



IDAHO WATER RESOURCE BOARD

NOTICE AND AGENDA

WATER RESOURCE PLANNING COMMITTEE

MEETING NO. 3-11

** Actually meeting 2-11*

Idaho Water Center, 6th Floor
Conference Rooms 602C & D
322 E. Front St., Boise, Idaho

C.L. "Butch" Otter
Governor

December 5, 2011
9:00 am to 11:30 am

Terry T. Uhling
Chairman
Boise
District 2

Roger W. Chase
Vice-Chairman
Pocatello
District 4

Bob Graham
Secretary
Bonners Ferry
District 1

Charles "Chuck" Cuddy
Orofino
At Large

Leonard Beck
Burley
District 3

Vince Alberdi
Kimberly
At Large

Jeff Raybould
St. Anthony
At Large

Peter Van Der Meulen
Hailey
At Large

1. Introductions
2. Discussion of Overall Idaho State Water Plan Structure
3. Review of Optimum Use Draft Policies
 - a. Other Committee Issues CAMP Status Updates
 - ESPA
 - RP
 - TV
 - b. CAMP Future Investigations
4. Next Steps & Next Meeting

Committee Members:

Leonard Beck, Chairman, Bob Graham, Roger Chase, Chuck Cuddy,
Jeff Raybould

AMERICANS WITH DISABILITIES

The meeting will be held in facilities that meet the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations to attend, participate in, or understand the meeting, please make advance arrangements by contacting Diana Ball, Administrative Assistant, by email diana.ball@idwr.idaho.gov or by phone at (208) 287-4800.

IDAHO STATE WATER PLAN - DRAFT POLICIES (09/30/2011)				
1996 SWP Policy Number	2010 Revisions		Ready for Final Review & Editing (Harriet & Helen)	Committee Final Review 2011 11 01
OPTIMUM USE POLICIES				
1A	1A	State Sovereignty	✓	
1C	1B	Beneficial Use of Water	✓	
1D	1C	Transferability of Use	✓	
1I	1D	Water Supply Bank	✓	
1F	1E	Conjunctive Management	✓	
1H	1F	Ground Water Withdrawal	✓	
NEW	1G	Interstate Aquifers	✓	
1E	1H	Quantification & Measurement of Water Resources	✓	
1J	1I	Aquifer Recharge	✓	
1L	1J	<i>Water Quality</i>	<i>Pending revision</i>	
	1K	CAMP	✓	
3B	1L	Surface Water Supply Enhancement	✓	
NEW	1M	Weather Modification	✓	
4D	1N	<i>Hydropower</i>	<i>Pending revision</i>	
CONSERVATION				
1G	2A	Water Use Efficiency	✓	
		Federally Listed Species and State Species of Greatest		
2A & 2B	2B	Conservation Need	✓	
3A	2C	Instream Flow	✓	
3C	2D	State Protected River System	✓	
3D	2E	Riparian Habitat and Wetlands	✓	
3E	2F	Stream Channel Rehabilitation	✓	
3H	2G	Safety Measures Program	✓	
3I	2H	Flood Hazard Areas	✓	
3J	2I	Flood DamageControl Levee Regulation	For discussion	
MANAGEMENT				
4B	3A	<i>Review of Federal Reservoir Water Allocation</i>	<i>Pending revision</i>	
4E	3B	<i>Hydropower Siting</i>	<i>Pending revision</i>	
4G	3C	Research Program	✓	
4H	3D	Funding Program	✓	
4I	3E	Water Planning Program	✓	
4J & 44K	3F	Water Rights Adjudication	✓	
2D	3G	Climate Variability	✓	
SNAKE RIVER BASIN - pending revision & renumbering (Group 4)				

BEAR RIVER BASIN				
6A	5A	Bear River Compact	✓	
	5B	Bear River Basin Water Management	✓	
6B	5C	Interstate Water Delivery	✓	
6C	5D	Bear Lake	✓	
SALMON-CLEARWATER BASINS				
	6A	Habitat Conservation Plans	✓	
	6B	Instream Flow	✓	
PANHANDLE BASINS				
	7A	Interstate Aquifers	✓	
7B	7B	Minimum Flows	✓	
7E+	7C	Navigation, Fisheries, and Recreation	✓	
<i>1996 Policies Eliminated from current draft</i>				
1B		<i>Public Interest</i>		
1K		<i>Spring Flows</i>		
1M		<i>Pollution Control</i>		
2C		<i>Lake and Reservoir Management</i>		
3F		<i>Tailings Pond Regulation</i>		
3G		<i>Radioactive Waste Monitoring</i>		
4A		<i>Agency Consolidation</i>		
4C		<i>Energy Plan</i>		
4F		<i>Conservancy Districts</i>		
6D		<i>Bear River Basin Water Projects</i>		

1. Optimum Use

Water is essential to the vitality and prosperity of the state. It is in the public interest to establish policies, initiatives, and programs that lead to optimum use of Idaho's ~~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 of Water Resources, 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 ~~the state's~~ waters shall be coordinated by the ~~Idaho Water Resource~~ 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 submitted to 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.

~~The state should pursue cooperative agreements and partnerships with other states, Indian tribes, and the federal government to address water resource and management issues in a manner that benefits the citizens of Idaho.~~

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 section 42-104 provides that an appropriation of water must be for “some useful or beneficial purpose” but does not define beneficial purpose. The concept of beneficial use is defined broadly, providing for the optimum use of the state’s water resources. Except for the constitutionally protected beneficial uses, the concept of what constitutes a beneficial use of water has evolved ~~evolves~~ over time based upon societal needs. For example, use of water for 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 are at or near full appropriation. 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.

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 ~~Idaho Water Resource~~ 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.

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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.
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- 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 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 ~~Idaho Water Resource~~ 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.

11 - AQUIFER RECHARGE

Aquifer recharge should be promoted and encouraged, consistent with ~~pursuant to~~ 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 will assist 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. ~~The Idaho Water Resource Board supports and will assist in the development of managed recharge projects that further water conservation and increase water available for beneficial use, consistent with state law.~~

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 ~~Comment—subcommittee recommends further discussion by the Board regarding this policy—prior policy statement stated that water should be protected against “unreasonable” contamination or deterioration.” What does unreasonable mean? Recommend further discussion. Check IDEQ policy statement that might be incorporated—be consistent~~

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 Idaho Department of Environmental Quality (IDEQ) is the lead state agency for protecting water quality. IDEQ’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, IDEQ 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 ~~and local units of 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 should be~~ directed toward meeting fish, wildlife, and recreational needs and not to the dilution of pollution. ~~It is t~~Through the collaborative efforts of the Board, IDEQ, state and other state federal agencies, municipalities and other ~~;~~ local units of government, water users, land managers, and other stakeholders ~~that~~ projects can be ~~should 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 IDEQ and other state agencies to integrate water management programs and policies.
- Ongoing monitoring of baseline conditions and trends.

MilestonesRecommendations

- Collaborative projects implemented ~~Formulate strategy to collaborate with agencies that have water quality authorities and to establish~~ that protect and enhance the water quality of the state's surface and ground water. ~~enhanced linkage of water quality and quantity programs.~~

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~~is 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 ~~Idaho Water Resource~~ 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 ~~Idaho Water Resource~~ 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 and will be completed for the following aquifers as funding allows: Treasure Valley, Rathdrum Prairie, Palouse, Big Wood, Mountain Home, Bear, Teton, Big Lost, Portneuf, and Blackfoot. 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.

Comment [SoI1]: Needs updating to reflect studies initiated

Table 1. Reservoir Sites with Apparent High Potential for Development

Potential Reservoir	Stream	Reservoir Capacity	Potential Purpose
<i>Upper Snake</i> Minidoka (enlargement)	Snake River	50,000 AF	Irrigation, Power, Flood Control, Flow Augmentation, Recharge, Recreation
Teton (or alternative)	Teton River	300,000 AF	Irrigation, Power, Flood Control, Flow Augmentation, Recreation
<i>Southwest Idaho</i> Twin Springs (or alternative)	Boise River	400,000 AF	Irrigation, Power, Flood Control, Flow Augmentation, Recreation
Lost Valley (enlargement)	Lost Valley Creek	20,000 AF (increase)	Irrigation, Recreation
Galloway	Weiser River	900,000 AF	Irrigation, Power, Flood Control, Flow Augmentation, Recreation
<i>Bear</i> Caribou	Bear River	48,000 AF	Irrigation, Power, Flood Control, Recreation

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.
- ~~By 2010, initiate studies of Teton, Galloway, Minidoka, and Twin Springs sites. Committee discussion needed~~
- Initiate construction of additional storage facility for approximately 600 thousand acre-feet by 2025.

1M – WEATHER MODIFICATION

Weather modification is a water augmentation strategy that should be researched and tested.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

NEEDS WORK

Appropriation of water for hydropower should be subordinated to all subsequent upstream beneficial uses but should not be subject to depletion below any applicable minimum stream flow established by state action. Appropriation of water for hydropower purposes should all be subordinated to all subsequent upstream depletionary beneficial uses where such appropriation will preclude the optimum development of Idaho's water resources.

Discussion:

The relationship of hydropower water rights to future upstream uses was the subject of an ongoing debate from statehood until 1985, 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 water management crises like the Snake River water rights controversy ultimately resolved through the Swan Falls Agreement, type conflicts by creating a framework for balancing the use of water for hydropower and other beneficial uses. Consistent with this framework, Idaho Code § 42-203B appropriations of water for hydropower uses should be subordinated to subsequent upstream beneficial uses to assure an adequate supply of water for all future beneficial uses and directs that hydropower water rights in excess of state established minimum stream flows are subordinated to future depletionary beneficial uses. As a general rule, isubordination to future depletionary beneficial uses In order to effectuates section 42-203B, all applications, permits and licenses for use of water for hydropower production shouldall be subordinated to future depletionary beneficial uses. At the same time, steps should be taken to maintain reliable hydropower flows. any protected base flows for hydropower purposes should be established through the Board's minimum stream flow program.

To ensure the continued availability of low cost power for Idaho, minimum stream flows to protect existing hydropower uses should be Eestablished and maintained. ing and maintaining minimum stream flows to protect existing hydropower uses ensures the continued availability of low cost power for Idaho.

Implementation Strategies:

- Ensure that all future applications, permits and licenses for use of water for hydropower purposes contain a subordination clause.
- Establish minimum stream flows to protect base flows for **existing** 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.