



Idaho Soil & Water Conservation Commission

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ITEM #16

TO: Chairman Bronson and Commissioners Radford, Stutzman, Wright, and Trebesch
FROM: Teri Murrison, Administrator
DATE: April 25, 2012
RE: State Water Plan Update

As you know, the Idaho Department of Water Resources/State Water Board (IDWR) is revising the Idaho State Water Plan (see attached Draft IDWR State Water Plan). In January, staff prepared and Commissioners approved early comments which were unofficially submitted to the IDWR (attached) prior to the release of the Draft.

IDWR will hold public hearings on the Draft Plan around the state and testimony will be taken during those hearings. At the conclusion of the public comment period (anticipated to be September 2012), the Board will review the testimony and other comments received and make final modifications prior to adopting a final Plan. The Plan will then be submitted to the Idaho Legislature for their approval in the 2013 legislation session.

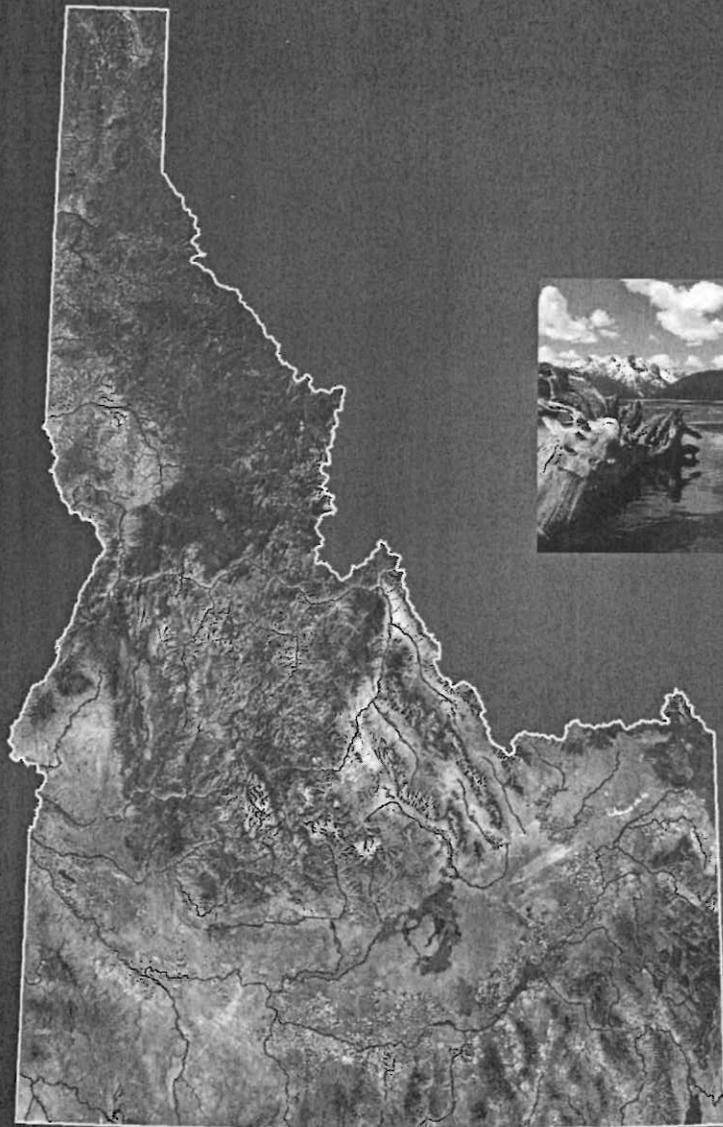
We will not review the Draft Plan at your meeting since it was just released to us, however staff will review and prepare draft comments for your consideration at the June 6th meeting. Please review the Draft and if you have suggestions or comments to add, forward them to me for discussion at your June meeting.

ACTION: For information only

Attachments:

- Draft IDWR State Water Plan
- Jan 2012 SWC Memo to IDWR on Draft State Water Plan

IDAHO STATE WATER PLAN



IDAHO WATER RESOURCE BOARD

PROPOSED MAY 2012

“There shall be constituted a Water Resource Agency, composed as the Legislature may now or hereafter prescribe, Additionally, the State Water Resource Agency shall have power to formulate and implement a state water plan for optimum development of water resources in the public interest. The Legislature of the State of Idaho shall have the authority to amend or reject the state water plan in a manner provided by law”

Idaho Constitution, Article XV, Section 7

State of Idaho
THE STATE WATER PLAN

C.L. “Butch” Otter, Governor

Idaho Water Resource Board

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Chairman

Roger W. Chase
Vice-Chairman

Robert Graham
Secretary

Vince Alberdi
Leonard Beck
Charles “Chuck” Cuddy
Peter Van Der Meulen
Jeff Raybould

Idaho Water Resource Board
Proposed Revision
May 2012

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Robert M. Bandy, Priest River
Brent J. Bell, Rexburg
Mary T. Brooks, Boise
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Gary Chamberlain, Challis
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D. Mike Satterwhite, Lewiston
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James Sawver, Eden
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Richard W. Wagner, Lewiston
J.D. Williams, Boise
D. Richard Wyatt, Lewiston
George L. Yost, Emmett

May 18, 2012

To the Citizens of Idaho:

<insert letter from Chairman>

Insert Resolution of Adoption by the IWRB

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THE WATER PLANNING PROGRAM

The Idaho Comprehensive State Water Plan (“State Water Plan” or “Plan”) was adopted by the Idaho Water Resource Board (“Idaho Water Resource Board” or “Board”) to guide the development, management, and use of the state's water and related resources. The wise use and management of the state’s water is critical to the state’s economy and to the welfare of its citizens. The Plan seeks to ensure that through cooperation, conservation, and good management, future conflicts will be minimized and the optimum use of the state’s water resources will benefit the citizens of Idaho. The Plan is subject to change so as to be responsive to new opportunities and needs.

Constitutional Authority

Article XV, section 7 of the Idaho Constitution provides the authority for the preparation of a Comprehensive State Water Plan. This constitutional amendment was adopted in November 1964 following a statewide referendum and states:

There shall be constituted a Water Resource Agency, composed as the Legislature may now or hereafter prescribe, which shall have power to formulate and implement a state water plan for optimum development of water resources in the public interest; to construct and operate water projects; to issue bonds, without state obligation, to be repaid from revenues of projects; to generate and wholesale hydroelectric power at the site of production; to appropriate public waters as trustee for Agency projects; to acquire, transfer and encumber title to real property for water projects and to have control and administrative authority over state land required for water projects; all under such laws as may be prescribed by the Legislature.

Article XV, section 3 of the Idaho Constitution provides for the appropriation and allocation of water. Section 3 provides that:

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 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 the 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 have preference over those using the same for manufacturing or agriculture 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.

Legislative Authority

Article XV, section 7 of the Idaho Constitution provided for the creation of a "Water Resource Agency" but did not establish the agency. In 1965, the 38th Legislature established the Idaho Water Resource Board, and directed that (as amended):

The Idaho Water Resource Board shall, subject to legislative approval, progressively formulate, adopt and implement a comprehensive state water plan for conservation, development, management and optimum use of all unappropriated water resources and waterways of this state in the public interest.

Idaho Code § 42-1734A(1).

To assist the Board, the legislature provided for the director of the Department of Water Resources ("Department"):

To perform administrative duties and such other functions as the Board may from time to time assign to the Director to enable the Board to carry out its powers and duties.

Idaho Code § 42-1805(6).

Article XV, section 7 was amended by the electorate during the general election of November 6, 1984. The amendment provides that:

The Legislature of the State of Idaho shall have the authority to amend or reject the state water plan in a manner provided by law. Thereafter any change in the state water plan shall be submitted to the Legislature of the State of Idaho upon the first day of a regular session following the change and the change shall become effective unless amended or rejected by law within sixty days of its submission to the Legislature.

Chapter 17 of title 42, Idaho Code, was amended in 1988 to designate the Plan as the Comprehensive State Water Plan Part A. Plans developed for specific geographic areas became components of the Comprehensive State Water Plan Part B.

The board may develop a comprehensive state water plan in stages based upon waterways, river basins, drainage areas, river reaches, ground-water aquifers, or other geographic considerations.

Idaho Code § 42-1734A(2).

As part of the comprehensive state water plan, the board may designate selected waterways as protected rivers as provided in this chapter.

Idaho Code § 42-1734A(1).

The authority to designate "protected rivers" derives from the state's power to regulate activities within a stream bed including stream channel alterations, water diversions, the extraction of minerals or other commodities, and the construction of impoundments.

Legislation in 2008 provided for the development of a statewide comprehensive aquifer management planning and management effort and fund. Idaho Code §§ 42-1779 and 42-1780.

Pursuant to the provisions of Idaho law and legislative funding approval, the Idaho water resource board and the Idaho department of water resources shall conduct a statewide comprehensive aquifer planning and management effort over a ten (10) year period of time beginning in fiscal year 2009.

Idaho Code § 42-1779.

Idaho Water Resource Board Programs

Pursuant to its constitutional and statutory authorities, the Board:

1. Formulates, adopts, and implements the State Water Plan, River Basin Plans, and Comprehensive Aquifer Management Plans.
2. Designates natural and protected rivers and files applications for and holds minimum stream flow water rights.
3. Provides financial assistance for water development and conservation projects in the form of revenue bonds, loans, and grants.
4. Establishes programs that address specific water resource issues at the direction of the Idaho Legislature.
5. Adopts rules governing:
 - * Well Construction
 - * Well Driller Licensing
 - * Construction and Use of Injection Wells
 - * Drilling for Geothermal Resources
 - * Mine Tailings Impoundment Structures
 - * Safety of Dams
 - * Stream Channel Alteration

The Department administers these programs.

6. Hears appeals challenging the Department's administrative decisions pursuant to programs administered under the Board's administrative rules.
7. Administers the Idaho Water Supply Bank.

8. At the request of the Governor, appears on behalf of and represents the state in proceedings, negotiations, or hearings involving the federal government, Indian tribes, or other states.
9. Files applications and obtains permits to appropriate, store, or use unappropriated waters, and acquires water rights subject to the provisions of applicable law.
10. Investigates, undertakes, and promotes water resource projects deemed to be in the public interest.
11. Cooperates and enters into contracts with federal, state, and local governmental agencies and private entities for water studies, planning, research, and activities.
12. Studies water pollution and advises the Idaho State Board of Environmental Quality regarding the establishment of water quality criteria in the context of the optimum development of the state's water resources.
13. Formulates and recommends legislation for water resource conservation, development, and utilization.

Comprehensive State Water Plan Formulation

Formulation of the State Water Plan is a dynamic process. Adoption of The State Water Plan – Part One, The Objectives, in 1974, and The State Water Plan - Part Two, in 1976, provided an initial state water policy. The purpose of Part One was to identify and define policies and objectives adopted by the Board to govern the planning, development, and conservation of the state's water and related lands. Part Two identified and evaluated projects and programs necessary to implement the objectives of Part One and delineated those areas where legislative action was required, identified the programs to be implemented by the Board, and described programs requiring the cooperation of public and private interests. The Plan was updated and re-adopted in 1982 and was amended in 1985 in connection with the Swan Falls settlement. The Plan was revised in 1986, 1992, and 1996 to reflect changing social and economic conditions and water resource needs. The Plan continues to evolve and provides a framework for the adoption and implementation of policies, programs, and projects that develop, utilize, conserve, and protect the state's water supplies.

Planning Process

The planning process encompasses five steps:

1. A comprehensive public involvement program to determine public views and interests regarding resource problems, needs, and opportunities as they relate to water use and management;
2. An ongoing evaluation of the state's water resources and uses and estimation of the future availability and demands on the resource;

3. A comprehensive evaluation of the effects resulting from the development and protection of the state's water resources;
4. Adoption of the Plan by the Board as required by Article XV, section 7 of the Idaho Constitution; and
5. Approval by the Idaho Legislature as provided by law.

Public involvement is an essential part of the planning process. Scoping meetings, comment periods, and formal hearings provide opportunity for public input during plan development. After adoption and approval, public comment on the effectiveness of the Plan is encouraged.

COMPREHENSIVE STATE WATER PLAN

The Comprehensive State Water Plan represents the state's position on water development, allocation, and conservation. Accommodating Idaho's growing and changing water needs and the increasing demands on both surface and ground water presents a significant challenge. The Plan seeks to meet that challenge through the establishment of policies on water development, management, and conservation with accompanying strategies that may be implemented depending on the availability of funds, and milestones which will assist in ongoing Plan review.

Objectives

The following objectives of the State Water Plan are formulated for the conservation, development, management and optimum use of all unappropriated water resources and waterways of this state in the public interest [Idaho Code § 42-1734A].

1. **Water Management** - Encourage the quantification of water supplies, water uses and water demands for all water rights within the state. Encourage integrated, coordinated, and adaptable water resource management and the prudent stewardship of water resources.
2. **Public Interest** - Ensure that the needs and interests of the public are appropriately considered in decisions involving the water resources of the state.
3. **Economic Development** - Encourage and support economic development through the optimum use of water resources, in accordance with the prior appropriation doctrine as established by law. Promote the integration and coordination of the use of water, the augmentation of existing supplies, and the protection of designated waterways for all beneficial purposes. [Idaho Code § 42-1734A(1)(b)].

5. **Environmental Quality** - Maintain, and where possible enhance water quality and water-related habitats. Study and examine the quality of rivers, streams, lakes and ground water [Idaho Code § 42-1734(15)], and ensure that due consideration is given to the needs of fish, wildlife, and recreation in managing the water resources of the state. Where appropriate, initiate state protection of waterways or water bodies with outstanding fish and wildlife, recreation, geologic or aesthetic values.
6. **Public Safety** - Encourage programs ensuring that life and property within the state are not threatened by the management or use of the state's water resources.

Policies

A main goal of this document is to help water managers, planners, and users formulate management strategies and policies needed to meet growing and changing water-use needs. The Board adopts the following policies for the conservation, development, management and optimum use of all the unappropriated water resources and waterways of this state in the public interest. [Idaho Code § 42-1734A]

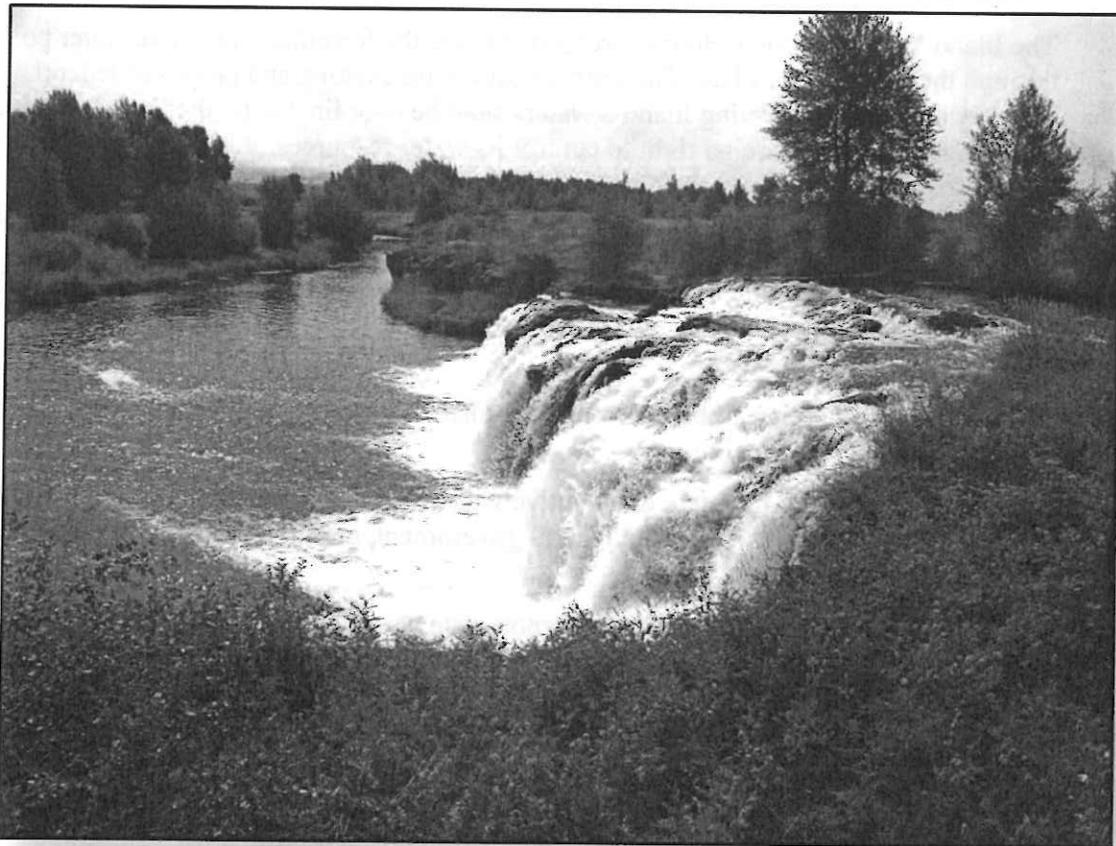


Photo: Falls on the Teton River in Eastern Idaho (*IDWR Photo*)

1. OPTIMUM USE

It is in the public interest to establish policies, initiatives, and programs that lead to optimum use of the water resources of the state. Water is essential to the vitality and prosperity of the state. All the waters of the state, when flowing in their natural channels, including the waters of all natural springs and lakes within the boundaries of the state are the property of the state (Idaho Code § 42-101). The state, through the Department, supervises the appropriation and allocation of the right to use the state waters for beneficial purposes.

1A - STATE SOVEREIGNTY

All waters, whether surface or ground water, are owned by the state as public property and the state asserts its sovereign right to regulate all waters within the state of Idaho for the benefit of its citizens. Thus, the state opposes any attempt by the federal government or other states, or any other entity to usurp the state's control over Idaho's water resources.

Discussion:

The Idaho Water Resource Board is responsible for the formulation of state water policy through the State Water Plan. The state's position on existing and proposed federal policies and actions affecting Idaho's waters shall be coordinated by the Board to ensure the state retains its sovereign right to control its water resources. Idaho Code § 42-1734B(4). The State Water Plan shall be filed with the Federal Energy Regulatory Commission, the Pacific Northwest Electric Power and Conservation Planning Council, and other federal agencies as Idaho's plan for the conservation, development, management and optimum use of the state's water resources. [Idaho Code § 42-1734C]

Implementation Strategies:

- Take legal action when necessary to protect the state's sovereignty over its water resources.
- Implement and maintain cooperative water resource agreements and partnerships with neighboring states, the federal government, and Indian tribes for the benefit of Idaho's citizens.
- Work with the office of the Governor, state agencies, and the legislature to ensure the development and implementation of a unified state position on water resource issues.

Milestones:

- Partnerships established with neighboring states, federal agencies, and Indian tribes to anticipate and plan for water resource conflicts that may occur.
- Protocols established ensuring coordination of the state's position on water resource issues.

1B - BENEFICIAL USE OF WATER

The concept of beneficial use must necessarily evolve with changing conditions.

Discussion:

Idaho Code § 42-104 provides that an appropriation of water must be for “some useful or beneficial purpose” but does not define beneficial purpose. Except for the constitutionally protected beneficial uses which are domestic, agricultural, manufacturing and mining, the concept of what constitutes a beneficial use of water has evolved over time based upon societal needs. For example, use of water for hydropower, the protection of fish and wildlife habitat, aquatic life, recreation, aesthetics, municipalities, navigation, water quality, and managed ground water recharge are recognized as beneficial uses. A broad definition of beneficial use has and will continue to allow for the optimum use of the state’s water resources.

Implementation Strategies:

- Review existing state policies and programs to ensure that traditional and emerging water use needs are recognized as beneficial uses of water.
- Establish or participate in local and regional advisory groups to formulate recommendations regarding traditional and emerging water use needs and priorities.

Milestones:

- Policies and rules revised to accommodate emerging water use needs.
- Reports submitted on advisory group recommendations.
- Statutory and/or regulatory changes made to accommodate emerging beneficial uses of water.

1C - TRANSFERABILITY OF USE

Changes in the nature of use of a water right should be allowed to meet emerging needs and to provide for optimum use of the state’s water resources.

Discussion:

The demand for water increases every year while the volume of unappropriated water within the state continually decreases and many basins do not provide a dependable water supply for current uses. Allowing for transferability of water rights provides flexibility in water allocation to meet changing conditions. Idaho Code §§ 42-108 and 42-222 provide for changes in place of diversion, place of use, and period of use, while also providing for the protection of other water users, the agricultural base of a region, and the local public interest. Pursuant to state law, priority dates are retained where other water right holders are not injured.

Implementation Strategies:

- Review Department of Water Resources policies and procedures and revise as necessary to implement a more efficient water right transfer process.
- Review existing statutes and regulations and propose revisions to establish a more efficient water right transfer process.

Milestones:

- Number of transfers processed.

1D - WATER SUPPLY BANK

The sale or lease of water is critical to the efficient management and optimal use of the state's water resources. Thus, use of the state's Water Supply Bank should be expanded to meet traditional and emerging needs for water.

Discussion:

As the state approaches the time when there is little or no unappropriated water, the Water Supply Bank, established by Idaho Code § 42-1761, provides an efficient mechanism for the sale or lease of water from natural flow and storage. The purpose of the Water Supply Bank is to obtain the highest duty of water, provide a source of adequate water supplies to benefit new and supplemental water users, and provide a source of funding for improving water use facilities and efficiencies. By aggregating water available for lease, rental pools operating under the authority of the Water Supply Bank can supply the water needs of many users.



Photo: Shoshone Falls near Twin Falls (IDWR Photo)

The Idaho Water Resource Board has adopted rules governing the sale or lease of water through the Water Supply Bank. Pursuant to state law, the Board has authorized local entities to operate storage and natural flow rental pools in numerous water districts that meet regional needs. The Shoshone-Bannock Tribes are also authorized by the state to operate a storage water rental pool.

The scope of existing and future water use needs requires further development of flexible water banking systems that address local water use needs and ensure the optimum use of the state's water resources. The Water Supply Bank should provide for efficient mechanisms that are responsive to traditional and emerging needs for water.

Implementation Strategies:

- Review existing statutes, rules, and Water Supply Bank procedures to identify revisions needed to meet current and future water use demands.
- Propose statutory, regulatory, and procedural changes that provide the Idaho Water Resource Board authority and flexibility to establish local rental pools adapted to the unique needs of a local area.
- Establish natural flow and storage rental pools in basins where local water users have identified the need for rental pools.
- Develop a public information and education program to promote use of the Water Supply Bank.

Milestones:

- Increased use of the Water Supply Bank.
- New storage and natural flow rental pools established.
- Efficient mechanisms in place that facilitate the optimum use of water.

1E - CONJUNCTIVE MANAGEMENT

Where a hydraulic connection exists between ground and surface waters, including spring flow, they are to be managed and administered conjunctively to ensure a sustainable water supply, in accordance with the prior appropriation doctrine as established by law.

Discussion:

Irrigation practices, ground water pumping, and climate variability impact the available supply of ground and surface water and effect changes in regional water budgets. This can result in insufficient water supplies to satisfy beneficial uses and increased administrative curtailment, conflict among water users, and litigation.

The goal of conjunctive management of ground and surface water is to protect the holders of senior water rights while allowing for the optimum development and use of the state's water resources.

Quantification and monitoring of the hydraulic relationship between ground water and surface water, including spring flow, is required to allow for optimal utilization of the water supply and to ensure the protection of senior water rights in accordance with the prior appropriation doctrine as established by Idaho law. Quantification and monitoring is also necessary for the development of plans and projects designed to maintain a stable balance between supply and demand.

Implementation Strategies:

- Continue to quantify the hydraulic relationship between ground water supplies, surface water supplies, and spring flows in designated river basins.
- Develop prioritized list of basins where additional technical information is needed to assess ground and surface water interaction.
- Develop enhanced technical tools for evaluating the interaction between surface and ground water resources for use in planning and administration.
- Increase measurement and monitoring of spring flow and promote cooperative efforts to better quantify spring flow hydraulics.
- On a continuing basis, assess conditions and trends of ground water levels in primary aquifers to estimate the rate of future aquifer recharge and withdrawal under various climatic conditions.
- Procure funding for studies and project implementation.

Milestones:

- Number of studies initiated and completed to quantify ground water/surface water relationships.
- Increased effectiveness of technical tools used to evaluate the hydraulic relationship between ground water and surface water and other water supply data.
- Projects implemented that contribute to stable balance between supply and demand.

1F - GROUND WATER WITHDRAWAL

Average withdrawals from an aquifer should not exceed the reasonably anticipated rate of future natural recharge to that aquifer.

Discussion:

Idaho Code § 42-226 allows for the full economic development of the state's underground water resources. Declining ground water levels, however, may result in insufficient water supplies to satisfy beneficial uses, impaired economic development, water quality problems, and conflicts between water users. All beneficial uses, including interdependent spring and surface water uses, should be considered in evaluating the full economic development potential of the state's ground water resources.

The Director of the Idaho Department of Water Resources is authorized to establish reasonable ground water pumping levels when necessary to protect prior appropriations of ground water. Idaho Code § 42-237a provides that the Director may prohibit or limit the withdrawal of water from a well if withdrawal would result in diversion of the ground water supply at a rate beyond the reasonable anticipated rate of future natural recharge. The Director may allow withdrawals to exceed natural recharge if a program exists to increase recharge or decrease withdrawals and senior water rights are protected. Idaho Code §§ 42-233a and 42-233b authorize the Director to designate areas as either Critical Ground Water Areas or Ground Water Management Areas. Designating a ground water basin as a Critical Ground Water Area or Ground Water Management Area provides management options to prevent excessive withdrawals from an aquifer. Where such designations are made, the Department requires additional measurement and reporting to determine available ground water supplies and use.

The comprehensive aquifer management planning initiated by the Idaho Water Resource Board provides opportunities for stakeholder participation in ground water management. Local advisory committees help the Board establish goals, objectives, and strategies to maximize available water supplies and assist with plan implementation. Public participation is key to the development of innovative approaches for meeting current and future demands on the state's ground water resources.

Implementation Strategies:

- Monitor ground water levels to estimate the rate of future natural aquifer recharge and withdrawal under various climate conditions.
- Develop water budgets for aquifers.
- Establish local advisory committees and solicit recommendations for ground water management.
- Identify opportunities for conducting cooperative ground water studies with state, federal and local agencies.
- Implement management strategies to maximize available water supply.

Milestones:

- Number of water budgets developed.
- Number of advisory committees active in ground water management and critical ground water areas.
- Number of ground water management plans adopted for all administratively designated areas.
- Number of basins with adequate monitoring networks.

1G - INTERSTATE AQUIFERS

Cooperative arrangements with neighboring states should be developed for shared aquifers to avoid water supply conflicts and to optimize utilization of the resource.

Discussion:

The growing demand for water increases competition between states with shared aquifers. Cooperative agreements to jointly develop, manage, and protect shared aquifers are necessary to avoid water supply conflicts, to ensure economic development, and to provide a mechanism for the exchange of technical information.

Implementation Strategies:

- Establish cooperative agreements with neighboring states to gather data and conduct studies to assess ground water conditions and trends.
- Develop coordinated aquifer management plans with neighboring states that resolve interstate conflict and address Idaho's water supply needs.

Milestones:

- Approval and implementation of cooperative agreements, which may include coordinated aquifer management plans, that ensure Idaho's water supply meets current and future needs.
- Cooperative technical studies conducted.

1H - QUANTIFICATION AND MEASUREMENT OF WATER RESOURCES

Quantification and measurement of Idaho's water supply and use is essential for sound water resource planning, management, and administration.

Discussion:

The Director of the Department of Water Resources is required to maintain an inventory of the state's water resources. Idaho Code § 42-1815. The measurement of water availability and use is necessary to administer and regulate existing water uses and to promote optimal water resource planning and management.

Chapters 6 and 7, title 42, Idaho Code, provide for water use measurement and reporting throughout the state. New instrument technologies for the measurement of water availability and use will continue to improve the accessibility and reliability of data collection and interpretation. These new technologies, such as automated electronic data recording equipment and transfer of data through wireless systems, provide transparency and instantaneous access to data, improve calibration of models used for administration and planning, and educate the public about water use by region and throughout the state.

Implementation Strategies:

- Assess existing measurement network and facilities and develop plan for improving data collection and reporting.
- Prioritize projects for conversion to automated electronic data collection and reporting systems.
- Provide technical assistance and participate in securing funding for improved measurement and reporting systems.

Milestones:

- Number of assessments completed.
- Number of automated data collection systems in use.
- Number of improved measurement and reporting strategies implemented.

II - AQUIFER RECHARGE

Aquifer recharge should be promoted and encouraged, consistent with state law.

Discussion:

Managed aquifer recharge: Managed recharge projects may be an appropriate means for enhancing spring flows, providing mitigation for junior ground water depletions, or to help maintain desirable aquifer levels. In addition, managed recharge may help optimize existing water supplies by changing the timing and availability of water supplies to meet demand. Managed recharge may also be used as an adaptive mechanism for minimizing the impacts of variability in climate conditions. Monitoring and evaluation of managed recharge projects is essential to document hydrologic effects and effects on surface and ground water quality. All water use needs affected by managed recharge projects should be considered. The Idaho Water Resource Board supports and assists in the development of managed recharge projects that further water conservation and increase water supplies available for beneficial use, consistent with state law. Projects involving the diversion of natural flow water appropriated pursuant to Idaho Code § 42-234 for managed recharge in excess of ten thousand (10,000) acre-feet on an average annual basis must be submitted to the Idaho Water Resource Board for approval prior to construction. [Idaho Code § 42-1737]

Aquifer storage and recovery: The use of managed recharge to store surface water in a confined underground area could be an important element in meeting future water use needs. Further understanding of the economic, legal, ecological, and technical feasibility of using confined underground aquifers for water storage in Idaho is required for the purpose of policy development and planning and to avoid injury to existing water rights.

Incidental aquifer recharge: The incidental recharge of aquifers occurring “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.” [Idaho Code § 42-234(5)] Incidental recharge may be an important component of some aquifer water budgets.

Implementation Strategies:

- Cooperate with public and private entities to develop, implement, and evaluate managed recharge projects.
- Identify and propose changes to statutes, rules, and policies that will assist the development and implementation of managed recharge projects.
- Identify river basins where the use of managed recharge projects should be evaluated as a potential strategy for addressing increased demand on water supplies.
- Monitor and evaluate recharge projects to document effects on water supply and water quality.
- Appoint an Aquifer Storage and Recovery Task Force.

Milestones:

- Managed recharge projects that optimize water supplies implemented.
- Effects of managed recharge projects on water supply and water quality documented.
- Aquifer Storage and Recovery Task Force recommendations submitted.

1J - WATER QUALITY

The citizens of Idaho will be best served by a cooperative effort involving public and private entities to assure that the state’s surface and ground water sources meet state water quality standards and maintain designated beneficial uses.

Discussion:

Water quality impacts the usability of water for a variety of purposes and it is essential that the quality of Idaho’s water resources be protected for public safety and economic stability and growth. The Department of Environmental Quality (DEQ) is the lead state agency for protecting water quality. DEQ’s Surface Water Program measures and assesses the levels of pollutants in surface waters. Pursuant to the Ground Water Quality Plan, adopted by the Legislature in 1992, the Department of Water Resources administers a statewide ambient ground water quality monitoring network and the Environmental Data Management System. The system collects, and makes available to the public, data obtained from ground water monitoring networks across the state.

When water quality fails to meet state standards, DEQ works with communities, industry, agricultural interests, state and federal agencies, and other stakeholders to develop water quality improvement plans. These plans outline actions needed to restore impaired water bodies so that they support designated uses. Where the quality of surface and ground water depends on land and water-use practices within a watershed, water users, land managers, state and federal agencies, and other units of local government are working together to implement best management practices and other strategies that reduce impairments to beneficial uses.

The use of water flow to dilute pollution is not a substitute for adequate water quality treatment. Instead, the allocation of water for instream flow use is directed toward meeting fish, wildlife, and recreational needs and not to the dilution of pollution. Through the collaborative efforts of the Board, DEQ, state and federal agencies, municipalities and other local units of government, water users, land managers, and other stakeholders projects can be implemented to protect and improve the water quality of the state's surface and ground water.

Implementation Strategies:

- Coordination and integration of monitoring programs with public and private entities.
- Ongoing analysis of statewide water quality monitoring program to identify need for modifications.
- Participate with DEQ and other state agencies to integrate water management programs and policies.
- Ongoing monitoring of baseline conditions and trends.

Milestones:

- Collaborative projects implemented that protect and enhance the water quality of the state's surface and ground water.

1K - COMPREHENSIVE AQUIFER MANAGEMENT PLANS

The Idaho Water Resource Board will complete and implement comprehensive aquifer management plans to address the increasing demands on the state's water supply.

Discussion:

Idaho Code §§ 42-1779 and 42-1780 established the Statewide Comprehensive Aquifer Planning and Management Program and the Aquifer Planning and Management Fund, which are designed to provide the Idaho Water Resource Board and the Department of Water Resources with the necessary information to develop aquifer management plans throughout the state. The program will be implemented in three phases. First, technical information describing the hydrology of the ground and surface water systems and the relationship between surface and ground water in a designated basin will be compiled.

Second, the Board, with the assistance of an advisory committee, will develop a management plan, based on an assessment of current and projected water uses and constraints, to address water supply and demand issues specific to each basin. Finally, the Board will be responsible for implementing the plan to obtain sustainable water supplies and provide for the optimum use of a region's water resources.

Idaho's first Comprehensive Aquifer Management Plan was developed for the Eastern Snake River Plain Aquifer ("ESPA CAMP"). The ESPA CAMP was adopted by the Idaho Water Resource Board and approved by the legislature in 2009. The ESPA CAMP sets forth actions designed to stabilize and improve spring flows, aquifer levels, and river flows across the Eastern Snake River Plain. The ESPA CAMP uses a phased approach to achieve a designated water budget change through a mix of management actions, including but not limited to, aquifer recharge, ground-to-surface water conversions, and demand reduction strategies. The Idaho Water Resource Board is responsible for implementation of the plan with the assistance of an advisory committee made up of representatives of stakeholders who rely upon the Eastern Snake River Plain aquifer to supply water for beneficial use.

Statewide comprehensive aquifer planning was initiated in 2008. The Rathdrum Prairie plan was completed in 2011 and the Treasure Valley plan is expected to be completed in 2012. Additional aquifers will be designated for the development of comprehensive plans as funding and conditions allow.

Implementation Strategies:

- Develop and implement comprehensive aquifer management plans for selected basins that establish goals, objectives, and implementation strategies to maximize available water supplies.
- Secure funding for technical studies and planning activities.

Milestones:

- Number of comprehensive aquifer management plans completed.
- Number of comprehensive aquifer management plans implemented.

1L - SURFACE WATER SUPPLY ENHANCEMENT

Surface water development will continue to play an important role in meeting Idaho's future water needs.

Discussion:

Future economic development, population growth, and evolving priorities will bring additional demands on Idaho's water resources, and surface water development will continue to play an important role in the state's future. The construction of new reservoirs, enlargement of existing reservoirs, and development of off-stream storage

sites could increase water supplies necessary to meet increased demand. These strategies are also important for flood management, hydropower generation, and recreation use.

Engineering, economic, legal, political, and environmental issues associated with water development projects affect decisions concerning the construction of reservoir facilities. In addition, changes in climate conditions will likely be an important factor in determining the costs and benefits of additional storage facilities. As required by Idaho Code § 42-1736B(c), the Idaho Water Resource Board maintains an inventory of potential storage sites. An inventory of reservoir sites with apparent high potential for development is set forth in Table 1.

Implementation Strategies:

- Concentrate assessment and evaluation of potential storage facilities on projects with the highest potential for development. Major considerations in defining high-potential projects are: cost per unit of storage, extent of public support, environmental considerations, adequacy of existing information and studies, extent and availability of funding sources for evaluation and assessment, and expected benefits that would accrue from the construction and operation of the facility.
- Review inventory and prioritize potential projects annually.
- Initiate feasibility/construction design studies for sites determined to be high priority.
- Identify potential funding sources for project evaluation and construction.
- Develop partnerships with private entities, local governments, and federal agencies to evaluate, design, and construct water storage projects.
- Provide recommendations regarding potential storage sites to private and public entities to ensure that land and resource development associated with these sites is consistent with the State Water Plan.

Milestones:

- Complete annual review of potential storage site inventory and revise as appropriate.
- Initiate construction of additional storage facility for approximately 600,000 acre-feet by 2025.

Table 1. Reservoir Sites with Apparent High Potential for Development

Potential Reservoir	Stream	Reservoir Capacity (AF)	Potential Purpose	Status of Study
<i>Upper Snake</i> Minidoka (enlargement)	Snake River	67,000	Irrigation, Power, Flood Control, Flow Augmentation, Recharge, Recreation	<i>Minidoka Dam Raise</i> <i>Special Study</i> (USBOR, Dec. 2009). Raise determined to be feasible. No action by the IWRB at this time.
Teton (or alternative)	Teton River	300,000	Irrigation, Power, Flood Control, Flow Augmentation, Recreation	<i>Henry's Fork Basin Study</i> ongoing. Multiple on- and offstream sites within basin under consideration.
<i>Southwest Idaho</i> Twin Springs (or alternative)	Boise River	70,000 to 300,000	Irrigation, Power, Flood Control, Flow Augmentation, Recreation	<i>Lower Boise Interim</i> <i>Feasibility Study</i> ongoing. Three sites prioritized for further analysis: (1) replacement of existing Arrowrock Dam, (2) new dam at Alexander Flats site, and (3) new dam at Twin Springs site.
Lost Valley (enlargement)	Lost Valley Creek	20,000 (increase)	Irrigation, Recreation	Not currently under investigation.
Galloway	Weiser River	900,000	Irrigation, Power, Flood Control, Flow Augmentation, Recreation	Weiser-Galloway Studies currently ongoing: <i>Geologic Investigation and</i> <i>Analysis Project</i> and <i>Snake</i> <i>River Operational Analysis</i> <i>Project</i> .
<i>Bear</i> Caribou	Bear River	48,000	Irrigation, Power, Flood Control, Recreation	Last study update completed in 1996. Not currently under investigation.

1M - WEATHER MODIFICATION

Weather modification offers the possibility of augmenting water supplies.

Discussion:

Weather modification, primarily winter cloud seeding to increase snowpack, has been practiced in Idaho and across the western states for many years. Increasing challenges, including a changing climate, growing population, and water allocation conflicts related to the presence of threatened and endangered species magnify pressures on a variable water supply. While the specific water quantities resulting from weather modification remain unknown, additional investigation should be conducted and pilot projects implemented to determine where and under what circumstances weather modification is a feasible strategy for increasing water supplies. A number of cloud seeding programs and studies have been conducted in Idaho with positive overall results, including programs funded by the Idaho Water Resource Board and Idaho Power Company.

Weather modification has the potential to raise legal issues related to the effect of weather modification activities outside state boundaries, potential adverse environmental effects, and intergovernmental conflicts where projects occur on or near public lands. Addressing these issues through legislation, rulemaking, and interstate agreements will help avoid future conflicts and litigation.

Under Idaho law, any person who intends to conduct weather modification activities is required to register with the Department of Agriculture and file a log of activities upon completion of the program. [Idaho Code §§ 22-3201, 22-3202] Idaho law also provides for the creation of weather modification districts. [Idaho Code §§ 22-4301, 22-4302]

Implementation Strategies:

- Support the continued evaluation of existing weather modification projects.
- Develop criteria for the development and implementation of additional weather modification projects.
- Collect baseline data and continue effectiveness research.
- Coordinate weather modification research and pilot projects with neighboring states.
- Ensure that state-funded projects are scientifically sound and include robust monitoring and evaluation component.

Milestones:

- Number of weather modification projects implemented that increase water supply.
- Increase in annual runoff resulting from weather modification projects.

- Increase in baseline data and effectiveness research.
- Agreements in place with neighboring states and federal agencies addressing research and implementation of weather modification projects.

1N - HYDROPOWER

Appropriation of water for hydropower should be subordinated to subsequent upstream beneficial uses to assure an adequate supply of water for all future beneficial uses and minimum stream flows for hydropower projects should be established through the Board's minimum stream flow program.

Discussion:

The relationship of hydropower water rights to future upstream uses was the subject of an ongoing debate from statehood until the 1985 Swan Falls Settlement, when the Idaho Legislature enacted Idaho Code § 42-203B to resolve the debate. Pursuant to section 3 of Article XV of the Idaho Constitution, the legislature determined that it was in the public interest to specifically implement the state's power to regulate and limit the use of water for power purposes. Through enactment of Idaho Code § 42-203B, the Legislature sought to avoid future Swan Falls-like controversies by creating a framework for balancing the use of water for hydropower and other beneficial uses. This framework provides for the subordination of appropriations of water for hydropower purposes to assure an adequate supply of water for all future upstream beneficial uses. The framework also provides for protection of base flows for hydropower and other instream uses through the Board's minimum stream flow program. Establishment of a minimum flow water right through the Board's minimum stream flow program ensures an open and transparent public process for establishing a balance between sustaining economic growth, maintaining reasonable electric rates, protecting and preserving existing water rights, and protecting water quality and other environmental values.

Implementation Strategies:

- Ensure that all future applications, permits and licenses for use of water for hydropower purposes contain a subordination provision.
- Establish minimum stream flows to protect base flows for hydropower users.
- Define, through agreements with the holders of existing hydropower water rights, the relationship between such rights and existing and future depletionary water rights.

Milestones:

- Execution of subordination agreements and/or implementation of minimum stream flows for existing hydropower facilities.

2. CONSERVATION

The Conservation policies focus on careful planning and prudent management of Idaho's water. The policies in this section encourage water conservation practices and efficient management of water resources for the benefit of Idaho citizens, consistent with the prior appropriation doctrine, as established by law. Conservation and water efficiency practices should be implemented through voluntary, market based programs, when economically feasible.

2A - WATER USE EFFICIENCY

Water conservation and water use efficiency should be promoted in accordance with state water law.

Discussion:

The Legislature, in Idaho Code § 42-250(1) determined that voluntary water conservation practices and projects can advance the policy of the State to promote and encourage conservation, development, augmentation and utilization of Idaho's water resources. "Water conservation practice" means any practice, improvement, project, or management program that results in the diversion of less than the authorized quantity of water while maintaining the full beneficial use(s) of the water right. [Idaho Code § 42-250(2)] Water conservation practices include, but are not limited to, practices that reduce consumptive use as defined in Idaho Code § 42-220B, reductions in conveyance losses, and reductions in surface and seepage losses occurring at the place of use. Idaho Code § 42-223 encourages conservation of water resources by providing that no portion of any water right shall be lost or forfeited for nonuse if the nonuse results from a water conservation practice which maintains the full beneficial use(s) authorized by a water right. As water efficiencies increase, conserved water may be available to supply existing uses, new demands, or improve instream flows. Conservation and water efficiency practices may offset the need for new water supply enhancement projects. Policies that promote water conservation and efficiency should be encouraged, where such practices do not result in adverse consequences to other users of the resource.

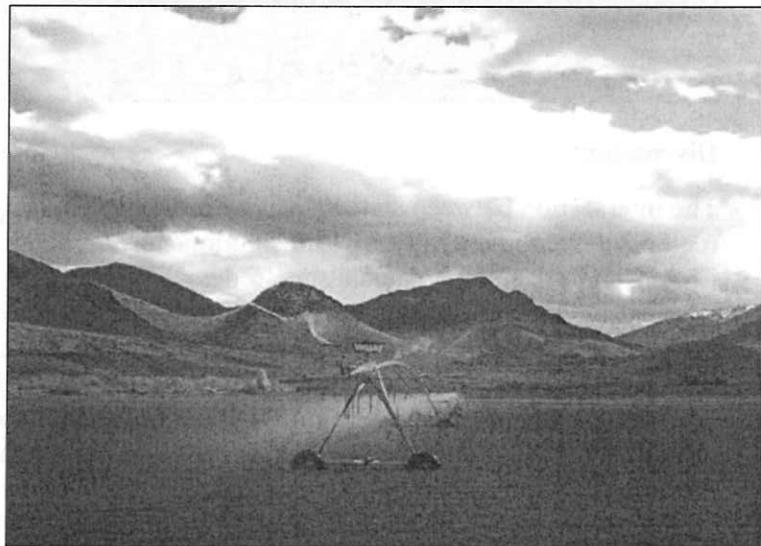


Photo: Idaho Irrigation (IDWR Photo)

Implementation Strategies:

- Review existing laws and regulations and identify inconsistencies or constraints to implementing water efficiency practices.
- Develop partnerships with local, state, and federal governments and non-governmental organizations to coordinate and support water conservation programs.
- Establish a public information program and conservation guidelines for a range of water uses.
- Evaluate opportunities for conservation and water efficiency practices in conjunction with the evaluation of new water supply enhancement facilities, including existing and new water metering for all municipalities that provide public drinking water and water for other uses.
- Identify localized opportunities for water conservation.

Milestones:

- Number of conservation guidelines implemented.
- Number of partnerships developed to coordinate water conservation.
- Number of water use efficiency practices implemented.
- Effects of conservation efforts quantified.

2B - FEDERALLY LISTED SPECIES AND STATE SPECIES OF GREATEST CONSERVATION NEED

Voluntary community-based conservation programs that benefit species listed under the Endangered Species Act and Species of Greatest Conservation Need and resolve water resource issues should be the primary strategy for achieving species protection and recovery.

Discussion:

The intersection between state water rights and the Endangered Species Act (ESA) requires development of integrated solutions to water allocation conflicts. In enacting the ESA, Congress contemplated a state-federal alliance to advance the recovery of listed species and provided for the development of state-led recovery efforts. Congress has directed federal agencies to “cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species.” 16 U.S.C. § 1531(c)(2). Cooperative community-based conservation programs are more effective in providing on-the-ground habitat benefits than enforcement actions. With site-specific information about water and land use practices and habitat requirements, targeted and effective conservation strategies can be developed and implemented that protect private property rights and assure state primacy over water resources while, at the same time, providing natural resource protection.

The Idaho Water Resource Board holds minimum stream flow water rights for 205 river reaches important to ESA-listed species and established as part of the Snake River Water Rights Settlement Act of 2004 (“2004 Water Rights Agreement”). The minimum stream flow water rights provide significant protection for ESA-listed species in the Salmon and Clearwater River Basins. The water rights for streams in watersheds with substantial private land ownership and private water use were established after consultation with local communities. Where the minimum stream flow water rights are higher than existing flows, the state works with water users on a voluntary basis to rent or otherwise acquire water to return to the streams. The Water Supply Bank and Idaho Water Transactions Program are used to achieve these objectives. In conjunction with the minimum stream flows, the state agreed to work with local stakeholders and communities to address habitat concerns on a limited number of streams with degraded habitat. The work plans include measures to remove barriers to fish passage, revegetate stream banks, and restore wetlands to proper functioning.

The 2004 Water Rights Agreement also provides for the development of long-term habitat conservation plans to assist in the recovery of ESA-listed species, under section 6 of the ESA. The plans are to be developed in collaboration with local landowners and water users, affected Indian tribes, and state and federal natural resource agencies. Section 6 agreements will provide incentives for conservation through the granting of incidental take coverage to participants in the program. Such agreements would provide participating water users with protection against uncertainty and regulatory delays while contributing to the recovery of listed species. Section 6 of the ESA may also provide opportunities for the implementation of voluntary conservation plans developed in collaboration with local water users and stakeholders in other regions of the state. It is in the interest of the public for the Idaho Water Resource Board to take a leadership role in the development of local and regional conservation strategies that contribute to the recovery of ESA-listed species and Species of Greatest Conservation Need.

Implementation Strategies:

- Participate in the development and implementation of habitat conservation plans pursuant to section 6 of the ESA.
- Collaborate with the Office of Species Conservation, state and federal agencies, affected Indian tribes, and local stakeholders to develop and implement habitat conservation programs that preclude the need for listing of species and contribute to listed species’ recovery.
- Coordinate with the Office of Species Conservation to integrate water resource programs with species protection and recovery, including the establishment of minimum stream flows, and state designation of protected rivers.

Milestones:

- Number of section 6 agreements implemented.
- Number of voluntary conservation agreements and measures implemented.
- Number of strategies implemented that preclude the need for listing under the ESA and result in listed species’ recovery.

2C - INSTREAM FLOW

The Idaho Water Resource Board will exercise its authority to establish and to protect minimum stream flow water rights on those water bodies where it is in the public interest to protect and support instream uses.

Discussion:

Instream flows protect and support many nonconsumptive, beneficial uses of water such as fish and wildlife habitat, aquatic life, recreation and aesthetic values, transportation, navigation, hydropower generation, and water quality. These uses contribute to Idaho's economy and the well being of its citizens.

In 1971, the legislature authorized the first formal appropriation of minimum stream flows by directing the Idaho Department of Parks and Recreation to appropriate a specific reach of Niagara Springs in the Malad Canyon area for instream flow purposes. The 1976 State Water Plan called for, and eventually legislation was enacted, creating a state-wide minimum stream flow program. The ability to obtain state-based minimum stream flow water rights in Idaho lies exclusively with the Idaho Water Resource Board. Chapter 15, title 42, authorizes the Idaho Water Resource Board to appropriate the minimum flow of water required to protect designated uses if the appropriation is in the public interest and will not interfere with any vested water right, permit, or water right application with a senior priority. Idaho currently has 297 licensed or permitted water rights for minimum stream flow purposes, including six minimum lake level water rights held by the state. At the legislature's direction, 205 of the minimum stream flow water rights were adopted pursuant to the Snake River Water Rights Agreement which, as discussed more fully in Policy 6B, provided a programmatic approach to addressing the needs of species listed under the federal Endangered Species Act. Similarly, the legislature has authorized the Idaho Water Resource Board to appropriate minimum stream flow water rights in the Lemhi and Wood River basins where the rights are maintained through operation of a Water Supply Bank. These locally managed programs are used to maintain or enhance instream flow in a manner that respects water use practices and addresses community concerns.

The Idaho Water Resource Board supports efforts to obtain storage and natural flow rights to improve and maintain instream flows when in the public interest. The Water Supply Bank and local rental pools are tools that can be used to improve instream flows through voluntary cooperation and to meet local needs. To facilitate their use throughout the state for use in improving and sustaining minimum stream flows, statutory changes are needed authorizing the Idaho Water Resource Board to establish local rental pools at the request and in cooperation with local communities. As recognized in the 1996 State Water Plan, statutory changes are also needed to authorize the Idaho Water Resource Board to apply for a change in the nature of use of an acquired right, where it has been determined that a minimum stream flow water right is in the best interest of the state. Idaho Code §§ 42-108 and 42-222 contain provisions that protect other water users, the agricultural base of an area, and the local public interest. Priority dates are retained only if other water rights holders are not injured.

Implementation Strategies:

- Establish local rental pools to meet instream flow needs as requested.
- Submit applications for minimum stream flow water rights that are in the public interest.
- Coordinate with state and federal agencies and stakeholders to identify potential minimum stream flow needs.
- Revise chapter 15, title 42 to authorize the Idaho Water Resource Board to establish local natural flow rental pools.
- Revise chapter 15, title 42 to authorize the Idaho Water Resource Board to transfer acquired water rights to minimum stream flow water rights.

Milestones:

- Minimum stream flow water rights established.
- Annual inventories of instream flow water rights completed.
- Statutory changes authorize the Idaho Water Resource Board to establish local natural flow rental pools.
- Statutory changes authorize the Idaho Water Resource Board to transfer acquired water rights to minimum stream flow water rights.

2D - STATE PROTECTED RIVER SYSTEM

The Idaho Water Resource Board will exercise its authority to protect the unique features of rivers where it is in the public interest to protect recreational, scenic, and natural values.

Discussion:

Idaho Code § 42-1734A(1) authorizes the Idaho Water Resource Board to protect highly-valued waterways as state protected rivers. The authority to designate “protected rivers” derives from the state’s ownership of the beds of navigable streams and the state’s right to regulate all waters within the state. The Idaho Water Resource Board has consistently recognized the value of free-flowing waterways by designating specific streams and rivers as natural or recreational rivers.

Although rivers can be protected under the federal Wild and Scenic Rivers Act, the Idaho Water Resource Board encourages federal officials to seek protection of streams and rivers through the Comprehensive State Water Planning process. The state planning process ensures coordinated and efficient water planning for Idaho rivers and streams and avoids potential state/federal sovereignty conflicts.

Implementation Strategies:

- Coordinate with local governments and federal agencies to identify specific waterways for consideration as protected rivers.
- Develop priority list of potential rivers for consideration in comprehensive basin planning
- Establish agency policy and procedures to ensure requirements of the protected rivers program are addressed when the Department of Water Resources reviews water right permit applications and stream channel alteration permits.
- Ensure that permits issued include provisions for the protection, restoration or enhancement of designated river reaches.

Milestones:

- Ongoing review of state rivers and streams for determination of whether they should be designated as part of the protected river system.
- Number of state/federal agreements to coordinate river planning implemented.
- Designation of streams or rivers determined to warrant protected status.

2E - RIPARIAN HABITAT AND WETLANDS

Protecting the ecological viability of riparian habitat and wetlands within the state is a critical component of watershed planning.

Discussion:

Functional riparian zones and wetlands contribute to water quality protection, storm water control, and ground water protection and provide important habitat for fish and wildlife. Riparian and wetlands areas cover approximately 20% of the state and support 80% of the species in the state. Riparian zones and wetlands should be protected to preserve their ecological values.

The integration of water resource and land use planning activities that affect riparian zones and wetlands requires coordination among various local, regional, and state authorities. The Department of Water Resources has exclusive authority over the appropriation of the public surface waters and ground waters of the state. The Department of Water Resources also regulates the alteration of stream channels and stream beds below the mean high watermark. Idaho Code §§ 42-3801 thru 42-3812. Local governments are authorized to regulate land use and development. The Idaho Department of Environmental Quality administers the state's Nonpoint Source Management Program which is based upon strong working partnerships and collaboration with state, tribal, regional, and local entities, private sector groups, citizens' groups, and federal agencies and the recognition that a successful program must be driven by local wisdom and experience.

In 2008, the Idaho Wetlands Working Group developed a Draft Wetlands Conservation Strategy that sets out a framework for protecting, restoring, and enhancing wetlands through collaborative, voluntary approaches. The Idaho Water Resource Board supports voluntary watershed-based conservation strategies for the protection of riparian and wetland areas above the mean high watermark developed and implemented through collaboration with water users, land managers, local governments, and state and federal agencies.

Implementation Strategies:

- Support collaborative watershed planning and the implementation of voluntary strategies to protect Idaho's wetlands and riparian areas.
- Support the development of guidelines and strategies to assist in the implementation of projects that protect, restore, and enhance wetlands and riparian areas.
- Evaluate whether the Stream Channel Protection Act, Idaho Code §§ 42-3801 thru 42-3812 adequately assists in the protection of wetlands and riparian areas and propose statutory changes as appropriate.
- Assist state and federal agencies and stakeholders in the acquisition of funding for project implementation.

Milestones:

- Project and funding proposals submitted.
- Projects implemented.

2F - STREAM CHANNEL REHABILITATION

The Idaho Water Resource Board will support cost effective stream channel rehabilitation where past activities adversely affect or could affect the ecological goods and services of the state's watersheds.

Discussion:

Functional stream channels provide ecological goods and services desired by the public. Ecological goods are those qualities that have economic value, such as timber resources, habitat that supports fishing and hunting, and aesthetic qualities of landscapes that would attract tourists. Ecological services include systems that best manage water resources, such as the regulation of runoff and flood waters, or the stabilization of landscapes to prevent erosion. Damage and destruction of stream channels can result from natural and human-caused changes and disturbances. Where current practices, legacy effects of past activities, or natural disturbances threaten public safety, private property, or the overall quality and quantity of water produced in the affected watershed, it is in the state's interest to take remedial action in a cost-effective manner. In many instances, historical targets for restoration are not practical and therefore restoration efforts should be designed to be sustainable in a rapidly-changing environment. Preventing damage to a

stream channel and adjacent property is more cost effective than restoration. It is in the state's interest to ensure that the stream channels of the state and their environments be protected.

Implementation Strategies:

- Conduct a statewide inventory of streams where natural events or human activities have altered channels and the disturbances threaten the public safety, private property, or other water resource values.
- Conduct cost/benefit analyses for rehabilitation of affected streams.
- Prioritize projects.
- Obtain funding for restoration of prioritized streams.

Milestones:

- Inventory conducted.
- Cost/benefit analyses conducted and priorities established.
- Funding obtained.
- Projects implemented.

2G - SAFETY MEASURES PROGRAM

Owners of water distribution and storage facilities are encouraged to establish or continue safety initiatives including construction and maintenance of safety features and development of public awareness programs to educate residents about hazards associated with these facilities.

Discussion:

Fatal accidents occur in waterways at or near water distribution and storage facilities in Idaho because of the inherent dangers of these facilities. With the increasing urbanization of rural areas, there has been a greater effort to provide public awareness programs and, where feasible, implement measures designed to prevent such occurrences. The Idaho Water Resource Board supports these voluntary initiatives.

Implementation Strategies:

- Secure and provide funding for the construction and maintenance of safety features at water distribution and storage facilities.
- Encourage the implementation of public safety awareness programs.

Milestones:

- Reduced number of accidents associated with water distribution and storage facilities.

2H - FLOOD HAZARD AREAS

Protection of floodplains through effective floodplain management and pre-disaster mitigation is essential to reducing and preventing flood damages.

Discussion:

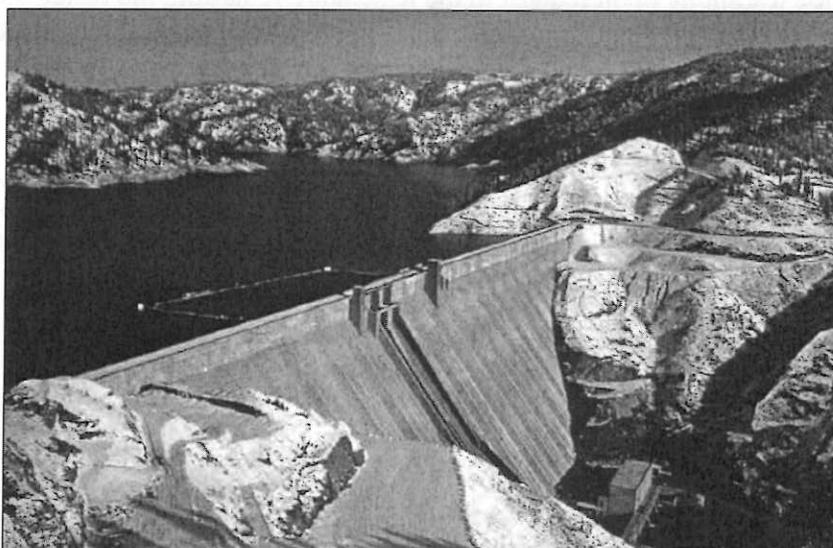
Floods are the most frequent and costly disasters in Idaho and can occur in most any area of the state. With population growth, there will be increased interest in the development of lands subject to periodic flooding. The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP), which many Idaho communities have joined by adopting and enforcing flood damage prevention ordinances. Although FEMA has prepared Flood Insurance Rate Maps (FIRMS) for some of the waterways within Idaho, the majority of FIRMS are more than 20 years old and require updating. In order to create safer communities and reduce the loss of life and property due to flood events, local governments are encouraged to use land use controls, building practices, and other tools to protect the natural function of floodplains.

Implementation Strategies:

- Assist local governments in securing funding to update or develop Digital Flood Insurance Rate Maps.
- Provide technical information on flood plain management and flood risk to elected officials, public and private organizations, and land developers.

Milestones:

- Increased participation in NFIP by communities.
- Decreasing trends in annual flood damages.



**Photo: Dworshak Dam on the North Fork of the Clearwater River
(IDWR Photo)**

2I - FLOOD DAMAGE REDUCTION LEVEE REGULATION

Levees should be designed, constructed and maintained to meet the intended purpose of reducing water and flood damage for the useful life of the levee.

Discussion:

Pursuant to Idaho Code § 42-1717, the Department of Water Resources regulates nearly 600 water storage dams and more than 20 mine tailing impoundment structures throughout the state. Levees are exempted by statute from IDWR dam safety regulations, and the construction, maintenance, and safety of levees is, for the most part, left to local entities. Presently, there is no state agency that is authorized to regulate levees for the protection of public health or safety.

The Idaho Water Resource Board supports the development of a comprehensive state program governing the design, construction, and maintenance of new flood reduction levees, and the periodic safety inspection of existing levees. A state flood reduction levee program should focus on the use of sound technical practices in levee design, construction, and operation. This should include the establishment of a safety program that helps ensure public education and awareness of the capacities and limitations of levees during flood events.

Implementation Strategies:

- Develop a state safety program to regulate the design, construction, and maintenance of new flood reduction levees.
- Investigate the implementation of a state levee safety program consistent with the standards and guidelines recommended by the Draft National Levee Safety Program.
- Provide testimony upon request to the legislature regarding the benefits offered to Idaho citizens resulting from implementation of a state levee safety inspection program.
- Participate in the development of a National Levee Safety Program with other state and federal agencies, as appropriate.
- In the event a National Levee Safety Program is adopted, obtain certification as a state levee safety program and assist with development of levee criteria for use by the states and the federal government.

Milestones:

- State levee safety program established.
- Levee failures in Idaho decreased.
- Reduce annually property losses resulting from levee failures.

3. MANAGEMENT

The Management policies focus on maintaining and enhancing administrative programs and practices related to current and future demands on Idaho's water and energy resources.

3A - REVIEW OF FEDERAL RESERVOIR WATER ALLOCATION

It is in the state's interest that proposed water allocations and reallocations of water in federal reservoirs be consistent with the Comprehensive State Water Plan.

Discussion:

Historically, the Board has reviewed federal water allocations proposed by the United States Bureau of Reclamation to determine whether the proposed allocations are consistent with state water resource planning and management objectives. In 1988, this cooperative arrangement was formalized through an agreement providing for Idaho Water Resource Board review of proposed water allocations from federal reservoirs in excess of 500 acre-feet annually, within an existing approved water right not otherwise reviewable by the Idaho Department of Water Resources. This state and federal partnership ensures that water resource and management issues are addressed in a comprehensive way, thereby providing for optimal use of the state's resources. It will become even more important to coordinate state and federal management strategies as demands on the state's water supply increase.

Implementation Strategies:

- Review status of existing cooperative agreements related to review of proposed allocations and revise accordingly.
- Identify opportunities for additional agreements providing for review of proposed allocations.
- Work with the United States Army Corps of Engineers to determine if cooperative agreements addressing allocations at the Albeni Falls and Dworshak facilities would be in the state's interest.

Milestones:

- Existing agreements maintained and revised accordingly.
- Additional cooperative agreements executed that promote optimal use of the state's water resources.

3B - HYDROPOWER SITING

The expansion of hydropower capacity and generation consistent with the state water plan can help meet the need for affordable and renewable energy resources.

Discussion:

Hydropower provides a clean, efficient, and renewable energy source and has contributed significantly to the state's energy supply. The state and region's power demand is expected to increase substantially over the next several decades as the population continues to grow. Although most cost effective and flexible sites have been developed, there will be opportunities for increasing hydroelectric generating capacity, while preserving environmental protection. These include enhancing incremental capacity at existing sites through new technologies that yield greater energy efficiency, adding generation capacity at existing dams, and the development of generation capacity in conjunction with the construction of new water storage projects.

The 2012 Idaho Energy Plan recommends that energy conservation and energy efficiency should be the highest priority resource. The 2012 Idaho Energy Plan also recommends development of in-state renewable resources that will contribute to a secure, reliable energy system for the state. The Idaho Water Resource Board supports the promotion of a more efficient use of energy throughout Idaho's economy, implementation of efficiency improvements at existing sites, and retrofitting existing dams. Hydropower development should be considered when planning new water storage projects. Feasibility studies for new storage projects should include evaluation of the costs, benefits, and adverse consequences of hydropower generation.

Under 16 U.S.C. § 803, the Federal Energy Regulatory Commission must determine that proposed projects are consistent with Idaho's comprehensive water plans when making licensing decisions. The Idaho Water Resource Board will review hydropower development proposals to determine whether they are consistent with the comprehensive state water plan, including the comprehensive basin and river plans, which address region-specific siting issues. The Board agrees with the 2012 Idaho Energy Plan recommendation to establish an Energy Facility Site Advisory Team that would provide technical expertise and assistance upon request from local officials considering energy facility siting proposals.

Implementation Strategies:

- Provide information and technical assistance to local communities through participation in an Energy Facility Site Advisory Team.
- Include evaluation of hydropower generation potential in feasibility studies for water storage projects.
- Provide information and technical assistance to proponents of projects that increase energy efficiency, increase generation capacity, or retrofit existing dams for hydroelectric generation.

Milestones:

- Hydropower siting proposals and projects comply with the Comprehensive State Water Plan.
- Efficiency improvements implemented at existing hydropower facilities.
- Generation capacity increased at existing hydropower projects, while protecting the environment.
- Existing dams retrofitted with generation capacity, while protecting the environment.

3C - RESEARCH PROGRAM

Focused research is necessary to support water resource planning and collaborative solutions that address the increasing demands on the state's water supplies.

Discussion:

Research and data gathering are essential to the state's efforts to meet future water challenges in a sustainable way. Adequate data on water availability, use and efficiencies, surface and ground water interaction and relationships, and emerging water management technologies is needed to help water managers and end-users make sound decisions and develop adaptive strategies for responding to the impacts of climate variability. Data collection and research is conducted by numerous public and private entities. A cooperative exchange of information contributes to more efficient use of limited financial resources for research and monitoring necessary to further the state's water supply objectives. Research priorities include: water use efficiency; water use monitoring; ground and surface water relationships, specifically the timing and spatial distribution of pumping and recharge efforts; ground water flow models; and system operation modeling methods for Idaho river basins. Environmental considerations should be addressed as studies are designed and implemented.

Implementation Strategies:

- Facilitate coordination and dissemination of research and data among state and federal agencies, universities, and private entities.
- Identify and prioritize research needs.
- Identify dedicated funding sources for basic and applied research.

Milestones:

- Cooperative research activities implemented.
- Completed research projects.
- Application of research results to planning and management