3D - FUNDING PROGRAM

Funding mechanisms to support the development, preservation, conservation, and restoration of the water resources of the state should be based on flexible strategies that provide equitable benefits.

Discussion:

The water resources of the state are essential to Idaho's economy and its citizens. There is no single strategy for successfully financing water resource projects. Instead, funding mechanisms for water planning and management should be based on flexible strategies that are broad-based and provide equitable benefits. Strategies for financing water resource programs include state appropriations, the establishment of water management improvement or conservancy districts, targeted user fees, the development of a state water fund supported by power franchise fees, targeted sales, property, or special product and services taxes, and revenue bonds. While the existing institutional and legal framework may be adequate for some projects, it is important to develop innovative approaches that are responsive to future needs. Transparency and clarity about the intent and limitations of any particular funding strategy will help ensure that a strategy is used and evaluated appropriately. Projects proposed for funding must be in the public interest and in compliance with the State Water Plan.

The Idaho Water Resource Board's Revolving Development Fund and the Water Management Account are supported by the appropriation of moneys from the state's general fund, federal funds, and other revenue sources. These programs have and will continue to provide financial assistance to project sponsors for water development and conservation, system rehabilitation, and treatment projects. The Board is also authorized to finance water projects with revenue bonds. The issuance of revenue bonds does not constitute a general obligation of the State of Idaho or the Idaho Water Resource Board.

Sources of funding for programs focused on the protection and restoration of species listed under the federal Endangered Species Act include Snake River Water Rights Act of 2004 appropriations, the Columbia Basin Water Transaction Program, the Pacific Coast Salmon Recovery Fund, and the 2008 Columbia Basin Fish Accords.

The Eastern Snake River Aquifer Comprehensive Management Plan calls for a water-user fee in conjunction with state appropriations. Implementation of strategies for addressing regional water use issues on the Eastern Snake River Plain Aquifer will assist in the development of comprehensive aquifer management implementation plans in other areas of the state.

The Board will continue to pursue opportunities for partnerships with the federal government and private entities to determine the feasibility of increasing water supplies through development of additional storage capacity. At the direction of the legislature, the Board has entered into agreements with the U.S. Army Corps of Engineers and the Bureau of Reclamation for studies in the Boise River and Snake River basins. As demands increase on Idaho's water storage and delivery systems, the need for additional water storage feasibility studies and funding partnerships will be assessed.

Implementation Strategies:

- Review existing authorities and identify changes needed to optimize financing for water resource projects.
- Evaluate Idaho Water Resource Board financial program procedures to determine whether revisions are needed to improve efficiency and accessibility.
- Pursue opportunities for private funding partnerships.
- Pursue opportunities for local, federal, and intra-state funding partnerships and projects.

Milestones:

- Financial programs and funding strategies meet the future water resource needs of the state.

3E - WATER RESOURCE PLANNING PROGRAM

Comprehensive water planning will help ensure sufficient water supplies to satisfy Idaho's future water needs.

Discussion:

Idaho Code § 42-1734A(1) directs the Idaho Water Resource Board to formulate and adopt a comprehensive state water plan for conservation, development, management and optimum use of all unappropriated water resources and waterways of the state. The legislature also authorized the Idaho Water Resource Board to develop plans for specific geographical areas. Comprehensive plans for individual hydrologic river basins include state protected river designations and basin-specific recommendations concerning water use and resource values. Basin plans also assure that the state's interests will be considered in federal management agency decisions. Public review and comment ensures that the state water plan serves the public interest. Article XV, section 7 of the Idaho Constitution authorizes the legislature to amend or reject the state water plan, as provided by law.

Adoption of The State Water Plan - Part One, The Objectives, in 1974, and The State Water Plan - Part Two in 1976, provided a comprehensive water plan, based upon an initial resource inventory, and provided a basis for more detailed planning for the hydrologic river basin plan areas. Implementing the policies in Part Two required the combined efforts of government agencies, the legislature, private concerns and the public. Consequently, the Plan delineated those areas where legislative action was required, identified the programs to be implemented by the Idaho Water Resource Board, and described programs requiring the cooperation of public and private interests. The Plan was revised and re-adopted in 1982, 1985, 1986, 1992, and 1996.

In 2008, the Idaho Legislature adopted Idaho Code Section 42-1779 and 42-1780, establishing the Comprehensive Aquifer Planning and Management Program (CAMP) and Aquifer Planning and Management Fund, which authorize the development of

aquifer management plans throughout the state for hydraulically connected ground and surface water resources. As funding allows, the Idaho Water Resource Board will undertake comprehensive aquifer management planning in prioritized basins. CAMP development provides opportunities for addressing existing and future water-use disputes through a public process involving affected water users, state and federal agencies, and other stakeholders.

In exercising its responsibilities for water resource planning, the Board will focus on the coordination of local, state and federal planning activities to minimize duplication and to promote the optimum use of Idaho's water resources.

Implementation Strategies:

- Review and update existing agreements for coordinated water resource planning.
- Develop new cooperative planning agreements.
- Secure funding to complete CAMPs for priority aquifers consistent with the schedule established by the Board.

Milestones:

- Cooperative planning agreements executed and implemented.
- Adoption of Treasure Valley and Rathdrum Prairie CAMP.
- Completion and adoption of CAMPs for remaining priority aquifers.

3F - WATER RIGHTS ADJUDICATION

Adjudication of water rights through the state courts should be completed to fully define and quantify all state, tribal and federal water rights.

Discussion:

The purpose of a general stream adjudication is to provide certainty and predictability in the administration and distribution of water diverting from hydraulically connected water sources. The need for a general adjudication of water rights in the Snake River Basin became apparent as the spring flows in the Thousand Springs reach began to decline and disputes arose over the availability of water supplies on the Snake River Plain. As part of the 1984 Swan Falls Agreement, the State agreed to commence the Snake River Basin Adjudication ("SRBA"), the largest legal proceeding in the history of the state. The SRBA is the cornerstone for the long-term management of the Snake River Basin within Idaho. At the conclusion of the SRBA, the state will have a listing of all water rights within the basin, which is the predicate for establishing water districts to administer all water rights in accordance with the prior appropriation doctrine, as established by law.

Pursuant to Idaho Code § 42-1734(3), the Idaho Water Resource Board is authorized to represent the state, when requested to do so by the Governor, in proceedings, negotiations, and hearings involving the federal government. In the SRBA, the Board

coordinated state participation in the negotiation of federal reserved water rights, including tribal claims. The Idaho Water Resource Board successfully negotiated agreements resolving federal reserved right claims including those filed by the Shoshone-Bannock, Nez Perce, and Shoshone-Paiute tribes as well as the claims of numerous federal agencies. The final settlement of the Nez Perce Tribe's claims reflected the tribe's and the state's shared interest in addressing environmental concerns and addressed the conflicting demands for consumptive and nonconsumptive uses. Consistent with state law, the Board should serve as the lead agency for coordinating state participation in all general stream adjudications.

On November 12, 2008, the district court ordered the commencement of an adjudication in the Coeur d'Alene Spokane River water system. Like the SRBA, the determination of all existing water rights from the water basins in Northern Idaho will provide the basis for administration of water rights in accordance with the prior appropriation doctrine, as established by law.

Implementation Strategies:

- As requested by the Governor, provide coordination and negotiation adjudication activities.
- As determined by state and local support, encourage general adjudications in unadjudicated basins in northern Idaho and the Bear River basin in eastern Idaho.

Milestones:

- Issuance of final unified decree in SRBA.
- Complete Coeur d'Alene Spokane River Basin adjudication.

3G - CLIMATE VARIABILITY

Preparedness strategies should be developed to account for the impact of climate variability on the state's water supplies.

Discussion:

Evidence suggests that currently the Earth's climate is warming and that warming may continue into the foreseeable future. While recognizing the uncertainties inherent in climate prediction, it is important to anticipate how a warming climate can potentially affect water supplies and plan accordingly.

Climate experts are less confident about how continued warming will affect the overall amount of precipitation Idaho receives, but changes in seasonal stream flows and increased annual variability have been documented. It is expected that seasonal flows in snowmelt-fed rivers will occur earlier, summer and fall stream flows will be reduced, and water temperatures will increase. Increased precipitation in the form of rain and fewer, but more intense, storm events are expected to result in more severe droughts and greater flooding. Potential impacts could also include more evaporation, reduced ground water

recharge, water quality challenges, reduced productivity of hydropower facilities, and irreversible impacts on natural ecosystems. Water resource managers must evaluate and plan for these possibilities.

Planning for the potential impacts of climate variability requires increased flexibility in water administration and the identification of existing tools that can be adapted to address climate-induced changes in water supplies. Increased monitoring and data collection as well as conducting an initial vulnerability analysis for watersheds will help managers develop adaptive approaches to changes in the hydrologic regime that may accompany an increase in climate variability. Increasing public awareness and strengthening community and regional partnerships to manage shared water resources are proactive steps that should be taken now to provide for the optimum use of Idaho's water resources.

Implementation Strategies:

- Evaluate existing legal and institutional tools and constraints that can be adapted to provide flexibility for water resource managers.
- Implement a collaborative approach to the analysis of reservoir operation rule curves that adequately considers past and current hydrologic data.
- Pursue expansion and diversification of water supplies, including increased surface and ground water storage.
- Develop and update flood-risk assessments and environmental impact mitigation measures.
- Identify and implement adaptive mechanisms to address the impact of climate variability on water supplies.
- Establish stakeholder forums involving state and local water supply managers, scientists, state and federal agencies, and water users to enhance understanding about the science of climate variability, to share information about existing and potential tools for ameliorating the impact of climate variability, and to increase understanding of the challenges facing water users and managers.

Milestones:

- Completion and implementation of updated flood control rule curves.
- Construction or expansion of water supply projects.
- Finalization of risk assessment studies.
- Documentation of legal and institutional framework and water management tools that anticipate and respond to climate variability.
- Establishment of regional forums that encourage the development of collaborative programs and decision making.
- Funding mechanisms in place for climate variability preparedness and risk assessment.

4. SNAKE RIVER BASIN

The Snake River was accurately described in the 1960s as "A Working River" by Senator (and former Idaho Governor) Len B. Jordan. This description accurately portrays the development of the river since the earliest settlement and irrigation of the semiarid lands of southern Idaho.

As a "Working River" the Snake has had – and continues to have – many competing demands for its water that affect the management of the river, among them: irrigation, hydroelectricity, municipal supply, flood control, recreation, fish, and wildlife management. Multiple governmental interests regulate activities that affect the use of the waters of the Snake River, among them: the Idaho Water Resource Board (Water Policy), Idaho Department of Water Resources (Water Administration), U.S. Bureau of Reclamation (Irrigation, Water Storage and Hydroelectricity), U.S. Army Corps of Engineers (Flood Control), National Oceanographic and Atmospheric Administration – Fisheries Service (Anadromous Fisheries Management), U.S. Fish and Wildlife Service (resident fisheries), Bonneville Power Administration (Federal Power), and the Federal Energy Regulatory Commission (Hydropower). The Snake River policies in this Plan provide essential policy guidance for the management of the Snake River in the public interest. When conflicts arise between competing interests – and with water resources in the arid American West, as they inevitably do – the laws of the State of Idaho and the policies in this Plan establish the blueprint for allocation of unappropriated waters of the Snake River.

This plan sets forth ten policies for the Snake River Basin. Policy 4A describes the minimum stream flow framework that guides overall water planning and management in the Snake River Basin. Policy 4B reaffirms the Milner Zero Flow policy that guides water resource planning and management in the Snake River Basin above Milner Dam. Policy 4C describes the trust created by the Swan Falls Settlement that guides water resource planning and development in the Milner to Murphy reach of the Snake River Basin. Policy 4D establishes a process for conjunctive management of the Eastern Snake Plain Aquifer and the Snake River. Policy 4E identifies the need and process for developing new storage within the Snake River Basin. Finally, Policies 4F through 4J set forth additional policies applicable to water supplies for agriculture, DCMI (domestic, commercial, municipal and industrial), hydropower, navigation, fish, wildlife, recreation, and scenic values.

4A - SNAKE RIVER MINIMUM STREAM FLOWS

The main stem Snake River above Hells Canyon Dam will be managed to meet or exceed the following minimum average daily flows at the designated stream gaging stations:

Gaging Station	Minimum Average Daily Flow
Milner	0 cfs
Murphy	3,900 cfs (4/1 through 10/31)
	5,600 cfs(11/1 through 3/31)
Weiser	4,750 cfs

These minimum stream flows provide the framework for water planning and management in the Snake River Basin and shall be administered in priority with other water rights under the prior appropriation doctrine.

Discussion:

Approximately 57%[1] of the surface area of the State of Idaho is within the Snake River Basin. The waters of the Snake River Basin represent 50% of the water resources of the State, but represent the water supply for 76% of Idaho's population. Thus, the Snake River forms the backbone of Idaho's economy, and effective management of this resource is essential to protect existing water rights, supporting agriculture, sustaining economic growth, maintaining a base flow for hydropower generation, and preserving fish, wildlife, and other environmental values.

The Snake River minimum stream flows have been an integral part of the State Water Plan since their adoption in 1976. They were established to provide the framework for achieving a balance between diversion of water for consumptive uses and preservation of Snake River flows for instream uses.

The policy of managing the Snake River to meet or exceed these designated minimum stream flows evolved over the course of the 20th Century as a result of the need to reconcile the conflict between irrigation, which requires diverting water out of the stream, and hydropower, which relies on retaining water in the stream. A brief overview of the evolution of the Snake River minimum stream flow framework is provided to give context for the Snake River policies that follow.

The dynamic tension between diversion of water for consumptive uses and retention of flows for instream uses manifested itself during the simultaneous development of the irrigable lands within the Snake River Basin and the development of the hydropower potential of the main stem Snake River. The inevitable conflict between these two uses was recognized as early as the 1889 Constitutional Convention, and the tension continued through the 20th Century.

[1] The Salmon and Clearwater Basins are not included in this calculation because they are treated as separate basins for purposes of the State Water Plan.

The initial effort to create a balance between hydropower and irrigation development arose out of a 1920 plan for construction of the American Falls Reservoir. Upstream from the Milner Dam the Snake River is not deeply entrenched, which facilitated gravity water diversions into canal systems. Below Milner Dam, the Snake River enters a deep canyon and was largely inaccessible for agricultural development in the 1920s, although a number of sites in the canyon were well suited for hydropower development. Based upon this physical divide, the Board of Engineers, which consisted of the State Engineer, U.S. Reclamation Service and irrigation interests, agreed to a concept that called for dedicating the entire flow of the Snake River above Milner Dam for future agricultural development.

The Board of Engineers' plan proposed the construction of storage capacity, to the extent economically feasible, to capture flows above Milner Dam for existing and future agricultural development. The Board of Engineers recognized, however, that it would take a number of years to fully develop the water supply for agricultural purposes and that the establishment of unlimited hydropower water rights in the meantime could frustrate the plan. Thus, the Board of Engineers' report recommended that future hydropower water rights be conditioned to prevent them from precluding storage and agricultural development of the flows of the Snake River above Milner Dam. This limitation on the ability of hydropower water right holders to establish rights to water above Milner Dam was integral to the Board of Engineers' plan for the "maximum utility" and "greatest use" of the water resources of the Snake River. The Board of Engineers' plan was viewed as not greatly impacting hydropower development because the Snake River soon reconstituted itself downstream from Milner Dam from irrigation return flows, tributary springs, and surface water sources.

The physical differences in the reaches above and below Milner Dam, and the corresponding differences in the existing and planned-for development above and below Milner Dam, led to the commonly-held view of the Snake as consisting of "two rivers." The "two rivers" concept, and its policy against allowing water to be called from above Milner Dam to satisfy downstream uses, was reaffirmed in every major Snake River water project and controversy in subsequent years. For instance, concern that development of the hydropower potential in Hells Canyon might monopolize the flows of the Snake River upstream led to an agreement between the State of Idaho and Idaho Power Company in the 1950's that subordinated hydropower generation at the Company's Hells Canyon Complex (HCC) to upstream consumptive uses, consistent with the "two rivers" concept.

The "two rivers" concept was formally recognized in the 1976 State Water Plan, which set a "protected flow" of zero cfs at the Milner U.S.G.S. gaging station. The purpose for allowing a zero flow at Milner Dam was to maximize the water supply available for development above the dam, including ground water development of the Eastern Snake Plain Aquifer, by allowing existing uses to continue, and by providing water for new uses above the dam. The Idaho Water Resource Board (IWRB) recognized, however, that the Milner zero minimum flow was not a target or goal to be achieved, nor was a zero cfs flow necessarily desirable. Rather, the Milner zero minimum flow recognizes that the exercise of water rights above Milner Dam has in the past, and may in the future, reduce

the flow of the Snake River at Milner Dam to zero. This concept is codified in Idaho Code § 42-203B(2).

To establish a balance between instream flow uses and consumptive uses of the flows of the main stem Snake River below Milner Dam, the 1976 State Water Plan also established minimum average daily flows[2] at the Milner, Murphy, and Weiser gauging stations. In the 1976 State Water Plan, "[t]he Idaho Water Resource Board concluded, after considering all current and potential uses of water on the main stem Snake River, that depletion of flows below that currently available in the low flow months to maintain water for production of hydropower and other main stem water uses [was] not in the public interest."

While the 1976 Idaho State Water Plan also recognized the 5,000 cfs at Johnson's Bar and 13,000 cfs at Lime Point flow requirements contained in the HCC Federal Energy Regulatory Commission (FERC) license were in the public interest, the 1976 Plan did not establish these flow requirements as state minimum stream flows. The Idaho Legislature in 1978, however, established a 5,000 cfs minimum average daily flow at Johnson's Bar to be maintained 95% of the time. In 1986, the Idaho State Water Plan recognized a minimum average daily flow at Lime Point of 13,000 cfs to be maintained 95% of the time. Like the HCC federal power license, however, neither the Johnson's Bar nor the Lime Point minimum stream flows are based upon natural flow conditions, but rather, are intended to protect natural flow of the Snake River below the HCC and operational releases from the HCC. Neither minimum stream flow is enforceable against junior water rights diverting from the Snake River above the HCC nor can a call be made for the release of water stored in the HCC. In addition, the Lime Point minimum stream flow water right cannot be used to seek administration of water rights diverting from the Salmon River Basin.

The Swan Falls Controversy of the 1980s marked the most recent chapter in the development of the Snake River minimum stream flow framework. While the primary legal issue in the Swan Falls controversy was the question of the subordination of certain water rights claimed by Idaho Power Company to consumptive-use water rights upstream of Swan Falls Dam, at the center of the controversy was the declining flows of the Snake River below Milner Dam that had resulted, in part, from ground water development of the Eastern Snake Plain Aquifer. The Company also was concerned that the 3,300 cfs Murphy minimum stream flow of the 1976 Idaho State Water Plan would allow further depletion of the flow of the Snake River. As part of the resolution of this controversy, the Idaho State Water Plan was amended to increase the minimum average daily flow at the Murphy gage to 3,900 cfs during the irrigation season and 5,600 cfs during the non-irrigation season. In exchange, a portion of Idaho Power Company's hydropower power water rights were explicitly subordinated to existing and certain future upstream water rights. The settlement also explicitly reaffirmed the Milner zero minimum stream flow, but recognized the hydraulic connection between the Eastern Snake Plain Aquifer and directed that it "be managed as an integral part of the river system."

[2] An average daily flow is the average of multiple flow measurements taken during a 24-hour period.

To summarize, the Milner, Murphy and Weiser minimum stream flows establish the framework for water planning and management in the Snake River Basin above the HCC. The State Water Plan, beginning with the first version in 1976, and continuing though each successive plan, has recognized that the minimum stream flows at Milner, Murphy, and Weiser ensure a balance between consumptive and instream uses of the flow of the main stem Snake River. Johnson's Bar and Lime Point minimum stream flows reflect FERC operating conditions for the HCC, and therefore do not establish a framework for water planning and management in the Snake River Basin above the HCC.

Implementation Strategies:

- A monitoring program will be developed by 2014 to account for fluctuations resulting from the operation of Idaho Power Company's hydropower facilities in the calculation of the Murphy minimum average daily flow.
- Develop tools to predict Snake River flows at the Murphy Gage based on ESPA ground water level trends, precipitation patterns, new appropriations and changes in conservation practices.
- Develop by 2014 management scenarios to ensure that Snake River flows at the Murphy and Weiser Gages remain above established minimum stream flow levels.
- Reevaluate the Johnson's Bar and Lime Point minimum stream flows when the FERC license for the HCC is issued.

Milestones:

- Snake River minimum average daily stream flows are maintained.
- Tools developed to predict Snake River flows at the Murphy Gage.
- Management strategy developed to ensure that Snake River minimum stream flows at the Murphy and Weiser Gages are maintained.
- Johnson's Bar and Lime Point minimum stream flows are reviewed.

4B - SNAKE RIVER MILNER ZERO MINIMUM FLOW

Water resource policy, planning, and practice should continue to provide for full development of the Snake River above Milner Dam recognizing that the exercise of water rights above Milner Dam has and may reduce flow at the Dam to zero.

Discussion:

Idaho Code § 42-203B(2) provides that water rights diverting from the Snake River and surface and ground water tributary to the Snake River downstream from Milner Dam shall not be considered for purposes of the determination and administration of existing and future rights to the use of the waters of the Snake River or its tributaries upstream from Milner Dam. As discussed in Policy 4A, the Milner Zero Minimum Stream Flow

evolved out of the 1920 Board of Engineers' plan that sought to provide for the optimum development of the Snake River upstream from Milner Dam by capturing and storing, to the extent economically feasible, the flow of the river for future agricultural development.

The 1976 State Water Plan formally implemented the Milner Zero Minimum Stream Flow by establishing a "protected flow" of zero cubic feet per second at the Milner gaging station. The 1976 State Water Plan Milner Zero Minimum Stream Flow Policy recognized that for purposes of administration, the Snake River at Milner is severed. As part of the resolution of the Swan Falls controversy, the State reaffirmed the "two rivers" administration concept through adoption of Policy 5A of the 1986 Idaho State Water Plan and enactment of Idaho Code § 42-203B(2).

The Board reaffirms the Milner "two rivers" concept that has appeared in each successive revision of the Idaho State Water Plan and finds that it is in the public interest to develop in-stream and off-stream storage projects as well as aquifer recharge projects to capture unappropriated flows to satisfy current and future water supply needs. The impact of developing new storage above Milner must be accounted for in water resource planning and management decisions in the Snake River Basin below Milner.

As this Board recognized in the Memorandum of Agreement entered into with Idaho Power Company as part of the 2009 Framework Reaffirming the Swan Falls Settlement, "implementation of managed recharge will have an effect on the flow characteristics of the Snake River above and below Milner Dam." Accordingly, while the Eastern Snake Plain Aquifer Comprehensive Management Plan established a long-term annual hydrologic target of 150,000 to 250,000 acre-feet of managed recharge, the Memorandum of Agreement provides that the long-term target should be phased in so that the State can "make informed water management and planning decisions . . . ." Consistent with the Memorandum of Agreement, the managed recharge hydrologic target for the Snake River Basin above Milner is to recharge between 100,000 and 175,000 acre-feet into the ESPA on an average annual basis by January 1, 2019. The Board, based upon data gathered during the initial phase of managed recharge, will establish a plan for implementation of the ESPA long-term managed recharge hydrologic target in 2019.

Development of new storage will take time. In the interim, the Board will cooperate with stakeholders to explore ways to optimize the management of flows that are currently passing over Milner Dam to first meet water supply needs above Milner Dam, and second to shape any remaining excess flows for hydropower and other uses below Milner Dam. Consistent with Policy 4B and Idaho Code § 42-203B(2), no use of any unappropriated flows passing Milner Dam by downstream users establishes a right to call on such flows now or in the future.

Implementation Strategies:

- Develop and maintain a reliable supply of water for existing uses and future beneficial uses above Milner Dam.
- Assess the feasibility of construction of new on-stream and off-stream storage in the Snake River Basin above Milner Dam.

- Implement a sustainable aquifer recharge program.
- Implement a process to address water management and reservoir operation needs through a standing advisory subcommittee that will include at least one representative from Idaho Power Company, the Committee of Nine, and the Bureau of Reclamation. The subcommittee will be a collaborative forum where relevant information may be exchanged and reviewed on how the state and the Bureau of Reclamation, in the exercise of their respective authorities, can optimize the management of the water resources and the reservoir system above Milner Dam. This subcommittee may periodically submit advisory recommendations to the Board and the U.S. Bureau of Reclamation, but will have no power or authority to affect vested water rights or to prescribe the manner in which the federal reservoir system or the water resources above Milner Dam shall be managed.
- Measurement and Monitoring Implementation Strategy:
  - Continuously improve the Eastern Snake River Aquifer Model (ESPAM), the Snake River Planning Model (SRPM), and the Snake River Accounting System.
  - Promote linkage of the models and their use in evaluation of impacts of various management decisions on Snake River flows, aquifer levels, and reservoir operations.
  - Undertake measurement and monitoring of the combined river and aquifer system to facilitate water management and planning in the Snake River Basin above Milner Dam.
  - Investigate, test, and adopt new water measurement and modeling methods and technologies that improve water management capabilities.
- Implement and maintain cooperative water resource agreements and partnerships with neighboring states, the federal government, and Indian tribes in managing the water resources of the Snake River above Milner Dam.
- Identify constraints that restrict or limit water transferability for DCMI and other emerging needs.

Milestones:

- Process in place that provides recommendations to optimize the management of the water resources and the reservoir system above Milner Dam.
- A managed aquifer recharge program above Milner Dam implemented that recharges between 100,000 and 175,000 acre-feet on an average annual basis by 2019 and data gathered to assess the efficacy of the program.
- Projects implemented that enhance the water supply above Milner Dam.

4C - REALLOCATION OF SNAKE RIVER TRUST WATER

Water made available for reallocation to new uses in the Snake River trust water area pursuant to Idaho Code § 42-203B shall be allocated in accordance with criteria established by Idaho Code §§ 42-203A and 42-203C.

Discussion:

The 1984 Swan Falls Settlement resolved the long-standing conflict between use of the flow of the Snake River for hydropower purposes and for agriculture and other depletionary uses. The details of this century-long conflict are chronicled in two Idaho Supreme Court decisions and the SRBA District Court's Memorandum Decision and Order on Cross-Motions for Summary Judgment dated April 18, 2008, and therefore, are not repeated here. The statutory trust created as a result of the settlement, however, establishes the framework for water planning and management of the main stem Snake River between Milner Dam and the Murphy gage. A brief overview of the trust created by Idaho Code § 42-203B(2) is provided as context for this policy.

One of the core principles of the Swan Falls Settlement was that the flow of the Snake River downstream from Milner Dam in excess of the Murphy minimum average daily flow of 3,900 cfs during the irrigation season and 5,600 cfs during the non-irrigation season would be available for future development in accordance with state law. The Settlement, however, recognized development would occur over time and that in the interim it was in the public interest to allow Idaho Power Company to continue to use the flow of the Snake River below Milner Dam up to the licensed amount of its hydropower water rights "pending approval of depletionary future beneficial uses." In order to implement these dual objectives, the State of Idaho took title to twenty-five hydropower water rights, under a statutory trust, which operates for the joint benefit of Idaho Power Company and the people of the State of Idaho. The State, by and through the Governor, is the trustee.

While the water made available for future development as a result of the trust is often referred to as "trust water," this term is a misnomer. The trust consists of "water rights" as opposed to "water." Trust Water is simply a shorthand term referring to flows above the minimum stream flow at the Murphy Gage, which were originally appropriated under water rights for hydropower generation at Idaho Power Company's facilities located between Milner Dam and the Murphy Gage. Additionally, the term refers only to water sources tributary to the Snake River below Milner Dam, as shown on Figure 1[3]. There is no specific amount of trust water; rather, the term describes the flow at Idaho Power Company's facilities in the Milner to Murphy reach of the Snake River in excess of the Murphy minimum flow and less than the total appropriated flow at each facility. The Swan Falls

[3] Pursuant to the Swan Falls Settlement and Idaho Code § 42-203B(2) "water rights for hydropower purposes on the Snake river or its tributaries downstream from Milner dam shall not place in trust any water from the Snake river or surface or ground water tributary to the Snake river upstream from Milner Dam." Thus, the hydropower water rights held in trust carry no right to seek administration of the rights to the use of the waters of the Snake or its tributaries upstream from Milner Dam.

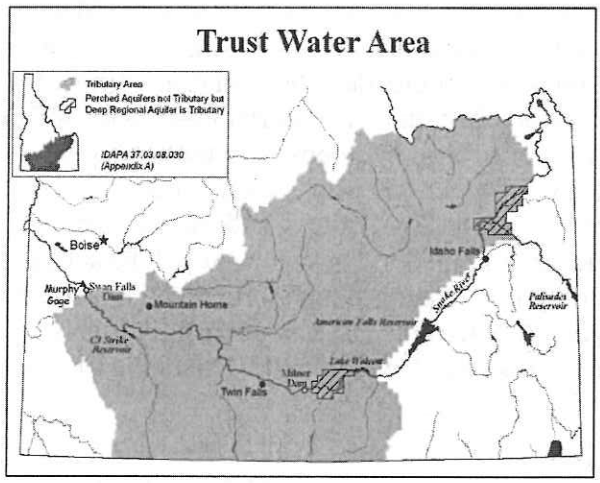

Figure 1 Trust Water Area

Framework recognized that "[t]he actual amount of development that can take place without violation of the [Murphy] minimum streamflows will depend on the nature and location of each new development, as well as the implementation of new practices to augment the streamflow."

Figure 2 shows what is deemed trust water at the Swan Falls dam[4]. The original graph used in implementation of the Swan Falls Settlement included the 1961 average daily flow at the Murphy Gage as representative of the then existing low flow year. Average daily flow data from 1984 to 2011 is added to Figure 2 to show the relative change in flow at the Murphy Gage since implementation of the Swan Falls Settlement.

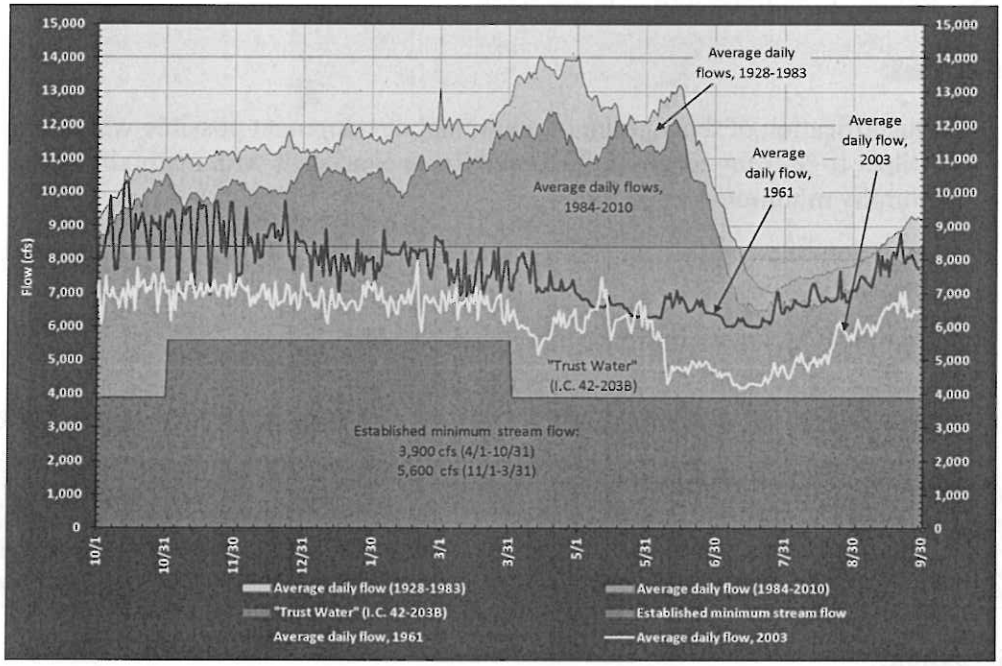

Figure 2 Swan Falls Trust Water Flows

[4] Figure 2 updates Figure 3 contained in the IDWR Policy and Implementation Plan for Processing Water Right Filings in the Swan Falls Area, dated November 3, 1988, which depicted water made available for appropriation above the Murphy Gage as a result of the Swan Falls Settlement. The original graph used average monthly flows for the purpose of representing the amount of water potentially available for future development. Since that time, technology has made it easier to graph average daily flows. Thus, Figure 2 uses average daily flows as reported by the USGS to provide a more accurate depiction of flow conditions at the Murphy Gage. Specifically, Figure 2 shows average daily flows for 1961 and 2003 and the average of the average daily flows for the years 1928 through 1983 and 1984 through 2010. Although not included here, the Policy and Implementation Plan also contains a similar graph that depicted water available for appropriation upstream from the Bliss hydropower facility as a result of the Swan Falls Settlement.

While flows are beginning to approach the minimum average daily flow at the Murphy Gage during certain times in low flow years, in most years flows are significantly above the Murphy minimum flow. The opportunity for further development of trust water, however, is currently limited by three factors. First, there is uncertainty over the relative rights of senior water right holders for uses other than hydropower to the spring flows in the Thousand Springs reach. While the Swan Falls Settlement subordinated the use of the flows of the Snake River for hydropower purposes, it did not address the rights of other senior water right holders. Second, term limited trust water right will be subject to a public interest review in the near future. Third, there is a moratorium on issuance of new water rights within the trust water area. Until these issues are resolved, it is not possible to make informed decisions regarding the allocation of the remaining trust water.

Implementation Strategies:

- Conduct hydrologic studies to determine the amount of additional development possible within the Murphy minimum stream flow constraint.
- Develop a conjunctive management plan setting forth measures necessary for future development of trust water.
- Review term limited trust water rights.

Milestones:

- Quantification of the amount of additional development possible within the Milner to Murphy reach of the Snake River consistent with maintaining the Murphy minimum stream flow.
- Adoption of a conjunctive management plan for the Milner to Murphy reach of the Snake River.
- Complete review term limited trust water rights.

4D - CONJUNCTIVE MANAGEMENT OF THE ESPA AND SNAKE RIVER

The Eastern Snake Plain Aquifer and the Snake River below Milner Dam should be conjunctively managed to provide a sustainable water supply for all existing and future beneficial uses within and downstream of the ESPA.

Discussion:

Most of the Eastern Snake Plain Aquifer (ESPA) is in direct hydraulic connection with the Snake River. The Snake River alternately contributes water to – and receives water from – the ESPA. The ESPA discharges an average of approximately 2,500 cfs of water to the Snake River at American Falls and approximately 5,200 cfs in the Thousand Springs reach between Milner and King Hill.

The advent of extensive ground water pumping in the ESPA, combined with changes in surface water irrigation practices and a series of droughts, have had a profound effect on the ESPA groundwater and spring discharge rates. Overall, spring discharge rates in the

Thousand Springs reach of the Snake River have declined from about 4.9 MAF/ear (6,800 cfs) in the early 1950s to about 3.8 MAF/year (5,200 cfs) currently – a decline of just over twenty (20)% over the past 60 years. Past aquifer level declines, and resulting reductions in spring discharge have created conflicts between surface and groundwater users, and in some instances between senior and junior groundwater users.

During certain times in low-flow years, the Snake River flow upstream of Milner Dam is fully diverted, and the Snake River flow at Milner is reduced to zero. At these times the Snake River flow at the Murphy Gage consists mostly of ESPA discharge from the Thousand Springs area.

Recognizing the hydraulic-connected nature of ground and surface water in the ESPA, the State began conjunctive management of ground- and surface-water resources in 1986. In recent years, the State has implemented scientific measures to increase knowledge of the hydraulic connection between the ESPA and the Snake River, and implemented measures to improve aquifer conditions in, and spring discharge from, the ESPA. Continuation of these efforts is fundamental to ensuring an adequate water supply for existing and future water demands within the Eastern Snake River Basin.

Conjunctive management of the Snake River Basin water resources is also key to meeting Snake River minimum stream flows at the Murphy and Weiser Gages set forth in Policy 4A. The 1984 Swan Falls Settlement explicitly recognized effective water management of the ESPA and Snake River – and associated policies and recommendations laid out in the State Water Plan – as the means of ensuring the Murphy minimum average daily flow while optimizing the development of the Snake River Basin: "[t]he State Water Plan is the cornerstone of the effective management of the Snake River and its vigorous enforcement is contemplated as a part of the settlement." [5]
Building on the existing conjunctive administration and management efforts, the Idaho Legislature in 2006, adopted Senate Concurrent Resolution 136, which requested that the Idaho Water Resource Board develop a comprehensive aquifer management plan for the Eastern Snake River Plain Aquifer. In January 2009, the Board adopted the ESPA Comprehensive Aquifer Management Plan (CAMP). The overall goal of ESPA CAMP is to "[s]ustain the economic viability and social and environmental health of the Eastern Snake Plain by adaptively managing the balance between water use and supplies." The objectives of the plan are to increase predictability for water users by managing for a reliable supply, creating alternatives to administrative curtailment, managing overall demand for water within the Eastern Snake Plain, increasing recharge to the aquifer, and reducing withdrawals from the aquifer.

[5] This policy addresses conjunctive management of the Eastern Snake River Aquifer and the Snake River and not water rights administration. Water rights administration is the enforcement of the relative rights of water right holders under the prior appropriation doctrine. By comparison, conjunctive management encompasses actions other than water rights administration that can be taken to optimize the benefits and value of Idaho's water resources. While conjunctive management is not a substitute for water rights administration, it is in the public interest to conjunctively manage the ESPA and the Snake River to lessen or obviate the need for broad-scale water rights administration to accomplish general water-management goals.

Policy 4D embraces conjunctive management goals and objectives of the ESPA CAMP. Implementation of the ESPA CAMP will improve the opportunities to adaptively manage and optimize water supplies within and downstream of the ESPA, resulting in: increased gains in some river reaches; improved storage carryover; increased aquifer levels; opportunities for municipal and industrial growth; reductions in overall consumptive use; increased spring discharge rates; and an ongoing public process for assessing the hydrologic, economic, and environmental issues related to the implementation of management strategies.

The overall goal of the ESPA CAMP is to effectuate a net annual ESPA water budget change of 600 thousand acre-feet (kaf) by the year 2030. This change is to be achieved through implementation of measures designed to both reduce demand on and increase the water supply of the ESPA. Approximately 100 kaf of demand reduction is to be achieved through groundwater to surface water conversions, and another 250-350 kaf of demand reduction is to be achieved through various measures designed to retire existing water rights. Aquifer recharge is expected to increase the ESPA water supply by 150-250 kaf.

The ESPA CAMP uses a phased approach to achieving the long-term change in the water budget. The goal of Phase 1 of ESPA CAMP is to implement measures that will result in a net annual change in the ESPA water budget of between 200 kaf and 300 kaf. The recommended actions to achieve this change include redistributing existing water supplies (including selected ground- to surface-water irrigation conversions), managed aquifer recharge, and augmentation of supplies through demand reduction and weather modification. The ESPA CAMP calls for implementation of Phase I strategies by 2018 with ongoing monitoring and evaluation of the intended and unintended effects of the strategies. The Phase I monitoring and evaluation studies will be used to select, design, and implement Phase II strategies that will lead to an additional 300-400 kaf "water budget change."

Most of the human made changes to the ESPA water balance during the past decades are reflected in current aquifer levels and spring flows. Continued changes in irrigation practices (e.g., conversion from gravity irrigation to sprinkler irrigation) and future climate variability, however, may create additional impacts to ESPA aquifer levels and aggregate spring discharge. Such impacts affect not only the ESPA area but also the Snake River downstream of the ESPA, because aggregate spring discharge from the Thousand Springs reach is the primary source of water sustaining the Murphy minimum stream flow, during portions of some years.

To date, efforts to monitor and measure ESPA groundwater levels, diversion volumes, and river reach/gains have focused on the ESPA, individual springs discharging water from the ESPA, and reaches of the Snake River hydraulically-connected with the ESPA. Because of the importance of the ESPA discharge on downstream reaches of the Snake River, however, it is imperative that an enhanced spring-flow monitoring program be developed to provide the information necessary for identifying, tracking, and predicting changes in future spring discharge trends. Such a monitoring program will need to include long-term measurements of aggregate annual spring discharge (as opposed to point-in-time discharge from individual springs) and ESPA ground-water levels.

Sustaining Snake River minimum stream flows downstream of the ESPA may require short-term and long-term adaptive management measures. A monitoring program aimed at identifying long-term spring-discharge trends in the Snake River Thousand Springs reach should be designed to support the development of one or more adaptive management "triggers" based on pre-determined observed or predicted change in aggregate spring discharge rate, aquifer levels, and/or Snake River flow. The triggers should be used to initiate adaptive management measures that address the cause – or impacts – of any unacceptable decline in Snake River flow downstream of the ESPA.

Monitoring efforts and adaptive management measures are crucial to sustaining the economic viability and social and environmental health of the ESPA and the Snake River. Successful adaptive management strategies, built on the principles of conjunctive management of ground and surface water, supported by scientific understanding and reliable data, and that take into account the complex and interrelated nature of Snake River subasins, will accomplish two goals: 1) ensure an adequate and sustainable water supply for existing and future uses, and 2) reduce conflicts between ground and surface water users.

Implementation Strategies:

- Implement actions delineated in the ESPA CAMP that will enhance aquifer levels and spring flows.
- Continue existing efforts to measure and monitor ground and surface water diversions, water levels, spring discharge rates, and Snake River reach gains/losses, and quantify ground and surface water interactions.
- Develop and implement a monitoring program to better predict the occurrence and duration of future low flows in the Snake River.
- Revise Part B of the State Water Plan to further develop the conjunctive management objectives set forth in the State Water Plan.

Milestones:

- ESPA CAMP hydrologic conjunctive management targets met or exceeded.
- Snake River flows at the Murphy and Weiser Gages remain at or above established minimum stream flows.
- Reduced water-related conflict in the Snake River Basin.
- Revision of Part B of the State Water Plan.

4E - SNAKE RIVER BASIN NEW STORAGE

Development of new on-stream, off-stream, and aquifer storage is in the public interest; provided, however, applications for large surface storage projects in the Milner to Murphy reach of the Snake River should be required to mitigate their impact on hydropower generation.

Discussion:

Most of the Eastern Snake Plain Aquifer (ESPA) is in direct hydraulic connection with the Snake River. The Snake River alternately contributes water to – and receives water from – the ESPA. The ESPA discharges an average of approximately 2,500 cfs of water to the Snake River at American Falls and approximately 5,200 cfs in the Thousand Springs reach between Milner and King Hill.

Although there are major dams and reservoirs designed for water storage, flow regulation, and flood control on the Snake River and its tributaries, their existing capacity is insufficient to provide the water supply and management flexibility needed for the myriad of existing and future beneficial uses. This is the case in every water year, especially in years of drought and limited snowpack. As a consequence, new storage should be pursued throughout the Snake River Basin, with one exception.

While additional storage water in the Milner to Murphy reach of the Snake River would be beneficial, diversion of water from the main stem of the Snake River between Milner and the Murphy Gaging station during the period November 1 to March 31 will have a significant impact on hydropower generation. Thus, no new storage projects within this reach of the Snake River are recommended and any approval of new storage projects in this reach should be coupled with provisions that mitigate the impact of such depletions on hydropower generation. The term "mitigation" is defined as causing to become less harsh or hostile, and is used here rather than "compensate" which connotes equivalence. Methodology will be developed for use in calculating impacts on hydropower generation as part of any application to construct new storage within this reach of the Snake River.

A number of studies focusing on water storage as one potential measure for addressing water supply demand and flood risk reduction are underway. This section provides a brief description of the most significant studies that have been initiated or are in the planning process.

Henry's Fork Project/Teton River Basins

The Board and the U.S. Bureau of Reclamation are conducting a study of water resources in the Henry's Fork/Teton River Basins to develop alternatives for improving water supply conditions in the Eastern Snake Plain Aquifer and upper Snake River Basin. These alternatives include new water storage projects, enlargement of existing reservoirs, and conservation and water management strategies, including managed aquifer recharge and automated water delivery systems.

Minidoka Dam Enlargement

In the 1980s, the Bureau of Reclamation and irrigation districts initiated the required planning process and feasibility studies to replace the spillway and two canal headworks due to the state of deterioration and potential for ongoing damage to sections of the Minidoka Dam. In 2008, the Board partnered with the Bureau of Reclamation to also evaluate the structural raising of Minidoka Dam to accommodate a 5-foot rise in normal reservoir surface elevation, in conjunction with planned spillway repairs. The study found that a 5-foot rise is technically feasible, and would provide an additional 67,000 acre-feet of storage with an average annual yield of 33,000 acre-feet. Funding for the enlargement of Minidoka Dam, however, is currently not available. If economic or other conditions change, the Board will consider further evaluation of this storage option.

ESPA Managed Recharge Pilot program

Recharging aquifers as a water supply alternative has significant potential to address water supply needs, in addition to addressing conjunctive management issues. Pursuant to the ESPA CAMP, the Board is undertaking a five-year pilot program of managed aquifer recharge to the Eastern Snake Plain Aquifer. One of the potential benefits of managed recharge in the ESPA is increased water storage in the aquifer. Effectiveness monitoring and evaluation results will be used to select and design future managed recharge strategies and projects.

Lower Boise River Interim Feasibility Study

The lower Boise River corridor, from Lucky Peak Dam to its confluence with the Snake River has experienced rapid population growth and significant urban development over the past several decades. As a consequence, there is renewed interest in addressing water supply and flood control issues. Interest has also been expressed in environmental restoration, to include habitat preservation, aesthetics and recreation along the Boise River.

In 2009, the Board and the U.S. Army Corps of Engineers (Corps) partnered to conduct an Interim Feasibility Study focused on water storage potential and flood reduction in the Boise River Basin. A preliminary analysis ranked an enlargement of Arrowrock Reservoir as the highest priority alternative, followed by the construction of a new reservoir at the Alexander Flat site and a new reservoir at the Twin Springs site. A preliminary analysis completed in 2011 concluded that based on existing information, raising Arrowrock Dam is technically feasible. The evaluation identified a number of uncertainties that will be addressed during future study and data collection efforts, as funding becomes available.

Weiser-Galloway Gap Analysis, Economic Evaluation and Risk-Based Cost Analysis (Gap Analysis)

Water storage on the Weiser River and at the Galloway site has been studied for decades. In 1954, the Corps received a study authorization resolution for the Galloway Project from the U.S. Senate Public Works Committee. In the early 1970s, federal lands for the potential Galloway dam and reservoir site were classified and withdrawn for hydropower purposes by the Federal Power Commission (now FERC). In 2008, Idaho House Joint

Memorial 8 directed the Board to investigate water storage projects statewide, including the Weiser-Galloway Project. The Board and the Corps partnered to conduct a "Gap Analysis" which was completed in March 2011. The Gap Analysis was designed to inform decision makers of critical information gaps that need to be addressed before deciding whether to move forward with comprehensive new environmental, engineering and economic feasibility studies. The analysis identified two critical information gaps that must be resolved before deciding to move forward with a new and more comprehensive feasibility, environmental and engineering studies:

1. Determine the safety, suitability and integrity of geologic structures at the potential dam and reservoir site.
2. Evaluate whether basin and system benefits would be realized by analyzing a series of system operating scenarios with a range of new storage options on the Weiser River. Potential benefits include flood risk reduction, hydropower, additional water storage, pump back, irrigation, recreation and flow augmentation requirements for anadromous fish recovery. On July 29, 2011, the Idaho Water Resource Board authorized expenditure of up to $2 million to address these questions, and the required studies are currently underway.

Implementation Strategies:

- Implement a long-term managed aquifer recharge program to achieve an average annual recharge of 250,000 - 300,000 acre feet. In recognition that implementation of managed recharge will have an effect on the flow characteristics of the Snake River above and below Milner Dam and in order to confirm the relative merits of managed recharge, the Board's managed recharge program will be limited to not more than 175,000 acre-feet on an average annual basis until January 1, 2019.
- Undertake studies of potential surface storage opportunities, which include assessing the benefits and consequences of development.
- Managed aquifer recharge goals achieved.

Milestones:

- Studies completed.
- Actions taken to defer or move forward with storage development.
- Aquifer management goals achieved.

4F - SNAKE RIVER BASIN AGRICULTURE

Development of supplemental water supplies to sustain existing agricultural development is in the public interest.

Discussion:

Agricultural use accounts for about 85% of the total diversions of the water of the Snake River Basin. Approximately 3.4 million acres of land are irrigated with surface water and 1.13 million acres of land are irrigated with ground water. As discussed more fully in Policy 4B, it has been the policy of the State since the adoption of the first state water plan to encourage the development of on-stream and off-stream storage above Milner Dam to capture unappropriated flows to the extent economically feasible for existing and future agricultural development in the Snake River Basin above the Dam, as well as other beneficial uses.

As a result of the Swan Falls Settlement, the flow of the Snake River between Milner Dam and the Murphy Gage in excess of the Murphy minimum stream flow is available for future agricultural (and DCMI) development. As discussed in Policy 4C, however, the opportunity for additional agricultural development of the waters of the Snake River and surface and ground water tributary to the Snake River between Milner Dam and the Murphy Gage is limited because of the conflicts over conjunctive management of Thousand Springs flows and a moratorium on the issuance of new permits within this reach of the Snake River issued on April 30, 1993.

In summary, agricultural development for the foreseeable future is likely to be limited because of the absence of a reliable water supply. To the extent new agricultural development occurs, it is likely to be located on streams tributary to the main stem Snake River. Appropriation of water for agriculture likely will be for a supplemental water supply to address existing water shortages.

Implementation Strategies:

- Identify and develop opportunities to acquire water to address existing agricultural water supply shortages.
- Encourage the more efficient use of existing water supplies where such action will provide water to address existing water supply shortages.

Milestones:

- Existing water supply maintained.
- Supplemental water supply developed.
- Enrollment of agricultural lands into Conservation Reserve Enhancement Program (CREP).
- Implementation of water conservation projects that reduce demand.
- Acres in agricultural production maintained.

4G - SNAKE RIVER DOMESTIC, COMMERCIAL, MUNICIPAL AND INDUSTRIAL USES (DCMI)

It is in the public interest to ensure the availability of water for future DCMI uses in the Snake River Basin.

Discussion:

While most DCMI water uses are largely nonconsumptive, future growth in Idaho's population and commercial and industrial expansion require a sustainable water supply.

Snake River Above the Murphy Gage

As discussed in Policy 4C, development of the water supply tributary to the Snake River below Milner has led to flows that are approaching the Murphy minimum flow of 3,900 cfs during a portion of the summer months, which may limit the amount of water available in this reach for all beneficial uses.

Snake River Below the Murphy Gage

DCMI demands on the Snake River downstream of the Boise River drainage are anticipated to grow at a slow to moderate rate but the increased demands are not as pressing as in the lower Boise River area.

Boise River Basin

As discussed in Policy 4E, the lower Boise River area has experienced rapid population growth over the past several decades with land-use changing from agriculture to urban use. Water supply for DCMI uses is forecasted to be one of the most pressing water supply issues in this area. Additional DCMI demands are particularly pressing upstream of Star located on the Boise River.

The principle source of water for DCMI in the Boise River Basin is ground water, however, there is unappropriated water during the spring runoff that could be captured and stored. Thus, while increased demand for DCMI use may be partially met by water conservation and some decrease in or conversion from agricultural production, additional strategies, such as aquifer and surface water storage, efficient water marketing systems, and water re-use must be evaluated. Because the Treasure Valley water system is a complex system of ground and surface water, further studies are underway to determine the contribution of surface water to aquifer recharge and the importance of aquifer discharge to surface water systems.

Implementation Strategies:

- Maintain existing surface irrigation distribution system and establish dual-use residential systems to preserve incidental recharge to aquifers.
- Develop flexible water marketing tools to facilitate rental and/or acquisition of water rights for new uses on a willing buyer/willing seller basis. Water

acquisition strategies, however, must account for any adverse hydrologic, economic and social impacts.

- Evaluate opportunities to enhance water supplies including but not limited to, ground water conservation, additional storage, and water re-use.
- Support programs that protect water quality for DCMI use.

Milestones:

- Completion of water supply enhancement projects.
- Infrastructure in place to distribute surface irrigation water to lands undergoing conversion from agricultural to residential.

4H - SNAKE RIVER HYDROPOWER USE

Hydropower generation is a beneficial use of the flow of the Snake River, and it is in the public interest to protect the minimum average daily flows set forth in Policy 4A as a base flow for hydropower use.

Discussion:

The Snake River and related tributaries provide Idaho with significant hydropower energy resources. Hydropower generation is a beneficial use of the waters of the Snake River, supplying approximately 65% of the State's energy production and ensuring that Idaho electric rates are among the lowest in the nation. Through enactment of Idaho Code Section 42-203B the State established the framework for balancing the use of the flow of the Snake River for hydropower and other instream purposes and the diversion of flow for depletionary uses.

As discussed in Policy 4C, the Swan Falls Settlement recognized the Snake River minimum stream flows set forth in Policy 4A provide an adequate base flow for hydropower use. Further, while hydropower water rights in excess of the Murphy minimum average daily flow are subject to subordination to future consumptive uses approved in accordance with state law, the Settlement allows Idaho Power Company to use up to the decreed amount of the hydropower water rights held in trust by the State of Idaho for power generation pending reallocation of such flows for future consumptive uses.

The HCC, which represents the majority of Idaho Power's hydropower generation capacity, is the largest privately owned hydroelectric project in the United States. The FERC license for the HCC expired in 2005 and Idaho Power is currently operating the project under annual licenses while FERC processes Idaho Power's pending relicense application. The new license for the HCC will determine the operating conditions for the project and address the protection and enhancement of recreational, aesthetic, navigation, and fish and wildlife resources in the reach of the Snake River that are affected by the project. The Board is participating in the FERC licensing proceeding to ensure that the

new license for the HCC includes operational conditions that preserve and enhance the generation capacity of the project in a manner consistent with the State Water Plan.

Implementation Strategies:

- Develop technical tools capable of assessing the impact of actions within the Snake River hydrologic system on the minimum stream flows of the Snake River.
- Evaluate management and administrative activities to determine the intended and unintended consequences of meeting the minimum stream flows on the Snake River.

Milestones:

- Minimum flows are maintained to meet power generation targets.

4I - SNAKE RIVER NAVIGATION

The minimum stream flows set forth in Policy 4A are sufficient for commercial and recreational navigation on the Snake River.

Discussion:

Above Milner Dam the flow of the Snake River is completely regulated; therefore, no base flow for navigation is proposed for this reach of the Snake River. The Murphy and Weiser minimum flows set forth in Policy 4A provide a sufficient base flow for recreational and commercial navigation in the Snake River between Milner Dam and the Hells Canyon Dam.

Below HCC, the Snake River flows into a steep and spectacular gorge that cuts through the Salmon River Mountains and Blue Mountains of Idaho and Oregon. Hells Canyon is one of the most rugged and treacherous portions of the course of the Snake River. The river flows 8,000 feet below the He Devil Peak of Idaho's Seven Devils Mountains. The Salmon River is a major tributary in this reach of the Snake River.

Photo: Rafting on the Snake River in Hells Canyon
(Photo Courtesy of IDWR Staff)

The Hells Canyon reach of the Snake River below the HCC provides unique recreational opportunities, including rafting, fishing, private and commercial jet boating, hiking, camping, and wildlife viewing. The area is a tourist destination that positively contributes to the local and regional economy. As such, providing adequate navigation conditions for private and commercial boating below the HCC is in the public interest.

The license issued by the Federal Power Commission for the HCC in 1955 addressed navigational flows below the HCC. Article 43 of the power HCC license provides that:

> *The project shall be operated in the interest of navigation to maintain 13,000 cfs flow in the Snake River at Lime Point (river mile 172) a minimum of 95 percent of the time, when determined by the Chief of Engineers to be necessary for navigation. Regulated flows of less than 13,000 cfs will be limited to the months of July, August, and September, during which time operation of the project would be in the best interest of power and navigation, as mutually agreed to by the Licensee and the Corps of Engineers. The minimum flow during periods of low flow or normal minimum plant operations will be 5,000 cfs at Johnson's Bar, at which point the maximum variation in river stage will not exceed one foot per hour. These conditions will be subject to review from time to time as requested by either party . . . .*

This license article has governed navigation flows since the original licensing of the HCC in 1955.

In the 1976 State Water Plan, the Board concluded that there was sufficient water in excess of the minimum flows established at the Milner, Murphy, and Weiser gaging stations to provide for additional uses and development and also allow for the navigation flow targets in Article 43 of the HCC license to be met without significantly affecting hydropower production. Based upon these conclusions, the 1976 State Water Plan found providing flows consistent with Article 43 was in the public interest. The 1976 Plan, however, did not establish minimum stream flows at Johnson's Bar or Lime Point.

In 1978, the Idaho Legislature, through enactment of Idaho Code § 42-1736A, created a minimum stream flow at Johnson's Bar to provide for "stream flows and hydro-power base" below the HCC. Through the adoption of the 1986 Idaho State Water Plan a minimum stream flow was established at Lime Point. Both minimum stream flows were recognized as providing a sufficient base flow for recreational and commercial navigation below the HCC. Consistent with the HCC FERC license, the Johnson's Bar and Lime Point minimum stream flows, however, are subordinated to upstream consumptive uses above the HCC and carry no right to seek the release of water from the HCC other than that required to be released by the terms of the FERC license.

As discussed in Policy 4F, FERC is in the process of relicensing the HCC. Various state and federal agencies exercise jurisdiction over resources in Hells Canyon and each of these agencies, together with private interests are parties to the HCC relicensing proceedings pending before FERC. Section 10(a)(1) of the FPA requires that a FERC licensed project "be best adapted to a comprehensive plan for improving and developing

a waterway"; which requires a balancing of public interest factors. The Final Environmental Impact Statement (FEIS 2007) issued by the FERC preliminarily addressed navigation flows below the HCC and the issue will be determined by FERC in a subsequently issued final license order. The Board believes that FERC should consider and address the navigation issue in the new HCC license in a manner consistent with this State Water Plan while ensuring that upstream water rights and water development is not impacted, and the full hydropower capacity of the HCC is preserved. The State of Idaho is actively participating in the HCC relicensing process to ensure that the State's interests are adequately addressed. The Board will continue to monitor the relicensing process to ensure consistency and continuity with this and future State Water Plans. Upon issuance of the new HCC license, the Board intends to review the impact of the new license on this policy.

Implementation Strategies:

- Participate with state and federal agencies in FERC relicensing proceedings to ensure the new FERC license for the HCC is consistent with the State Water Plan.

Milestones:

- When issued, FERC license consistent to Idaho State Water Plan.

4J - SNAKE RIVER FISH, WILDLIFE, RECREATION, AND SCENIC RESOURCES

The minimum stream flows set forth in Policy 4A provide adequate flows for current Snake River fish, wildlife, recreation, and scenic values. Any additional flows for future fish, wildlife, recreation, and scenic purposes should be addressed through collaborative agreements.

Discussion:

In addition to the minimum stream flows set forth in Policy 4A, the state has entered into a number of voluntary agreements that benefit fish, wildlife, recreation, and scenic values while protecting existing water rights and uses and providing for economic stability. These agreements are described below.

Snake River Flow Augmentation

The State of Idaho, as part of the 2004 Snake River Water Rights Agreement (2004 Agreement), established a flow augmentation program that provides water for salmon and steelhead listed under the Endangered Species Act. Pursuant to the provisions of the biological opinion for the Federal Columbia River Power System (FCRPS), and the 2004 Agreement, the U.S. Bureau of Reclamation annually seeks to rent up to 487,000 acre-feet of water from willing lessors in Idaho for Snake River flow augmentation to assist in offsetting the impact of the FCRPS. Although flow augmentation from the upper Snake River has proven to be controversial because of the inability to demonstrate the specific benefits to ESA-listed fish, the State of Idaho cooperates with the federal

program (see Idaho Code § 42-1763B) as a means of providing incidental take coverage for U.S. Bureau of Reclamation projects operations in Idaho.

This flow augmentation program consists of two tiers. Tier 1 minimum flows are those established by the Swan Falls Settlement. Tier 2 provides for the rental of up to 427,000 acre feet of storage water in accordance with the provisions of Idaho Code § 42-1736B and the Snake River flow component of the 2004 Agreement. The 2004 Agreement also allows for the United States to rent up to 60,000 acre feet of consumptive natural flow water rights through the Board's water bank in accordance with state law. The Board acquired the natural flow water rights of the Bell Rapid's irrigation project and is leasing a portion of those water rights to the U.S. Bureau of Reclamation to provide the 60,000 acre feet of natural flow water. The rental agreement provides that "protection of the Leased Water . . . will result in the protection of 48,320 acre-feet during the period of April 10 through August 31 of each year for the term of the Agreement."

The state agreed to the implementation of the flow augmentation program for the term of the Biological Opinion as a means of protecting existing water rights and uses and providing for economic stability. It is important, however, that evaluation of the efficacy of flow augmentation be conducted in conjunction and/or cooperation with other State and Federal agencies and regional interests.

Hells Canyon National Recreation Area:

The early controversy over the development of Hells Canyon gave rise to emerging concerns about the preservation of the region's natural features and ultimately led to enactment of the Hells Canyon National Recreation Area Act of 1975, which precluded future hydropower development in the Hells Canyon reach of the Snake River. The Act also designated the Snake River as "wild" (Hells Canyon Dam to Pittsburg Landing) and "scenic" (Pittsburg Landing to 37 miles south of Lewiston) to preserve the free-flowing character and unique environment while providing for continued public use. While providing protection to these important resources, the Act also protects present and future uses of the waters of the Snake River for consumptive or non-consumptive beneficial uses, including domestic, municipal, stock water, irrigation, mining, power, and industrial uses. The Act specifically provides that no flow requirements of any kind may be imposed on the waters of the Snake River below Hells Canyon Dam under the provisions of the Act, or any rules, regulations, or guidelines adopted pursuant to the Act. Pursuant to an agreement between the state and the federal government, the United States' federal reserved water rights associated with the HCNRA are limited to the tributary streams of the Snake River within the HCNRA. The decrees quantifying the federal reserved water rights on streams tributary to the main stem Snake River contain subordination provisions that protect existing rights and allow for a limited amount of future development on the tributary streams.

Owyhee Initiative

In 2009, Congress enacted the Owyhee Public Land Management Act, Pub. L. 111-11, 123 Stat. 1037. This Act set aside certain lands in southwestern Idaho as wilderness. The Act was the result of a collaborative effort initiated by the Owyhee County Commissioners to resolve decades-old land management issues in Owyhee County. The

goal was to develop and implement a landscape-scale program that preserves the natural character of the area while providing for economic stability and growth. Central to local support for enactment of the Act was the 2006 Owyhee Initiative Water Rights Agreement (2006 Agreement), which provided for a balance between instream and out-of-stream water uses within the Owyhee River Basin. The 2006 Agreement recognizes the ecological importance of stream and river flows in this arid region and recognizes local citizens' desire to maintain and protect their current way and quality of life. The 2006 Agreement calls for memorializing this balance through subordination language in the decreed federal reserved water rights for the designation of river segments that sets aside a certain amount of water for future development. The Agreement was signed by a local collaborative group that included ranchers, conservationists, landowners, business interests, outfitters, and off-road recreationists. Implementation of this water rights agreement will provide additional fish and wildlife benefits for the Owyhee River Basin.

Implementation Strategies:

- Maintain minimum stream flows set forth in Policy 4A for Snake River fish, wildlife, recreation, and scenic values.
- Ensure the flow augmentation plan of the 2004 Snake River Water Rights Agreement is implemented consistent with the Agreement.
- In conjunction and/or cooperation with other State and Federal agencies and regional interests, evaluate the efficacy of the flow augmentation program.
- Ensure the federal reserved water rights decreed as part of the implementation of the Owyhee Public Land Management Act contain subordination provisions consistent with the 2006 Owyhee Initiative Water Rights Agreement.
- Ensure new appropriations of water are consistent with the subordination provisions of the reserved water rights for the Hells Canyon National Recreation Area and the Owyhee wild and scenic rivers.

Milestones:

- Minimum stream flows maintained.
- Snake River flow augmentation is conducted in accordance with the terms of the 2004 Snake River Water Rights Agreement.
- Flow augmentation evaluation studies underway or completed.
- Federal reserved water rights decreed for Owyhee wild and scenic rivers contain subordination provisions consistent with the 2006 Owyhee Water Rights Agreement.
- New appropriations of water in the streams tributary to the Snake River within the Hells Canyon National Recreation Area satisfy the subordination requirements contained in the federal reserved water right decrees.
- New appropriations within the Owyhee River Basin satisfy the subordination requirements contained in the federal reserved water right decrees for the Owyhee wild and scenic river reaches.

5. BEAR RIVER BASIN

5A - BEAR RIVER COMPACT

Water use and management in the Bear River Basin shall conform to the allocations agreed to in the Bear River Compact.

Discussion:

The original Bear River Compact was signed into law on March 17, 1958, and amended on February 8, 1980. Idaho Code § 42-3402. The Compact was negotiated to provide for the efficient use of water for multiple purposes, to permit additional development, to promote interstate comity, and to accomplish the equitable apportionment of the waters of the Bear River among Idaho, Utah, and Wyoming. Water allocations for the Bear River Basin were adopted in 1978. The Compact is administered by an interstate administrative agency, the Bear River Commission, which is comprised of three members from each state and a non-voting federal chairman. The Bear River Commission must review the Compact at intervals of not less than twenty years and may propose amendments.

The Compact divides the Bear River into three divisions and treats allocation differently in each. The Upper Division of the river extends from its source in the Uinta Mountains, to and including Pixley Dam Wyoming. The Central Division includes the portion of the Bear River from Pixley Dam to, and including Stewart Dam. The Lower Division of the Bear River includes the flow from Stewart Dam to the Great Salt Lake and encompasses Bear Lake and its tributary drainage. The Compact makes allocations for the diversions of surface water, the storage of water above Bear Lake, ground water depletion, and future development. The allocation provisions for the three divisions of the Bear River apply only during times of shortage.

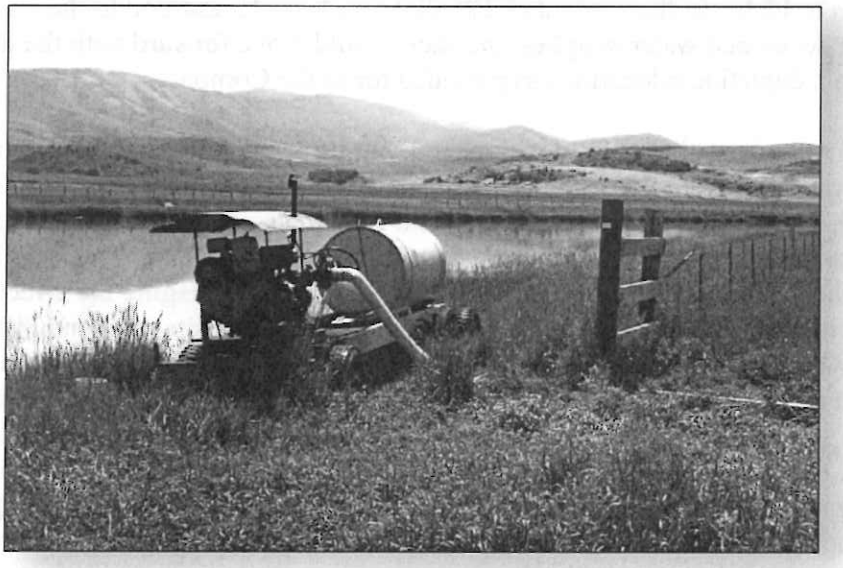

Photo: Diesel-driven pump out of the Bear River near Preston
(Photo Courtesy of Corbin Knowles)

Idaho and Utah are implementing conjunctive management of surface and ground water. Idaho's Bear River Conjunctive Management Plan guides the development of ground water in the Bear River Ground Water Management Area. Although initial estimates of ground water depletions in the Lower Division indicate equal depletions in Idaho and Utah, the Idaho Water Resource Board encourages the Bear River Commission to prioritize additional studies to determine the effects of ground water use on the Bear River system.

Implementation Strategies:

- Encourage and assist the Bear River Commission to initiate further study and consideration of the effects of ground water use on Bear River surface flow.
- Ongoing review of Bear River Compact implementation and related issues, including depletion calculation procedures.

Milestones:

- Studies completed on the interaction between ground water and surface water in the Bear River Basin.

5B - BEAR RIVER BASIN WATER MANAGEMENT

The Idaho Water Resource Board supports enhancing water supplies, increasing water use efficiency, and implementing water supply bank mechanisms to help meet future water needs in the Bear River Basin.

Discussion:

The Bear River Compact designates how the undeveloped water supplies of the Bear River are to be allocated among Idaho, Utah, and Wyoming. The Compact allocates a first right to development and depletion of water not currently allocated in the Lower Division to Idaho, in the amount of 125,000 acre feet. In addition to the efficient use of existing developed water supplies, the state should move forward with the development of Idaho's depletion allocations as provided for in the Compact.

Ground water is available for development, but its development cannot injure existing senior water rights. In 2001, the Department of Water Resources established the Bear River Ground Water Management Area and created an advisory committee to provide guidance in the preparation of a ground water management plan. The Bear River Ground Water Management Plan, adopted in 2003, provides for managing the effects of ground water withdrawals to accommodate projected growth and water demand in the Bear River Basin, while protecting senior priority surface and ground water rights from injury. In addition to the use of mitigation plans that protect existing rights, the plan encourages flexible strategies for making water available for new development including new surface storage, ground water recharge projects, and transfers of existing rights through water banking and other marketing mechanisms. The ground water management plan encourages the wise use of available water supplies and continues the involvement of a local advisory committee in the development of management policies for the area. To

address declining ground water levels, the Bear River Basin has been designated as a priority basin for the development and implementation of a comprehensive aquifer management plan.

Idaho Code § 42-1765 authorizes the Idaho Water Resource Board to create a local rental pool to facilitate marketing of stored water. A Bear River rental pool would provide the advantage of being locally managed and controlled, with the flexibility to develop specific procedures designed to address special conditions existing in the basin. Use of water supply banks also provides protection from forfeiture for unused water rights in Idaho and a source of funding for improving water management. Cooperation between Idaho, Utah, and PacifiCorp will be required to establish a storage rental pool for Bear Lake.

Implementation Strategies:

- Initiate further discussion concerning the development of a Bear River storage water rental pool with the Bear River Commission, Utah, and PacifiCorp.
- Develop strategies to improve water supplies and reduce demand through the implementation of a comprehensive aquifer management plan, in coordination with Utah, Wyoming, and PacifiCorp.

Milestones:

- Bear River Basin comprehensive aquifer management planning underway.
- Strategies developed to meet future water needs.
- Local storage rental pool established.
- Development of Idaho's depletion allocation.

5C - INTERSTATE WATER DELIVERY

Idaho water users in the Lower Division of the Bear River Basin must be protected from inequitable water allocation in the event of a water emergency and the scheduling of interstate water deliveries.

Discussion:

The Bear River Compact authorizes the Bear River Commission to implement a water delivery schedule in the Lower Division without regard to state boundaries if the Bear River Commission finds that a "water emergency" exists. Idaho Code § 42-3402. This provision was intended to apply only to true emergency conditions which must be determined using comprehensive accounting processes. Idaho and Utah have developed separate, but similar water accounting models that incorporate the rights identified in the Commission Approved Lower Division Water Delivery Schedule. Absent a water emergency, Idaho water users are not required to accept delivery based upon interstate accounting allocation. Both states, however, have worked to reconcile their respective accounting models to reduce conflict over water delivery.

The "Bear Lake Settlement Agreement" was signed and voluntarily adopted by Lower Division water users and PacifiCorp in 1995 and amended in 2004. The agreement established, among other things, an "Irrigation Water Allocation and Lake Recovery Proposal" for Bear Lake. The proposal provides for an "Annual Allocation" which represents the total, estimated quantity of water available to be delivered to storage contract holders. This agreement and the state water accounting models have resulted in a process by which Lower Division water users have voluntarily agreed to water delivery by water right priority without regard to state boundaries.

Implementation Strategies:

- Continue work with Utah and Lower Division water users to improve water right accounting models.
- Facilitate and promote improved water delivery and measurement, including gage and diversion automation.

Milestones:

- Continued cooperation in interstate water administration.
- Completion of technical upgrades to water delivery and measurement infrastructure.

5D - BEAR LAKE

The outstanding recreational, aesthetic, and fish and wildlife resource values of Bear Lake should be preserved, while recognizing the existing storage allocations for irrigation and hydroelectric power generation.

Discussion:

Bear Lake, noted for its unique coloration and endemic fish species, provides an abundance of recreational opportunities. To protect these values, the Idaho Water Resource Board obtained a minimum lake level water right for Bear Lake of 5902 feet.

The 2004 Amended and Restated Bear Lake Settlement Agreement between PacifiCorp and several water users and private interests confirmed that Bear Lake must be operated primarily as a storage reservoir to satisfy contracts for existing irrigation uses and flood control needs in the three states, with the use of water for hydropower generation being incidental to other purposes. Bear Lake storage is allocated based on lake elevation with reduced allocations occurring when Bear Lake falls below the irrigation reserve of 5914.7 feet. The settlement agreement also provides for a portion of the active storage in Bear Lake to be voluntarily retained to enhance recreation and water quality values.

Pursuant to the 2002 Settlement Agreement Resolving the Relicensing of the Bear River Hydroelectric Projects and the Federal Energy Regulatory Commission licenses issued for PacifiCorp's Bear River projects, protection, mitigation, and enhancement measures are being implemented to benefit fish and wildlife and recreational resources in the Bear

River Basin. The settlement agreement established a committee to guide implementation of these measures, with a primary focus on protecting and improving habitat for Bonneville Cutthroat Trout. The settlement agreement confirms that PacifiCorp's ability to regulate Bear Lake reservoir levels and provide instream flows at the projects for these purposes is restricted by and subject to historic practices, water rights, and flood control responsibilities that are memorialized in water contracts, water agreements, and judicial decrees and opinions.

The Bear River Compact provides for cooperation with state and federal agencies in matters relating to water pollution of interstate significance. The Idaho Water Resource Board supports the Bear River Commission's efforts to develop opportunities for more integrated watershed management throughout the basin.

Implementation Strategies:

- Cooperate with the Bear River Commission to address interstate issues of concern related to Bear Lake, including water quality, threatened or endangered species and species of special concern, and recreation.

Milestones:

- Bear Lake operations are consistent with 2003 Bear Lake Settlement Agreement.
- Cooperative programs addressing interstate issues of concern related to water quality, recreation, and sensitive species implemented.

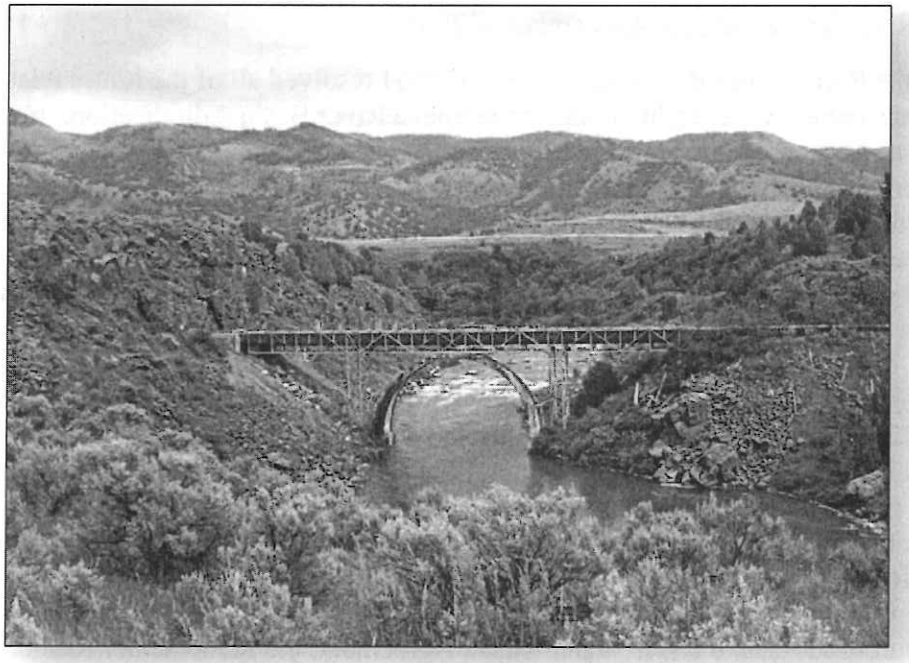

Photo: Last Chance Canal over the Bear River
(*Photo Courtesy of Liz Cresto*)

6. SALMON / CLEARWATER RIVER BASINS

6A - CONSERVATION PLANS

Voluntary, community-based conservation plans and strategies for the benefit of ESA-listed species and other species of concern are key components of water planning and management in the Salmon and Clearwater River Basins.

Discussion:

The Salmon and Clearwater River basins support a thriving agricultural industry and significant tourism. Because a number of fish species in the Salmon and Clearwater River basins have been listed as threatened or endangered under the ESA, numerous programs are being implemented to improve fish habitat, while protecting existing water rights. A significant portion of freshwater habitat important to ESA-listed fish is located on private lands. As a consequence, local support is key to implementing conservation measures that advance species' recovery. Federal agencies are encouraged to cooperate with state and local landowners to develop voluntary, incentive-based conservation plans. Any water required for instream uses must be obtained in compliance with state law.

In the Snake River Basin Adjudication, the state entered into two agreements that provide for water management within the basin that supports agricultural-based communities, while encouraging the voluntary implementation of flow-related conservation measures that improve instream conditions for ESA-listed fish. The agreements are based upon improving instream flow conditions pursuant to state law.

Snake River Water Rights Agreement of 2004

The Snake River Water Rights Agreement of 2004 resolved all of the issues related to the Nez Perce Tribe's water right claims in the Snake River Basin Adjudication. In the Salmon and Clearwater basins, the primary goal of the settlement agreement provisions is to conserve and enhance fish habitat in order to address ESA concerns. There are three cornerstones to such efforts: the establishment of state minimum flows, the establishment of a voluntary forestry program with standards to improve fish habitat, and the establishment of voluntary programs by irrigators and other water users to improve instream flow.

The state and local water users are working with the federal agencies, tribes, and other stakeholders to advance the recovery of listed species through the development of conservation agreements under Section 6 of the ESA. In coordination with the Office of Species Conservation, the state has begun early implementation of voluntary conservation measures that provide immediate benefits to ESA-listed fish and provide the foundation for implementation of long-range plans.

As a result of the Snake River Water Rights Agreement, the Idaho Water Resource Board holds minimum stream flow water rights on 205 streams that provide significant protection for steelhead, salmon, and bull trout. Most of the streams flow through federal public lands and have minimal use. Twenty-four streams, however, are in basins with

substantial private ownership and significant private water use. The flows for those streams were established after consultation with local communities. Where the minimum stream flow water rights are higher than existing flows, the Idaho Water Resource Board works with water users on a voluntary basis to rent or otherwise acquire water to return to streams, in accordance with state law.

Wild and Scenic Rivers Agreement

The Wild and Scenic Rivers Agreement resolved issues related to federal reserved water right claims filed by the federal government under the Wild and Scenic Rivers Act. The agreement provides for the quantification of the wild and scenic federal reserved water rights and state administration of those rights. To protect existing rights and allow for some future development, the United States agreed to subordinate the federal rights to certain junior priority state and private rights and to a sum certain of future junior rights.

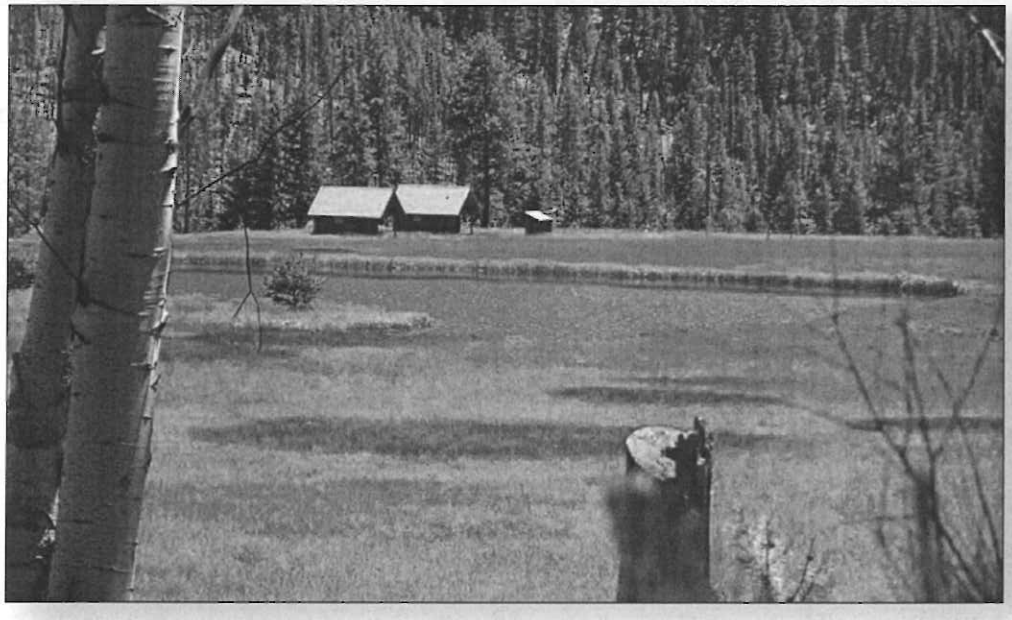

Photo: Scenic Central Idaho near Salmon (*Courtesy of Shari Ferree*)

Implementation Strategies:

- Ensure that the water right application review process considers basin conservation plans and limiting factors for ESA-listed fish.
- Ensure that the stream channel alteration permit process considers basin conservation plans and limiting factors for ESA-listed fish.
- Develop flow-limited reach GIS maps for use in water administration.
- Continue early implementation of conservation measures.
- Develop and implement conservation projects and plans based on local problem-solving and support.

Milestones:

- Conservation measures implemented.
- Conservation plans approved pursuant to Section 6 of the ESA and implemented.
- Approved water right transfers address limiting factors for ESA-listed fish.
- Water right permits address limiting factors for ESA-listed fish.
- Flow-limited reach GIS maps completed and in use.

6B - INSTREAM FLOW PROGRAM

The Idaho Water Resource Board will promote, provide, and where possible, expand opportunities for voluntary, market-based transactions to improve instream flow for the benefit of ESA-listed aquatic species.

Discussion:

The Idaho Water Resource Board administers and participates in a variety of programs to improve instream flows throughout the Salmon and Clearwater River basins. This programmatic approach to addressing the needs of ESA-listed and other sensitive species includes a suite of water supply acquisition tools including short and long-term leases, permanent purchases, partial season leases, diversion reduction agreements, and water use efficiency measures, all of which are market-based and voluntary. The Idaho Water Resource Board works collaboratively with organizations committed to voluntary, market-based conservation strategies, such as conservation easements, to maximize instream flow programs. These partnerships benefit targeted fish species and support local economies.

Columbia Basin Water Transaction Program

The Columbia Basin Water Transactions Program was initiated in 2002 to support innovative, voluntary, grassroots strategies to improve flows in the Columbia River Basin's streams and rivers. The majority of funding is provided by the Bonneville Power Administration in cooperation with the Northwest Power and Conservation Council. It is in the public interest to continue implementation of the Columbia Basin Water Transactions Program in the Salmon and Clearwater basins to keep agriculture productive and improve instream flows for ESA-listed and other sensitive fish species.

Section 6 Habitat Conservation Fund

Section 6 of the ESA directs "that Federal agencies shall cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species." 16 U.S.C.A. § 1531(C)(2). Pursuant to the Snake River Water Rights Agreement of 2004, in addition to the establishment of minimum stream flow water rights, the state agreed to work with local stakeholders and communities to develop work plans for addressing limiting factors for fish on streams with degraded habitat. The state also agreed to develop cooperative agreements under Section 6 of the ESA with the assistance of local land owners, federal agencies, and tribes to establish long-term

conservation goals and conservation measures that will contribute to the recovery of anadromous and resident fish in the Upper Salmon River Basin. The Idaho Water Resource Board's instream flow programs are central to the development and implementation of Section 6 Conservation Plans.

Pacific Coast Salmon Recovery Fund

The Pacific Coast Salmon Recovery Fund provides grants to state agencies and treaty Indian tribes for salmon recovery efforts. The Idaho Water Resource Board works with agencies, tribes, and stakeholders to use Pacific Coast Salmon Recovery Fund monies for early implementation of conservation measures in the basins.

2008 Columbia Basin Fish Accords

The Columbia Basin Fish Accords are designed to supplement biological opinions for listed salmon and steelhead and the Northwest Power and Conservation Council's fish and wildlife program. The agreement between the State of Idaho, the Bonneville Power Administration, the U.S. Army Corps of Engineers, and the U.S. Bureau of Reclamation addresses issues associated with the direct and indirect effects of construction, inundation, operation and maintenance of the Federal Columbia River Power System, and Reclamation's Upper Snake River Project on the fish and wildlife resources in the Columbia River Basin.

Under the agreement, the Bonneville Power Administration committed to funding a suite of habitat quality improvement projects designed to address limiting factors within the basins affecting ESA-listed salmon and steelhead. The Idaho Water Resource Board uses these funds to develop projects that improve instream flow and freshwater survival of ESA-listed salmon and steelhead. The program targets flow-related projects that reconnect tributaries and increase flow in the mainstem Lemhi and Pashimeroi Rivers to improve fish passage conditions and increase the quantity and quality of fish habitat.

Implementation Strategies:

- Continue implementation of programs to improve instream flows in the Salmon and Clearwater River basins.
- Pursue opportunities for partnerships with local water users and other stakeholders to implement programs that improve instream flows and support local economies.

Milestones:

- Number and scope of instream flow improvement projects implemented.
- Number of participants in instream flow improvement projects.
- Degree of habitat improvement resulting from instream flow programs.

7. PANHANDLE RIVER BASINS

7A - INTERSTATE AQUIFERS

Completion of comprehensive aquifer management plans and the Northern Idaho Adjudication and implementation of interstate agreements are central to the optimum use of the Panhandle Basin's water resources.

Discussion:

The Panhandle's rivers and lakes are key to continued economic development and provide for multiple uses of water including irrigation, domestic supplies, mining, and commercial uses. These lakes and rivers also provide significant recreation, fish and wildlife, and aesthetic resources important for the region's economy. In average water years, Idaho's Panhandle region has an abundant water supply. A growing population and the urbanization of agricultural lands, however, have resulted in increased ground water use which has resulted in conflicts over water quantity and quality within the region and across state boundaries.

Spokane Valley-Rathdrum Prairie Aquifer

The Rathdrum Prairie Aquifer (RPA) extends south from Bonner County through Kootenai County toward the cities of Coeur d'Alene and Post Falls and west to the Idaho-Washington state line. The aquifer extends into Washington and becomes part of the larger Spokane Valley-Rathdrum Prairie (SVRP) Aquifer. The area includes the rapidly growing cities of Spokane, Washington and Coeur d'Alene and Post Falls, Idaho. The SVRP Aquifer was designated a "Sole Source Aquifer" by the U.S. Environmental Protection Agency in 1978 and a sensitive source aquifer by the state of Idaho.

In 2002, the Director of the Idaho Department of Water Resources , pursuant to Idaho Code § 42-233b, designated the Rathdrum Prairie Ground Water Management Area and created the Rathdrum Prairie Ground Water Management Area Advisory Committee, composed of members representing the interests of citizen groups, municipalities, counties, and other irrigation, commercial, and industrial water users within the designated area. On September 15, 2005, the Director issued a final order adopting the Ground Water Management Plan for the Rathdrum Prairie Ground Water Management Area. The plan, based in large part on the recommendations of the advisory committee, sets forth goals, strategies, and actions for managing the ground water resources of the SVRP Aquifer. Goals include obtaining adequate technical data and quantification of water availability and water use, managing the ground water resource efficiently and fairly for all users, and encouraging planning and water conservation efforts.

Although the states of Idaho and Washington have primary responsibility for water allocation and water quality, local governments are increasingly being called upon to consider water supply and water quality implications in land use planning. To address these challenges, a study of the SVRP Aquifer was conducted jointly by the Idaho Department of Water Resources, the Washington State Department of Ecology, and the United States Geological Service. Begun in 2003 with broad community support, the

purpose of the project is to provide a scientific foundation to assist the states in water administration. The SVRP Aquifer study established a collaborative modeling committee of experts from both states. Significant new information from the study refined earlier estimates of hydrologic information. The data, computer model, water budget, and other information are available to the public and provide a detailed, up-to-date basis for assessing all aspects of ground water use, including water development, establishing well head protection zones, and local and regional land use planning. A 2007 agreement between the Idaho Department of Water Resources and the Washington State Department of Ecology establishes a collaborative framework to maintain and enhance the model to inform state management decisions.

Pursuant to Idaho Code § 42-1779, which established the Statewide Comprehensive Aquifer Planning and Management Program, a comprehensive aquifer management plan was adopted on July 29, 2011 for the Rathdrum Prairie Aquifer by the Idaho Water Resource Board. The Idaho Water Resource Board will be responsible for implementing the plan to obtain sustainable water supplies and optimum use of the region's water resources.

Palouse Basin Aquifers

The development of a comprehensive aquifer management plan for the Palouse Basin is also a priority. The Grande Ronde and Wanapum aquifers underlie the Palouse Basin. The Pullman-Moscow area of eastern Washington and northern Idaho relies almost entirely on ground water for its supply of municipal, institutional, and domestic water. The Palouse Basin Aquifer Committee consists of representatives from the cities of Moscow, Pullman, Colfax, Latah, and Whitman counties, the University of Idaho and Washington State University and was formed to address concerns about declining ground water levels and coordinate studies to further inform water management decisions. In 1992, with the assistance of the states and pursuant to several intergovernmental agreements, a Pullman-Moscow Ground Water Management Plan was completed. The plan provides technical information about the general response of the Wanapum and Grande Ronde aquifers to pumping withdrawals and recommendations for future use that limit ground water depletion and protect water quality through conservation practices and other measures. Additional studies are needed to better understand the hydrology of the aquifers.

Managing cross-boundary conflicts requires an accounting of the state's water resources. Adjudication of water rights in the Panhandle region should therefore be completed to fully define and quantify existing water rights. The determination of all existing water rights from the river basins in northern Idaho will provide the basis for administration of water rights in accordance with the prior appropriation doctrine, as established by law, and for interstate cooperation. Pursuant to Idaho Code § 42-1406B, the Director of the Idaho Department of Water Resources filed a petition in the district court to commence an adjudication for northern Idaho. On November 12, 2008, the district court ordered the commencement of adjudication in the Coeur d'Alene Spokane River water system. The estimated date for completion of the adjudication is 2012.
Idaho Code § 42-1734(3) authorizes the Idaho Water Resource Board to appear on behalf of the state in negotiations with the federal government. Consistent with state law, the

Idaho Water Resource Board should serve as the lead agency for coordinating state participation in the Northern Idaho Adjudication.

Implementation Strategies:

- Implement the comprehensive aquifer management plan for the Rathdrum Prairie.
- Evaluate timing for developing a comprehensive aquifer management plan for the Palouse River basin that establish goals, objectives, and strategies to address the increasing demand on water supplies, reduce cross-boundary conflicts, and provide for effective conjunctive management of hydraulically connected water resources.
- Complete the Northern Idaho Adjudication.
- Implement and maintain the cooperative agreement between Idaho and Washington for maintenance of the SVRP Aquifer ground water model.
- Advise and provide technical support to Palouse Basin Aquifer Committee and other stakeholders to promote the wise use of the region's water supply.
- Provide technical support for the completion of aquifer studies that will assist in water management.

Milestones:

- Cooperative agreements approved and implemented by Idaho and Washington.
- Implementation of Rathdrum Prairie Comprehensive Aquifer Management Plan action items.
- Development and implementation of Palouse comprehensive aquifer management. Northern Idaho Adjudication completed.
- Aquifer studies completed.

7B - MINIMUM STREAM FLOWS

The Idaho Water Resource Board will establish and protect minimum stream flow and lake level water rights to preserve the scenic and recreational water bodies in the Panhandle river basins.

Discussion:

The Panhandle contains some of the most significant scenic and recreational water bodies in the state. The Idaho Water Resource Board holds 19 minimum stream flow water rights on reaches of the Pend Oreille, St. Maries, Pack, Moyie, St. Joe, Coeur d'Alene, and Spokane Rivers that protect approximately 17,600 cfs total flow. In 1927, the state established minimum lake levels for Priest, Pend Oreille and Coeur d'Alene Lakes. These water rights protect and support many beneficial uses of water such as fish and wildlife habitat, aquatic life, recreation and aesthetic values, and navigation in the

Panhandle basins and make a significant contribution to the economy of the region and the state.

Population growth and new water demands may increase the need to obtain additional minimum stream flows in the Panhandle region. The establishment and use of local water supply banks and rental pools should be considered as a strategy for addressing the need for meeting minimum stream flow water rights or new rights in the Panhandle region, including minimum lake levels for the protection of navigation and transportation, fish and aquatic resources, and aesthetic and recreational values.

Implementation Strategies:

- Coordinate with state and federal agencies and stakeholders to identify potential minimum stream flow needs.
- Submit applications for minimum stream flow water rights that are in the public interest.
- Monitor activities that could impair minimum stream flows.
- Evaluate the need for establishment of local water supply banks.

Milestones:

- Minimum stream flow water rights established.

7C - NAVIGATION, FISHERIES, AND RECREATION

Water management decisions in the Panhandle Region should minimize, where feasible, adverse effects on navigation, fisheries, and recreation.

Discussion:

The Panhandle's lakes and rivers provide for commercial and recreational navigation and important habitat for numerous fish and wildlife species. These resources are also affected by the operation of private and federal hydropower projects. Avista's Clark Fork projects, located in Montana and Idaho, are operated pursuant to a Federal Energy Regulatory Commission license based upon a comprehensive settlement agreement executed by Idaho, Montana, federal agencies and Indian tribes, and other stakeholders. The Post Falls project license is also based, in part, upon a settlement agreement between Avista, the Idaho Department of Fish and Game and the Idaho Department of Parks and Recreation. The Post Falls license requires a summer full-pool elevation and fall draw-down protocol for Lake Couer d'Alene that is protective of fishery needs, while providing adequate lake levels for summer recreation activities and navigation.

On the Pend Oreille River, the U.S. Army Corp of Engineers operates Albeni Falls Dam, which controls the level of Lake Pend Oreille. Lake Pend Oreille has been designated a Special Resource Water, a special body of water recognized by the state as needing intensive protection. Since 1996, consistent with a U.S. Fish and Wildlife Service Biological Opinion on the operation of the Federal Columbia River Power System, winter

lake levels have been managed for the protection of the lake's kokanee population, an important forage base for ESA-listed bull trout. Winter lake level management also directly affects the amount of erosion and sedimentation that occurs, waterfowl habitat, water quality, navigation, and shoreline infrastructure. Cooperation between the state and federal government and community stakeholders is essential for making sound management decisions regarding the operation of Albeni Falls Dam.

In 2003, the Idaho legislature created the Lake Pend Oreille, Pend Oreille River, Priest Lake and Priest River Commission (Lakes Commission) to address water quantity and water quality issues affecting the state's and local communities' interests, while recognizing existing authorities. The Idaho Water Resource Board supports the Lake Commission's participation in regional water management decisions and efforts to minimize adverse effects on navigation, water quality, and fish, wildlife, and recreational resources.

Implementation Strategies:

- Identify proposed actions that may affect navigation, water quality, and fish, wildlife, and recreation resources, in coordination with state and federal agencies and stakeholders.
- Provide technical assistance to assist the Lake Commission's participation in regional water management decisions.

Milestones:

- Collaborative water management decisions made that minimize adverse effects on navigation, water quality, and fish, wildlife, and recreational resources.

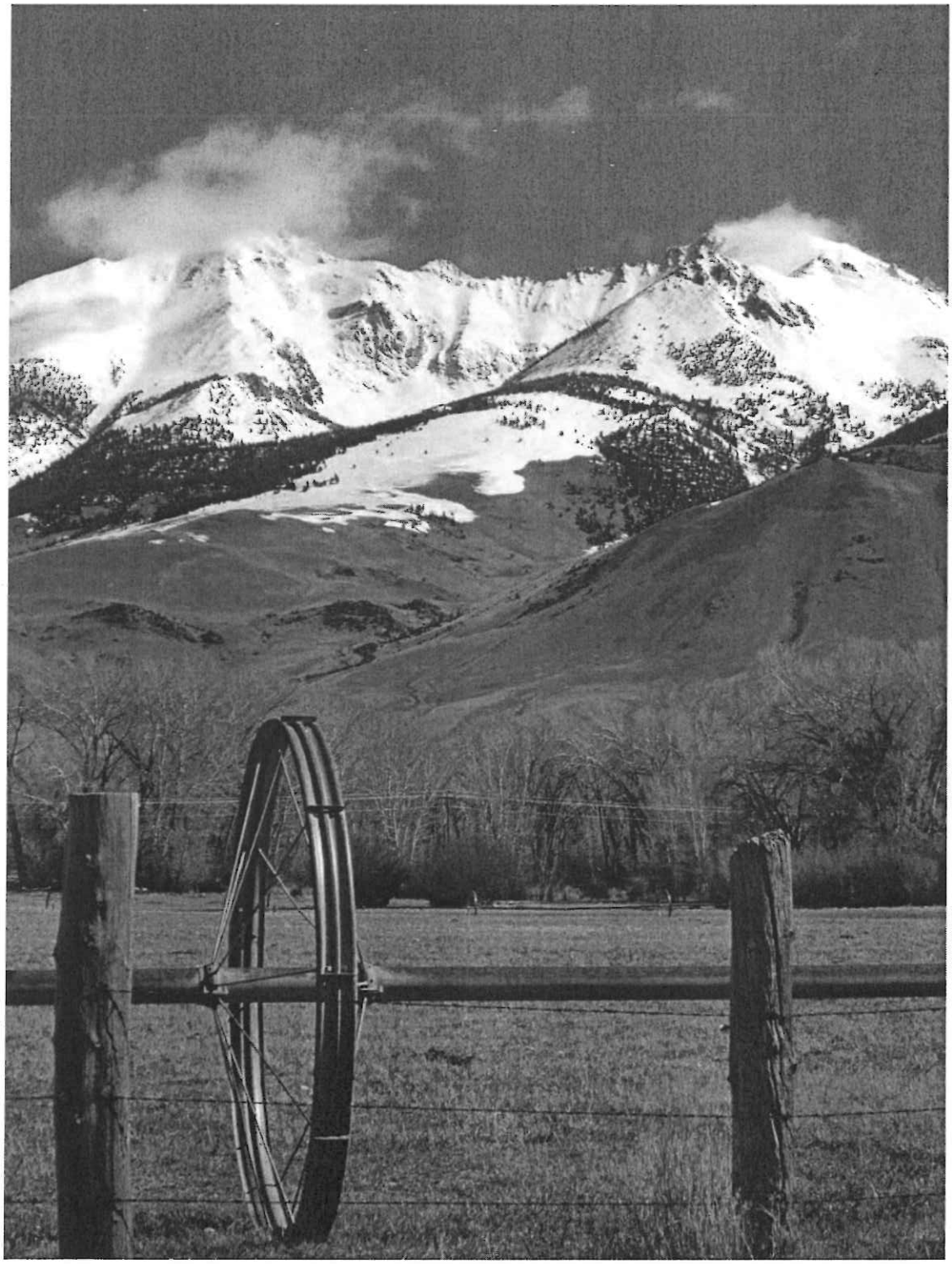

Photo: Mackay Lost River Range (*Photo by Mike McVay*)

GREAT SEAL OF
THE STATE OF IDAHO
ESTO PERPETUA