

The Water Report™

Water Rights, Water Quality & Water Solutions in the West

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CONJUNCTIVE MANAGEMENT IN IDAHO

PUBLIC-PRIVATE PARTNERSHIPS & CONJUNCTIVE MANAGEMENT OF SURFACE AND GROUND WATER

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Public-Private Partnerships can reduce development risks, provide more cost-effective and timely infrastructure delivery, offer the potential for better ongoing maintenance, and leverage limited public sector resources, all while maintaining the appropriate level of public control over the project. The National Council for Public-Private Partnerships, *Testing Tradition: Assessing the Added Value of Public-Private Partnerships*, 2012 (available at: www.ncppp.org/resources/papers/WhitePaper2012-FinalWeb.pdf).

INTRODUCTION

Application of water to a beneficial use has been a key to the development of the western United States. The primary source of supply was initially surface water but in recent decades the source for new development has shifted to ground water. For many years the impacts of ground water pumping on surface water supplies was ignored across the western United States. Today these conjunctive impacts are widely recognized technically, legally, and administratively. Idaho's experience with conjunctive impacts is one focus of this article.

How do we move forward with optimum water resource development given the recognition of these conjunctive impacts? A second focus of this article is the role public and private entities in Idaho can play by working together to achieve beneficial conjunctive management of interconnected surface and ground water resources in a manner that encourages, promotes and facilitates the optimum development and use of the state's water resources for the overall benefit of the state and its citizens. See *2012 Idaho State Water Plan*, Policy 1E, Idaho Water Resource Board, adopted November 28, 2012, (available at www.idwr.idaho.gov/waterboard/WaterPlanning/StateWaterPlanning/State_Planning.htm).

Fundamental to this discussion is the difference between the terms "conjunctive administration" and "conjunctive management." The former term is now commonly used to refer to the combined priority administration of water rights from hydraulically-connected surface and ground water resources by the Director of the Idaho Department of Water Resources. By contrast, the term conjunctive management is used to refer to "actions other than water rights administration that can be taken to optimize the benefits and value of Idaho's water resources" through maintenance of a sustainable supply in basins where there is a hydraulic connection between ground and surface waters. *Id.* These terms are further discussed below.

This article starts by reviewing legal considerations. It then addresses the significant role of water rights adjudication in Idaho; describes water distribution and delivery entities; provides applications of conjunctive considerations; discusses the role of the private sector in water resource development; suggests implementation of public-private partnerships in the Eastern Snake Plain; and finally offers some insights for the future.

Editor's Note: Conjunctive water administration and management in Idaho has been extensively covered in previous issues of *The Water Report* due to that state's active engagement with the issues. For additional background on Idaho's conjunctive use actions, see the following major articles: Rassier, *TWR* #10; Fereday, *TWR* #40; Budge, *TWR* #64; and Moon, *TWR* #86.

Conjunctive Management

Key Principles

New Rights

Interim Authority

“Two Rivers” Concept

The Water Report

(ISSN 1946-116X)

is published monthly by
Envirotech Publications, Inc.
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Eugene, OR 97402

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Subscription Rates:

\$299 per year

Multiple subscription rates
available.

Postmaster: Please send
address corrections to
The Water Report,
260 North Polk Street,
Eugene, OR 97402

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LEGAL CONSIDERATIONS

Foundational Principles

The Prior Appropriation Doctrine has governed water rights usage in Idaho since before statehood. *Malad Valley Irrig. Co. v. Campbell*, 2 Idaho 411, 18 P. 52 (1888). The state constitution since its adoption in 1890 has mandated that water rights be governed by the “first in time is first in right” priority system. Idaho Const. art. XV, sec. 3. The Prior Appropriation Doctrine governs the use of both surface water and ground water in Idaho. Idaho Code §§ 42-103 and 42-229. A water right in Idaho is defined by source, quantity, date of priority, point of diversion, purpose of use, season of use, and place of use. *Id.* § 42-1411. An appropriation of water in Idaho must be for a useful or beneficial purpose. *Id.* at § 42-104. There is no statutory limitation on what purposeful uses of water may be recognized as beneficial. *State Dep’t of Parks v. Idaho Dep’t of Water Admin.*, 96 Idaho 440, 530 P.2d 924 (1974). The use made of the water, however, must not be determined to be wasteful or otherwise contrary to the local public interest. *See* I.C. §§ 42-203A(5) and 42-202B(3).

A new water right in Idaho can only be obtained through compliance with the statutory application, permit, and license procedures for the appropriation of water contained in title 42, chapters 1, 2 and 3, Idaho Code. *Id.* at §§ 42-103 and 42-229. The water right appropriation process is initiated by filing with the Idaho Department of Water Resources (IDWR) an application for permit to appropriate the public waters of the state in accordance with section 42-202, Idaho Code. The application for permit is processed by IDWR pursuant to the procedures and criteria provided in section 42-203A, Idaho Code.

Water Rights Administration

The Director of IDWR has direction and control over the distribution of water from all natural water sources within a state water district created pursuant to Idaho Code § 42-604. I.C. § 42-602. Water distribution is primarily accomplished by Watermasters acting under the supervision of the Director. In time of shortage, the water is distributed in accordance with rights of prior appropriation. *Id.* at § 42-607. With minor exceptions, water distribution within water districts was historically limited to the distribution of surface water. A change began in 2002 and 2003 when the Director, acting pursuant to statute, obtained authorization from the Snake River Basin Adjudication District Court to exercise interim administration authority over ground water rights in the administrative basins overlying the Eastern Snake Plain Aquifer (ESPA) in the Thousand Springs and American Falls areas. Since then, the Director has established state water districts across the Eastern Snake River Plain with appointed Watermasters responsible for the distribution of ground water rights from the ESPA.

A particularly important facet of water rights administration in the Snake River Basin is the provision of Idaho Code § 42-203B(2) providing that “[f]or the purpose 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.” This provision was enacted in 1986 to confirm the Milner zero minimum stream flow and to formalize in statute the “two rivers” concept, long an established staple of Idaho water policy.

The “two-rivers” concept means that for purposes of water rights administration in Idaho the Snake River is divided at Milner Dam, which is located upstream from Twin Falls. As a practical matter this means that the holders of water rights downstream from Milner are precluded from making calls for water above Milner — this includes preclusion of senior-priority right holders below Milner from making delivery calls against junior-priority rights above Milner. A zero minimum stream flow at the Milner U.S.G.S. Gaging Station was first designated by the State Water Plan in 1976 giving formal recognition to the “two rivers” concept by setting a “protected flow” of zero cfs. The “two-rivers” concept is based on the physical division of the Snake River Basin at Milner Dam and reportedly arose out of a 1920 plan prepared by the Board of Engineers:

Upstream from Milner Dam the Snake River is not deeply entrenched, but below the dam the river enters a deep canyon. This physical characteristic of the Snake River led the Board of Engineers to propose that the Snake River above Milner Dam be dedicated to irrigation because of the ease of diverting the flow through gravity irrigation. The Board of Engineers proposed that the main stem Snake River below Milner Dam should be devoted to hydropower because the flow of the river was largely inaccessible for agricultural development at that time. ...

The “two rivers” concept has been repeatedly reaffirmed as part of every major Snake River water project and resolution of every major water controversy. For example, Idaho Power Company’s [Hell’s Canyon Complex] water rights were subordinated to upstream consumptive uses, consistent with the “two rivers” concept. 2012 State Water Plan at 44.

Conjunctive Administration

The foundation for the conjunctive administration of surface and ground water rights was established with passage of the 1951 Idaho Ground Water Act. That act, as amended in 1953, affirmed the extension of

Conjunctive Management	<p>the traditional policies of the Prior Appropriation Doctrine to the development of the state’s ground water resources, providing that “while the doctrine of ‘first in time is first is right’ is recognized, a reasonable exercise of this right shall not block full economic development of underground water resources.” I.C. § 42-226. Importantly, with respect to conjunctive administration, the Act provided: “Water in a well shall not be deemed available to fill a water right therein if withdrawal therefrom of the amount called for by such right would affect, contrary to the declared policy of this act, the present or future use of any prior surface or ground water right or result in the withdrawing of the ground water supply at a rate beyond the reasonably anticipated average rate of future natural recharge.” <i>Id.</i> at § 42-237a.g. Thus, the act provided that ground water usage would be administered to protect both affected senior-priority rights — i.e., both ground and surface water rights — and to avoid mining of the source aquifer (use existing recharge).</p>
Conjunctive Control	<p>Four decades later, in response to requests from senior-priority right holders for administrative action the Director promulgated Rules for Conjunctive Management of Surface and Ground Water Resources. IDAPA 37.03.11. The rules adopted in 1994 provide procedures that govern IDWR’s response 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.” <i>Id.</i> at 37.03.11.001.</p>
“Mining” Disallowed	<p>[Editor’s Note: A “delivery call” is made by a senior water right owner to petition IDWR to regulate junior water rights so that the senior right can be satisfied]. The rules provide a necessary structure for IDWR to jointly administer interconnected surface and ground water rights and help facilitate the conjunctive management of the hydraulically-connected resources.</p>
“Delivery Call”	<p>In 2005, the Director issued the first orders under the conjunctive management rules in response to delivery calls made by senior surface right holders against junior-priority ground water users diverting water from the ESPA. These orders recognize that the water supply for the ESPA is hydraulically connected to the Snake River and tributary surface water sources at various places and to varying degrees. As a consequence of this recognition and based on simulations using a calibrated computer model of the ESPA, the Director determined that ground water withdrawals from certain portions of the ESPA for irrigation and other consumptive purposes cause reductions in spring flows tributary to the Thousand Springs reach of the Snake River. The orders are available at: www.idwr.idaho.gov/about/orders.htm. Before completion of the administrative process responding to the delivery calls, the surface right holders sought declaratory relief in court challenging the constitutional validity of the rules both facially and as applied. [Editor’s Note: A law is “facially” unconstitutional if a plain reading of the law — without regard to how the law is applied or the effects of the law — shows that the law has a constitutional flaw.] In <i>American Falls Reservoir Dist. No. 2 v. Idaho Dep’t of Water Res.</i>, 143 Idaho 862, 154 P.3d 433 (2007), the Idaho Supreme Court (Court) held the rules to be facially constitutional. The Court further held that the “as applied” challenge to the rules was premature prior to exhaustion of the administrative remedies.</p>
Hydraulic Connection	<p>Conjunctive Management</p>
Beneficial Uses	<p>Even though the court’s decision in <i>American Falls Reservoir Dist. No. 2</i> dealt with issues of water rights administration, the case holds important implications for the conjunctive management of interconnected surface and ground water resources because the case confirmed numerous foundational principles of Idaho’s Prior Appropriation Doctrine important to effective management. For example, the court confirmed the continuing need for “beneficial use” and reasonable means of diversion in the exercise of a water right as well as the state policy of full economic development of water resources, and the prohibition of waste. [Editor’s Note: Water must be needed and used for a “beneficial” or useful purpose, including irrigation, domestic, stockwater, commercial, etc., for the valid exercise of a water right]. The court found IDWR’s rules consistent with state constitutional principles in authorizing the Director to take into account the amount of storage water available to a senior surface water right holder before ordering the curtailment of a junior water right. Finally, the Court confirmed the importance of administrative fact-finding by the Director before curtailing the diversion of water under junior-priority water rights alleged to be causing material injury to more senior rights.</p>
Storage Affect	<p>The Idaho Legislature further advanced the pathway to more effective conjunctive management of interconnected surface and ground water resources in 2009 with its declaration that the appropriation and use of water for aquifer recharge purposes by any person or entity constitutes a beneficial use of water for which the Director of the Department of Water Resources is authorized to issue permits and licenses in compliance with applicable Idaho law and the state water plan. <i>See</i> I.C. § 42-234(2). The Legislature recognized that incidental ground water recharge benefits are often obtained when water is diverted and used for other purposes; however, this incidental recharge may not be used to claim or establish a separate water right for recharge purposes. <i>Id.</i> at § 42-234(5). The Legislature also acted in 2009 to give the Idaho Water Resource Board authority to approve or disapprove all ground water recharge projects proposing to divert natural flow water for a managed recharge project “in excess of ten thousand (10,000) acre-feet on an average annual basis.” <i>Id.</i> at § 42-237(a). [Editor’s Note: “natural flow water” is water that flows naturally in a surface water stream as opposed to water that has been stored and later released from a reservoir.] This Board approval is in addition to the normal approval required from the Director of the Department of Water Resources under chapter 2, title 42, Idaho Code, to initiate a new water right appropriation.</p>
Aquifer Recharge Purpose	
Incidental Recharge	

Conjunctive Management

Ground Water Recharge Criteria

State Water Plan

Recharge & Conjunctive Use

Recharge Goal

Board's Target

Additional Recharge Options

The statute provides that in determining whether such a ground water recharge 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; and 7) the state water plan and water policy formulated under other laws of this state. *See Id.* at § 42-237(b). Note that criterion number seven as amended in 2009 references the state water plan, which includes as a component the Eastern Snake Plain Aquifer Comprehensive Aquifer Management Plan (ESPA CAMP) adopted by the Water Resource Board in 2009 and approved by the Idaho Legislature. 2009 Idaho Sess. Laws, ch. 223, p. 703.

THE COMPREHENSIVE STATE WATER PLAN & AQUIFER RECHARGE

The Idaho State Water Plan is composed of Part A – statewide policies, goals and objectives; and Part B – component water plans for individual basins, sub-basins, or parts of basins. *See I.C. § 42-1734A.* Revisions to Part A of the plan were adopted by the Idaho Water Resource Board (Board) on November 28, 2012, and the revised plan is before the 2013 Session of the Idaho Legislature for review and approval by House Bill 38.

Policy 1E of the plan provides: “Where a hydraulic connection exists between ground and surface waters, they should be conjunctively managed to maintain a sustainable water supply.” 2012 State Water Plan at 11. Policy 1I of the plan further provides: “Aquifer recharge should be promoted and encouraged, consistent with state law.” *Id.* at 15. The policy discussion assures that “[t]he Board supports and assists in the development of managed recharge projects that further water conservation and increase water supplies available for beneficial use.” *Id.* Another policy supporting conjunctive management initiatives is Policy 4E stating that the development of new aquifer storage in the Snake River Basin resulting from managed recharge is in the public interest. *Id.* at 55. Finally, Policy 4B — addressing the zero minimum flow on the Snake River at Milner Dam — speaks to the potential water supply for new aquifer storage in the ESPA by reasserting the long-standing policy of the State encouraging the development of unappropriated flows above that point “for existing and future agricultural development and other beneficial uses in the Snake River Basin above the Dam.” *Id.* at 46.

The ESPA CAMP component of Part B of the State Water Plan referenced above sets a long-term objective to incrementally achieve a net ESPA water budget change of 600 thousand acre-feet (kaf) annually by the year 2030 through a mix of management actions, including aquifer recharge of approximately 150-250 kaf/year using the Board’s natural flow water permit and storage water when available. 2009 ESPA CAMP at 10; available at: www.idwr.idaho.gov/WaterBoard/WaterPlanning/CAMP/ESPA/default.htm. Phase I of the ESPA CAMP (years 1-10) sets a water budget change objective of between 200-300 kaf/year, including aquifer recharge of approximately 100 kaf/year using the Board’s natural flow water permit and storage water when available. *Id.* at 11.

The aquifer recharge target changes under the ESPA CAMP are focused on benefits from recharge projects “using the Board’s natural flow water permit and storage water when available.” The average annual recharge targets are not intended to serve as a limitation on the amount of recharge to the aquifer that may be authorized using water rights or water supplies not controlled by the Board. To emphasize this point, the ESPA CAMP states that the “Plan in no way modifies or diminishes existing state water law including the prior appropriation doctrine, or the power and duties of the Director of the Department.” *Id.* at 3. Thus, for example, the Plan should not be viewed as a limitation on the ability of water users to participate in non-Board aquifer recharge projects using their storage water supplies in accordance with Idaho law.

The potential need for recharge projects outside the ESPA CAMP umbrella is made evident by the Board’s determination that the “Plan is not designed to provide mitigation credit for any individual group, although it is expected that Plan implementation should reduce the demand for administrative solutions.” *Id.* at 5. Although it is expected that Plan implementation will reduce the demand for administrative curtailments on the ESPA, it is not expected that Plan implementation will eliminate the need for private recharge projects in order to mitigate for the depletion-effects of pumping under junior-priority ground water rights. Nothing in the Plan purports to limit or otherwise hinder the right of water right holders on the Eastern Snake River Plain from utilizing their water rights for authorized beneficial purposes in accordance with Idaho law, including aquifer recharge purposes. Likewise, nothing in the Plan restricts the right of junior-priority ground water right holders from taking actions in accordance with Idaho law, including ground water recharge, to mitigate for the depletion-effects of their pumping when the depletions cause injury to senior-priority rights from interconnected sources.

Conjunctive Management

Legislative Proposals

Adjudication Nears Completion

Conjunctive Administration Provisions

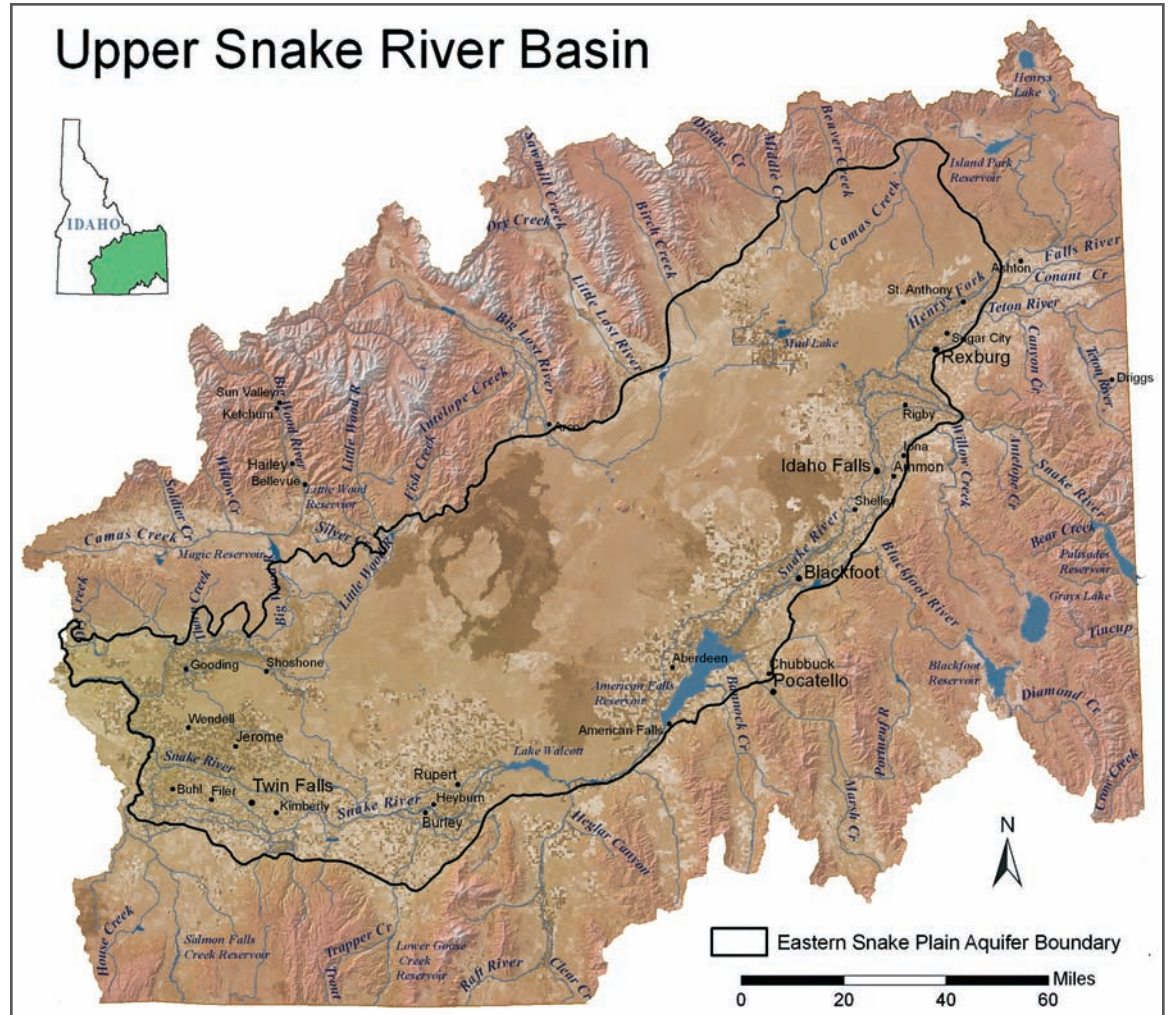
Proposed Statutory Changes

In 2012, IDWR drafted legislative changes for ground water recharge with the intent of initiating public discourse on this topic. If approved, these changes would significantly modify the current statutory regime relating to aquifer recharge projects in the state. Accordingly, the proposed changes were recently discussed by the Idaho Water Users Association Legislative Committee and referred to a Working Group. This establishes a thorough review process which is unlikely to produce a product in time for the 2013 session, but could result in proposed legislation for the 2014 session.

WATER RIGHTS ADJUDICATION & CONJUNCTIVE ADMINISTRATION IN IDAHO

The Snake River Basin Adjudication (SRBA) was commenced on November 9, 1987, to adjudicate all water rights from surface and ground water sources within the Snake River Basin in Idaho, comprising about 87 percent of the state. The adjudication was later adjusted to provide that the participation of de minimis domestic and stockwater uses from ground water was optional. More than 155,000 water rights were claimed, reviewed by IDWR, submitted to the SRBA Court in the form of Director’s Reports, made subject to review by all parties, and decreed by the SRBA Court. Fewer than 150 claims are still contested and unadjudicated at this time. Thus, the SRBA is almost completed and the ground water rights decreed in the SRBA are eligible to be added to water districts for conjunctive delivery. The process for adding the rights to a district is beyond the scope of this article, but the legal mechanisms are in place and this action has already been completed in many basins. The process to either add ground water rights to a district or to create a special district for ground water rights takes from six months to a year to accomplish.

One purpose of the SRBA was to address conjunctive administration of water rights within the Snake River Basin. This issue became Basin Wide Issue No. 5. The SRBA Court, IDWR, and the parties worked diligently on this issue for more than two years. The resulting Memorandum Decision and Order of Partial Decree on this matter (dated February 27, 2002) provides that the SRBA Court will set forth for each sub-basin three General Provisions related to conjunctive administration. The first General Provision for the sub-basin specifies a list of water rights that shall be administered separately from all



Conjunctive Management

Connected Sources

Legally Connected

Water Districts

Ground Water Distribution

Mitigation Plans

Districts' Authority

Recharge Project Flexibility

other rights in the sub-basin in accordance with the Prior Appropriation Doctrine as established by Idaho law. This category includes water rights that are to be administered separately from other rights because previous court decisions decreed streams to be administered as “non-tributary” (not connected to the other stream for regulatory purposes). The second General Provision for the sub-basin specifies all rights to be delivered as separate from all other rights in the Snake River Basin in accordance with the Prior Appropriation Doctrine as established by Idaho law. This category provides an opportunity to identify water rights from that sub-basin which are to be administered separately from the entire Snake River Basin — no water rights were ever found to be included in this category. The third General Provision for the sub-basin provides that except as specified in the first two General Provisions, water rights within the sub-basin will be “administered as connected sources of water in the Snake River Basin in accordance with the prior appropriation doctrine as established by Idaho law.” In this way the SRBA court decreed the legal interconnection of ground water and surface water for all water rights adjudicated by the SRBA, and provided a legal basis for subsequent implementation of conjunctive administration within the basin. Thus, each of the more than 100,000 water rights with a ground water source in the SRBA was legally specified to be conjunctively connected with other water rights in the Snake River Basin.

The SRBA does not include the Bear River Basin in southeastern Idaho, and adjudication of this basin has not been authorized. The SRBA also does not include Idaho’s northern panhandle basins. However, adjudication of these basins was commenced on November 12, 2008, starting with the Coeur d’Alene River and tributaries.

WATER DISTRIBUTION & DELIVERY ENTITIES

State Water Districts

State water districts are created by order of the Director of the Department of Water Resources, pursuant to I.C. § 42-604, following a judicial determination of the rights to the use of the waters of a public water source or system. A water district is responsible for the distribution of water to the various ditches, canals, or other diversion works diverting water from the adjudicated natural water sources within the district. *Id.* § 42-602. Water distribution in water districts is accomplished by Watermasters, acting under the supervision of the Director, who are elected annually by the water users. In times of shortage, the law provides for the distribution of water in accordance with rights of prior appropriation. *Id.* § 42-607.

In 2002, the Director, acting with authorization from the SRBA district court, began creating water districts, initially in the Thousand Springs and American Falls areas, for the distribution of ground water rights in the administrative basins overlying the ESPA. The Watermasters for these districts are authorized to curtail illegal diversions, measure and report diversions, enforce the provisions of any stipulated agreement, and curtail out-of-priority diversions that are not covered by a stipulated agreement or a mitigation plan approved by the Director when the diversions are determined by the Director to be causing injury to senior-priority surface water rights or senior-priority ground water rights.

Ground Water Districts

The Legislature in 1995 provided for the establishment of ground water districts to assist in the management and supervision of water use. I.C. §§ 42-5201 to 42-5276. An important purpose of ground water districts is to develop and operate mitigation plans designed to mitigate any material injury caused by ground water use within the district upon senior water users — either within or outside the district boundaries. Nine ground water districts covering much of the ESPA have been established under these statutes. The districts have authority to construct and operate ground water recharge or storage projects and “to acquire water rights or to appropriate the unappropriated waters of the state for the purpose of storing waters in, or recharging, ground water basins within the district to aid in the efficient irrigation of district lands, to serve domestic, commercial, municipal or industrial uses within the district, or to carry out a mitigation plan.” *Id.* at § 42-5225. The Legislature has granted ground water districts the discretion to exercise a broad range of authorities related to aquifer recharge projects and the development and operation of mitigation plans.

Irrigation Districts

An irrigation district is a quasi-municipal entity with taxing authority formed under the provisions of title 43, Idaho Code, for the purpose of delivering water from an irrigation project to landowners putting the water to beneficial use within a specific geographic boundary. Irrigation districts possess unique statutory authority for the construction and operation of ground water recharge projects for the purpose of “recharging ground water basins within the district to aid in the efficient irrigation of district lands.” I.C. §43-343. A ground water recharge project can be utilized by an irrigation district either to increase the efficient usage of its existing senior-priority water rights or to provide a source of water to mitigate for the depletion-effects due to the use of junior-priority ground water rights within the district. A practical effect of section 43-343 is to authorize an irrigation district to construct and operate a recharge project to benefit district lands without going through the process of creating a separate recharge district under the provisions

Conjunctive Management

Senior Surface Rights

Underground Storage

Regulation of Rights

of chapter 42, title 42, Idaho Code. In addition, it may be possible for other governmental entities, under the “joint powers” provisions of sections 67-2327 and 67-2328, Idaho Code, to join with an irrigation district in the development of a recharge project with benefits extending to lands beyond the boundaries of the irrigation district.

Canal Companies

As discussed above, ground water districts and irrigation districts both have considerable discretion to exercise a broad range of authorities related to ground water recharge projects and the development and operation of mitigation plans. In addition, there are many canal companies operating in Idaho. These are not-for-profit corporations that primarily deliver irrigation water to their shareholder-members. These companies, both large and small, have an important role to play in the implementation of conjunctive management of interconnected ground and surface waters in Idaho. Their importance is due to the early-priority natural flow and storage water rights that they hold and because of the extensive canal systems that they operate.

Aquifer Recharge Districts

The 1978 Idaho Ground Water Recharge Act sets forth the procedures for formation and operation of an aquifer recharge district. Chapter 42, Title 42, Idaho Code. The procedures are similar to those existing for the formation and operation of other special purpose districts dealing with interests in real property. Initial authorization existed only for a pilot project district described in section 42-4201, however, the formation provisions now have applicability state-wide. Among the powers and duties of the board of directors of a recharge district is authority “to construct and operate diversion works, recharge ponding areas and injection wells, subject to such standards and specifications as the director of the department of water resources shall determine.” I.C. § 42-4212(4). The Act further provides that “[t]he appropriation and storage underground of waters by the aquifer recharge district...is hereby declared to be a public use, subject to the regulation and control of the state in the manner prescribed by law.” *Id.* at §42-4212(7).

APPLICATION OF CONJUNCTIVE CONSIDERATIONS

Based on the background information above, the reader should be ready to apply the principles of conjunctive administration and conjunctive management in Idaho. A specific example is instructive.

Figure 1 portrays the basic scenario. Mrs. Adams is the first to divert and apply water to a beneficial use on a stream, earning a date of priority of June 16, 1887. Mr. Black is successful in applying his diverted water to a beneficial use a day later. Under the appropriation doctrine both can use water when it is available — but during periods of shortage Mr. Black must curtail his use to allow for full delivery to Mrs. Adams — to the extent she applies the water to a beneficial use. Mrs. Clark established a date of priority nearly 100 years later, June 16, 1982, by filing an application for permit with IDWR, drilling a well, and ripening the permit into a license. Mr. Black has been frustrated because while he endures curtailment, Mrs. Clark continues to pump ground water. And what if there is not just one well upstream but more than 4,000 irrigation wells, as is the case in the Eastern Snake Plain Aquifer? If the fairness of the Prior Appropriation Doctrine is to be applied, the impacts of ground water pumping must be mitigated.

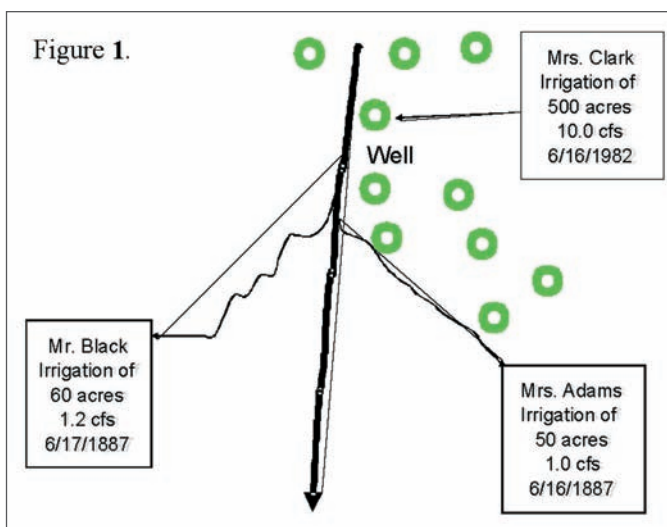
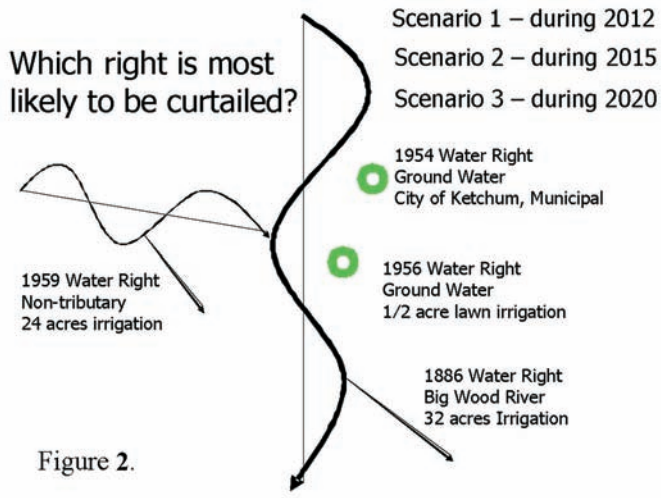


Figure 1. Example of Conjunctive Administration in Idaho

Conjunctive Management

Regulation

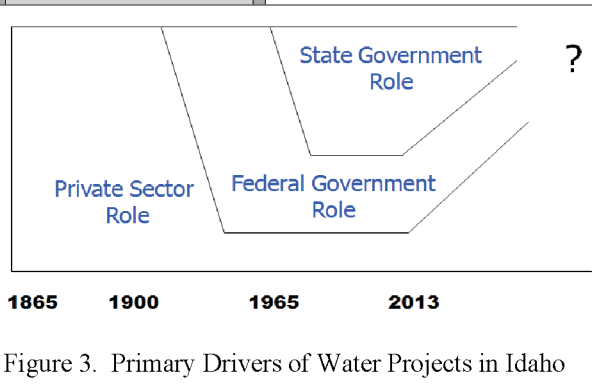
Now the reader is ready for the test question, portrayed in Figure 2. In this real-world scenario on the Big Wood River in Idaho, there are four representative diverters (among others). We have: (1) an 1886 water right for irrigation from the Big Wood River; (2) a 1959 water right from a stream that was declared by the Court in the 1920s Frost Decree to be non-tributary to the Big Wood River (and the non-tributary nature was confirmed as res judicata (previously determined) by the SRBA Court); (3) a 1956 water right for a half-acre of lawn diverted from a well; and (4) a 1954 water right for the City of Ketchum for Municipal purposes, including lawn watering. As of 2012 the ground water rights had not yet been added to the water district as the SRBA had just been concluded in the basin. In Scenario 1, during 2012 as flows began to recede during the summer months, which water right was first curtailed by the Watermaster? The answer is that the one and only right curtailed by the Watermaster in 2012 was the 1886 water right for irrigation. The two ground water rights were not yet added to the water district so they could not be distributed (regulated), and the 1959 water right is non-tributary — and also not distributed by the Watermaster. In Scenario 2, during 2015, we anticipate that ground water rights will be added to the water district so the first right to be curtailed will be the lawn irrigation portion of the City of Ketchum water right, as it is the most junior of the involved rights. The non-consumptive in-house portion of a municipal right (that portion needed for in-house uses such as cooking, bathing, and toilets) is considered to be pass-through water (quickly returned to the river via the waste treatment plant) and is not subject to a call by a senior user. In Scenario 3, during 2020 we anticipate that even small lawns will need mitigation due to their cumulative impact — but adding these smaller uses to the water district will require a change in IDWR policy to reduce the size of an exempted parcel. Such a reduction in the size of a parcel exempted from a mitigation requirement (see below) might require a change in the law.



Curtailment or Mitigation

THE PRIVATE SECTOR & WATER DEVELOPMENT IN IDAHO

Thus far, this article has been establishing the basis for understanding conjunctive administration — i.e., the basis for regulation and control of ground water diversions in conjunction with surface water use. When conjunctive administration is implemented in a basin, ground water rights are typically junior to the surface water rights. Thus, when a delivery call is made by a senior water right holder, one of the first actions of IDWR or the Water District is to distribute a letter to the holders of the ground water rights. The letter will provide two options, either: (1) curtail the diversion and use of water; or (2) provide adequate mitigation to the senior water right holders. Anticipating such a call gives rise to implementing a conjunctive management approach, whereby water is saved in the aquifer via ground water recharge during times of plenty to be available for mitigation during times of scarcity. A complete description of this ground water recharge mitigation process is beyond the scope of this article, but an initial basic consideration is to determine who — or what agency or entity — should be responsible to provide conjunctive management planning and implementation. Should it be the public sector, the private sector, or a combination of the two? In aid of answering this question it is helpful to look back at history.



The evolution of primary drivers depicted in Figure 3 applies to water projects throughout the western United States. In the nineteenth century virtually all water projects were privately funded. In the twentieth century the federal government via the US Bureau of Reclamation and the Army Corps of Engineers assumed a major funding role for new projects. State governments sponsored some projects starting mid-century. With the advent of the twenty-first century, the ability of federal and state governments to provide funding has waned but the public sector is being looked to for major investments.

OPPORTUNITIES FOR PUBLIC-PRIVATE PARTNERSHIPS

Conjunctive

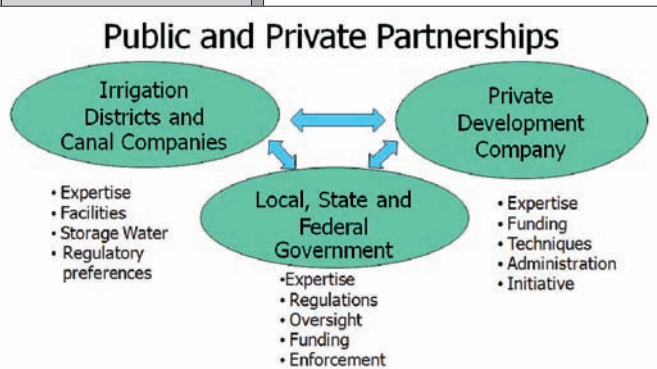


Figure 4. Public and Private Partnerships

During recent years the term Public-Private Partnership (PPP) has represented the mutually beneficial and symbiotic linkages of the public and private sectors for creating and constructing optimally feasible water projects. The PPP concept has grown so rapidly that the National Council of Public-Private Partnerships was formed (*see* www.ncppp.org). Figure 4 depicts some of the mutual strengths of this approach.

One reason to form a PPP is that ground water recharge project costs can be sufficiently high that one entity alone cannot construct an adequately sized project. Also, the skill sets and strengths of public and private entities can be symbiotic, resulting in project efficiencies if the public and private entities combine efforts.

Take for example the graph in Figure 5, which is a conceptual diagram of the potential for recharge. Over the years incidental recharge has declined throughout the State of Idaho, due to improved on-farm and water delivery efficiencies. [Editor’s Note: Incidental recharge historically occurred when water was diverted for irrigation and a certain percentage of the water recharged the aquifer rather than being utilized by the crop.] To maintain the needed aquifer recharge, the State of Idaho has sponsored managed recharge by incentivizing water delivery organizations to carry water early and late in the season when canals would otherwise be empty. However, these efforts have been inadequate in compensating for reductions to incidental recharge. By partnering with the private sector the State has an opportunity to increase recharge that is additional to the totally state-sponsored efforts. Approximately 30,000 AF was privately recharged in late 2011 under the auspices of Upper Snake Mitigation Solutions, LLC (this quantification was verified by Bill Quinn, then the Recharge Coordinator for IDWR).

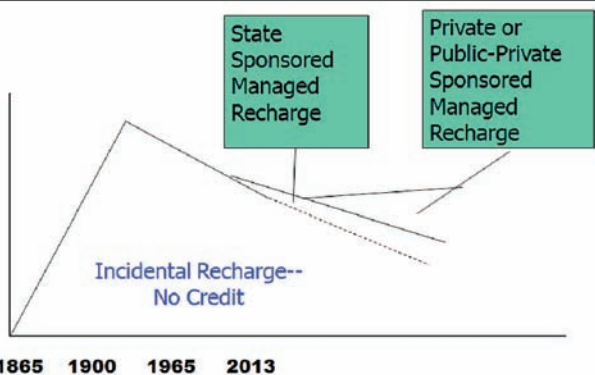


Figure 5. Role of State and Private Entities for Recharge

THE EASTERN SNAKE PLAIN AQUIFER

As noted above, the Eastern Snake Plain Aquifer Comprehensive Aquifer Management Plan (ESPA-CAMP) was passed into law by the Idaho State Legislature in 2009. ESPA-CAMP establishes a long-term program for managing water supply and demand in the ESPA through a phased approach to implementation, together with an adaptive management process to allow for adjustments or changes in management techniques as implementation proceeds. Due to the inherent complexities in the management and responses of the river and aquifer to water budget changes, a very deliberate choice was made to incrementally implement the various mechanisms proposed in ESPA-CAMP. The goal of ESPA-CAMP is to “Sustain the economic viability and social and environmental health of the Eastern Snake Plain by adaptively managing a balance between water use and supplies.”

ESPA-CAMP OBJECTIVES ARE TO:

- Increase predictability for water users by managing for a reliable supply
- Create alternatives to administrative water use curtailment
- Manage overall demand for water within the Eastern Snake Plain
- Increase recharge to the aquifer
- Reduce withdrawals from the aquifer

The sooner ESPA-CAMP is implemented the better the chance of achieving these stated goals and objectives.

The State of Idaho and the Idaho Water Resource Board (Board), by implementing a collaborative approach to water management, demonstrated that public and private interests that depend on the aquifer, springs, and the river can work together to develop a comprehensive water management plan. The Board determined that it was essential for the State and the Board to continue to provide direction and financial support to implement ESPA-CAMP. Public and private individuals and organizations devoted significant time and effort toward educating each other about their concerns and the ways in which different interests are affected by water management decisions. This education process and the trust relationships that

Supply & Demand Program

Objectives

Collaborative Approach

Conjunctive Management

Funding Issue

were established were vital to the development of ESPA-CAMP. It was determined that building on the foundation and momentum established within the planning committee was key to successful plan implementation. An Implementation Committee was formulated which included most of the original planning committee members to assist the Board as it moved forward with ESPA-CAMP implementation.

Probably the most difficult and controversial issue the planning committee addressed was how to fund implementation of the plan. In order to achieve Phase One, which included the first ten years of water management objectives, the estimated cost ranged from 70 to 100 million dollars. The Board decided to take under consideration the feasibility of establishing a state water project fund. Power franchise fees, sales tax, product tax, or other sources could be collected and deposited in the state water project fund and matched with contributions by water users and other partners. Where water users and implementation partners successfully secure their 60 percent of the funding for a project or group of projects, the Board would request that the legislature authorize matching funds for the proposed projects. A proposed funding mechanism that established fees or assessments levied against the water users for the private 60 percent contribution was formulated and proposed. However, during the process of developing and passing legislation that would have provided the necessary authorities, a group of water users that had been represented on the planning committee, did not support the funding mechanism and successfully defeated the proposed legislation. Hence, a funding mechanism was never adopted.

Recharge Need

The Eastern Snake Plain Aquifer remains a location where a major ground water recharge effort is warranted and needed, and where a public-private partnership should be established and implemented. Our past efforts seeking to implement ESPA-CAMP for the Eastern Snake Plain Aquifer demonstrate a number of key principles that may provide useful guidance for future efforts: 1) building trust is the most vital and challenging aspect of developing partnerships; 2) relationships that come from collaborative processes are a primary way to build or compromise trust; 3) do not take for granted success in the political process just because you have majority support; and 4) the most difficult issues to resolve are those that cost real money.

A collection approach that should be further evaluated involves using water districts as vehicles for collecting contributions from water user groups, including irrigated agriculture, municipalities, spring-users, and industrial/commercial users. Currently there is no official working group focused on funding for the ESPA CAMP, but the Board continues to be interested in recharge.

LESSONS LEARNED & RECOMMENDATIONS

Statutory Need: Aquifer Recharge Credits

Presently Idaho statutes adequately describe and support implementation of conjunctive management and public-private partnerships to support recharge efforts, with one exception. If a private entity desires to conduct aquifer recharge, as was done in the fall of 2011, the IDWR Director has indicated that the present statutory structure does not provide sufficient basis to support the creation and tracking of aquifer recharge credits. The Director drafted statutory language intended to fill this gap, but as indicated above the draft language was routed to a Working Group for review. Thus, although this legislative review might not solve the statutory inadequacies in 2013, Idaho now has a process underway to address this issue.

Modeling

Implementation of both conjunctive administration and conjunctive management require a ground water model. In the case of the Eastern Snake Plain Aquifer model, the same model is to be used for both purposes. This adds credibility to the model and implements a state policy position that if a model is good enough to be used for curtailment of a junior ground water user, it is good enough to account for and track ground water recharge efforts to allow for assigning conjunctive management recharge credits.

Water Bank

Presently Idaho has an effective and well-run water supply bank with two primary components overseen by the Idaho Water Resource Board. The first component — the statewide bank — contains more than 750 water rights that have been leased to the bank for use by other water users. As a second component the Board appoints Local Committees to operate Rental Pools of storage water in several locations throughout the state. As credits for ground water recharge are contemplated, some have suggested that new water rights for ground water recharge should be held exclusively by the Board. This concept will be a primary issue for discussion by the Working Group tasked with reviewing the ground water recharge legislation. A fundamental concern about this concept is that it seems at odds with: (1) the constitutional provision allowing private sector appropriation of water and application to a beneficial use; and (2) the efforts around the United States to form public-private partnerships, because limiting the holder of water rights for ground water recharge to the Board will have a chilling effect on private investment in the process; and (3) existing statutory provisions that authorize and encourage ground water districts, irrigation districts, and aquifer recharge districts to conduct ground water recharge.

Recharge Credits

Conjunctive Modeling

Private & Public Ownership

NEXT STEPS

**Conjunctive
Management****Adjudication
Moving
Forward****Possible Roles****Drivers****Curtailment
Coming**

Idaho is fortunate to have clean and highly productive aquifers around the state. Now that the SRBA is largely completed and the water right adjudication is being conducted in Northern Idaho, the large challenge of decreeing ground water rights is being resolved. Senior surface water users who have long objected to the impacts of ground water pumping by juniors are demanding relief, and the laws provide for that relief. Letters will be sent to ground water holders around the state with two choices — either curtail pumping or provide mitigation. The stage is set to begin to manage water conjunctively so as to provide an opportunity for the junior ground water users to continue to make beneficial use of water for irrigation of crops and urban landscapes, industrial and commercial uses, and any other uses that have consumptive components.

How Idahoans go about managing water sources conjunctively is the challenge. Should we wait for an “inspirational” drought and hope for a legislative solution — somehow hoping that a taking from the senior water right holders will be deemed acceptable? This did not work for the junior pumpers in the Arkansas River Valley of Colorado. Should we wait for the state or the federal government to take care of the ground water recharge effort despite the shrinking budgets for existing programs and an almost total lack of funding for capital expansions? Should we leave the problem to be solved by the private sector, ignoring the vast powers assigned to public entities such as irrigation districts, municipalities, ground water districts and others?

The best solution appears to be a joint effort — employing a combination of skills, powers and capabilities via public-private partnerships. On one hand, the private sector will be seeking to earn a reasonable profit. On the other hand, profit is a good motivator — it has been a primary driver in developing our nation. Government can be helpful and encouraging, and guide the effort towards good decision-making and leveling of playing fields. But government is not well-suited to do everything for a project, including conceptualization, funding, design, permitting, construction, oversight, regulation, and records-keeping.

Time is running out for ground water users in Idaho. The decreeing of most of the water rights in the SRBA enables these water rights to be added to water districts and thus subject to Watermaster control. During the past six years most of the hydrographs statewide have been average or above. When the hydrographs inevitably dip below average the senior surface water users who are materially injured by junior pumping of ground water will rightly demand conjunctive delivery by priority and curtailment of junior users. The Director of IDWR will have no choice but to distribute water accordingly. The water resource development community should act quickly to form public-private partnerships and move forward to develop conjunctive management options.

FOR ADDITIONAL INFORMATION:

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Idaho State Water Plan 2012 available at: www.idwr.idaho.gov/waterboard/WaterPlanning/Statewaterplanning/State_Planning.htm

Dave Tuthill is the founder of Idaho Water Engineering, LLC. This Idaho company presently includes more than a dozen technical professionals, each of whom have a minimum of 30 years of experience in their respective disciplines. Dave worked for the Idaho Department of Water Resources from 1976 through his retirement from the State of Idaho in 2009. During the period from January 1, 2007 through June 30, 2009, he had the privilege of serving as Director of the agency. Dave earned a B.S. degree in Agricultural Engineering from Colorado State University in 1974, a M.S. degree in Civil and Environmental Engineering from the University of Colorado in 1975, and a Ph.D. in Civil Engineering from the University of Idaho in 2002. He retired from the Engineer Branch of the U.S. Army Reserve as a Colonel in 2004.

Phil Rassier holds a J.D. degree from the University of Idaho College of Law. He worked for the Idaho Attorney General's Office from 1976 to 2010, serving for many years as the chief deputy attorney general at the Idaho Department of Water Resources. Following retirement in 2010, Phil began serving as a project advisor for Idaho Water Engineering, LLC. He is an inactive member of the Idaho State Bar and presently resides in France.

Hal Anderson began his Idaho career in 1975 at the University of Idaho in the College of Natural Resources (CNR), after completing a four-year tour of duty in the U.S. Air Force. Hal was on staff at CNR and after completing his Masters degree came to the Idaho Department of Water Resources (IDWR) in 1981. Hal was Technical Services Bureau Chief for 12 years prior to his promotion to Planning and Technical Services Division Administrator in 1999. As division administrator Hal managed and supervised the hydrogeologists, hydrologists, planners, modelers, engineers and GIS specialists that provided the technical support to IDWR and the Water Board. Hal also served as the lead staff person for the Idaho Water Resource Board. As lead staff person Hal managed Board programs, represented the Board in various professional and political capacities including working directly with the Governor's Office and the Idaho Legislature. Hal is currently Managing Partner of Idaho Water Engineering, LLC.