision. The district court also acted within its discretion and consistently with the legal standards and reached its decision through an exercise of reason. Specifically, the district court found that the City knew of the judge's alleged conflict as early as 2000, and that it was disclosed again by the judge two months before the City sought to intervene. Further, the district court observed that the City did not seek disqualification until ten days after the court ruled on the first contested motion. Finally, the district court concluded that intervention was sought for the purpose of prejudicial delay and the City had engaged in improper forum shopping. The City has not met its burden of demonstrating that the district court committed error in its exercise of discretion; thus, the district court properly revoked the order allowing the City to intervene. Consequently, there is no need to address the City's argument about the ruling on its motion to disqualify the district judge.

VI. CONCLUSION

To the extent the district court engaged in an analysis of the constitutionality of the Rules "as applied" to the facts of this case before administrative remedies were exhausted, it was in error. As to the perceived lack of procedural components articulated in the Rules, Rule 20.02 incorporates Idaho law; therefore, the failure to recite certain burdens and evidentiary standards, set specific timelines and set objective standards does not make the Rules facially unconstitutional. The CM Rules also survive a facial challenge in the recognition given to

partial decrees and in the treatment of carryover water. The decision of the district court granting partial summary judgment to American Falls is reversed. The district court's revocation of the City's motion to intervene was not an abuse of discretion and is, therefore, affirmed. We award costs on appeal to the Appellants.

Chief Justice SCHROEDER and Justices BURDICK, JONES and KIDWELL, Pro Tem,
CONCUR.