

STATE WATER PLAN – SNAKE RIVER POLICY

4 - SNAKE RIVER BASIN

4 – SNAKE RIVER BASIN WATER MANAGEMENT FRAMEWORK

The Idaho Water Resource Board's Snake River minimum stream flows establish the framework for water management in the Snake River basin.

Discussion:

Approximately 87% of the surface area of the State of Idaho is within the Snake River drainage basin. The waters of the Snake River form the backbone of Idaho's economy. Effective management of this resource is essential to protecting existing water rights, sustaining economic growth, maintaining low-cost power rates, and preserving fish, wildlife and other environmental values.

At the core of Snake River water management is the state policy of managing the Snake River to meet or exceed minimum stream flows established at the Milner, Murphy, Weiser, Johnson Bar and Lime Point gaging stations. These minimum stream flows establish, as a matter of state policy, a balance between diversion of water out of stream for consumptive uses and preservation of flows for instream uses. This policy of managing reaches of the Snake River to meet or exceed designated instream flows evolved over the course of the 20th Century and was incorporated into the 1976 State Water Plan. A brief overview of the evolution of the instream flow management policy is provided to give context for the individual river reach policies that follow.

Throughout the first half of the 20th Century the dynamic tension between diversion of water for consumptive uses and retention of flows for instream uses was manifested in the context of 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.

Initially, the conflict was resolved through the development of the Milner Policy in 1920, which dedicated the flow of the Snake River above Milner Dam for future agricultural development. The Milner Policy was based upon the physical character of the river. Upstream from the Milner Dam the relatively flat landscape facilitated water diversions from the main stem Snake River into canal systems with technology available at the time. Below Milner Dam, the Snake River enters a deep canyon and was largely inaccessible for agricultural development in the first half of the 20th century. The descent of the Snake River into the canyon below Milner, however, made the downstream reach of the river ideally suited for hydropower development. Thus, the State adopted the Milner Policy, which subordinated hydropower development below Milner to future upstream development. As discussed more fully below, the Milner Policy as it evolved does not mandate a zero flow at the Milner gage but rather prevents holders of water rights using water below Milner Dam from calling for the delivery of water above Milner Dam.

The advent of high lift pumping technology in the 1950s precipitated the next phase of the Snake minimum stream flow policy. Pumping made irrigation of vast expanses of desert land lying above the Eastern Snake Plain Aquifer possible. Additional power to turn the pumps was to come from

development of the hydropower potential of the Hells Canyon reach of the Snake River. Concern that hydropower development might monopolize the flows of the Snake River, however, led to an agreement between the State of Idaho and Idaho Power Company that subordinated its hydropower water rights for the Hells Canyon complex to all future upstream consumptive uses. The subordination provision in the Hells Canyon complex license, like the Milner Policy, precludes hydropower uses from interfering with future upstream development.

The FPC license for the Hells Canyon complex provided for operational flows at Johnson Bar and Lime Point to provide for navigation. As discussed more fully in the Below Weiser reach policy, these operational flows form the basis for the Johnson Bar and Lime Point state minimum stream flows, which were first recognized in the 1976 Idaho State Water Plan.

In the latter part of the 20th Century, the dynamic tension between consumptive and instream flow uses expanded beyond the irrigation/hydropower context to include water quality, fish and wildlife and other instream uses. Studies conducted by the Idaho Department of Fish and Game suggested that further depletions of the flows of the Snake River in the reach between Milner and Weiser would be detrimental to fish and wildlife. Thus, the 1976 Idaho State Water Plan determined it was not in the public interest to allow depletion of the average daily flow of the Snake River below 3,300 cfs at the Murphy gage and below 4,750 cfs at the Weiser gage. These minimum flows were established to “maintain water for production of hydropower and other main stem water uses. . .”

The Swan Falls Controversy brought the need for maintaining minimum flows into greater focus and led to a comprehensive settlement balancing instream uses with upstream development. The average minimum daily flow at the Murphy gage was increased to 3,900 cfs during the irrigation season and 5,600 cfs during the non-irrigation season and the State Water Plan directed “that ground water and surface water of the Snake River basin would be managed to meet or exceed the state minimum average daily flow at Milner, Murphy, and Weiser. The Murphy and Weiser minimum flows were designated as management constraints.

The State of Idaho, as part of the 2004 Snake River Water Rights Agreement, established a flow augmentation program that supplements the main stem Snake River state minimum stream flows. The program consists of two tiers. Tier 1 recognizes the Milner and Murphy minimum stream flows as base flows. Tier 2 provides for the rental of storage water in accordance with the provisions of Idaho Code § 42-1763B and the Snake River flow component of the 2004 Snake River Water Rights Agreement and for the acquisition of up to 60,000 acre-feet of natural flow water rights within the Milner to Murphy reach of the Snake River.

The minimum stream flows that evolved over the last century form an integrated plan for management of the Snake River as a whole. Each minimum stream flow was established to address specific management objectives for the Snake River above its ending point. The State Water Plan, beginning with the first plan in 1976 and continuing through each successive plan, has recognized this framework as a means of ensuring an equitable allocation of the flows of the Snake River between consumptive and instream uses and as a means of ensuring an equitable allocation of the flows of the Snake River for future development throughout the basin. While this framework allows for the development of future uses of water within each reach, localized decisions must take into account the potential impact of such development on water supplies in other reaches.

STATE WATER PLAN – SNAKE RIVER POLICY

SNAKE RIVER ABOVE MILNER DAM OUTLINE

4 - SNAKE RIVER BASIN

4B- SNAKE RIVER ABOVE MILNER DAM

Water resource policy, planning and practice should continue to optimize water use and 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:

Milner Policy: The formulation and implementation of a plan for the optimum development and use of the water resources of the Snake River above Milner Dam must be consistent with the so called “Milner Policy” set forth in Idaho Code § 42-203B(2), which provides that no portion of the waters of the Snake River upstream from Milner Dam shall be considered for the purposes of the determination and administration of rights to the use of the waters downstream from Milner dam. The exercise of water rights above Milner Dam may reduce the flow of the Snake River at Milner Dam to zero.

The Milner Policy evolved from a 1920 report prepared by a Board of Engineers convened by the Governor and the United States for the purpose of preparing a plan for the future development of irrigation and hydropower in the Upper Snake River Basin. As described by the Board of Engineers, the Milner Policy was founded upon the physical divide in the Snake River at Milner Dam. Above Milner Dam, the waters were easily diverted and used for irrigation and other consumptive uses. Below Milner Dam the river descended into a deep canyon and was unavailable for agricultural development with technology available at the time. The Board recommended, therefore, that in order to make optimum use of the water resources the entire flow of the Snake River above Milner should be dedicated to the extent economically feasible for upstream irrigation. Over the past century, the Milner Policy guided the economic growth and the development within the Snake River basin and is inextricably intertwined with the overall management of the water resources of the basin.

The Milner Policy envisioned that while development of the flows above Milner Dam would have some impact on hydropower generation, the increased spring flows resulting from the upstream development would sustain hydropower production downstream from Milner Dam. In order to ensure that hydropower development didn't interfere with development above Milner, however, the Board advised that in “granting power rights in the future the Federal Government and the State should so far as possible provide restrictions requiring [their] eventual surrender ...” This policy of subordinating hydropower development to upstream consumptive uses was affirmed by the 1984 Swan Falls Settlement and 2009 Swan Falls Reaffirmation Agreement between the State and Idaho Power Company.

Consistent with the Milner Policy and the Swan Falls Settlement, the primary long-term water planning objective for the Snake River above Milner Dam is to ensure that unappropriated flows tributary to the Snake River above Milner Dam are available to supply existing and future beneficial uses in this reach of the Snake River.

Conjunctive Administration of Spring Flow and GW Rights: On January 6, 1993, the Director of the Idaho Department of Water Resources issued an Amended Moratorium Order against the issuance of permits to divert water from the Snake River and all tributary sources above Milner Dam in the non-trust water area (1993 Non-Trust Water Moratorium). The Moratorium seeks to protect the status quo while moving forward with the implementation of the conjunctive administration of surface and ground water rights. Resolution of the surface/ground water conflict is essential to the implementation of the long-term water planning objectives for this reach of the Snake River.

ESPA CAMP: Consistent with Milner Policy and the intent to optimize use of water in a heavily developed basin, as well as the need to address concerns about water supply and conflicts between surface and ground water use in the Eastern Snake Plain, the Idaho Water Resource Board adopted the Eastern Snake Plan (ESPA) Comprehensive Aquifer Management Plan (CAMP) to “Sustain 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 the water resources to provide for a reliable water supply for existing and future uses. The plan established long-term strategies to incrementally achieve a net water budget change in the ESPA of 600 thousand acre-feet (kaf) annually by the year 2030 through a suite of water management actions.

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 over a ten year period that will result in a target hydrologic water budget change of between 200 kaf and 300 kaf. The recommended measures to achieve this target include ground water to surface water conversions, managed aquifer recharge, demand reduction, and weather modification.

Fully implementing the ESPA CAMP will improve the opportunities to adaptively manage and optimize water supplies across the ESPA by: increasing gains in some river reaches, improving storage carryover; increasing aquifer levels; decreasing the need for litigation, mitigation and administrative activities; allowing for municipal and industrial growth; reducing overall demand; and increasing and sustaining spring flow. The ESPA CAMP anticipates implementation of Phase I strategies by 2018 with ongoing monitoring and evaluation of the intended and unintended effects of the strategies. The monitoring and evaluation studies will be used to select and design Phase II strategies.

As part of the 2009 Swan Falls Reaffirmation Agreement, the State and the Board entered into a Memorandum of Agreement with Idaho Power Company that requires the Board to obtain legislative approval to increase the Phase 1 ESPA CAMP managed recharge goal of 100,000 af by more than 75,000 af prior to January 1, 2019. “The purpose of this memorandum of agreement is to recognize that implementation of managed recharge will have an effect on the flow characteristics of the Snake River above and below Milner Dam and to confirm that the relative merits of recharge proposals in addition to or different than that provided in Phase 1 of ESPA CAMP will be considered through the adaptive management process set forth in Section 4 of ESPA CAMP.” The Memorandum of Agreement also requires that a change to the ESPA CAMP long-term hydrologic target for managed recharge target must be accomplished through an amendment of the State Water Plan. Finally, the Memorandum of

Agreement recognizes that it is the mutual interest of the State and the Company to work cooperatively to explore and develop a managed recharge program for the Snake River Basin above the Swan Falls Dam that achieves to the extent possible benefits for all uses including hydropower.

Upper Snake River Optimum Use Policy: Except for winter flows in excess of the storage capacity of existing reservoirs, the reliable water supply of the Snake River Basin above Milner Dam is nearly developed. Thus, future development of the water resources in the Snake River Basin upstream of Milner Dam consistent with the State Water Plan and the ESPA CAMP will require measures that augment and enhance available water supplies, such as the development and efficient use of existing on-stream, off-stream, and aquifer storage, development of new storage, and water right acquisitions and exchanges. Implementation of such actions, however, will result in a change in flows passing Milner. Therefore, as discussed in the Milner to Murphy Reach section, a process must be in place to identify and account for impacts that development above Milner will have on the water supply available to meet management objectives in the Milner to Murphy reach of the Snake River.

Coordinated management of the water resource development with the federal reservoir system above Milner Dam will provide an opportunity to optimize the use of the available water supply above Milner Dam. Therefore, the following Upper Snake River Optimum Use Policy is established:

1. It is in the public interest to manage the water resources above Milner Dam in a coordinated manner consistent with state law and the State Water Plan to provide a reliable supply of water for existing and future beneficial uses.
2. The Bureau of Reclamation is encouraged to manage the federal reservoir system above Milner Dam in a manner compatible with this policy, to the extent consistent with federal reclamation law and project purposes. To facilitate this effort, the Board will implement a process to openly address water management and reservoir operation needs through a standing advisory subcommittee. 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 consistent with the policy set forth in paragraph 1. The Board shall request that the Bureau of Reclamation and the Committee of Nine, designate representatives as standing members of this subcommittee and shall invite other parties that may be interested in the management of affected water resources to also participate. This subcommittee may periodically submit advisory recommendations to the Board and the Bureau of Reclamation, but shall 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.

In the early 1990s the Idaho Legislature at the request of the Bureau of Reclamation provided authorization for the rental of up to 427,000 af of storage water on a willing buyer-willing seller basis for augmenting flows for ESA-listed fish in the Lower Snake River. Despite continuing concerns about the efficacy of flow augmentation, the 2004 Snake River Water Rights Agreement resolving the Nez Perce Tribe's water right claims in the SRBA extended the flow augmentation program for a period of thirty years. All storage water released for flow augmentation must be rented through the Idaho Water Resource Board's water bank or through local water rental committees on a willing buyer-willing seller

basis. In addition, the State acquired 60,000 af of natural flow water rights that it has rented to the Bureau of Reclamation as part of the flow augmentation program. While the total amount of water provided in any particular year varies based upon water available for rental and market conditions there is an annual cap of 427,000 af. This annual cap may be increased to 487,000 af under certain conditions provided for in Idaho Code § 42-1763B and the 2004 Snake River Water Rights Agreement. The program is coupled with a biological opinion, which provides incidental take coverage for the Bureau of Reclamation's operation and maintenance of the Upper Snake Projects and related private uses of storage water.

As part of the 1990 Fort Hall Water Rights Agreement, the Board approved the creation of the Shoshone-Bannock water bank. The Shoshone-Bannock Water Bank accrues water in American Falls reservoir and is authorized to rent and deliver storage water anywhere in Idaho.

The effect of the flow augmentation program and the Shoshone-Bannock water bank is to allow water that would otherwise be available for use above Milner Dam to be released to meet water use needs below Milner Dam. To the extent feasible, strategies should be pursued to encourage the exchange flow augmentation water and water rented through the Shoshone-Bannock Water Bank with water downstream of Milner Dam in order to meet demands above Milner Dam. Strategies may include new storage within the Snake River Basin, water right acquisitions, and exchanges with existing storage spaceholders.

Water Transfer Policy: As a result of the limited water supplies above Milner Dam, future domestic, commercial, municipal, and industrial and other water supply needs likely will have to be met through the transfer of existing water rights to meet these new demands. Therefore some provision must be made to facilitate approval of acquisition and use of water rights for new uses on a willing buyer/willing seller basis. Any changes in water right acquisition policy, however, should include measures to protect against unreasonable hydrologic, economic, and/or social impacts.

Cooperation and Appraisal of Management the Water Resources: Ongoing appraisal of actions implemented to sustain existing water resources and support new water uses above Milner Dam is necessary to determine the efficacy of specific strategies and to ensure consistency with the Milner Policy, objectives of the Swan Falls Agreement, and implementation of the ESPA CAMP and the Optimum Use Policy. Monitoring and administrative strategies shall be evaluated in the collaborative forum addressed herein.

Implementation Strategies:

1. Identify where existing new surface water storage sites can be built that are safe, environmentally sound and economical to secure new water supplies, provide flexibility in reservoir operations, and offset flow augmentation demands on supplies above Milner Dam.
2. Implement actions recommended in the ESPA CAMP Phase I to accomplish hydrologic targets including groundwater to surface water conversions, managed aquifer recharge, demand reduction, and weather modification.
3. Monitor and evaluate the results of each of the ESPA CAMP actions on water supply conditions above Milner Dam to assist with development and implementation of future actions, and determination of the efficacy of implementation of the ESPA CAMP Phase II.

4. Manage the water resources above Milner Dam in accordance with the Milner Policy and Upper Snake River Optimum Use Policy.
5. Establish a standing subcommittee for the purpose of supporting the Upper Snake River Optimum Use Policy and collaborating on the management of the water resources and the reservoir system above Milner Dam with representatives from the U.S. Bureau of Reclamation and other stakeholders. The subcommittee shall have no power or authority to affect vested water rights or to prescribe the manner in which the reservoir system or the water resources above Milner Dam shall be managed, but shall develop, through a collaborative effort, recommendations and policies for the efficient and effective management of the water resources and the reservoir system above Milner Dam.
6. Opportunistically acquire Snake River water below Milner Dam, or from other tributary basins, to be exchanged for flow augmentation water with consideration of potential third party impacts including but not limited to impacts on water quality, aquatic resources, and hydropower. In addition, acquire storage water or surface water rights on flow-limited streams upstream of Milner Dam for transfer downstream to support conversions and stream flow restoration.
7. Measurement and Monitoring Implementation Strategy:
 - a. Continue to support and update the Eastern Snake River Plain Aquifer Model Version 1.1 (ESPAM1.1), 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.
 - b. 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.
 - c. Evaluate the utility of System dynamic modeling techniques to facilitate decision making on optimizing the use of water resources above Milner Dam.
8. Work with the office of the Governor, state agencies, and the legislature to ensure that state management programs are consistent with the State Water Plan and the ESPA CAMP.
9. 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.
10. Propose statutory, regulatory, and procedural changes that provide the Idaho Water Resource Board authority and flexibility to use the Water Supply Bank to adaptively manage and optimize water resources of the Snake River above Milner Dam.
11. Enhance water transferability to ensure a water supply for DCMI and other emerging needs while protecting against unreasonable impacts.

Milestones:

1. Evaluate the efficacy of the ESPA CAMP Phase I strategies by 2018 and identify how and whether to proceed with Phase II to meet long-term ESPA CAMP hydrologic targets.
2. Complete necessary actions to implement water supply enhancement projects.

Additional milestones will be developed.

DRAFT

STATE WATER PLAN – SNAKE RIVER POLICY

SNAKE RIVER FROM MILNER DAM TO MURPHY GAGE

4 - SNAKE RIVER BASIN

SNAKE RIVER FROM MILNER DAM TO MURPHY GAGE

Water resources tributary to the Snake River in the Milner to Murphy reach will be managed to meet or exceed the minimum stream flow of 3,900 cfs from April 1 to October 31 and 5,600 cfs from November 1 to March 31 at Murphy gage/Swan Falls.

Discussion:

Swan Falls Minimum Flow Policy: The Swan Falls Settlement between Idaho Power Company and the State established a minimum average daily flow of 3,900 cfs from April 1 to October 31 and 5,600 cfs from November 1 to March 31 at the Murphy gage to assure an adequate hydropower resource base and to protect other instream values such as fish propagation, recreation, aesthetics and water quality. These minimum flows are management and permitting constraints.

As a consequence of the “Milner Policy” set forth in Idaho Code § 42-203B(2) river flows over Milner Dam may be reduced overtime and consequently river flows from the Milner to Murphy gage may consist, at times, almost entirely of ground water discharges from the aquifer into springs and surface water returns. Therefore, the Eastern Snake Plain Aquifer must be managed as an integral part of this reach of the Snake River.

The State of Idaho, by and through the Governor, holds legal title to the hydropower water rights for the Idaho Power Company hydroelectric plants in this reach of the Snake River in excess of the Swan Falls minimum flows in trust for the benefit of Idaho Power Company and the people of the State of Idaho. Pursuant to Idaho Code § 42-203B, the hydropower water rights held in trust by the State are subordinate to new water rights that are acquired pursuant to state law

As contemplated by the parties to the Swan Falls Settlement, the State of Idaho approved applications for the appropriation of water from sources tributary to the Snake River below Milner Dam. These new depletions in combination with changes in irrigation practices and climate variability have led to declines in spring flows in this reach of the Snake River to the point that in dry years the flows are beginning to approach the 3,900 cfs minimum flow.

Conjunctive Administration of Spring Flow and Ground Water Rights: On April 30, 1993, the Director of the Idaho Department of Water Resources issued an Amended Moratorium Order against the issuance of permits to divert water from the Eastern Snake River Plain Area (1993 Trust Water Moratorium). The Moratorium precludes the processing of applications for the appropriation of water pending resolution of the surface and ground water rights water supply conflict. Resolution of the this conflict is an

essential step in the implementation of the long-term water planning objectives for this reach of the Snake River.

ESPA CAMP: In 2009, the Board adopted the ESPA CAMP to address the declining water supplies of the ESPA and the Snake River. The plan, among other things, seeks to stabilize and enhance the spring flows in this reach of the Snake River through implementation of a suite of measures, including managed and incidental recharge, groundwater to surface water conversions, demand reduction, additional surface water storage and weather modification. While the ESPA CAMP measures are expected to lead to stabilization of spring flows, the ESPA CAMP will not result in a return to the historic high spring flow conditions that developed as a result of large scale gravity irrigation diversions in the early part of the last century.

Milner to Murphy Optimum Use Policy: The water management objectives for the Milner to Murphy reach of the Snake River is to adaptively manage water resources in this reach to achieve a balance between existing water use and supplies and to thereby satisfy the Swan Falls minimum flows and increase the reliability of the water supply available to satisfy existing water rights.. The primary tool for achieving these objectives will be the implementation of the ESPA CAMP.

In order to achieve a balance between water use and supplies and to prevent new conflicts between spring and ground water users all new permits and licenses to divert spring flows should be subordinated to upstream consumptive uses within this reach and conditioned on providing mitigation to offset any depletionary impacts on flows at the Murphy gage. Nothing in this policy, however, shall be construed to affect or change in anyway the legal rights of any current water right holder under the prior appropriation doctrine as established by Idaho law.

A number of the water rights diverting trust water contain a 20 year term limit. In light of the declining spring flows, the State should examine these term permits as they expire to determine whether those permits should be conditioned upon providing mitigation to offset any depletionary impacts on the flows at the Murphy Gage.

As provided for in the Swan Falls Settlement, approval of new storage projects that seek to divert water from sources tributary to the Snake River below Milner Dam and above the Murphy Gaging station should be coupled with a requirement to mitigate for any impacts of such storage on hydropower generation.

Need direction from the Board on how to reconcile State Water Plan Part B for the Milner to King Hill Reach of the Snake River with "Milner Policy."

Water Transfer Policy: As a result of the limited water supplies in the Milner to Murphy reach of the Snake River, the day is fast approaching when there will be no unappropriated water available for future DCMI (domestic, commercial, municipal, and industrial) and other water supply needs. Therefore some provision must be made to facilitate approval of the acquisition and use of water rights for new uses on a willing buyer/willing seller basis. Any changes in water right acquisition policy, however, should include measures to protect against unreasonable hydrologic, economic, and/or social impacts.

Swan Falls Minimum Flow Adaptive Management Policy: The impact from the use of ground water within the basin on the timing of aquifer discharge to the Snake River is such that curtailment of water rights when the flow of the Snake River approaches the Swan Falls minimum flows is not an effective remedy. Therefore, a long-term monitoring and adaptive management plan to proactively administer water sources tributary to the Snake River below Milner Dam is essential to prevent depletion of the flow of the Snake River at Murphy gage below the Swan Falls minimums. The plan should establish an agreed upon measurement and monitoring protocol for determining the average daily flow at the Murphy gaging station consistent with terms of the Swan Falls Agreement. In addition, the plan should identify adaptive management strategies for managing the water sources tributary to the Snake River below Milner Dam to satisfy the Swan Falls minimum flows.

Implementation Strategies:

- 1) Initiate a review of water right permits and licenses containing a term limitation.
- 2) Support the development of an enhanced spring water measurement program as a mechanism for facilitating adaptive management measures to achieve ESPA CAMP and Swan Falls minimum flow objectives.
- 3) Implementation of a Swan Falls monitoring and adaptive management program to provide for the administration of water sources tributary to the Snake River below Milner Dam to achieve the minimum average daily flows at the Murphy Gauge.
- 4) Develop streamlined policy for processing transfers to meet the water supply needs for DCMI and other future water uses...
- 5) Implement ESPA CAMP to accomplish goals and objectives to sustain and enhance spring flows within this reach to improve the reliability of water supply for hydropower generation and other instream values above the Murphy gage.

Milestones:

To be developed...

STATE WATER PLAN – SNAKE RIVER POLICY

SNAKE RIVER FROM MURPHY GAGE TO WEISER GAGE

4 - SNAKE RIVER BASIN

4C - SNAKE RIVER FROM MURPHY GAGE TO WEISER GAGE

Water resources tributary to the Snake River from Murphy Gage to Weiser Gage reach will be managed to meet or exceed an average daily flow of 4,750 cfs at the Weiser Gage.

Discussion:

Management and Permitting Constraints: The minimum stream flow water right of 4,750 cfs (year round) is held by the Idaho Water Resource Board. This water right has a priority date of 1976 and was established by legislative approval of the State Water plan in 1976. The flow of the Snake River at the Weiser gage is a management and permitting constraint. This minimum flow was established to assure an adequate hydropower resource base and protect other instream flow values such as fish habitat, recreation, aesthetics, and water quality.

Background: Large-scale organized irrigation came to the lower Boise River in the 1860's and 1870's. At that time, the greatest need was for a water storage system to supplement river flows during the late summer months when irrigation demands exceeded natural river supplies.

The Boise Project began in 1906 by extending the New York Canal 40 miles to convey water from the Boise River Diversion to Lake Lowell. Since then, the Boise Project has evolved to provide full irrigation water supply to approximately 224,000 acres and a supplemental supply to some 173,000 acres.

Storage facilities tributary to the Murphy to Weiser reach of the Snake River consist of Anderson Ranch Reservoir, Arrowrock Reservoir, Lucky Peak Reservoir, Lake Lowell, Deadwood Reservoir, Cascade Reservoir, and Black Canyon Reservoir. In the Boise River basin all three reservoir facilities (Anderson Ranch, Arrowrock, and Lucky Peak) are operated in a coordinated manner to provide water for irrigation within the Boise River basin and flood control. To the extent possible, water is stored high in the system for operational flexibility. During the irrigation season, Lucky Peak is held at or near full through the summer and Arrowrock and Anderson Ranch Reservoirs are drafted for irrigation. In the fall, Lucky Peak is drafted to meet late-season irrigation needs. Storage water that is not used is credited as carryover into the next year.

Background and challenges on Payette, Weiser, Owyhee being developed.

Urban Growth in Boise River Basin: The lower Boise River flows approximately 64 miles through Ada and Canyon counties, from Lucky Peak Dam to its confluence with the Snake River. This area has experienced rapid population growth over the past several decades with land-use changing from agricultural to urban use. As a result, there are increasing demands on water supplies for domestic use.

This change in land and water use not only requires water management strategies to meet demand, but also requires methods for protecting water quality and effective flood risk management. These issues are best addressed through a regional planning process.

Treasure Valley CAMP: In 2008 the Idaho Legislature passed House Bills (HB) 428 and 644 which directed the Idaho Water Resource Board to conduct a statewide comprehensive aquifer planning and management effort (CAMP). The Idaho Water Resource Board began developing the framework for a comprehensive management plan (CAMP) for the Treasure Valley basin in Fiscal Year 2008. The process is anticipated to take four years. The Treasure Valley CAMP will provide the framework for water planning and management for the next 50 years.

The specific goals of the CAMP program are to:

- Provide reliable sources of water, projecting 50 years in to the future
- Develop strategies to avoid conflicts over water resources
- Prioritize future state investments in water
- Bridge the gaps between future water needs and supply

During the first phase of the project, technical studies and planning activities will be undertaken. The technical studies will focus on refining the understanding of the ground and surface water system and developing a water budget. The planning process will undertake studies to estimate future water needs and identify tools to meet those needs.

A few of the components to be addressed in the Treasure Valley CAMP are:

- 1. Conjunctive Management:** Over the years, surface water and ground water development and management in the Boise basin has evolved to a point where Conjunctive Management must be implemented to satisfy both ground water and surface water demands. A few of the drivers of this change are:
 - Reduced deep percolation of water as a result of improved irrigation efficiencies
 - Increasing urbanization
 - Increased interest in maintenance of instream flows
 - Water needs for energy production
 - Impacts of climate variability
- 2. Additional DCMI for Growth:** In addition to surface water supplies, water users in the Boise River basin rely on groundwater. In recent years, increasing population and droughts have led to localized declines in shallow groundwater levels in the Boise River basin. Water supply for DCMI uses is forecasted to be one of the most pressing water supply issues for this reach of the Snake River. In 2000, 175,000 acre-feet of groundwater was pumped in the Boise River basin, of which 30 percent was used for irrigation (53,000 AF) and 70 percent was used for DCMI (122,000 AF [IDWR, 2000]). Most large municipal water suppliers draw from the deeper regional aquifer. Analysis suggests that groundwater levels in the deeper aquifer are relatively stable, in contrast

with shallow water table levels that appear to be locally declining in areas where residential development is replacing flood-irrigated farmland (IWRRI, 2004).

In 2001, an IDWR study "predicted that there will be a significant increase in DCMI water demand during the next 25 years [in Ada and Canyon Counties] and that between 76,000 and 96,000 additional acre-feet of water will be needed to accommodate the additional demand. As part of the Treasure Valley CAMP, a future demand study will estimate future water for various categories, including DCMI, over the next 50 years.

Additional DCMI demands are particularly pressing upstream of Star [located on the Boise River], where much of the population of the Treasure Valley is located, and where the only surface water available for new appropriation occurs during the spring run-off. In order to utilize the unappropriated spring run-off water for additional DCMI demand, new surface water storage or aquifer recharge projects will be needed.

3. **Studies for Additional Storage:** A 1994 U.S. Army Corps of Engineers, *Technical Report on Additional Snake River Basin Storage, Phase 1* concluded that additional upstream storage, including the Galloway Project, could benefit fall Chinook salmon, from the confluence of the Salmon River to Lower Granite Dam during critical low flow years by allowing for flow augmentation in the Snake River. Additionally, the report concluded "the feasibility of transferring the flood control storage space from the Brownlee Project to the Galloway Project could improve the effectiveness of upstream storage and should be considered."

In conjunction with the Treasure Valley CAMP, House Joint Memorial (HJM) 8 encouraged the Idaho Water Resource Board, in coordination with other public and private entities, to initiate and complete the study of additional water storage projects for water supply and flood control in the state of Idaho, including, but not limited to, the study of Twin Springs Dam in the Boise River drainage. Completion of the interim feasibility study is anticipated in 2012, subject to congressional funding.

The CAMP will also evaluate the potential for managed recharge in the Treasure Valley as a method of water storage.

Municipal Water Use and Development Policy: As a result of the limited water supplies in the Murphy Gage to Weiser reach of the Snake River, the day is fast approaching when there will be no unappropriated water available for future DCMI (domestic, commercial, municipal, and industrial) and other water supply needs. The Board therefore adopts a Municipal Water Use Policy with the following components:

1. Continuation of dual-use residential systems to preserve incidental recharge throughout Treasure Valley where appropriate.
2. Development of flexible water marketing tools to facilitate rental or acquisition of water rights for new uses on a willing buyer/willing seller basis. Water acquisition strategies should account for adverse hydrologic, economic, and/or social impacts.
3. Improved hydrologic monitoring programs to inform policy decisions.
4. Evaluation and implementation of water supply enhancement measures, including but not limited to, groundwater conservation, additional storage, and water re-use.

5. Protection of surface water and ground water quality for beneficial uses.

Flow Augmentation: In the early 1990's the Idaho Legislature at the request of the Bureau of Reclamation provided authorization for the rental of up to 427,000 acre-feet of storage water on a willing buyer-willing seller basis for augmenting flows for ESA-listed fish in the Lower Snake River. Despite continuing concerns about the efficacy of flow augmentation, the 2004 Snake River Water Rights Agreement resolving the Nez Perce Tribe's water right claims in the SRBA extended the flow augmentation program for a period of thirty years. All storage water released for flow augmentation must be rented through the Idaho Water Resource Board's water supply bank or through local water rental committees on a willing buyer-willing seller basis. In addition, the State of Idaho acquired 60,000 acre-feet of natural flow water rights that it has rented to the Bureau of Reclamation as part of the flow augmentation program. While the total amount of water provided in any particular year varies based upon water available for rental and market conditions, there is an annual cap of 427,000 acre-feet. This annual cap may be increased to 487,000 acre-feet under certain conditions proved for in Idaho Code 42-1763B and the 2004 Snake River Water Rights Agreement.

The Snake River basin augmentation flows are supplied in part from the Boise Project, and in part from other upper Snake River Projects. Currently the Boise/Payette reservoir system is able to provide approximately 136,000 acre-feet (in total from Lucky Peak Reservoir, Deadwood Reservoir, and Cascade Reservoir) of water to be used for flow augmentation.

Additional items that may need to be addressed in this reach of the Snake River

Use of storage water to maintain flows/winter flows (includes aspects of water quality)

Implementation Strategies:

- 1) *Complete and implement Treasure Valley CAMP*
- 2) *Complete evaluation of new surface water storage sites in the Boise and Weiser River Basins*
- 3) *Evaluate managed recharge as a water storage strategy for meeting increasing DCMI needs.*

Milestones:

- 1)

STATE WATER PLAN – SNAKE RIVER POLICY

SNAKE RIVER BELOW WEISER

4 - SNAKE RIVER BASIN

4D- SNAKE RIVER BELOW WEISER

The minimum stream flows at Johnson Bar and Lime Point are not permitting and management constraints for water right administration above the Hells Canyon Complex. These minimum stream flows will be maintained through operational releases from the Hells Canyon Complex and tributary inflows to this reach.

Discussion:

The Snake River near Weiser runs north for approximately two miles before flowing into the headwaters of the Hells Canyon Complex (HCC). A USGS gage near Weiser Idaho defines the beginning of the reach and measures inflows into the HCC; the reach ends at the Idaho/Washington State Line. The river defines the Idaho-Oregon state border, which flows through Brownlee, Oxbow, and Hell's Canyon Reservoirs and into Hells Canyon, 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 plunges 8,000 feet below the He Devil Peak of Idaho's Seven Devils Mountains. The Salmon and Clearwater Rivers are major tributaries in this reach of the Snake River (See Policies 6A and 6B).

Hells Canyon Complex: In the late 1940s and early 1950s, Idaho Power Company and federal agencies competed for the right to construct hydropower facilities in the Hells Canyon reach of the Snake River. At the center of the conflict between public and private development was the question of which project would ensure the opportunity for future upstream development. Ultimately, Idaho Power prevailed, based upon its voluntary agreement to subordinate its hydropower water rights to all future upstream consumptive uses. The Federal Energy Regulatory Commission (formerly Federal Power Commission), at the request of Idaho Power Company, included Article 41 of the FERC license which provides that the project will "be operated in such a manner as [to] not conflict with the future depletion in flows of the waters of the Snake River and its tributaries, or prevent or interfere with the future upstream diversion and use of such water above the backwater created by the project, for the irrigation of lands and other beneficial consumptive uses in the Snake River [watershed]." The Idaho Supreme Court in 1983 held that this provision constituted a subordination of the Company's hydropower water rights for the Hells Canyon Complex.

While the hydropower water rights for the Hells Canyon Complex are subordinated to all future upstream consumptive uses, the Federal Power Commission as part of the FPC license required minimum flows be maintained for navigation.

Article 43 of the power 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 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...”

The 1976 State Water Plan recognized the importance of these minimum flows to downstream uses, and the 1986 State Water Plan made their maintenance a matter of state water policy. The plan, however, also made clear that “Snake River flows above the hydropower right at any Idaho Power facility are considered unappropriated and therefore are not held in trust by the state.” Accordingly, the state minimum flows at Johnson Bar and Lime Point are not permitting or management constraints.

Hells Canyon National Recreation Area: The Hells Canyon controversy 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. The Act provided that no flow requirements of any kind may be imposed on the waters of the Snake River below Hells Canyon Dam. The United States’ federal reserved water rights are limited to the tributary streams of the Snake River within the HCNRA. The decrees quantifying the tributary federal reserved water rights contain subordination provisions that protect existing rights and allow for a limited amount of future development on the tributary streams.

Endangered Species Act: The Snake River below Hells Canyon Dam provides habitat for fish species that have been listed as endangered or threatened under the Endangered Species Act, including sockeye salmon, spring/summer Chinook salmon, fall Chinook salmon, steelhead trout, and bull trout.

Flow augmentation is a strategy currently used as mitigation for the effects of hydropower operations on ESA-listed species. Flow augmentation is intended to enhance migration of ESA-listed fish species. Flow augmentation from the upper Snake River has proven to be controversial because of the inability to demonstrate the specific benefits of the program. Evaluation of the efficacy of flow augmentation should be conducted in conjunction and/or cooperation with other State and Federal agencies and regional interests.

Port of Lewiston - Placeholder

Optimum Use Policy: Existing hydropower uses should be preserved while protecting the natural characteristics of the Hells Canyon and Snake River downstream of the Hells Canyon Complex.

The Hells Canyon Complex represents the majority of Idaho Power’s hydropower generation capacity. The HCC FERC license expired in 2005. The relicensing of this complex is critical to the Company’s ability

to continue to provide low-cost power for Idaho. The relicensing will also address the protection and enhancement of recreational, aesthetic, and fish and wildlife resources in this reach. The Board finds that it is in the public interest that any operational requirements in the FERC license should be consistent with the state-established minimum stream flows.

The Hells Canyon National Recreation Area provides unique recreational opportunities. Traditional Recreation Area activities like hiking, backpacking, rafting, and fishing occur along-side commercial jet boat excursions in the Canyon. The area is a tourist destination that positively contributes to the local economy. It is therefore in the public interest to preserve these unique resources below the Hells Canyon Complex. The State minimum stream flows are permitting and management constraints below the HCC.

Implementation Strategies:

- 1) Collaborate with state and federal agencies in FERC relicensing proceedings to ensure consistency with SWP.
- 2) Support collaborative efforts to address water quality and ESA issues while sustaining low cost hydropower for the State.

Milestones:

- 1) FERC relicensing in accordance with SWP.

STATE WATER PLAN – SNAKE RIVER POLICY

4 - SNAKE RIVER BASIN

4E - Hydrologic Interdependence Policy

Placeholder – Policy to provide for integrated management of the Snake River reaches consistent with the State minimum stream flows (For example – reconciling development of spring flows with the Milner Policy to achieve the Murphy minimum flow).