IDAHO WATER RESOURCE BOARD

AGENDA
MEETING NO. 9-12

November 28, 2012, 8:00 a.m.
IDWR Idaho Water Center
Conference Rooms C&D
322 E. Front St., Boise, Id 83702

Tuesday, November 27, 2012, 8:00 a.m., IWRB Work Session

Prior to Work Session agenda, the Board will convene an Executive Session pursuant to Idaho Code Section 67-2345(1)(c) and (f) to communicate with legal counsel regarding legal ramifications of and legal options for pending litigation, or controversies not yet being litigated but imminently likely to be litigated. Executive Session is closed to the public.

IWRB MEETING AGENDA

Wednesday, November 28, 2012

1. Roll Call
2. Agenda and Approval of Minutes
3. Public Comment – The Board will allocate a period of time (not to exceed 30 minutes) for the public to address the Board.
4. Director's Report
5. IWRB Committee and Other Reports
   a. Water Resource Planning Committee
   b. Streamflow Enhancement and Minimum Streamflow Committee
   c. Upper Snake Operations Forum
6. Underground Injection Control Rules Revision
7. Blackfoot Equitable Adjustment
8. IWRB Financial Program
   a. Status Report
   b. Bond Trustee
   c. Other Revenue Bond Updates
   d. Canyon County Drainage District No. 2 Loan
9. Water Transactions Program
   a. Pole Creek
   b. Kenney Creek
   c. 2013 Lemhi Annual
   d. Spring Creek
10. Idaho State Water Plan
11. Treasure Valley CAMP
12. ESPA Management Update
13. Water Storage Studies Update
14. Western States Water Council Update
15. Other Items Board Members May Wish to Present
16. Next Meeting and Adjourn

IDAHO WATER RESOURCE BOARD

Work Session in Preparation for
IWRB Meeting No. 9-12

November 27, 2012 at 8:00 am
Idaho Water Center
Conference Rooms C&D
322 E. Front St., Boise, Idaho 83702

WORK SESSION AGENDA

1. 8:00 am Executive Session
   Board will meet pursuant to Idaho Code Section 67-2345(1)(c) and (f) to communicate with legal counsel regarding legal ramifications of and legal options for pending litigation, or controversies not yet being litigated but imminently likely to be litigated. Executive Session is closed to the public.
2. ESPAM Recharge Modeling
3. Idaho State Water Plan
4. Treasure Valley CAMP
5. Water Right Accounting Update
6. Big Wood Basin Model Development
   Lunch
7. Underground Injection Control Rules Revision *(See Tab 6 under IWRB Meeting)*
8. Sustainability Policy Discussion
9. Water Transactions Program Discussion *(See Tab 9 under IWRB Meeting)*
10. Canyon County Drainage District No. 2 Loan *(See Tab 8d under IWRB Meeting)*

AMERICANS WITH DISABILITIES

The meeting will be held in facilities that meet the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations to attend, participate in, or understand the meeting, please make advance arrangements by contacting the Idaho Department of Water Resources at (208) 287-4800.

Memorandum

To: Idaho Water Resource Board

From: Helen Harrington

Date: November 16, 2012

Re: Water Resource Planning ("Planning") Committee

The Planning Committee has held meetings on October 10, October 25, November 5 and November 12. The Committee has been reviewing and revising the Proposed Revision of the Idaho State Water Plan and the Proposed Treasure Valley Comprehensive Aquifer Management Plan.

Both plans are provided to the IWRB reflecting the recommended changes and a final plan with changes incorporated. Both plans are discussed separately on the agenda.

Memorandum

To: Idaho Water Resource Board

From: Morgan Case

Date: November 28, 2012

Re: October 4, 2012 Streamflow Enhancement and Minimum Stream Flow Committee Meeting

The Streamflow Enhancement and Minimum Stream Flow Committee met in Boise on October 4th. The Committee considered and recommended funding the following water transaction proposals to the full Board:

- **Tetonia Canal Transactions** – Friends of the Teton River sponsored water transactions to improve flows in Spring Creek, tributary to the Teton River. The projects would restore 4.35 cfs into Trail Creek by leasing water rights appurtenant to 142.8 acres and renting the water for delivery to the Teton River for instream flow.
- **2013 Lemhi River Annual Transaction** - A project to secure 16.21 cfs of water in the Lower Lemhi River through a set of 6 minimum flow agreements. The annual agreements bridge the gap between existing flow restoration and the 35 cfs minimum flow target in the draft Lemhi Conservation Plan.
- **Pole Creek Agreement 2013** - an extension of the 6 cfs minimum stream flow in lower Pole Creek. No funds were expended in 2012 due to adequate natural flows.

The Board also received a briefing on water transaction activity in the Pahsimeroi River Basin.

Memorandum

To: Idaho Water Resource Board

From: Tom Neace, Ground Water Protection Section Manager

Date: November 27, 2012

Re: Proposed revisions to the Underground Injection Control Rules of IDAPA 37.03.03

Action Item: Approve the resolution for submittal of pending rules to the 2013 Idaho Legislature.

IDWR has completed negotiated rulemaking meetings, published the proposed rules in the Idaho Administrative Bulletin, the 21-day public comment period has ended, the final public hearing has been held, draft responses to written comments from the public have been generated, and final revisions due to the written comments have been made. IDWR is providing the pending rules to the IWRB for its consideration and approval prior to submittal to the 2013 Idaho Legislature (copy attached).

Revising the existing Class V rules was done to achieve consistency with federal law. Failure to achieve consistency could jeopardize State primacy and federal funding of the UIC program. Failure to align our rules with federal requirements may result in less protection for the State's aquifers due to unregulated injection. If the State of Idaho rules are less stringent than federal law, the U.S EPA could conduct independent inspections and enforcement actions in Idaho. Therefore, it is important that Idaho maintains regulatory authority. New Class II injection well rules were prepared for the anticipated industry requirements related to oil and gas production.

Class V Existing Rules Revision Summary

- Update/add definitions for consistency with state statute(s) and federal law
- Remove exemptions that are inconsistent with federal law
- Regulation of improved sinkholes (major topic of discussion)
- Relax permitting requirements for low-flow water-based heat exchange wells

Class II New Rules Summary

Would allow for:

- Injection of fluids to aid in recovery of hydrocarbons
- Disposal of brines and other fluids associated with hydrocarbon production
- Storage of liquid hydrocarbons

Specifies:

- Application requirements
- Application processing
- Permit conditions
- Operating requirements
- Actions to be taken on approved permits
- Bonding

BEFORE THE WATER RESOURCE BOARD

OF THE

STATE OF IDAHO

IN THE MATTER OF AMENDING THE	)	
RULES FOR THE CONSTRUCTION AND	)	**RESOLUTION ADOPTING**
USE OF INJECTION WELLS	)	**PENDING RULES**

WHEREAS, the Idaho Water Resource Board ("Board") is authorized by Sections 42-3913 through 42-3915, Idaho Code, to promulgate rules for the construction and use of injection wells; and

WHEREAS, on July 20, 2012, the Board passed and approved a resolution adopting the proposed negotiated rules and authorizing the Director of the Department of Water Resources to submit the proposed rules for publication in the Idaho Administrative Bulletin; and

WHEREAS, the proposed rules were published, a final public hearing was held, written comments were received; and

WHEREAS, draft responses to written comments were generated by the IDWR UIC program; and

WHEREAS, the rulemaking process is complete and the Board has reviewed the pending rules.

NOW THEREFORE, BE IT RESOLVED that the Board approves the pending Rules and Minimum Standards for the Construction and Use of Injection Wells attached hereto and authorizes the Director to submit the pending rules to the Office of the Administrative Rules Coordinator in preparation for reading by the 2013 Idaho Legislature.

DATED this _____ day of November, 2012.

_____
TERRY T. UHLING, Chairman
Idaho Water Resource Board

ATTEST:_____
Bob Graham, Secretary

001. TITLE AND SCOPE (RULE 1).

01. Title. These rules will be cited as IDAPA 37.03.03 "Rules and Minimum Standards for the Construction and Use of Injection Wells." (5-3-03)

02. Scope. These rules and minimum standards are for construction and use of injection wells in the state of Idaho. Upon promulgation, these rules apply to all injection wells (see Rule Subsection 02~~3~~35.01). The construction and use of Class I, ~~II,~~ III, ~~or~~ IV, or VI injection wells are prohibited by these rules. Class IV wells are also prohibited by federal law. These rules and minimum standards for construction and use of injection wells shall apply to all injection wells in the state of Idaho, ~~*including*~~ except in Indian lands ~~*to the extent not otherwise preempted by federal law administered by the United States Environmental Protection Agency (EPA)*~~. All injection wells shall be permitted and constructed in accordance with the "Well Construction Standards Rules" found in IDAPA 37.03.09 which are authorized under Section 42-238, Idaho Code. ~~*(5-3-03)*~~( )

03. Rule Coverage. In the event that a portion of these rules is less stringent than the minimum requirements for injection wells as established by Federal regulations, the correlative Federal requirement will be used to regulate the injection well. ( )

04. Variance of Methods. The Director may approve the use of a different testing method or technology if it is no less protective of human health and the environment, will not allow the migration of injected fluids into a USDW, meets the intent of the rule and yields information or data consistent with the original method or technology required. A request for review by the Director must be submitted in writing by the applicant, permit holder, or operator and be included with all pertinent information necessary for the Director to evaluate the proposed testing method or technology. ( )

(BREAK IN CONTINUITY OF SECTION

010. DEFINITIONS (RULE 10).

01. Abandonment. ~~*The discontinuance of the use of an injection well. See "permanent abandonment," "temporary abandonment," and "unauthorized abandonment."*~~ See "permanent decommission. ~~*(7-1-93)*~~( )

02. Abandoned Well. See "permanent decommission". ( )

03. Agricultural Runoff Waste. Excess surface water from agricultural fields generated during any agricultural operation, including runoff of irrigation tail water, as well as natural drainage resulting from precipitation, snowmelt, and floodwaters, and is identical to the statutory phrase "irrigation waste water" found in Idaho Code 42-3902. ( )

0~~2~~4. **Applicant**. Any owner or operator submitting an application for permit to construct, modify or maintain an injection well to the Director of the Department of Water Resources. (7-1-93)

05. Application. The standard Department forms for applying for a permit, including any additions, revisions or modifications to the forms. ( )

0~~3~~6. **Aquifer**. Any formation that will yield water to a well in sufficient quantities to make production of water from the formation reasonable for a beneficial use, except when the water in such formation results solely from fluids deposited through an injection well. (5-3-03)

07. Area of Review. The area surrounding an injection well described according to the criteria set forth in Subsection 045.07 of these rules. ( )

0~~4~~8. Beneficial Use. One (1) or more of the recognized beneficial uses of water including but not limited to, domestic, municipal, irrigation, hydropower generation, industrial, commercial, recreation, aquifer recharge and storage, stockwatering and fish propagation uses, as well as other uses which provide a benefit to the user of the water as determined by the Director. Industrial use as used for purposes of these rules includes, but is not limited to, manufacturing, mining and processing uses of water. (5-3-03)

0~~5~~9. Best Management Practice (BMP). A practice or combination of practices ~~*determined to be the most*~~ that are more effective ~~*and practicable means of*~~ than other techniques at preventing or reducing contamination of ground water and surface water by injection well operation~~, to achieve water quality goals and protect beneficial uses of ground water~~. ~~(7-1-93)~~( )

~~**06**~~**10. Casing**. ~~*A conduit required by these rules and Well Construction Standards Rules to maintain the well opening and prevent contamination of ground water.*~~ A pipe or tubing of appropriate material, of varying diameter and weight, lowered into a borehole during or after drilling in order to support the sides of the hole and thus prevent the walls from caving, to prevent loss of drilling mudfluid into porous ground, or to prevent water, gas, or other fluid from entering or leaving the hole. ~~(7-1-93)~~( )

11. Cementing. The operation whereby a cement slurry is pumped into a drilled hole and/or forced behind the casing. ( )

~~**07**~~**12. Cesspool**. An injection well that receives sanitary waste without benefit of a treatment system or treatment device such as a septic tank. Cesspools sometimes have open bottom and/or perforated sides.~~(5-3-03)~~( )

~~**08**~~**13. Coliform Bacteria**. All of the aerobic and facultative anaerobic, gram-negative, non-spore forming, rod-shaped bacteria that either ferment lactose broth with gas formation within forty-eight (48) hours at thirty-five degrees Celsius (35°C), or produce a dark colony with a metallic sheen within twenty-four (24) hours on an Endo-type medium containing lactose. (7-1-93)

14. Confining Bed. A body of impermeable or distinctly less permeable material stratigraphically adjacent to one (1) or more aquifers. ( )

15. Confining Zone. A geological formation, group of formations, or part of a formation that is capable of limiting fluid movement above an injection zone. ( )

~~**09**~~**16. Construct**. To create a new injection well or to convert any structure into an injection well. (7-1-93)

1~~0~~7. Contaminant. Any physical, chemical, ~~*ion, radionuclide, synthetic organic compound, micro-organism, waste or other substance*~~ biological, or radiological substance or matter.~~ which does not occur naturally in ground water or which naturally occurs at a lower concentration.~~ ~~(7-1-93)~~( )

1~~1~~8. Contamination. The ~~*direct or indirect introduction of any contaminant into ground water, caused in whole or in part by human activity.*~~ introduction into the natural ground water of any physical, chemical, biological, or radioactive material that may: ~~(7-1-93)~~( )

a. Cause a violation of Idaho Ground Water Quality Standards found in IDAPA 58.01.11 "Ground Water Quality Rule" or the federal ground water quality standards, whichever is more stringent; or ( )

b. Adversely affect the health of the public; or ( )

c. Adversely affect a designated or beneficial use of the State's ground water. Contamination includes the introduction of heated or cooled water into the subsurface that will alter the ground water temperature and render the local ground water less suitable for beneficial use. ( )

19. Conventional Mine. An open pit or underground excavation for the production of minerals.( )

20. Decommission. To remove a well from operation such that injection through the well is not possible. See "permanent decommission" and "unauthorized decommission". ( )

~~1~~**21. DEQ**. The Idaho Department of Environmental Quality. (5-3-03)

~~13~~**22. Deep Injection Well**. An injection well which is more than eighteen (18) feet in vertical depth below land surface~~, and is identical to the statutory phrase, "waste disposal and injection well."~~ ~~(7-1-93)~~( )

~~14~~**23. Department**. The Idaho Department of Water Resources. (7-1-93)

~~15~~**24. Director**. The Director of the Idaho Department of Water Resources. (7-1-93)

25. Disposal Well. A well used for the disposal of waste into a subsurface stratum. ( )

~~1~~**26. Draft Permit**. ~~*The completed Application for Permit with permit conditions, compliance schedules and monitoring requirements attached.*~~ A prepared document indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a "permit." Permit conditions, compliance schedules, and monitoring requirements are typically included in a "draft permit". A notice of intent to terminate a permit, and a notice of intent to deny a permit are types of "draft permits." A denial of a request for modification, revocation and reissuance, or termination is not a "draft permit." ~~*(7-1-93)*~~( )

27. Drilling Fluid. Any number of liquid or gaseous fluids and mixtures of fluids and solids (such as solid suspensions, mixtures and emulsions of liquids, gases, and solids) used in operations to drill boreholes into the earth. ( )

~~*17. Drinking Water Source. An aquifer which contains water having less than ten thousand (10,000) mg/l total dissolved solids and has not been exempted from this designation by the Director of the Department of Water Resources pursuant to Rule 75. (7-1-93)*~~

~~1~~**28. Drywell**. An injection well completed above the water table so that its bottom and sides are typically dry except when receiving fluids. (5-3-03)

29. Emergency Permit. A UIC "permit" issued in accordance with Subsection 045.09 of these rules. ( )

~~19~~**30. EPA**. The United States Environmental Protection Agency. (5-3-03)

~~20~~**31. Endangerment**. Injection of any fluid which exceeds Idaho ground water quality standards, or federal ground water quality standards, whichever is more stringent, that may result in the presence of any contaminant in ground water which supplies or can reasonably be expected to supply any public or non-public water system, and if the presence of such contaminant may result in such a system not complying with any ground water quality standard or may otherwise adversely affect the health of persons or result in a violation of ground water quality standards that would adversely affect beneficial uses. ~~*(5-3-03)*~~( )

32. Exempted Aquifer. An "aquifer" or its portion that meets the criteria in the definition of "underground source of drinking water" but which has been exempted according to the procedures in Section 025 of these rules and been recategorized as "other" according to the procedures in IDAPA 58.01.11 "Ground Water Quality Rule". ( )

33. Existing Injection Well. An "injection well" other than a "new injection well." ( )

34. Experimental Technology. A technology which has not been proven feasible under the conditions in which it is being tested. ( )

35. Facility or Activity. Any UIC "injection well," or another facility or activity that is subject to regulation under the UIC program. ( )

36. **Fault**. A surface or zone of rock fracture along which there has been displacement. ( )

37. **Flow Rate**. The volume per time unit given to the flow of gases or other fluid substance which emerges from an orifice, pump, turbine or passes along a conduit or channel. ( )

~~21~~**38.** **Fluid**. Any material or substance which flows or moves, whether in a semisolid, liquid, sludge, gaseous or any other form or state. (7-1-93)

~~22~~**39.** **Formation**. A body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity which is prevailingly, but not necessarily, tabular and is mappable ~~at the~~ on the earth's surface or traceable in the subsurface. ~~(7-1-93)~~( )

40. **Formation Fluid**. Fluid present in a "formation" under natural conditions as opposed to introduced fluids. ( )

41. **Generator**. Any person, by site location, whose act or process produces hazardous waste identified or listed in 40 CFR part 261. ( )

~~23~~**42.** **Ground Water**. Any water that occurs beneath the surface of the earth in a saturated formation of rock or soil. (5-3-03)

~~24~~**43.** **Ground Water Quality Standards**. Standards found in IDAPA 58.01.11, "Ground Water Quality Rule," Section 200. (5-3-03)

~~25~~**44.** **Hazardous Waste**. Any substance defined by IDAPA 58.01.05, "Rules and Standards for Hazardous Waste," (40 CFR 261.3). (5-3-03)

45. **Indian Lands**. "Indian Country" as defined in 18 U.S.C. 1151. That section defines Indian Country as: ( )

a. All land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation; ( )

b. All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State; and ( )

c. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. ( )

46. **Individual Subsurface Sewage Disposal System**. For the purpose of these rules, any standard or alternative disposal system which ~~discharges~~injects sanitary waste from single family residential septic systems, or non-residential septic systems which are used solely for the disposal of sanitary waste and have the capacity to serve fewer than twenty (20) people a day.~~beneath the earth's surface. These systems inject less than two thousand five hundred (2,500) gallons per day and have the capacity to serve fewer than twenty (20) persons per day.~~ ( )

47. **Improved Sinkhole.** A naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings which have been modified by man for the purpose of directing and emplacing fluids into the subsurface. ( )

~~27~~**48.** **Injection**. The subsurface emplacement of fluids~~.~~ through an injection well, but excludes the following: ~~*The purpose of injection by Class V wells is the temporary or permanent disposal or storage of fluids into subsurface formations.*~~ ~~(5-3-03)~~( )

a. The underground injection of natural gas for purposes of storage; ( )

b. The underground injection of fluids or propping agents, other than diesel fuels, pursuant to hydraulic fracturing operations related to oil, gas, or geothermal activities. ( )

2849. **Injection Well**. Any ***excavation or artificial opening into the ground which meets the following three (3)*** feature that is operated to allow injection which also meets at least one (1) of the following criteria: ***(7-1-93)***( )

a. ***It is a*** A bored, ***drilled or dug hole,*** or ***is a*** driven ***mine*** shaft ***or a driven well point*** whose depth is greater than the largest surface dimension; ***and*** ***(7-1-93)***( )

b. ***It is deeper than its largest straight line surface dimension*** A dug hole whose depth is greater than the largest surface dimension; ***and*** ***(7-1-93)***( )

c. ***It is used for or intended to be used for injection.*** An improved sinkhole; or ***(7-1-93)***( )

d. A subsurface fluid distribution system. ( )

e. Provided however, that "injection well" does not mean or include any well drilled for oil, gas, or geothermal production activities, other than one into which diesel fuels are injected pursuant to hydraulic fracturing operations ( )

50. Injection Zone. A geological "formation", or those sections of a formation receiving fluids through an "injection well." ( )

29. Irrigation Waste Water*. Water diverted for irrigation but not applied to crops, or runoff of irrigation tail water from the cropland as a result of irrigation.* ***(7-1-93)***

2651. **IWRB**. Idaho Water Resource Board. (5-3-03)

3052. **Large Capacity Cesspools**. Any cesspool used by a multiple dwelling, community or regional system for the disposal of sanitary wastes (for example: a duplex or an apartment building) or any cesspool used by or intended to be used by twenty (20) or more people per day (for example: a rest stop, campground, restaurant or church). (5-3-03)

53. Large Capacity Septic System. Class V wells that are used to inject~~dispose of~~ sanitary waste through a septic tank and are used by multiple dwellings, business establishments, communities, and regional business establishments. ~~for the injection of wastes. These systems have the capacity to serve twenty (20) or more people per day and receive more than two thousand five hundred (2,500) gallons per day.~~ ( )

54. Lithology. The description of rocks on the basis of their physical and chemical characteristics. ( )

3155. **Maintain**. To allow, either expressly or by implication, an injection well to exist in such condition as to accept or be able to accept fluids. Unless a well has been ***abandoned*** permanently decommissioned pursuant to the criteria contained in these rules it is considered to be capable of accepting fluids. ***(7-1-93)***( )

56. Mechanical Integrity. The condition or status of an injection well and its physical components as they relate to the flow of fluids inside or outside the injection well. A well is said to have mechanical integrity if there is no significant leak in the casing, tubing, or packer, and there is no significant fluid movement into a underground source of drinking water through vertical channels adjacent to the wellbore. ( )

3257. **Modify**. To alter the construction of an injection well, but does not include cleaning or redrilling operations which neither deepen nor increase the dimensions of the well. (7-1-93)

3358. **Motor Vehicle Waste Disposal Wells**. Injection wells that receive or have received fluids from

vehicle repair or maintenance activities, such as an auto body repair shop, automotive repair shop, new and used car dealership, specialty repair shop (transmission and muffler repair shop), or any facility that does any vehicular repair work. (5-3-03)

59. New Injection Well. An "injection well" which began to be used for injection after a UIC program for the State applicable to the well is approved or prescribed. ( )

60. Open-Loop Heat Pump Return Wells. Injection wells that receive surface water or ground water that has been passed through a heat exchange system for cooling or heating purposes. ( )

~~*34*~~**61. Operate**. To allow fluids to enter an injection well by action or inaction of the operator. (7-1-93)

~~*35*~~**62. Operator**. Any individual, group of individuals, partnership, company, corporation, municipality, county, state agency, taxing district, federal agency or other entity that operates or proposes to operate any injection well. (7-1-93)

~~*3*~~**63. Owner**. Any individual, group of individuals, partnership, company, corporation, municipality, county, state agency, taxing district, federal agency or other entity owning land on which any injection well exists or is proposed to be constructed. (7-1-93)

64. Packer. A device lowered into a well to produce a fluid-tight seal. ( )

~~*37*~~**65. Perched Aquifer**. Ground water separated from an underlying main body of ground water by an unsaturated zone. (7-1-93)

~~*38*~~**66. Permanent ~~*Abandonment*~~ Decommission**. The discontinuance of use of an injection well in ~~*accordance with current IDAPA 37.03.09, "Well Construction Standards*~~ a method approved by the Director such that the injection well no longer has the capacity to inject fluids and the upward or downward migration of fluid is prevented. This also includes the disposal and proper management of any soil, gravel, sludge, liquids, or other materials removed from or adjacent to the injection well in accordance with all applicable Federal, State, and local regulations and requirements." ~~*Permanent abandonment requires plugging the well bore with bentonite grout, cement grout, concrete, or other impermeable material to prevent the upward or downward migration of fluids.(5-3-03)*~~( )

67. Permit. An authorization, license, or equivalent control document issued by the Department. ( )

~~*39*~~**68. Person**. Any individual, association, partnership, firm, joint stock company, trust, political subdivision, public or private corporation, state or federal governmental department, agency or instrumentality, or any other legal entity which is recognized by law~~. as the subject of right and duties (Idaho Code 30-101 EPHA)~~( ). (7-1-93)

69. Plugging. The act or process of stopping the flow of water, oil or, gas, or other fluids into or out of a formation through a borehole or well penetrating that formation. ( )

70. Plugging Record. A systematic listing of permanent or temporary decommissioning of water, oil, gas, test, exploration and waste injection wells, and may contain a well log, description of amounts and types of plugging material used, the method employed for plugging, a description of formations which are sealed and a graphic log of the well showing formation location, formation thickness, and location of plugging structures. ( )

~~*40*~~**71. Point of Beneficial Use**. The top or surface of a ~~*drinking water source*~~ USDW, directly below an injection well, where water is available for a beneficial use. ~~*(5-3-03)*~~( )

~~*41*~~**72. Point of Diversion for Beneficial Use**. A location such as a producing well or spring where ground water is taken under control and diverted for a beneficial use. (7-1-93)

~~*42*~~**73. Point of Injection**. The last accessible sampling point prior to waste being released into the

subsurface environment through an ~~*Class V*~~ injection well. For example, the point of injection for a Class V septic system might be the distribution box. For a drywell, it is likely to be the well bore itself. ~~*(5-3-03)*~~( )

74. **Pressure**. The total load or force per unit area acting on a surface. ( )

75. **Project**. A group of wells in a single operation. ( )

~~*43*~~**76.** **Radioactive Material**. Any material, solid, liquid or gas which emits radiation spontaneously. Radioactive geologic materials occurring in their natural state are not included. (7-1-93)

~~*44*~~**77.** **Radioactive Waste**. Any fluid which contains radioactive material in concentrations which exceed those established for discharges to water in an unrestricted area by 10 CFR 20.1302.(b)(2)(i) and Table 2 in Appendix B of 10 CFR 20. (5-3-03)

78. **RCRA**. The Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976. ( )

~~*45*~~**79.** **Remediation Project**. Use of an injection well for the ~~R~~removal, treatment or isolation of a contaminant from ground water through actions or the removal or treatment of a contaminant in ground water as approved by the Director. ~~*(5-3-03)*~~( )

80. Residential (Domestic) Activities. Human activities that generate liquid or solid waste in any public, private, industrial, commercial, municipal, or other facility.

~~***46. Replacement Well.*** *An injection well constructed to replace an existing injection well, authorized for use under these rules, that meets the following criteria: (7-1-93)*~~

~~***a.*** *The replacement well is located within two hundred (200) feet of the existing injection well. (7-1-93)*~~

~~***b.*** *The injected fluids are from the same source as the fluids injected through the existing injection well. (7-1-93)*~~

~~***c.*** *The injected fluids are of equal or better quality than the fluids injected through the existing well. (7-1-93)*~~

~~***d.*** *Construction features of the replacement well are similar to the features of the existing well and meet or exceed minimum well construction standards. (7-1-93)*~~

~~***e.*** *The distance between the point of injection and the nearest boundary of the receiving aquifer is at least as great as that distance for the existing injection well. (7-1-93)*~~

~~***f.*** *The existing injection well is abandoned by an approved method within thirty (30) days of completion of construction of the replacement well. (7-1-93)*~~

~~*47*~~**80~~1~~.** **Sanitary Waste**. ~~*Any liquid or solid waste originating from humans and human activities, such as wastes collected from toilets, showers, wash basins, floor drains, sinks used for cleaning domestic areas, sinks used for food preparation, clothes washing operations, and sinks or washing machines where food and beverage serving dishes, glasses, and utensils are cleaned.*~~ Any fluid generated through residential (domestic) activities, such as food preparation, cleaning and personal hygiene. This term does not include industrial, municipal, commercial, or other non-residential process fluids. ~~*(5-3-03)*~~( )

~~*4*~~**821.** **Schedule of Compliance**. A schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with the standards. (7-1-93)

~~*49*~~**823.** **Septic System**. An injection well that is used to inject sanitary waste below the surface. A septic

system is typically comprised of a septic tank and subsurface fluid distribution system or disposal system. (5-3-03)

~~50~~**843.** **Shallow Injection Well**. An injection well which is less than or equal to eighteen (18) feet in vertical depth below land surface. (7-1-93)

854. **Site**. The land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity. ( )

~~51~~**856.** **State**. The state of Idaho. (7-1-93)

876. **Stratum (plural strata)**. A single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material. ( )

878. **Subsidence**. The lowering of the natural land surface in response to: Earth movements; lowering of fluid pressure; removal of underlying supporting material by mining or solution of solids, either artificially or from natural causes; compaction due to wetting (Hydrocompaction); oxidation of organic matter in soils; or added load on the land surface. ( )

~~52~~**889.** **Subsurface Fluid Distribution System**. An assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground~~, usually part of a septic system~~. ~~(5-3-03)~~( )

8990. **Surface Casing**. The largest diameter permanent pipe string set and sealed following setting of the conductor pipe. ( )

~~53~~**90.** ~~**Surface Runoff Water**. Runoff water from the natural ground surface and cropland. Runoff from urbanized areas such as streets, parking lots, airports, and runoff from animal feedlots, agricultural processing facilities and similar facilities is not included within the scope of this phrase. (7-1-93)~~

911. **Total Dissolved Solids**. The total dissolved (filterable) solids as determined by the use of the method specified in 40 CFR part 136. ( )

922. **Transferor**. The owner or operator transferring ownership and/or operational control of the well. ( )

933. **UIC**. The Underground Injection Control program under Part C of the Safe Drinking Water Act, including an "approved State program." ( )

~~54~~**94.** ~~**Temporary Abandonment**. The prevention of injection by use of a removable or retrievable device, such as a packer or cap. (7-1-93)~~

~~55~~**954.** **Unauthorized ~~Abandonment~~ Decommission**. The ~~permanent abandonment~~ decommissioning of any injection well that has not received the approval of the Department prior to ~~abandonment~~ decommissioning, or was not ~~abandoned~~ decommissioned in a method approved by the Director. These wells may have to be properly decommissioned when discovered by the Director to ensure that the well prevents commingling of aquifers or is no longer capable of injection. ~~(7-1-93)~~( )

965. **Underground Injection**. See "injection. ( )

976. **Underground Source of Drinking Water (USDW)**. An aquifer or its portion: ( )

a. Which: ( )

i. Supplies any public water system; or ( )

ii. Contains a sufficient quantity of ground water to supply a public water system; or ( )

(1) Currently supplies drinking water for human consumption; or ( )

(2) Contains fewer than ten thousand (10,000) mg/l total dissolved solids; and ( )

b. Which is not an exempted aquifer. ( )

56987. **Unreasonable Contamination**. Endangerment of a ~~*drinking water source*~~ USDW or the health of persons or other beneficial uses by injection. See "endangerment." ~~*(7-1-93)*~~( )

998. **USDW**. Underground Source of Drinking Water. ( )

5710099.**Water Quality Standards**. Refers to those standards found in Idaho Department of Environmental Quality Rules, IDAPA 58.01.02, "Water Quality Standa

58101100.**Well**. For the purposes of these rules, "well" means "injection well." (5-3-03)

1012. **Well Monitoring**. The measurement, by on-site instruments or laboratory methods, of the quality of water in a well. ( )

011. -- 0~~2~~14. (RESERVED)

[Moved from Section 065]

0~~6~~15. VIOLATIONS, FORMAL NOTIFICATION AND ENFORCEMENT (RULE ~~6~~15).

01. Violations. It shall be a violation of these rules for any owner or operator to: (7-1-93)

a. Fail to comply with a permit or authorization, or terms or conditions thereof; (5-3-03)

b. Fail to comply with applicable standards for water quality; (7-1-93)

c. Fail to comply with any permit application notification or filing requirement; (7-1-93)

d. Knowingly make any false statement, representation or certification in any application, report, document or record filed pursuant to these rules, or terms and conditions of an issued permit; (7-1-93)

e. Falsify, tamper with or knowingly render inaccurate any monitoring device or method required to be maintained or utilized by the terms and conditions of an issued permit; (7-1-93)

f. Fail to respond to any formal notification of a violation when a response is required; or (5-3-03)

g. ~~*Abandon*~~ Decommission a well in an unauthorized manner. ~~*(7-1-93)*~~( )

02. Additional. It shall be a violation of these rules for any person to construct, operate, maintain, convert, plug, ~~*abandon*~~ decommission or conduct any other activity in a manner which results or may result in the unauthorized injection of a hazardous waste or of a radioactive waste by an injection well. ~~*(7-1-93)*~~( )

03. Formal Notification. Formal notification of violations may be communicated to the owner or operator with a letter, a notice of violation, a compliance or enforcement order or other appropriate means. (7-1-93)

04. Enforcement. Violation of any of the provisions of the ~~*Waste Disposal and*~~ Injection Well Act (Chapter 39, Title 42, Idaho Code) or of any rule, regulation, standard or criteria pertaining to the ~~*Waste Disposal and*~~ Injection Well Act may result in the Director initiating an ~~*administrative*~~ enforcement action as provided under Chapters 17 and 39, Title 42, Idaho Code. ~~*(5-3-03)*~~( )

016. -- 019. (RESERVED)

[Moved from Section 070]

0~~7~~20. HEARING BEFORE THE WATER RESOURCE BOARD (RULE ~~7~~20).

01. General. All hearings before the Idaho Water Resource Board shall be conducted in accordance with Chapter 52, Title 67, Idaho Code, at a place convenient to the owner and/or operator. For purposes of such hearings, the Idaho Water Resource Board or its designated hearing officer shall have power to administer oaths, examine witnesses, and issue in the name of the said Board subpoenas requiring testimony of witnesses and the production of evidence relevant to any matter in the hearing. Judicial review of the final determination by the Idaho Water Resource Board may be secured by the owner by filing a petition for review as prescribed by Chapter 52, Title 67, Idaho Code, in the District Court of the county where the injection well is situated or proposed to be located. The petition for review shall be served upon the Chairman of the Idaho Water Resource Board and upon the Attorney General. (7-1-93)

02. Hearings on Conditional Permits, Disapproved Applications, or Petitions for Exemption. Any owner or operator aggrieved by the approval or disapproval of an application, or by conditions imposed upon a permit, or any person aggrieved by the Director's decision on a petition for exemption under Rule ~~7~~25 of these rules, shall be afforded an opportunity for a hearing before the Idaho Water Resource Board or its designated hearing officer. Written notice of such grievance shall be transmitted to the Director within thirty (30) days after receipt of notice of such approval, disapproval or conditional approval. Such hearing shall be held for the purpose of determining whether the permit shall be issued, whether the conditions imposed in a permit are reasonable, whether a change in circumstances warrants a change in conditions imposed in a valid permit, or whether the Director's decision on a petition for exemption should not be changed. ~~(7-1-93)~~( )

03. Hearings on Permit Cancellations. When the Director has reason to believe the operation of an injection well for which a permit has been issued is interfering with the right of the public to withdraw water for beneficial uses, or is causing unreasonable contamination of a drinking or other ground water source as provided for in Title 42, Chapter 39, Idaho Code, the permit may be canceled by the Director. Prior to the cancellation of such permit there shall be a hearing before the Water Resource Board for the purpose of determining whether or not the permit should be canceled. At such hearing, the Director shall be the complaining party. At least thirty (30) days prior to the hearing, a notice, which shall be in accordance with Chapter 52, Title 67, Idaho Code, shall be sent by certified mail to the owner or operator whose permit is proposed to be canceled. The Board shall affirm, modify, or reject the Director's decision and make its decision in the form of an order to the Director. (7-1-93)

021. -- 024. (RESERVED)

[Moved from Section 075]

0~~7~~25. EXEMPTION FROM DRINKING WATER SOURCE DESIGNATION (RULE ~~7~~25).

01. General. Most aquifers in Idaho are likely to fit within the definition of "~~*drinking water source*~~ underground source of drinking water." ~~*(Rule Subsection 010.15).*~~ Some portions of these aquifers, however, may be isolated or contain water of such quality that they will not be utilized as drinking water sources. Other deep ground water systems may contain water of such poor quality that they will not be used for drinking water. Under the authorities of section 1805, Title 42, Idaho Code, the Director may determine "the most effective means by which these water resources may be applied for the benefit of the people of this state." As such, ~~T~~these aquifers, portions of aquifers and deep ground water systems may be employed in the best interests of Idaho as disposal sites for certain contaminants, as authorized for disposal under these rules. However, injection must be consistent with the requirements of the Ground Water Quality Act of 1989 and the Idaho Ground Water Quality Plan. ~~(7-1-93)~~( )

02. ~~***Most Effective Means.*** ~~*Under the authorities of Section 1805, Title 42, Idaho Code, the Director may determine, "the most effective means by which these water resources may be applied for the benefit of the people of this state." The Director may exempt an aquifer or portion thereof from a drinking water source designation if:*~~~~ **Petition Process for Aquifer Exemptions**. The Department or any other person or entity may petition to exempt an aquifer from the designation as a drinking water source. The Department and the Idaho Department of Environmental Quality ~~both~~ have jurisdictional responsibilities for processing a petition for aquifer exemption and re-categorization. Once the Department has processed and approved the aquifer exemption, and the Idaho Department of Environmental Quality has processed and approved the aquifer re-categorization, the U.S. Environmental Protection Agency must also approve the exemption for the process to be considered complete. ~~Therefore, t~~The applicant must ~~first~~ submit information to the Department and ~~then~~ to the Idaho Department of Environmental Quality and may do so at the same time so each agency's process occurs concurrently. The petition process is broken down into the following general steps: ( )

a. ~~*It is not currently a drinking water source; and* The petition is first submitted to the Department where it is reviewed. If the petition is approved, the Department shall obtain U.S EPA concurrence to support the approval. *(7-1-93)*~~ The petition for aquifer exemption shall be submitted to the Department and must contain the general information found in Subsection 025.05 and has been reviewed by the Department, the applicant and the Idaho Department of Environmental Quality will be notified as to whether or not the aquifer meets the criteria for exemption. If the aquifer does not meet the criteria, the petition will be denied and the applicant will be informed of the reasons for the denial. If the aquifer meets criteria for exemption, the Department will review the information submitted and determine if the geologic and hydrogeologic characteristics will allow for the proposed injection activities while preventing degradation to adjacent USDW's. If the geologic and hydrogeologic characteristics are not conducive to preventing degradation to adjacent USDW's, the petition will be denied and the applicant and IDEQ will be informed of the reason for denial, thereby terminating the proves for both agencies. If the Department intends to approve a petition for exemption, an opportunity for public input will be provided. If, after the public input period, the Department does not intend to approve the petition, the Department will deny the petition and inform the applicant and IDEQ of the reasons for denial, thereby terminating the process for both agencies. If, after the public input period, the Department intends to approve the petition, the Department will hold approval of the exemption pending the outcome of IDEQ's aquifer re-categorization process. If the aquifer re-categorization process fails, the Department will deny the petition for exemption. ( )

b. The petition for aquifer re-categorization shall be submitted to the Idaho Department of Environmental Quality and must contain the information found in petition process of IDAPA 58.01.11 "Ground Water Quality Rule". The Idaho Department of Environmental Quality will determine if the information submitted is sufficient enough to be submitted to their Environmental Quality Board for review. If the information submitted is not sufficient, IDEQ will deny the petition and inform the applicant and the Department of the reasons for denial, thereby terminating the process for both agencies. If the information submitted is sufficient but the Environmental Quality Board does not approve the petition and does not instruct staff to initiate negotiated rulemaking, IDEQ will deny the petition and inform the applicant and the Department of the reason for denial, thereby terminating the process for both agencies. If the Environmental Quality Board approves the petition, IDEQ staff will initiate the negotiated rulemaking process with opportunity for public input. ( )

~~**b**~~**c.** ~~*It will not be utilized as a drinking water source in the future because:* Upon approval and U.S. EPA concurrence, the Department will direct the applicant to initiate the aquifer categorization process with the Idaho Department of Environmental Quality to categorize the aquifer as "other" and adopt less strict water quality standards for the exempted zone which ultimately allows for the injection of fluids that exceed the water quality standards set forth in IDAPA 58.01.11 "Ground Water Quality Rule." To be considered for exemption by the Department, an aquifer must meet the criteria set forth in Subsection 025.04 of these rules. The petition for exemption shall be submitted to the Department and must contain the general information found in Subsection 025.05 and the pertinent specific information found in Section 025.06 of these rules. Once the petition has been reviewed by the Department, the applicant will be notified as to whether or not the aquifer meets the criteria for exemption. If the aquifer does meet the criteria for exemption the notification will direct the applicant to the Idaho Department of Environmental Quality to initiate the procedures for categorizing an aquifer as per IDAPA 58.01.11 "Ground Water Quality Rule". If the aquifer does not meet the criteria for exemption the notification will deny the petition and list the reasons for the denial.*(7-1-93)*~~ Upon a successful aquifer re-categorization by IDEQ and an issuance of an intent to approve the exemption by the Departm 025.03 of these rules, and information submitted by the applicant for review and final approval. Upon U.S. EPA

approval, the Department will notify the applicant and IDEQ of the approved aquifer exemption.)( )

~~i. It is situated at such a depth or location that recovery for drinking water purposes is economically or technologically impractical; or (7-1-93)~~

~~ii. Is so contaminated that it would be economically or technologically impractical to render the water fit for human consumption; or (7-1-93)~~

~~iii. The total dissolved solids content of the ground water is greater than three thousand (3,000) mg/l and it is not reasonably expected to supply a public water system. (7-1-93)~~

~~c. The Director shall not provide an exemption for any aquifer categorized as "Sensitive Resource" or "General Resource" by the Department of Environmental Quality. Procedures for Recategorizing an Aquifer to "Other Resource," (IDAPA 58.01.11, "Ground Water Quality Rule," Section 350), may need to be completed prior to any petition for exemption. (5-3-03)~~

03. ~~Petition for Exemption~~ Identification of Underground Sources of Drinking Water and Exempted Aquifers. ~~(40 CFR 144.7). Any owner or operator proposing to inject contaminants authorized under Rule Subsection 025.03 into an aquifer or portion thereof that is within the definition of a drinking water source, but is not currently used in that manner, and is not likely to be used as such in the future, may petition the Director for an exemption to that designation. The petition for exemption shall contain: (7-1-93)~~( )

a. ~~Reason or reasons for the exemption;~~ The Director may identify (by narrative description, illustrations, maps, or other means) and shall protect as underground sources of drinking water, all aquifers and parts of aquifers which meet the definition of "underground source of drinking water" in Section 010 of these rules, except to the extent there is an applicable aquifer exemption under Paragraph 025.03.b. of this rule. If an aquifer has not been specifically identified by the Director, it is an underground source of drinking water if it meets the definition in Section 010 of these rules. ~~(7-1-93)~~( )

b. ~~A description of the aquifer or part thereof proposed for exemption, to include the vertical and lateral limits of the aquifer and water table gradient or potentiometric surface;~~ The Director may identify (by narrative description, illustrations, maps, or other means) and describe in geographic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and definite, all aquifers or parts thereof which the Director proposes to designate as exempted aquifers using the criteria in Subsection 025.04 of these rules.~~(7-1-93)~~( )

~~c. The expected direction and rate of movement of the contaminants; (7-1-93)~~

~~d~~c. ~~A description of the geology to include all aquifers or ground water systems, lithologies and controlling features;~~ Subsequent to program approval or promulgation, the Director may, after notice and opportunity for a public hearing, identify additional exempted aquifers. For approved State programs exemption of aquifers identified: ~~(7-1-93)~~( )

i. Under Paragraph 025.04.b. shall be treated as a program revision under Section 40 CFR 145.32; ( )

ii. Under Paragraph 025.04.c. shall become final if the Director submits the exemption in writing to the U.S. Environmental Protection Agency and the U.S. environmental Protection Agency has not disapproved the designation within ~~forty-five (45) days~~the timeframe set forth in 40 CFR 144.7.b.3. Any disapproval by the U.S. Environmental Protection Agency shall state the reasons and shall constitute final Agency action for purposes of judicial review. ( )

~~e. Ground water resources in the area overlying the aquifer proposed for exemption; (7-1-93)~~

~~f. Any other information that the Director may deem necessary to make a decision. (7-1-93)~~

~~g. Confirmation that the aquifer has been designated "Other Resource" by the DEQ. (5-3-03)~~

04. ~~***Director's Action.*** *The Director shall provide legal notice of the proposed exemption in a newspaper or newspapers of general circulation in the area that may be affected by the exemption. The notice shall provide locations where the petition for exemption may be reviewed and shall provide for a comment period of thirty (30) days.*~~ **Criteria for Exempted Aquifers.** ~~(40 CFR 146.4)~~ An aquifer or a portion thereof which meets the criteria for an "underground source of drinking water" in Section 010 may be determined under Subsection 025.03 of these rules to be an "exempted aquifer" for Class II wells if it meets the criteria in Paragraphs 025.04.a. through 025.04.c. of these rules. ~~*(7-1-93)*~~( )

a. ~~*A fact-finding hearing may be requested by any person or persons that could be affected by the exemption. All hearings shall be conducted in accordance with the procedures set forth in Rule Subsection 040.02 of these rules.*~~ It does not currently serve as a source of drinking water; and ~~*(7-1-93)*~~( )

b. ~~*A copy of the petition for exemption will be submitted to the Director of the Department of Environmental Quality for recommendations. A written notice of the recommendations shall be provided to the Director of the Department of Water Resources within thirty (30) days of receipt, or within fifteen (15) days of any hearing pertaining to the petition.*~~ It cannot now and will not in the future serve as a source of drinking water because: ~~*(7-1-93)*~~( )

i. It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II ~~or III~~ operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible. ( )

ii. It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical; ( )

iii. It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or ( )

c. The total dissolved solids content of the ground water is more than three thousand (3,000) and less than ten thousand (10,000) mg/l and it is not reasonably expected to supply a public water system. ( )

~~***c.*** *After due consideration of the petition and upon receipt of the recommendation of the Director of the Department of Environmental Quality, the Director shall either approve or disapprove the petition for exemption.* *(7-1-93)*~~

05. ~~***Hearing Before the Idaho Water Resource Board.*** *Any person aggrieved by the Director's decision shall have the right to a hearing before the Idaho Water Resource Board pursuant to Rule Subsection 070.01 of these rules.*~~ **General Information to be Submitted with a Petition for Exemption.** Applicants requesting exemptions must provide the following general information: ~~*(7-1-93)*~~( )

a. A map of the proposed exempted area in a format acceptable to the director. The map must show the boundaries of the area to be exempted, the topography, and other natural surface features and surface water locations. Any map which precisely delineates the proposed exempted area is acceptable. ( )

b. A written description of the proposed exempted aquifer including: ( )

i. Name of formation of aquifer. ( )

ii. Subsurface depth or elevation of zone. ( )

iii. Vertical confinement from other underground sources of drinking water. ( )

iv. Thickness of proposed exempted aquifer. ( )

v. Area of exemption (e.g., acres, square miles, etc.). ( )

vi. A water quality analysis of the horizon to be exempted. ( )

c. In addition to the above descriptive information concerning the aquifer, all exemption requests must demonstrate that the aquifer ". . . does not currently serve as a source of drinking water." as per Paragraph 025.04.a. of these rules. To demonstrate this, the applicant must survey the proposed exempted area to identify any water supply wells which tap the proposed exempted aquifer. The area to be surveyed should cover the exempted zone and a buffer zone outside the exempted area. The buffer zone should extend a minimum of a one-quarter (1/4) mile from the boundary of the exempted area. Any water supply wells located should be identified on the map showing the proposed exempted area. If no water supply wells would be affected by the exemption, the request should state that a survey was conducted and no water supply wells are located which tap the aquifer to be exempted within the proposed area. If the exemption pertains to only a portion of an aquifer, a demonstration must be made that the waste will remain in the exempted portion. Such a demonstration should consider among other factors, the pressure in the injection zone, the waste volume, injected waste characteristics (i.e., specific gravity, persistence, etc.) in the life of the facility. The model described in Subparagraph 045.07.a.ii. of these rules or a comparable aquifer model acceptable to the Director shall be used in this demonstration. ( )

06. Specific Information to be Submitted with a Petition for Exemption. ( )

a. The following information shall be submitted with a petition for exemption for an aquifer meeting the criteria in Subparagraph 025.04.b.i. of these rules. ( )

i. If the proposed exemption is to allow a Class II enhanced oil recovery well operation to continue, the fact that it has a history of hydrocarbon or mineral production will be sufficient proof that this standard is met. Many times it may be necessary to slightly expand an existing well field to recover minerals or hydrocarbons. In this case, the applicant must show only that the exemption request is for expanding the previously exempted aquifer and state his reasons for believing that there are commercially producible quantities of minerals within the expanded area. ( )

ii. For Class II wells, a demonstration of commercial producibility shall be made as follows: ( )

(1) For a Class II well to be used for enhanced oil recovery processes in a field or project containing aquifers from which hydrocarbons were previously produced, commercial producibility shall be presumed by the Director upon a demonstration by the applicant of historical production having occurred in the project area or field. ( )

(2) For Class II wells not located in a field or project containing aquifers from which hydrocarbons were previously produced, information such as logs, core data, formation description, formation depth, formation thickness and formation parameters such as permeability and porosity shall be considered by the Director, to the extent such information is available. ( )

(3)ii. Exemptions relating to any new Class II wells which will be injecting into a producing or previously produced horizon should include the following types of information: ( )

(41) Production history of the well if it is a former production well which is being converted. ( )

(52) Description of any drill stem tests run on the horizon in question. This should include information on the amount of oil and water produced during the test. ( )

(63) Production history of other wells in the vicinity which produce from the horizon in question.( )

(74) Description of the project, if it is an enhanced recovery operation including the number of wells and their location. ( )

b. The following information shall be submitted with a petition for exemption for an aquifer meeting the criteria in Subparagraph 025.04.b.ii. of these rules. Consideration of an aquifer exemption request under this

provision would depend on the availability of alternative supplies, the adequacy of alternatives to meet present and future needs, and a demonstration that there are major costs for treatment and or development associated with the use of the aquifer. The economic evaluation, submitted by the applicant, should consider the above factors, and these that follow: ( )

i. Distance from the proposed exempted aquifer to public water supplies. ( )

ii. Current sources of water supply for potential users of the proposed exempted aquifer. ( )

iii. Availability and quality of alternative water supply sources. ( )

iv. Analysis of future water supply needs within the general area. ( )

v. Depth of proposed exempted aquifer. ( )

vi. Quality of the water in the proposed exempted aquifer. ( )

vii. Costs to develop the proposed exempted aquifer as a water supply source including any treatment costs and costs to develop alternative water supplies. This should include costs for well construction, transportation, and water treatment for each source. ( )

c. The following information shall be submitted with a petition for exemption for an aquifer meeting the criteria in Subparagraph 025.04.b.iii. of these rules. Economic considerations will factor into the Director's decision on aquifer exemption requests under this section. Unlike the previous section, the economics involved are controlled by the cost of technology to render water fit for human consumption. Treatment methods can usually be found to render water potable. However, costs of that treatment may often be prohibitive either in absolute terms or compared to the cost to develop alternative water supplies. The Directors evaluation of aquifer exemption requests under this section will consider the following information submitted by the applicant: ( )

i. Concentrations and types of contaminants in the aquifer. ( )

ii. Source of contamination. ( )

iii. Whether contamination source has been abated. ( )

iv. Extent of contaminated area. ( )

v. Probability that the contaminant plume will pass the through proposed exempted area. ( )

vi. Ability of treatment to remove contaminants from ground water. ( )

vii. Chemical content of proposed injected fluids. ( )

viii. Current water supply in the area. ( )

ix. Alternative water supplies. ( )

x. Costs to develop current and probable future water supplies, cost to develop water supply from proposed exempted aquifer. This should include well construction costs, transportation costs, water treatment costs, etc. ( )

xi. Projections on future use of the proposed aquifer. ( )

d. The following information shall be submitted with a petition for exemption for an aquifer meeting the criteria in Paragraph 025.04.c. of these rules. An application under this provision must include information about the quality and availability of water from the aquifer proposed for exemption. Also, the exemption request must

analyze the potential for public water supply use of the aquifer. This may include: a description of current sources of public water supply in the area, a discussion of the adequacy of current water supply sources to supply future needs, population projections, economy, future technology, and a discussion of other available water supply sources within the area. ( )

026. -- 029. (RESERVED)

[Moved from Section 076]

0~~7~~630. SEVERABILITY (RULE 30).
The provisions of these rules are severable. If any provisions or the application of such provisions to any person or circumstance is declared invalid for any reason, such declaration shall not affect the validity or remaining portions of these rules. (7-1-93)

031. – 034. (RESERVED)

[Moved from Section 025]

0~~2~~35. CLASSIFICATION OF INJECTION WELLS ~~-- *AUTHORIZATIONS, PROHIBITIONS AND EXEMPTIONS*~~ (RULE ~~2~~35).

01. Classification of Injection Wells. For the purposes of these rules, injection wells are classified as follows: (7-1-93)

a. Class I: ~~*-- Wells used to inject hazardous, radioactive, industrial, or municipal wastes beneath the lowermost formation containing a drinking water source.* *(5-3-03)*~~( )

i. Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to inject hazardous waste beneath the lowermost formation containing, within one-quarter (1/4) mile of the well bore, an underground source of drinking water. ( )

ii. Other industrial and municipal disposal wells which inject fluids beneath the lowermost formation containing, within one-quarter (1/4) mile of the well bore, an underground source of drinking water. ( )

iii. Radioactive waste disposal wells which inject fluids below the lowermost formation containing an underground source of drinking water within one-quarter (1/4) mile of the well bore. ( )

b. Class II~~*-- Wells used to inject fluids which are brought to the surface with conventional oil and gas production, utilized for enhanced recovery of oil or gas, or stored as liquid hydrocarbons at standard temperature and pressure in the injection formation*~~. Wells used to inject fluids: ~~*(7-1-93)*~~( )

i. Which are brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production and may be commingled with waste waters from gas plants, dehydration stations, or compressor stations which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection. ( )

ii. For enhanced recovery of oil or natural gas; and ( )

ii. For storage of hydrocarbons which are liquid at standard temperature and pressure. ( )

c. Class III~~*-- Wells which inject for the extraction of minerals unless used for solution mining in conventional mines*~~. Wells used to inject fluids for extraction of minerals including: ~~*(7-1-93)*~~( )

i. Mining of sulfur by the Frasch process; ( )

ii. In situ production of uranium or other metals; this category includes only in-situ production from ore bodies which have not been conventionally mined. Solution mining of conventional mines such as stopes leaching is included in Class V. ( )

iii. Solution mining of salts or potash. ( )

d. Class IV: ~~-- *Wells used to inject hazardous or radioactive wastes into or above a formation which contains a drinking water source.* (7-1-93)~~( )

i. Wells used by generators of hazardous waste or of radioactive waste, by owners or operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste into a formation which within one-quarter (1/4) mile of the well contains an underground source of drinking water. ( )

ii. Wells used by generators of hazardous waste or of radioactive waste, by owners or operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste above a formation which within one-quarter (1/4) mile of the well contains an underground source of drinking water. ( )

iii. Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to dispose of hazardous waste, which cannot be classified under Subparagraphs 035.01.a.i. or 035.01.d.i. or 035.01.d.ii. of this rule (e.g., wells used to dispose of hazardous waste into or above a formation which contains an aquifer which has been exempted pursuant to Section 025 of these rules). ( )

e. Class V -- All injection wells not included in Classes I, II, III, ~~or~~ IV, or VI. ~~(7-1-93)~~( )

f. Class VI. ( )

i. Wells that are not experimental in nature that are used for geologic sequestration of carbon dioxide beneath the lowermost formation containing a USDW; or,

ii. wells used for geologic sequestration of carbon dioxide that have been granted a waiver of the injection depth requirements pursuant to requirements at 40 CFR Section146.95; or, ( )

iii. ~~W~~wells used for geologic sequestration of carbon dioxide that have received an expansion to the areal extent of an existing Class II enhanced oil recovery or enhanced gas recovery aquifer exemption pursuant to Section 025 of these rules. ( )

02. Subclassification. Class V wells are subclassified as follows: (7-1-93)

a. *5A5-Electric Power Generation. (7-1-93)

b. *5A6-Geothermal Heat. (7-1-93)

c. *5A7-Heat Pump Return. (7-1-93)

d. 5A8-Aquaculture Return Flow. (7-1-93)

e. *5A19-Cooling Water Return. (7-1-93)

f. 5B22-Saline Water Intrusion Barrier. (7-1-93)

g. *5D2-Storm Runoff. (7-1-93)

h.	5D3-Improved Sinkholes.	(7-1-93)
i.	*5D4-Industrial Storm Runoff.	(7-1-93)
j.	*5F1-Agricultural Runoff Waste.	(7-1-93)
k.	*5G30-Special Drainage Water.	(7-1-93)
l.	5N24[1]-Radioactive Waste Disposal.	~~(5-3-03)~~( )
m.	*5R21-Aquifer Recharge.	(7-1-93)
n.	5S23-Subsidence Control.	(7-1-93)
o.	5W9-Untreated Sewage.	(7-1-93)
p.	5W10-Cesspools.	(7-1-93)
q.	*5W11-Septic Systems (General).	(7-1-93)
r.	*5W12-Waste Water Treatment Plant Effluent.	~~(7-1-93)~~( )
s.	*5W20-Industrial Process Water.	(7-1-93)
t.	5W31-Septic Systems (Well Disposal).	(7-1-93)
u.	*5W32-Septic System (Drainfield).	(7-1-93)
v.	*5X13-Mine Tailings Backfill.	(7-1-93)
w.	5X14-Solution Mining.	(7-1-93)
x.	5X15-In-Situ Fossil Fuel Recovery.	(7-1-93)
y.	5X16-Spent Brine Return Flow.	(7-1-93)
z.	*5X25-Experimental Technology.	(7-1-93)
aa.	*5X26-Aquifer Remediation.	(7-1-93)
bb.	*5X27-Other Wells.	(7-1-93)
cc.	*5X28[1]-Motor Vehicle Waste Disposal Wells.	~~(5-3-03)~~( )
dd.	5X29-Abandoned Water Wells.	(5-3-03)

*[1] The construction and operation of ~~W~~wells in these subclasses ~~are~~ is currently ~~inventoried~~ illegal in Idaho.

~~***035. APPLICATION FOR PERMIT TO CONSTRUCT, MODIFY OR MAINTAIN AN INJECTION WELL (RULE 35).***~~

~~***01. Application Requirements for All Class V Wells, Except Those Class V Wells Authorized Without Permit. (7-1-93)***~~

~~***a. No person shall continue to maintain or use an unauthorized injection well after the effective date***~~

given in Section 42-3903, Idaho Code, unless a permit therefor has been issued by the Director. No injection well requiring a permit under Rule 25 shall be constructed, modified or maintained after the effective date given in Section 42-3903, Idaho Code, unless a permit therefor has been issued by the Director. No injection well requiring a permit shall continue to be used after the expiration of the permit issued for such well unless another application for permit therefor has been received by the Director. All applications for permit shall be on forms furnished by the Director.

(5-3-03)

b. Each application for permit to construct, modify or maintain an injection well, as required by these rules, shall be accompanied by a filing fee as specified in Section 42-3905, Idaho Code, payable to the Department of Water Resources. For the purposes of these rules, all wells or groups of wells associated with a "Remediation Project" may be administered as one (1) "well" at the discretion of the Director. (5-3-03)

02. Application Information Required. An applicant shall submit the following information to the Director for all injection wells to be authorized by permit, unless the Director determines that it is not needed in whole or in part, and issues a written waiver to the applicant: (5-3-03)

a. Facility name and location; (7-1-93)

b. Name, address and phone number of the well operator; (7-1-93)

c. Class, subclass and function of the injection well (see Rule 25); (7-1-93)

d. Latitude/longitude or legal description of the well location to the nearest ten (10) acre tract; (5-3-03)

e. Ownership of the well; (7-1-93)

f. County in which the injection well is located; (7-1-93)

g. Construction information for the well; (7-1-93)

h. Quantity and general character of the injected fluids; (7-1-93)

i. Status of the well (to be constructed, active, temporarily abandoned, etc.); (7-1-93)

j. A topographic map or aerial photograph extending one (1) mile beyond property boundaries, depicting: (7-1-93)

i. Location of the injection well and associated facilities described in the application; (7-1-93)

ii. Locations of other injection wells; (7-1-93)

iii. Approximate drainage area, if applicable; (7-1-93)

iv. Hazardous waste facilities, if applicable; (7-1-93)

v. All wells used to withdraw drinking water; (7-1-93)

vi. All other wells, springs and surface waters. (7-1-93)

k. Distance and direction to nearest domestic well; (7-1-93)

l. Depth to ground water; and (5-3-03)

m. Alternative methods of waste disposal. (7-1-93)

03. Additional Information. *The Director may require the following additional information for Class V injection wells to assess potential effects of injection: (5-3-03)*

a. *A topographic map showing locations of the following within a two (2) mile radius of the injection well: (5-3-03)*

i. All wells producing water; (7-1-93)

ii. All exploratory and test wells; (7-1-93)

iii. All other injection wells; (7-1-93)

iv. Surface waters (including man-made impoundments, canals and ditches); (7-1-93)

v. Mines and quarries; (7-1-93)

vi. Residences; (7-1-93)

vii. Roads; (7-1-93)

viii. Bedrock outcrops; and (5-3-03)

ix. Faults and fractures. (7-1-93)

b. *Additional maps or aerial photographs of suitable scale to accurately depict the following: (7-1-93)*

i. Location and surface elevation of the injection well described in this permit; (7-1-93)

ii. Location and identification of all facilities within the property boundaries; (7-1-93)

iii. Locations of all wells penetrating the proposed injection zone or within a one quarter (1/4) mile radius of the injection well; (7-1-93)

iv. Maps and cross sections depicting all underground sources of drinking water to include vertical and lateral limits within a one-quarter (1/4) mile radius of the injection well, their position relative to the injection zone and the direction of water movement: local geologic structures; regional geologic setting. (7-1-93)

c. *A comprehensive report of the following information: (7-1-93)*

i. A tabulation of all wells penetrating the proposed injection zone, listing owner, lease holder and operator; well identification (permit) number; size, weight, depth and cementing data for all strings of casing; (7-1-93)

ii. Description of the quality and quantity of fluids to be injected; (7-1-93)

iii. Geologic, hydrogeologic, and physical characteristics of the injection zone and confining beds; (5-3-03)

iv. Engineering data for the proposed injection well; (7-1-93)

v. Proposed operating pressure; (7-1-93)

vi. A detailed evaluation of alternative disposal practices; (7-1-93)

~~vii. A plan of corrective action for wells penetrating the zone of injection, but not properly sealed or abandoned; and (5-3-03)~~

~~viii. Contingency plans to cope with all shut-ins or well failures to prevent the migration of unacceptable fluids into underground sources of drinking waters. (7-1-93)~~

~~d. Name, address and phone number of person(s) or firm(s) supplying the technical information and/or designing the injection well; (7-1-93)~~

~~e. Proof that the applicant is financially responsible, through a performance bond or other appropriate means, to abandon the injection well in accordance with the conditions of the permit. (5-3-03)~~

~~04. Other Information. The Director may require of any applicant such additional information as may be necessary to demonstrate that the proposed or existing injection well will not endanger drinking water sources. The Director will not complete the processing of an application for which additional information has been requested until such time as the additional information is supplied. The Director may return any incomplete application and will not process such application until such time as the application is received in complete form.(7-1-93)~~

036. -- 039. (RESERVED)

0~~3~~40. AUTHORIZATIONS, PROHIBITIONS AND EXEMPTIONS.

01. Authorizations. Construction and use of Class V deep injection wells may be authorized by permit as approved by the Director in accordance with these rules. ( )

02. Prohibitions. ( )

a. These rules prohibit the permitting, construction, or use of any Class I, ~~II,~~ III ~~or~~ IV, or VI injection well. ~~(7-1-93)~~( )

~~b. Prohibition of injection of hazardous and of radioactive wastes (Class IV) - Construction of a well to be used for injection of hazardous wastes or of radioactive wastes into or above a drinking water source, or injection of hazardous wastes or of radioactive wastes through an existing injection well into or above a drinking water source is prohibited. (7-1-93)~~

~~c. Construction and use of Class V deep injection wells may be authorized by permit as approved by the Director in accordance with these rules. (5-3-03)~~

~~d. Construction of large capacity cesspools or motor vehicle waste disposal wells is prohibited. Construction and use of other Class V shallow injection wells are authorized by these rules without permit provided that: (5-3-03)~~

~~i. Required inventory information is submitted to the Director pursuant to Rule 30. (7-1-93)~~

~~ii. Use of the shallow injection well shall not result in unreasonable contamination of a drinking water source or cause a violation of surface or ground water quality standards that would affect a beneficial use.(5-3-03)~~

~~e. Class V shallow injection wells used for the disposal of waste water as defined in Idaho Department of Environmental Quality Rule, IDAPA 58, Title 01, Chapter 03, "Individual/Subsurface Sewage Disposal Rules," are exempt from the authorization requirements of these rules, but are subject to the IDAPA 58.01.03.000, et seq., "Individual/Subsurface Sewage Disposal Rules," Title 39, Chapter 1 and Title 39, Chapter 36, Idaho Code. (7-1-93)~~

~~f. State or local entities involved in highway and street construction and maintenance are exempt from the permit requirements for shallow Class V wells, but shall comply with all other requirements of these rules. (5-3-03)~~

~~*g. Mine tailings backfill (5X13) wells are authorized by rule as part of mining operations because federal studies show the threat of endangerment from use of these wells is low. They are therefore exempt from the ground water quality standards and permitting requirements of these rules provided that their use is limited to the injection of mine tailings only. The use of any 5X13 well(s) shall not result in water quality standards at points of diversion for beneficial use being exceeded or otherwise affect a beneficial use. Should water quality standards be exceeded or beneficial uses be affected, the Director may order the wells to be put under the permit requirements of these rules, or the wells may be required to be remediated or closed. As a condition of their use, the Director may require the construction and sampling of monitoring wells by the owner/operator. 5X13 wells are subject to the inventory requirements of Rule Subsection 030.01. (5-3-03)*~~

~~*h. All large capacity cesspools must be properly abandoned by January 1, 2005. A cease and desist order may be issued to the owner or the operator when a large capacity cesspool is found to be a threat to the ground water resources as described in Subsection 030.03. (5-3-03)*~~

~~*i. All motor vehicle waste disposal wells must be properly abandoned by January 1, 2005. A cease and desist order may be issued to the owner or the operator when a motor vehicle waste disposal well is found to be a threat to the ground water resources as described in Subsection 030.03. (5-3-03)*~~

b. Any underground injection through a class II injection well, except as authorized by permit issued under the UIC program, is prohibited. The construction or use of any class II injection well required to have a permit is prohibited until the permit has been issued. ~~(40 CFR 144.11)~~ ( )

c. No owner or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows or causes the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary or secondary drinking water regulation, under IDAPA 58.01.11, "Ground Water Quality Rule," Section 200 or may otherwise adversely affect the health of persons. The applicant for a permit shall have the burden of showing that the requirements of Paragraph 040.02.c. are met. ~~(40 CFR 144.12)~~ ( )

d. For Class II wells, if any water quality monitoring of an underground source of drinking water indicates the movement of any contaminant into the underground source of drinking water, or degradation of the ground water quality is detected and deemed significant by the Department, except as authorized under these rules, the Director shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well) as are necessary to prevent such movement. In the case of wells authorized by permit, these additional requirements shall be imposed by modifying the permit in accordance with Subsection 057.02, or the permit may be terminated under Subsection 057.03 if cause exists, or appropriate enforcement action may be taken if the permit has been violated. ~~(40 CFR 144.12)~~ ( )

e. Notwithstanding any other provision of this section, the Director may take emergency action upon receipt of information that a contaminant which is present in or likely to enter a public water system or underground source of drinking water may present an imminent and substantial endangerment to the health of persons. ~~(40 CFR 144.12)~~( )

f. Construction of large capacity cesspools, motor vehicle waste disposal wells, radioactive waste disposal wells, and untreated sewage disposal wells is prohibited. Construction and use of other Class V shallow injection wells are authorized by these rules without permit provided that: ( )

i. Required inventory information is submitted to the Director pursuant to Subsection 070.01 of this rule. ( )

ii. Use of the shallow injection well shall not result in unreasonable contamination of a USDW or cause a violation of surface or ground water quality standards that would affect a beneficial use. ( )

g. Class IV injection wells used to inject contaminated ground water that has been treated and is being reinjected into the same formation from which it was drawn are not prohibited by these rules if such injection

is approved by EPA, or a State, pursuant to provisions for cleanup of releases under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. 9601–9657, or pursuant to requirements and provisions under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901 through 6987. ( )

h. All large capacity cesspools must be properly decommissioned by January 1, 2005. A cease and desist order may be issued to the owner or the operator when a large capacity cesspool is found to be a threat to the ground water resources as described in Paragraph 070.01.c. ( )

i. All motor vehicle waste disposal wells must be properly decommissioned by January 1, 2005. A cease and desist order may be issued to the owner or the operator when a motor vehicle waste disposal well is found to be a threat to the ground water resources as described in Paragraph 070.01.c. ( )

j. The Construction, operation or maintenance of any non-experimental Class V geologic sequestration well is prohibited. ( )

03. Exemptions. ( )

a. The UIC inventory and fee requirements of these rules do not apply to individual subsurface sewage disposal system wells. These systems are, however, subject to the permitting and fee requirements of IDAPA 58.01.03 "Individual/Subsurface Sewage Disposal Rules," Title 39, Chapter 1 and Title 39, Chapter 36, Idaho Code. ( )

b. State or local government entities are exempt from the permit requirements of these rules for wells associated with highway and street construction and maintenance projects, but shall submit shallow injection well inventory information for said wells and shall comply with all other requirements of these rules. ( )

c. Mine tailings backfill (5X13) wells are authorized by rule as part of mining operations. They are therefore exempt from the ground water quality standards and permitting requirements of these rules provided that their use is limited to the injection of mine tailings only. The use of any 5X13 well(s) shall not result in water quality standards at points of diversion for beneficial use being exceeded or otherwise affect a beneficial use. Should water quality standards be exceeded or beneficial uses be affected, the Director may order the wells to be put under the permit requirements of these rules, or the wells may be required to be remediated or closed. As a condition of their use, the Director may require the construction and sampling of monitoring wells by the owner/operator. 5X13 wells are subject to the inventory requirements of Subsection 070.01. ( )

041. -- 044. (RESERVED)

045. CLASS II: APPLICATION INFORMATION.

01. Application For A Permit. ~~(40 CFR 124.3)~~ ( )

a. Application. ( )

i. Any person who requires a permit shall complete, sign, and submit to the Director an application for each permit required under this section. ( )

ii. The Director shall not begin the processing of a permit until the applicant has fully complied with the application requirements for that permit found in Subsection 045.02 of these rules and the signature and certification requirements found in Subsection 045.03 of these rules. ( )

b. The Director shall review for administrative completeness every application for permit to operate an injection well. The Director shall notify the applicant whether the application is administratively complete within ten (10) business days of its receipt. If the application is administratively incomplete, the Director shall list the information necessary to make the application administratively complete and submit this with the notification. The purpose of this review is to determine if the applicant has submitted all of the appropriate forms and information

necessary to perform a review for completeness in section 045.01.c. There will be no technical analysis of the details contained in the permit application as part of this review. ( )

c. The Director shall review for completeness every application for permit. Each application for permit submitted for a new UIC injection well should be reviewed for completeness by the Director within 60 days of its receipt. Each application for permit submitted for an existing injection well should be reviewed for completeness within 60 days of receipt. Upon completing the review, the Director shall notify the applicant in writing whether the application is complete. If the application is incomplete, the Director shall list the information necessary to make the application complete. When the application is for an existing UIC injection well the Director shall specify in the notice of deficiency a date for submitting the necessary information. The Director shall notify the applicant that the application is complete upon receiving this information. After the application is completed, the Director may request additional information from an applicant but only when necessary to clarify, modify, or supplement previously submitted material. Requests for such additional information will not render an application incomplete. ( )

d. If an applicant fails or refuses to correct deficiencies in the application, the permit may be denied and appropriate enforcement actions may be taken under the applicable statutory provision IDWR housekeeping as determined by the Director. ( )

e. If the Director decides that a site visit is necessary for any reason in conjunction with the processing of an application, he or she shall notify the applicant and a date shall be scheduled. ( )

f. The effective date of an application is the date on which the Director notifies the applicant that the application is complete as provided in Paragraph 045.01.c. of this rule. ( )

g. For each application for a new UIC injection well the Director shall, no later than the effective date of the application, prepare and mail to the applicant a project decision schedule. The schedule shall specify target dates by which the Director intends to: ( )

i. Prepare a draft permit; ( )

ii. Give public notice; ( )

iii. Complete the public comment period, including any public hearing; and ( )

iv. Issue a final permit. ( )

02. Application For A Permit; Authorization By Permit. ~~(40 CFR 144.31)~~ ( )

a. Permit application. All injection activities including construction of an injection well are prohibited until the owner or operator is authorized by permit. Procedures for applications, issuance and administration of emergency permits are found exclusively in Subsection 045.09. ( )

b. When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit. ( )

c. Time to apply. Any person who performs or proposes an underground injection for which a permit is or will be required shall submit an application to the Director in accordance with the UIC program. For new injection wells, the application shall be submitted within a reasonable time before construction is expected to begin.( )

d. Completeness. The Director shall not issue a permit before receiving a complete application for a permit except for emergency permits. An application for a permit is complete when the Director receives an application form with all of the information requirements listed in Paragraph 045.02.e., and Subsections 045.03 through 045.08, and Subsection 045.10 and any supplemental information which are completed to his satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity. ( )

e. Information requirements. All applicants for Class II permits shall provide the following information to the Director, using the application form provided by the Director. ( )

i. Name, mailing address, and location of the facility for which the application is submitted. ( )

ii. Permit processing fee. ( )

iii. Up to four (4) SIC codes which best reflect the principal products or services provided by the facility. ( )

iv. The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity. ( )

v. Whether the facility is located on Indian lands. ( )

vi. Documentation that the applicant has the right to conduct operations at the proposed site. ( )

vii. A topographic map (or other map if a topographic map is unavailable) extending one (1) mile beyond the property boundaries of the source depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, and other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within a quarter mile of the facility property boundary, or within the area of review, whichever is greater. ( )

viii. A brief description of the nature of the injection activity. ( )

ix. The applicant shall identify and submit on a list with the permit application the names and addresses of all owners of record of land within one-quarter (1/4) mile of the facility boundary. The applicant shall also submit an affidavit certifying that all owners of record of land within one-quarter (1/4) mile of the facility boundary have been notified in writing of the proposed injection well. A copy of this notice shall be submitted with the affidavit. This requirement may be waived by the Director where the site is located in a populous area and the Director determines that the requirement would be impracticable. ( )

x. A determination of the regional ground water flow direction and gradient in the USDW(s) above the injection zone. ( )

xi. A plugging and abandonment plan that meets the requirements of Subsection 054.03 of these rules and is acceptable to the Director. ( )

ef. Recordkeeping. Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under Subsection 045.02 for a period of at least three (3) years from the date the application is signed. ( )

03. Signatories to Permit Applications and Reports. ~~(40 CFR 144.32)~~ ( )

a. Applications. All permit applications, except those submitted for Class II wells (see Paragraph 045.03.b. of this rule), shall be signed as follows: ( )

i. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: ( )

(1) A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision making functions for the corporation, or ( )

(2) The manager of one (1) or more manufacturing, production, or operating facilities employing more than two hundred fifty (250) persons or having gross annual sales or expenditures exceeding twenty-five ($25) million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. ( )

Note: The Department does not require specific assignments or delegations of authority to responsible corporate officers identified in Subparagraph 045.03.a.i.(1). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under Subparagraph 045.03.a.i.(2) rather than to specific individuals. ( )

ii. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or ( )

iii. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: ( )

(1) The chief executive officer of the agency, or ( )

(2) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency. ( )

b. Reports. All reports required by permits, other information requested by the Director, and all permit applications submitted for Class II wells under Subsection 045.02 shall be signed by a person described in Paragraph 045.03.a. of this rule, or by a duly authorized representative of that person. A person is a duly authorized representative only if: ( )

i. The authorization is made in writing by a person described in Paragraph 045.03.a. of this rule; ( )

ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and ( )

iii. The written authorization is submitted to the Director. ( )

c. Changes to authorization. If an authorization under Paragraph 045.03.b. of this rule is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Paragraph 045.03.b. of this rule must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative. ( )

d. Certification. Any person signing a document under Paragraph 045.03.a. or 045.03.b. of this rule shall make the following certification: ( )

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. ( )

04. Bonding. ( )

a. Individual Bond. The Director shall require, as a condition of every Class II injection well permit, that every person who engages in the construction, alteration, testing, or operation of a well provide evidence of good and sufficient security in the form of a bond, letter of credit, or other surety acceptable to the Director that ensures that the applicant perform the duties required by this chapter and properly abandon any well covered by such permit. Good and sufficient security for each injection well shall be an amount of ten thousand dollars ($10,000) plus one dollar ($1) per foot of depth. The bond shall be conditioned upon the performance of the owner's or operator's duty to comply with the rules of the Water Resource Board, with respect to the drilling, maintaining, operating, and plugging of each well. Said bond shall remain in force and effect until the plugging and abandonment of said well is approved by the Director and the well site is reclaimed as described in Section 325 of IDAPA 20.07.02 "Conservation of Crude Oil and natural Gas in the State of Idaho", or the bond is released by the Department. The Director may impose additional bonding on an owner or operator given sufficient reason, such as non-compliance, unusual conditions, or other circumstances that suggest a particular well has potential risk or liability in excess of that normally expected. ( )

05. Information to Be Considered By The Director. ~~(40 CFR 146.24)~~ ( )

a. This section sets forth the information which must be considered by the Director in authorizing Class II wells. Certain maps, cross-sections, tabulations of wells within the area of review, and other data may be included in the application by reference provided they are current, readily available to the Director (for example, in the permitting agency's files) and sufficiently identified to be retrieved. All the information in this section is to be submitted to the Director ( )

~~i~~a. Prior to the issuance of a permit for the construction or conversion of a new Class II well the applicant shall submit the following: ( )

ii. Information required in Subsection 045.02; ( )

iii. A map showing the injection well or project area for which a permit is sought and the applicable area of review. Within the area of review, the map must show the number or name and location of all existing producing wells, injection wells, decommissioned wells, dry holes, and water wells. The map must also show surface bodies of waters, mines (surface and subsurface), quarries and other pertinent surface features including residences and roads, and faults if known or suspected. Only information of public record and pertinent information known to the applicant is required to be included on this map. This requirement does not apply to existing Class II wells. This requirement does not apply to permit renewals; and ( )

iv~~i~~ii. A tabulation of data reasonably available from public records or otherwise known to the applicant on all wells within the area of review included on the map required under Subparagraph 045.05.a.ii. of this rule which penetrate the proposed injection zone or, in the case of Class II wells operating over the fracture pressure of the injection formation, all known wells within the area of review which penetrate formations affected by the increase in pressure. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of plugging and complete, and any additional information the Director may require. In cases where the information would be repetitive and the wells are of similar age, type, and construction the Director may elect to only require data on a representative number of wells. ( )

(~~1~~iv) Proposed operating data: ( )

(~~2~~1) Average and maximum daily rate and volume of fluids to be injected. ( )

(2~~3~~) Average and maximum injection pressure; and ( )

v~~(~~3). Source and an appropriate analysis of the chemical and physical characteristics of the injection fluid. ( )

vi. Appropriate geological data on the injection zone and confining zone including lithologic description, geological name, thickness and depth; ( )

vii. Geologic name and depth to bottom of all underground sources of drinking water which may be affected by the injection; ( )

viii. Schematic or other appropriate drawings of the surface and subsurface construction details of the well to show compliance with section 045.06 of these rules; ( )

ixviii. In the case of new injection wells the corrective action proposed to be taken by the applicant under the National Pollutant Discharge Elimination System in Title 40 Code of Federal Regulations 122.44; ( )

ix. A certificate that the applicant has assured through a performance bond or other appropriate means, the resources necessary to close plug or abandon the well; ( )

xi. Proposed formation testing program to obtain the information required by Paragraph 045.06.ge, unless such information is already available; ( )

xii. Proposed stimulation program; ( )

xiii. Proposed injection procedure; ( )

xivii. Proposed contingency plans, if any, to cope with well failures so as to prevent migration of contaminating fluids into an underground source of drinking water; ( )

xiv. Plans for meeting the monitoring requirements of Paragraph 054.01.b. ( )

b. Prior to operating a Class II well the owner/operator must submit the following information: ( )

i. All available logging and testing program data on the well; ( )

ii. A demonstration of mechanical integrity pursuant to Subsection 054.02; ( )

iii. The anticipated maximum pressure and flow rate at which the permittee will operate. ( )

iv. The information specified in Paragraph 045.06.ge, of these rules; ( )

v. The actual injection procedure; and ( )

vi. For new wells the status of corrective action on defective wells in the area of review. ( )

c. Prior to the plugging and abandonment of a Class II well the owner/operator must provide the following information: ( )

i. The type, and number of plugs to be used; ( )

ii. The placement of each plug including the elevation of top and bottom; ( )

iii. The type, grade, and quantity of cement to be used; ( )

iv. The method of placement of the plugs; and ( )

v. The procedures to meet the requirements of section 054.03 of these rules. ( )

06. Construction Requirements. ~~(40 CFR 146.22)~~ ( )

a. All new Class II wells shall be sited in such a fashion that they inject into a formation which is separated from any USDW by a confining zone that is free of ~~known~~ open faults or fractures within the area of review. ( )

b. Requirements. ( )

i. All Class II injection wells shall be cased and cemented to prevent movement of fluids into or between underground sources of drinking water. The casing and cement used in the construction of each newly drilled well shall be designed for the life expectancy of the well. In determining and specifying casing and cementing requirements, the following factors shall be considered: ( )

(1) Depth to the injection zone; ( )

(2) Depth to the bottom of all USDWs; and ( )

(3) Estimated maximum and average injection pressures; ( )

ii. In addition the Director may consider information on: ( )

(1) Nature of formation fluids; ( )

(2) Lithology of injection and confining zones; ( )

(3) External pressure, internal pressure, and axial loading; ( )

(4) Hole size; ( )

(5) Size and grade of all casing strings; and ( )

(6) Class of cement. ( )

c. The requirements in Paragraph 045.06.b. of this rule need not apply to existing or newly converted Class II wells located in existing fields if: ( )

i. Regulatory controls for casing and cementing existed for those wells at the time of drilling and those wells are in compliance with those controls; and ( )

ii. Well injection will not result in the movement of fluids into an underground source of drinking water so as to create a significant risk to the health of persons. ( )

d. Appropriate logs and other tests shall be conducted during the drilling and construction of new Class II wells. A descriptive report interpreting the results of that portion of those logs and tests which specifically relate to (1) an USDW and the confining zone adjacent to it, and (2) the injection and adjacent formations shall be prepared by a knowledgeable log analyst and submitted to the director. At a minimum, these logs and tests shall include: ( )

i. Deviation checks on all holes constructed by first drilling a pilot hole and then enlarging the pilot hole, by reaming or another method. Such checks shall be at sufficiently frequent intervals to assure that vertical avenues for fluid movement in the form of diverging holes are not created during drilling. ( )

ii. Such other logs and tests as may be needed after taking into account the availability of similar data in the area of the drilling site, the construction plan, and the need for additional information that may arise from time to time as the construction of the well progresses. In determining which logs and tests shall be required the following shall be considered by the Director in setting logging and testing requirements: ( )

(1) For surface casing intended to protect underground sources of drinking water in areas where the lithology has not been determined: ( )

(a) Electric and caliper logs before casing is installed; and ( )

(b) A cement bond, temperature, or density log after the casing is set and cemented. ( )

(2) For intermediate and long strings of casing intended to facilitate injection: ( )

(a) Electric porosity and gamma ray logs before the casing is installed; ( )

(b) Fracture finder logs; and ( )

(c) A cement bond, temperature, or density log after the casing is set and cemented. ( )

e. At a minimum, the following information concerning the injection formation shall be determined or calculated for new Class II wells or projects: ( )

i. Fluid pressure; ( )

ii. Estimated fracture pressure; ( )

iii. Physical and chemical characteristics of the injection zone. ( )

07. Area of Review. ~~(40 CFR 146.6)~~ The area of review for each injection well or each field, project or area of the State shall be determined according to either Paragraph 045.07.a. or 045.07.b. of this rule. The Director may solicit input from the owners or operators of injection wells within the State as to which method is most appropriate for each geographic area or field. ( )

a. Zone of endangering influence. ( )

i. The zone of endangering influence shall be: ( )

(1) That area the radius of which is the lateral distance in which the pressures in the injection zone may cause the migration of the injection and/or formation fluid into an underground source of drinking water. ( )

ii. Computation of the zone of endangering influence may be based upon the parameters listed below and should be calculated for an injection time period equal to the expected life of the injection well or pattern. The following modified equation illustrates one form which the mathematical model may take. ( )

$$r \equiv [(2.25KHt) / (S10^{x})]^{0.5}$$

where:

$$x \equiv (4\pi KH)(h_w - h_{bo} * S_w G_b) / (2.3Q)$$

$\equiv$

$r \equiv$ Radius of endangering influence from injection well (length)

$K \equiv$ Hydraulic conductivity of the injection zone (length/time)

$H \equiv$ Thickness of the injection zone (length)

$T \equiv$ Time of injection (time)

$S \equiv$ Storage coefficient (dimensionless)

$Q \equiv$ Injection rate (volume/time)

h_{po} ≡ Observed original hydrostatic head of injection zone (length) measured from the base of the lowermost underground source of drinking water

h_w ≡ Hydrostatic head of underground source of drinking water (length) measured from the base of the lowest underground source of drinking water

S_pG_p ≡ Specific gravity of fluid in the injection zone (dimensionless)

π ≡ 3.142 (dimensionless)

The above equation is based on the following assumptions:
(1)The injection zone is homogenous and isotropic;
(2)The injection zone has infinite area extent;
(3)The injection well penetrates the entire thickness of the injection zone;
(4)The well diameter is infinitesimal compared to "r" when injection time is longer than a few minutes; and
(5)The emplacement of fluid into the injection zone creates instantaneous increase in pressure.

b. Fixed radius. ( )

i. A fixed radius around the well of not less than one-fourth (1/4) mile may be used. ( )

ii. In determining the fixed radius, the following factors shall be taken into consideration: Chemistry of injected and formation fluids; hydrogeology; population and ground-water use and dependence; and historical practices in the area. ( )

c. If the area of review is determined by a mathematical model pursuant to Paragraph 045.07.a. of this rule, the permissible radius is the result of such calculation even if it is less than one-fourth (1/4) mile. In these instances, the Director has the discretion to review the area of review analysis and impose the fixed radius method if the model results yield a small radius that is unrealistic. ( )

08. Corrective Action. ~~(40 CFR 144.55, 146.7)~~ ( )

a. Coverage. Applicants for Class II injection well permits shall identify the location of all known wells within the injection well's area of review which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the injection formation, all known wells within the area of review penetrating formations affected by the increase in pressure. For such wells which are improperly sealed, completed, or decommissioned, the applicant shall also submit a plan consisting of such steps or modifications as are necessary to prevent movement of fluid into underground sources of drinking water ("corrective action"). Where the plan is adequate, the Director shall incorporate it into the permit as a condition. Where the Director's review of an application indicates that the permittee's plan is inadequate (based on the factors in Paragraph 045.0~~7~~8.c. of this rule), the Director shall require the applicant to revise the plan, prescribe a plan for corrective action as a condition of the permit under Paragraph 045.08.b. of this rule, or deny the application. ( )

b. Requirements. ( )

i. New injection wells. No owner or operator of a new injection well may begin injection until all required corrective action has been taken. ( )

ii. Injection pressure limitation. The Director may require as a permit condition that injection pressure be so limited that pressure in the injection zone does not exceed hydrostatic pressure at the site of any

improperly completed or decommissioned well within the area of review. This pressure limitation shall satisfy the corrective action requirement. Alternatively, such injection pressure limitation can be part of a compliance schedule and last until all other required corrective action has been taken. ( )

c. In determining the adequacy of corrective action proposed by the applicant and in determining the additional steps needed to prevent fluid movement into underground sources of drinking water, the following criteria and factors shall be considered by the Director: ( )

i. Nature and volume of injected fluid; ( )

ii. Nature of native fluids or by-products of injection; ( )

iii. Potentially affected population; ( )

iv. Geology; ( )

v. Hydrology; ( )

vi. History of the injection operation; ( )

vii. Completion and plugging records; ( )

viii. ~~d~~Decommissioning procedures in effect at the time the well was decommissioned; and ( )

ix. Hydraulic connections with underground sources of drinking water. ( )

09. Emergency Permits. ~~(40 CFR 144.34)~~ ( )

a. Coverage. Notwithstanding any other provision of this section, the Director may temporarily permit a specific underground injection if: ( )

i. An imminent and substantial endangerment to the health of persons will result unless a temporary emergency permit is granted; or ( )

ii. A substantial and irretrievable loss of oil or gas resources will occur unless a temporary emergency permit is granted to a Class II well; and ( )

(1) Timely application for a permit could not practicably have been made; and ( )

(2) The injection will not result in the movement of fluids into underground sources of drinking water; or ( )

iii. A substantial delay in production of oil or gas resources will occur unless a temporary emergency permit is granted to a new Class II well and the temporary authorization will not result in the movement of fluids into an underground source of drinking water; and ( )

(1) Timely application for a permit could not practically have been made. ( )

b. Requirements for issuance. ( )

i. Any temporary permit under Subparagraph 045.0~~8~~9.a.i. of this rule shall be for no longer term than required to prevent the hazard. ( )

ii. Any temporary permit under Subparagraph 045.0~~8~~9.a.ii. of this rule shall be for no longer than 90 days, except that if a permit application has been submitted prior to the expiration of the 90-day period, the Director may extend the temporary permit until final action on the application. ( )

iii. Any temporary permit under Subparagraph 045.089.a.iii. of this rule shall be issued only after a complete permit application has been submitted and shall be effective until final action on the application. ( )

iv. Notice of any temporary permit under Subsection 045.089 shall be published in accordance with Subsection 048.04 within ten (10) days of the issuance of the permit. ( )

v. The temporary permit under this section may be either oral or written. If oral, it must be followed within five (5) calendar days by a written temporary emergency permit. ( )

vi. The Director shall condition the temporary permit in any manner he or she determines is necessary to ensure that the injection will not result in the movement of fluids into an underground source of drinking water. ( )

10. Request for Variance. ~~(40 CFR 144.16)~~ ( )

a. When injection does not occur into, through or above an underground source of drinking water, the Director may consider a well or project with a request for variance from the requirements for area of review, operation, monitoring, and reporting than required in these rules to the extent that the reduction in requirements will not result in an increased risk of movement of fluids into an underground source of drinking water. ( )

b. When injection occurs through or above an underground source of drinking water, but the radius of endangering influence when computed under Paragraph 045.07.a is smaller or equal to the radius of the well, the Director may authorize a well or project with less stringent requirements for operation, monitoring, and reporting than required in these rules to the extent that the reduction in requirements will not result in an increased risk of movement of fluids into an underground source of drinking water. ( )

c. When reducing requirements under Paragraph 045.0910.a. or 045.0910.b. of this rule, the Director shall prepare a fact sheet under Subsection 048.02 explaining the reasons for the action. ( )

11. Contingency Plan. The applicant shall submit a contingency plan(s) which describes how the fluids, that were intended to be injected, will be disposed of in the case that this injection well being applied for is unusable for injection under these rules at some point during its operating life. ( )

~~046. -- 047. (RESERVED)~~

~~048.~~ CLASS II: APPLICATION PROCESSING.

01. Draft Permits. ~~(40 CFR 124.6)~~ ( )

a. Once an application is complete, the Director shall tentatively decide whether to prepare a draft permit or to deny the application. ( )

b. If the Director tentatively decides to deny the permit application, he or she shall issue a notice of intent to deny. A notice of intent to deny the permit application is a type of draft permit which follows the same procedures as any draft permit prepared under this section. See Paragraph 048.031.ed. The applicant may request to meet with the Director, or a designated representative, to review application deficiencies and be given the opportunity to correct the deficiencies prior to initiating the public notice found in Subsection 048.04. If the Director's final decision (Subsection 048.07) is that the tentative decision to deny the permit application was incorrect, he or she shall withdraw the notice of intent to deny and proceed to prepare a draft permit under Paragraph 048.01.dc. of this rule. ( )

c. If the Director decides to prepare a draft permit, he or she shall prepare a draft permit that contains the following information: ( )

i. All conditions under Subsection 051.01; ( )

ii. All compliance schedules under Subsection 051.03; ( )

iii. All monitoring requirements under Subsection 051.04; and ( )

iv. Permit conditions under Subsection 051.02; ( )

~~c~~**d.** All draft permits prepared under this section shall be accompanied by a fact sheet (Subsection 048.02), and shall be based on the administrative record (Subsection 048.03), publicly noticed (Subsection 048.04) and made available for public comment (Subsection 048.05). The Director shall give notice of opportunity for a public hearing (Subsection 048.05), issue a final decision (Subsection 048.07) and respond to comments (Subsection 048.08). ( )

02. Fact Sheet. ~~(40 CFR 124.8)~~ ( )

a. A fact sheet shall be prepared for every draft permit. The fact sheet shall briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit. The Director shall send this fact sheet to the applicant and, on request, to any other person. ( )

b. The fact sheet shall include, when applicable: ( )

i. A brief description of the type of facility or activity which is the subject of the draft permit; ( )

ii. The type and quantity of wastes, fluids, or pollutants which are proposed to be injected. ( )

iii. A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record; ( )

iv. Reasons why any requested variances or alternatives to required standards do or do not appear justified;( )

v. A description of the procedures for reaching a final decision on the draft permit including: ( )

(1) The beginning and ending dates of the comment period under Subsection 048.04 and the address where comments will be received; ( )

(2) Procedures for requesting a hearing and the nature of that hearing; and ( )

(3) Any other procedures by which the public may participate in the final decision. ( )

vi. Name and telephone number of a person to contact for additional information. ( )

03. Administrative Record for Draft Permits. ~~(40 CFR 124.9)~~ ( )

a. The provisions of a draft permit prepared under Subsection 048.01 shall be based on the administrative record defined in Section 048.03. ( )

b. For preparing a draft permit under Subsection 048.01, the record shall consist of: ( )

i. The application, if required, and any supporting data furnished by the applicant; ( )

ii. The draft permit or notice of intent to deny the application or to terminate the permit; ( )

iii. A fact sheet (Subsection 048.02); ( )

iv. All documents cited in the statement of basis or fact sheet; and ( )

v. Other documents contained in the supporting file for the draft permit. ( )

c. Material readily available at the Department or published material that is generally available, and that is included in the administrative record under Paragraphs 048.03.b. and 048.03.c. of this rule, need not be physically included with the rest of the record as long as it is specifically referred to in the statement of basis or the fact sheet. ( )

d. This section applies to all draft permits when public notice was given after the effective date of these rules. ( )

04. Public Notice of Permit Actions and Public Comment Period. ~~(40 CFR 124.10)~~ ( )

a. Scope. ( )

i. The Director shall give public notice that the following actions have occurred: ( )

(1) A permit application has been tentatively denied under Paragraph 048.01.b.; ( )

(2) A draft permit has been prepared under Paragraph 048.01.~~d~~c.; ( )

(3) A hearing has been scheduled under Subsection 048.06; or ( )

(4) An appeal has been granted in accordance with the requirements of the statutes listed in Section 003 of these rules. ( )

ii. No public notice is required when a request for permit modification, revocation and reissuance, or termination is denied under Paragraph 057.01.b. Written notice of that denial shall be given to the requester and to the permittee. ( )

iii. Public notices may describe more than one (1) permit or permit actions. ( )

b. Timing. ( )

i. Public notice of the preparation of a draft permit (including a notice of intent to deny a permit application) required under Paragraph 048.04.a. of this rule shall allow at least thirty (30) days for public comment. Commenters may request additional time to comply with the requirements of Subsection 060.01 and must demonstrate the need for such time. ( )

ii. Public notice of a public hearing shall be given at least thirty (30) days before the hearing. (Public notice of the hearing may be given at the same time as public notice of the draft permit and the two (2) notices may be combined.) ( )

c. Methods. Public notice of activities described in Subparagraph 048.04.a.i. of this rule shall be given by the following methods: ( )

i. By mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under Paragraph 048.04.c. may waive his or her rights to receive notice for any classes and categories of permits): ( )

(1) The applicant; ( )

(2) Any other agency which the Director knows has issued or is required to issue a permit for the same facility or activity; ( )

(3) Persons on a mailing list developed by: ( )

(a) Including those who request in writing to be on the list; ( )

(b) Soliciting persons for "area lists" from participants in past permit proceedings in that area; and ( )

(c) Notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as Regional and State funded newsletters, environmental bulletins, or State law journals. ( )

(4) Other Agencies; ( )

(a) To any unit of local government having jurisdiction over the area where the facility is proposed to be located; and ( )

(b) To each State agency having any authority under State law with respect to the construction or operation of such facility. ( )

(5) Owners or operators of oil or gas wells that are in the same reservoir or field as the proposed well. ( )

ii. By placing a legal notice in a newspaper of general circulation in the county in which the well is located; and ( )

iii. Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or legal notice in a newspaper of general circulation in the county in which the well is located, or any other forum or medium to elicit public participation. ( )

d. Contents: ( )

i. All public notices. All public notices issued under this part shall contain the following minimum information: ( )

(1) Name and address of the office processing the permit action for which notice is being given;( )

(2) Name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit; ( )

(3) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit; ( )

(4) Name, address and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit or draft general permit, as the case may be, statement of basis or fact sheet, and the application; and ( )

(5) A brief description of the comment procedures required by Subsections 048.05 and 048.06 and the time and place of any hearing that will be held, including a statement of procedures to request a hearing and other procedures by which the public may participate in the final permit decision. ( )

(6) The location of the administrative record required by Subsection 048.03, the times at which the record will be open for public inspection, and a statement that all data submitted by the applicant is available as part of the administrative record. ( )

(7) Any additional information considered necessary or proper. ( )

ii. Public notices for hearings. In addition to the general public notice described in Subparagraph

048.04.d.i. of this rule, the public notice of a hearing under Subsection 048.06 shall contain the following information: ( )

(1) Reference to the date of previous public notices relating to the permit; ( )

(2) Date, time, and place of the hearing; ( )

(3) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures. ( )

e. In addition to the general public notice described in Subparagraph 048.04.d.i. of this rule, all persons identified in Subparagraphs 048.04.c.i.(1), 048.04.c.i.(2), 048.04.c.i.(3), and 048.04.c.i.(4) of this rule shall be mailed a copy of the fact sheet or statement of basis, the permit application and the draft permit. ( )

05. Public Comments and Requests For Public Hearings. ~~(40 CFR 124.11)~~ During the public comment period provided under Subsection 048.04, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments shall be considered in making the final decision and shall be answered as provided in Subsection 048.08. ( )

06. Public Hearings. ~~(40 CFR 124.12)~~ ( )

a. Basis and notice. The Director may conduct a fact finding hearing or investigative hearing in accordance with section 42-3907, Idaho Code. ( )

i. The Director shall hold a public hearing whenever he or she finds, on the basis of requests, a significant degree of public interest in a draft permit(s); ( )

ii. The Director may also hold a public hearing at his or her discretion, whenever, for instance, such a hearing might clarify one (1) or more issues involved in the permit decision; ( )

iii. Public notice of the hearing shall be given as specified in Subsection 048.04. ( )

b. Any person may submit oral or written statements and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing may be required. The public comment period under Subsection 048.04 shall automatically be extended to the close of any public hearing under this section. The hearing officer may also extend the comment period by so stating at the hearing. ( )

07. Issuance and Effective Date Of Permit. ~~(40 CFR 124.15)~~ ( )

a. After the close of the public comment period under Subsection 048.04 on a draft permit, the Director shall issue a final permit decision. The Director shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. This notice shall include reference to the procedures for appealing a decision. For the purposes of this section, a final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit. ( )

b. A final permit decision shall become effective immediately after the service of notice of the decision unless: ( )

i. A later effective date is specified in the decision; or ( )

ii. An Administrative Appeal is initiated in accordance with Section 003 of these rules. ( )

08. Response to Comments. ~~(40 CFR 124.17)~~ ( )

a. At the time that any final permit decision is issued under Subsection 048.07, the Director shall issue a response to comments that will be made available to the public upon request. This response shall: ( )

i. Specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change; and ( )

ii. Briefly describe and respond to all significant comments on the draft permit raised during the public comment period, or during any hearing. ( )

b. Any documents cited in the response to comments shall be included in the administrative record for the final permit decision as defined in Subsection 048.09. If new points are raised or new material supplied during the public comment period, the Department may document its response to those matters by adding new materials to the administrative record. ( )

09. Administrative Record for Final Permit. ~~(40 CFR 124.18)~~ ( )

a. The Director shall base final permit decisions under Subsection 048.07 on the administrative record defined in this section. ( )

b. The administrative record for any final permit shall consist of the administrative record for the draft permit and: ( )

i. All comments received during the public comment period provided under Subsection 048.04; ( )

ii. Any written materials submitted at such a hearing; ( )

iii. The response to comments required by Subsection 048.08 and any new material placed in the record under that section; ( )

iv. Other documents contained in the supporting file for the permit; and ( )

v. The final permit. ( )

vi. Recordings of any contested case hearing initiated under the Administrative Appeals process as per Section 003 of these rules.

c. The additional documents required under Paragraph 048.0~~4~~9.b. of this rule should be added to the record as soon as possible after their receipt or publication by the Agency. The record shall be complete on the date the final permit is issued. ( )

d. This section applies to permits when the draft permit was subject to the administrative record requirements of Subsection 048.03. ( )

e. Material readily available at the Department, or published materials which are generally available and which are included in the administrative record under the standards of this section or of Subsection 048.08 ("Response to comments"), need not be physically included in the same file as the rest of the record as long as it is specifically referred to in the statement of basis or fact sheet or in the response to comments. ( )

10. Duration of Permits. ~~(40 CFR 144.36)~~ ( )

a. UIC permits for Class II wells shall be issued for a period up to the operating life of the facility. The Director shall review each issued Class II well UIC permit at least once every five (5) years to determine whether it should be modified, revoked and reissued, terminated or a minor modification made as provided in Subsection 057.02, 057.03, or 057.04. ( )

b. Except as provided in Subsection 057.05, the term of a permit shall not be extended by modification beyond the maximum duration specified in this section. ( )

c. The Director may issue any permit for a duration that is less than the full allowable term under this section and the reason(s) for this determination will be added to the back file for this facility. ( )

11. Criteria for Establishing Permitting Priorities

01. In determining priorities for setting times for owners or operators to submit applications for authorization to inject under the procedures of section 045.02 of these rules, the Director shall base these priorities upon consideration of the following factors:

a. Injection wells known or suspected to be contaminating underground sources of drinking water;

b. Likelihood of contamination of underground sources of drinking water;

c. Potentially affected population;

d. Injection wells violating existing State requirements;

e Coordination with the issuance of permits required by other State or Federal permit programs;

f. Age and depth of the injection well; and

g. Expiration dates of existing State permits, if any.

049. -- 050. (RESERVED)

051. CLASS II: PERMIT CONDITIONS.

01. Conditions Applicable to All Permits. ~~(40 CFR 144.51)~~ The following conditions apply to all UIC permits. All conditions applicable to all permits shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the permit. ( )

a. Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of these rules and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the permittee need not comply with the provisions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit under Subsection 045.09. ( )

b. Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. ( )

c. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. ( )

d. Duty to mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit. ( )

e. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-

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up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit. ( )

f. Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition. ( )

g. Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege. ( )

h. Duty to provide information. The permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit. ( )

i. Inspection and entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to: ( )

i. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; ( )

ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit; ( )

iii. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and ( )

iv. Sample or monitor at reasonable times, for the purposes of assuring permit compliance, any substances or parameters at any location. ( )

j. Monitoring and records. ( )

i. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. ( )

ii. The permittee shall retain records of all monitoring information, including the following: ( )

(1) Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time; and ( )

(2) The nature and composition of all injected fluids until three (3) years after the completion of any plugging and abandonment procedures specified under Subparagraph 051.02.a.vi~~i~~. The Director may require the owner or operator to deliver the records to the Director at the conclusion of the retention period. The owner or operator shall continue to retain the records after the three (3) year retention period unless he delivers the records to the Director or obtains written approval from the Director to discard the records. ( )

iii. Records of monitoring information shall include: ( )

(1). The date, exact place, and time of sampling or measurements; ( )

(2) The individual(s) who performed the sampling or measurements; ( )

(3) The date(s) analyses were performed; ( )

(4) The individual(s) who performed the analyses; ( )

(5) The analytical techniques or methods used; and ( )

(6) The results of such analyses. ( )

k. Signatory requirement. All applications, reports, or information submitted to the Director shall be signed and certified. (See Subsection 045.03) ( )

l. Reporting requirements: ( )

i. Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. ( )

ii. Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.( )

iii. Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary. (See Subsection 057.06; in some cases, modification or revocation and reissuance is mandatory.) ( )

iv. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit. ( )

v. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 30 days following each schedule date. ( )

vi. Twenty-four (24) hour reporting. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The permittee shall report any noncompliance which may endanger health or the environment, including: ( )

(1) Any monitoring or other information which indicates that any contaminant may cause an endangerment to a USDW; or ( )

(2) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs. ~~Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.~~ ( )

vii. Other noncompliance. The permittee shall report all instances of noncompliance not reported under Subparagraphs 0495l.01.l.i. 0495l.01.l.iv., 0495l.01.l.v., and 0495l.01.l.vi. of this rule, at the time monitoring reports are submitted. The reports shall contain the information listed in Subparagraph 0495l.01.l.vi. of this rule.( )

viii. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information. ( )

m. Requirements prior to commencing injection. A new injection well may not commence injection until construction is complete, and ( )

i. The permittee has submitted notice of completion of construction to the Director; and ( )

ii. Review. ( )

(1) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or ( )

(2) The permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within thirteen (13) days of the date of the notice in Subparagraph 0495~~1~~.01.m.i. of this rule, in which case prior inspection or review is waived and the permittee may commence injection. The Director shall include in his notice a reasonable time period in which he shall inspect the well. ( )

n. The permittee shall notify the Director at such times as the permit requires before conversion or decommissioning the well. ( )

o. A Class II permit shall include conditions which meet the applicable requirements of Subsection 054.03 to ensure that plugging and abandonment of the well will not allow the movement of fluids into or between USDWs. Where the plan meets the requirements of Subsection 054.03, the Director shall incorporate the plan into the permit as a permit condition. Where the Director's review of an application indicates that the permittee's plan is inadequate, the Director may require the applicant to revise the plan, prescribe conditions meeting the requirements of Paragraph 049~~5~~1.01.o., or deny the permit. For purposes of this paragraph, temporary or intermittent cessation of injection operations is not decommissioning. ( )

p. Plugging and abandonment report. Within 60 days after plugging a well or at the time of the next quarterly report (whichever is less) the owner or operator shall submit a report to the Director. If the quarterly report is due less than fifteen (15) days before completion of plugging, then the report shall be submitted within 60 days. The report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either: ( )

i. A statement that the well was plugged in accordance with the plan previously submitted to the Director; or ( )

ii. Where actual plugging differed from the plan previously submitted, an updated version of the plan on the form supplied by the Director, specifying the differences. ( )

q. Duty to establish and maintain mechanical integrity. ( )

i. The owner or operator of a Class II well permitted under this part shall establish mechanical integrity prior to commencing injection or on a schedule determined by the Director. Thereafter the owner or operator of Class II wells must maintain mechanical integrity as defined in Subsection 054.02 The Director may require by written notice that the owner or operator comply with a schedule describing when mechanical integrity demonstrations shall be made. The frequency for establishing mechanical integrity shall be at least once every five (5) years during the life of the injection well. ( )

ii. When the Director determines that a Class II well lacks mechanical integrity pursuant to Subsection 054.02 he/she shall give written notice of his/her determination to the owner or operator. Unless the Director requires immediate cessation, the owner or operator shall cease injection into the well within 48 hours of receipt of the Director's determination. The Director may allow plugging of the well pursuant to the requirements of Subsection 054.03 or require the permittee to perform such additional construction, operation, monitoring, reporting and corrective action as is necessary to prevent the movement of fluid into or between USDWs caused by the lack of mechanical integrity. The owner or operator may resume injection upon written notification from the Director that the owner or operator has demonstrated mechanical integrity pursuant to Subsection 054.02. ( )

iii. The Director may allow the owner or operator of a well which lacks mechanical integrity, as described by Paragraph 054.02.a., to continue or resume injection, if the owner or operator has made a satisfactory demonstration that there is no movement of fluid into or between USDWs. The resumption of injection under this rule can be authorized for up to one (1) year. The operator can request an additional one (1) year extension. A maximum of two (2) years is allowed under this rule. ( )

02. Establishing Permit Conditions. ~~(40 CFR 144.52)~~ ( )

a. In addition to conditions required in Subsection 051.01, the Director shall establish conditions, as required on a case-by-case basis under Subsection 048.10, and Paragraph 051.03.a., Subsection 051.04. Permits shall contain the following requirements, when applicable. ( )

i. Construction requirements as set forth in Subsection 045.06. Existing wells shall achieve compliance with such requirements according to a compliance schedule established as a permit condition. The owner or operator of a proposed new injection well shall submit plans for testing, drilling, and construction as part of the permit application. No construction may commence until a permit has been issued containing construction requirements (see Paragraph 040.02.b.). New wells shall be in compliance with these requirements prior to commencing injection operations. Changes in construction plans during construction may be approved by the Director as minor modifications (Subsection 057.04). No such changes may be physically incorporated into construction of the well prior to approval of the modification by the Director. ( )

ii. Corrective action as set forth in Subsection 045.08. ( )

iii. Operation requirements; the permit shall establish any maximum injection volumes and/or pressures necessary to assure that fractures are not initiated in the confining zone, that injected fluids do not migrate into any underground source of drinking water, that formation fluids are not displaced into any underground source of drinking water, and to assure compliance with the Subsection 054.01 operating requirements. ( )

~~iv. Requirements for wells managing hazardous waste.~~ ( )

iv. Monitoring and reporting requirements as set forth in Subsection 054.01. The permittee shall be required to identify types of tests and methods used to generate the monitoring data. Monitoring of the nature of injected fluids shall comply with applicable analytical methods cited and described in table I of 40 CFR 136.3 or in appendix III of 40 CFR part 261 or in certain circumstances by other methods that have been approved by the Director. ( )

v~~i~~. After a cessation of operations of two (2) years the owner or operator shall plug and abandon the well in accordance with the plan unless he: ( )

(1) Provides notice to the Director; ( )

(2) Describes actions or procedures, satisfactory to the Director, that the owner or operator will take to ensure that the well will not endanger USDWs during the period of temporary inactivity. These actions and procedures shall include compliance with the technical requirements applicable to active injection wells unless waived by the Director. ( )

vi~~i~~. Financial responsibility. ( )

(1) The permittee, including the transferor of a permit, is required to demonstrate and maintain financial responsibility, as described in Subsection 045.04 of these rules, and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director until: ( )

(a) The well has been plugged and abandoned in accordance with an approved plugging and abandonment plan pursuant to Paragraph 051.01.o. and Subsection 054.03, and submitted a plugging and abandonment report pursuant to Paragraph 051.01.p.; or ( )

(b) The well has been converted in compliance with the requirements of Paragraph 051.01.n.; or( )

(c) The transferor of a permit has received notice from the Director that the owner or operator receiving transfer of the permit, the new permittee, has demonstrated financial responsibility for the well. ( )

(2) The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance, such as a financial statement or other materials acceptable to the Director as described in Subsection 045.04 of these rules. The Director may on a periodic basis require the holder of a lifetime permit to submit an estimate of the resources needed to plug and abandon the well revised to reflect inflation of such costs, and a revised demonstration of financial responsibility, if necessary. ( )

viii. Mechanical integrity. A permit for any Class II well or injection project which lacks mechanical integrity shall include a condition prohibiting injection operations until the permittee shows to the satisfaction of the Director under Subsection 054.02 that the well has mechanical integrity. ( )

ixviii. Additional conditions. The Director shall impose on a case-by-case basis such additional conditions as are necessary to prevent the migration of fluids into underground sources of drinking water. ( )

ix. If the collection and reporting of new or existing data to establish the background water quality of USDWs in the area of review has not been required, and subsequently performed, under any other permit regulating the injection well or project, the Director will require this data be collected and background water quality established as a permit condition to be satisfied prior to injecting fluids into the injection well. The Director will specify the sampling locations, potential need for the construction of new monitoring wells, sampling frequencies, sampling duration, and analytes to be sampled for. ( )

b. Other applicable requirements. ( )

i. In addition to conditions required in all permits the Director shall establish conditions in permits as required on a case-by-case basis, to provide for and assure compliance with all applicable requirements of these rules. ( )

ii. An applicable requirement is a statutory or regulatory requirement which takes effect prior to final administrative disposition of the permit. An applicable requirement is also any requirement which takes effect prior to the modification or revocation and reissuance of a permit, to the extent allowed in Subsection 057.02. ( )

iii. New or reissued permits, and to the extent allowed under Subsection 057.02 modified or revoked and reissued permits, shall incorporate each of the applicable requirements referenced in Subsection 051.02. ( )

c. Incorporation. All permit conditions shall be incorporated either expressly or by reference. If incorporated by reference, a specific citation to the applicable regulations or requirements must be given in the permit. ( )

03. Schedule of Compliance. ~~(40 CFR 144.52)~~ ( )

a. General. The permit may, when appropriate, specify a schedule of compliance leading to compliance with these rules ( )

i. Time for compliance. Any schedules of compliance shall require compliance as soon as possible, and in no case later than three (3) years after the effective date of the permit. ( )

ii. Interim dates. Except as provided in Subparagraph 049~~5~~1.03.b.i.(2) of this rule, if a permit establishes a schedule of compliance which exceeds one (1) year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement. ( )

(1) The time between interim dates shall not exceed one (1) year. ( )

(2) If the time necessary for completion of any interim requirement is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date. ( )

iii. Reporting. The permit shall be written to require that if Subparagraph 0~~49~~51.03.a.i. of this rule is applicable, progress reports be submitted no later than thirty (30) days following each interim date and the final date of compliance. ( )

b. Alternative schedules of compliance. A permit applicant or permittee may cease conducting regulated activities (by plugging and abandonment) rather than continue to operate and meet permit requirements as follows: ( )

i. If the permittee decides to cease conducting regulated activities at a given time within the term of a permit which has already been issued: ( )

(1) The permit may be modified to contain a new or additional schedule leading to timely cessation of activities; or ( )

(2) The permittee shall cease conducting permitted activities before noncompliance with any interim or final compliance schedule requirement already specified in the permit. ( )

ii. If the decision to cease conducting regulated activities is made before issuance of a permit whose term will include the termination date, the permit shall contain a schedule leading to termination which will ensure timely compliance with applicable requirements. ( )

iii. If the permittee is undecided whether to cease conducting regulated activities, the Director may issue or modify a permit to contain two (2) schedules as follows: ( )

(1) Both schedules shall contain an identical interim deadline requiring a final decision on whether to cease conducting regulated activities no later than a date which ensures sufficient time to comply with applicable requirements in a timely manner if the decision is to continue conducting regulated activities; ( )

(2) One schedule shall lead to timely compliance with applicable requirements; ( )

(3) The second schedule shall lead to cessation of regulated activities by a date which will ensure timely compliance with applicable requirements; ( )

(4) Each permit containing two (2) schedules shall include a requirement that after the permittee has made a final decision under Subparagraph 0~~49~~51.03.b.iii.(1) of this rule it shall follow the schedule leading to compliance if the decision is to continue conducting regulated activities, and follow the schedule leading to termination if the decision is to cease conducting regulated activities. ( )

iv. The applicant's or permittee's decision to cease conducting regulated activities shall be evidenced by a firm public commitment satisfactory to the Director, such as a resolution of the board of directors of a corporation. ( )

04. Requirements for Recording and Reporting of Monitoring Results. ~~(40 CFR 144.54)~~ All permits shall specify: ( )

a. Requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate); ( )

b. Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including when appropriate, continuous monitoring; ( )

c. Applicable reporting requirements based upon the impact of the regulated activity and as specified in Paragraph 054.01.c. Reporting shall be no less frequent than specified in the above regulations. ( )

052. -- 053. (RESERVED)

054. CLASS II: OPERATING REQUIREMENTS.

01. Operating, Monitoring, and Reporting Requirements. ~~(40 CFR 146.23)~~ ( )

a. Operating requirements. Operating requirements shall, at a minimum, specify that: ( )

i. Injection pressure at the wellhead shall not exceed a maximum which shall be calculated so as to assure that the pressure during injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to the USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into an underground source of drinking water. ( )

ii. Injection between the outermost casing protecting underground sources of drinking water and the well bore shall be prohibited. ( )

b. Monitoring requirements. Monitoring requirements shall, at a minimum, include: ( )

i. Monitoring of the nature of injected fluids at time intervals sufficiently frequent to yield data representative of their characteristics; ( )

ii. Observation and recording of injection pressure, flow rate, and cumulative volume at reasonable intervals no greater than thirty (30) days, or at ~~least with~~ the following frequencies, whichever is more stringent; ( )

(1) Weekly for produced fluid disposal operations; ( )

(2) Monthly for enhanced recovery operations; ( )

(3) Daily during the injection of liquid hydrocarbons and injection for withdrawal of stored hydrocarbons; and ( )

(4) Daily during the injection phase of cyclic steam operations. And recording of one observation of injection pressure, flow rate and cumulative volume at reasonable intervals no greater than thirty (30) days. ( )

iii. A demonstration of mechanical integrity pursuant to Subsection 054.02 at least once every five (5) years during the life of the injection well; ( )

iv. Maintenance of the results of all monitoring until the next permit review (see Subparagraph 051.02.a.iv.); and ( )

v. Hydrocarbon storage and enhanced recovery may be monitored on a field or project basis rather than on an individual well basis by manifold monitoring. Manifold monitoring may be used in cases of facilities consisting of more than one (1) injection well, operating with a common manifold. Separate monitoring systems for each well are not required provided the owner/operator demonstrates that manifold monitoring is comparable to individual well monitoring. ( )

c. Reporting requirements. ( )

i. Reporting requirements shall at a minimum include an annual report to the Director summarizing the results of monitoring required under Paragraph 05~~0~~4.01.b. of this rule. Such summary shall include monthly records of injected fluids, and any major changes in characteristics or sources of injected fluid. Previously submitted information may be included by reference. ( )

ii. Owners or operators of hydrocarbon storage and enhanced recovery projects may report on a field or project basis rather than an individual well basis where manifold monitoring is used. ( )

02. Mechanical Integrity. ~~(40 CFR 146.8)~~ ( )

a. An injection well has mechanical integrity if: ( )

i. There is no significant leak in the casing, tubing or packer; and ( )

ii. There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore. ( )

b. One (1) of the following methods must be used to evaluate the absence of significant leaks under Subparagraph 05~~0~~4.01.a.i. of this rule: ( )

i. Following an initial pressure test, monitoring of the tubing-casing annulus pressure with sufficient frequency to be representative, as determined by the Director, while maintaining an annulus pressure different from atmospheric pressure measured at the surface; or ( )

ii. Pressure test with liquid or gas: ( )

(1) The casing must be tested at a surface pressure of one thousand five hundred (1,500) psig or at a surface pressure of point twenty-five (0.25) psi/foot multiplied by the true vertical depth of the packer, whichever is greater, but the casing may not be subjected to a hoop stress that will exceed seventy percent (70%) of the minimum yield strength of the casing. ( )

(2) Criteria for a passing MIT are that the test pressure must show a stabilizing pressure trend, the test pressure may not decline more than ten percent (10%) from the actual test pressure, and the initial pressure is at or above the required test pressure. ( )

c. One (1) of the following methods must be used to determine the absence of significant fluid movement under Subparagraph 05~~0~~4.02.a.ii. of this rule: ( )

i. The results of a temperature or noise log, radioactive tracer survey, oxygen activation/water flow log, or equivalent log suite preapproved by the Director; or ( )

ii. Cementing records, cement bond log, ultrasonic imaging tool, or equivalent log preapproved by the Director, demonstrating the presence of adequate cement to prevent such migration.

d. The Director may allow the use of a test to demonstrate mechanical integrity other than those listed in Paragraph 05~~0~~4.02.b. and Subparagraph 05~~0~~4.02.c.ii. of this rule if it will reliably demonstrate the mechanical integrity of wells for which its use is proposed. The method must have prior approval of the Director. ( )

~~iii~~e. In conducting and evaluating the tests enumerated in this section or others to be allowed by the Director, the owner or operator and the Director shall apply methods and standards generally accepted in the industry. When the owner or operator reports the results of mechanical integrity tests to the Director, he shall include a description of the test(s) and the method(s) used. In making his/her evaluation, the Director shall review monitoring and other test data submitted since the previous evaluation. ( )

~~d~~**f.** The Director may require additional or alternative tests if the results presented by the owner or operator under Paragraph 054.02.e are not satisfactory to the Director to demonstrate that there is no movement of fluid into or between USDWs resulting from the injection activity. ( )

~~e~~**g.** The owner/operator must give the Director, or his designee, the opportunity to observe the mechanical integrity test by notifying the Department at least five (5) business days prior to the initiation of the test. ( )

03. Plugging and Abandoning Class II Wells. ~~(40 CFR 146.10) Requirements for Class II wells.~~ ( )

a. Prior to permanently decommissioning Class II wells, the well shall be plugged with cement in a manner which will not allow the movement of fluids either into or between underground sources of drinking water. ( )

b. Placement of the cement plugs shall be accomplished by one (1) of the following: ( )

i. The Balance method; ( )

ii. The Dump Bailer method; ( )

iii. The Two-Plug method; or ( )

iv. An alternative method approved by the Director, which will reliably provide a comparable level of protection to underground sources of drinking water. ( )

c. The well to be decommissioned shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director, prior to the placement of the cement plug(s). ( )

055. -- 056. (RESERVED)

057. CLASS II: ACTIONS ON APPROVED PERMITS.

01. Modification, Revocation and Reissuance, or Termination of Permits. ~~(40 CFR 124.5)~~ ( )

a. Permits may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Director's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in Subsections 057.02 and 057.03. All requests shall be in writing and shall contain facts or reasons supporting the request. ( )

b. If the Director decides the request is not justified, he or she shall send the requester a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comment, or hearings. ( )

c. Modification. ( )

i. If the Director tentatively decides to modify or revoke and reissue a permit under Subsection 057.02, he shall prepare a draft permit under Subsection 048.0~~3~~1 incorporating the proposed changes. The Director may request additional information and, in the case of a modified permit, may require the submission of an updated application. In the case of revoked and reissued permits the Director shall require the submission of a new application. ( )

ii. In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit. When a permit is revoked and reissued under this section, the entire permit is reopened just as if the permit had expired and was being reissued. During any revocation and reissuance proceeding the permittee shall comply with all conditions of the existing permit until a new final permit is reissued. ( )

iii. "Minor modifications" as defined in Subsection 057.04 are not subject to the requirements of this section. ( )

d. Termination. If the Director tentatively decides to terminate a permit under Subsection 057.03, he or she shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under Subsection 048.01. ( )

e. All draft permits (including notices of intent to terminate) prepared under this section shall be based on the administrative record as defined in Subsection 048.03. ( )

02. Causes for Modification or Revocation and Reissuance of Permits. ~~(40 CFR 144.39)~~ When the Director receives any information (for example, inspects the facility, receives information submitted by the permittee as required in the permit (see Subsection 051.01), receives a request for modification or revocation and reissuance under Subsection 057.01, or conducts a review of the permit file) he or she may determine whether or not one (1) or more of the causes listed in Paragraphs 05~~1~~7.02.a. and 05~~1~~7.02.b. of this rule for modification or revocation and reissuance or both exist. If cause exists, the Director may modify or revoke and reissue the permit accordingly, subject to the limitations of Paragraph 05~~1~~7.02.c. of this section, and may request an updated application if necessary. When a permit is modified, only the conditions subject to modification are reopened. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a new term. See Subparagraph 057.01.c.ii. If cause does not exist under this section or Subsection 057.04, the Director shall not modify or revoke and reissue the permit. If a permit modification satisfies the criteria in Subsection 057.04 for "minor modifications" the permit may be modified without a draft permit or public review. Otherwise, a draft permit must be prepared. ( )

a. Causes for modification. For Class II wells the following are ~~be~~ causes for revocation and reissuance as well as modification. ( )

i. Alterations. There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit. ( )

ii. New regulations. The standards or regulations on which the permit was based have been changed by promulgation of new or amended standards or regulations or by judicial decision after the permit was issued. ( )

iii. Compliance schedules. The Director determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonably available remedy. See also Paragraph 057.04.c. ( )

b. Causes for modification or revocation and reissuance. The following are causes to modify or, alternatively, revoke and reissue a permit: ( )

i. Cause exists for termination under Subsection 057.03, and the Director determines that modification or revocation and reissuance is appropriate. ( )

ii. The Director has received notification (as required in the permit, see Paragraph 057.04.d.) of a proposed transfer of the permit. A permit also may be modified to reflect a transfer after the effective date of an automatic transfer (Paragraph 057.06.b.) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new permittee. ( )

iii. A determination that the waste being injected is a hazardous waste as defined in Title 39, Chapter 4403 of the Idaho Code either because the definition has been revised, or because a previous determination has been changed. ( )

c. Facility siting. Suitability of the facility location will not be considered at the time of permit modification or revocation and reissuance unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time of permit issuance. ( )

03. Causes For Termination of Permits. ~~(40 CFR 144.40)~~ ( )

a. The Director may terminate a permit during its term, or deny a permit renewal application for the following causes: ( )

i. Noncompliance by the permittee with any condition of the permit; ( )

ii. The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time; or ( )

iii. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; ( )

b. The Director shall follow the applicable procedures in Subsection 020.03 and Subsection 057.01 in terminating any permit under this section. ( )

04. Minor Modifications of Permits. ~~(40 CFR 144.41)~~

~~-~~Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section. Any permit modification not processed as a minor modification under this section must be made for cause and with a draft permit and public notice as required in Subsections 048.01 and 048.04. Minor modifications may only: ( )

a. Correct typographical errors; ( )

b. Require more frequent monitoring or reporting by the permittee; ( )

c. Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement; or ( )

d. Allow for a change in ownership or operational control of a facility where the Director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the Director. ( )

e. Change quantities or types of fluids injected, so long as they are within the capacity of the facility as permitted and, in the judgment of the Director, would not interfere with the operation of the facility or its ability to meet conditions described in the permit and would not change its classification. ( )

f. Change construction requirements approved by the Director pursuant to Subparagraph 051.02.a.i. (establishing UIC permit conditions), provided that any such alteration shall comply with the requirements of this Section and Subsection 045.06. ( )

g. Amend a plugging and abandonment plan which has been updated under Subparagraph 051.02.a.~~v~~vi. ( )

05. Continuation of Expiring Permits. ~~(40 CFR 144.37)~~ ( )

a. The conditions of an expired permit continue in force until the effective date of a new permit if: ( )

i. The permittee has submitted a timely application which is a complete application for a new permit; and ( )

ii. The permittee has submitted all supplemental information requested by the Director; and IDWR suggested revision. ( )

iii. The Director, through no fault of the permittee does not issue a new permit with an effective date on or before the expiration date of the previous permit (for example, when issuance is impracticable due to time or resource constraints). ( )

b. Effect. Permits continued under this section remain fully effective and enforceable. ( )

c. Enforcement. When the permittee is not in compliance with the conditions of the expiring or expired permit the Director may choose to do any or all of the following: ( )

i. Initiate enforcement action based upon the permit which has been continued; ( )

ii. Issue a notice of intent to deny the new permit. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit; ( )

iii. Issue a new permit with appropriate conditions; or ( )

iv. Take other actions authorized by these regulations. ( )

d. State continuation. An EPA issued permit does not continue in force beyond its time expiration date under Federal law if at that time a State is the permitting authority. A State authorized to administer the UIC program may continue either EPA or State-issued permits until the effective date of the new permits, if State law allows. Otherwise, the facility or activity is operating without a permit from the time of expiration of the old permit to the effective date of the State-issued new permit. ( )

06. Transfer of Permits. ~~(40 CFR 144.38)~~ ( )

a. Transfers by modification. Except as provided in Paragraph 05~~1~~7.06.b. of this rule, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under Subparagraph 057.02.b.ii.), or a minor modification made (under Paragraph 057.04.d.), to identify the new permittee. ( )

b. Automatic transfers. As an alternative to transfers under Paragraph 05~~1~~7.06.a. of this rule, any UIC permit for a well not injecting hazardous waste or injecting carbon dioxide for geologic sequestration may be automatically transferred to a new permittee if: ( )

i. The current permittee notifies the Director at least 30 days in advance of the proposed transfer date referred to in Subparagraph 05~~1~~7.06.b.ii. of this rule; ( )

ii. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them, and the notice demonstrates that the financial responsibility requirements of Subparagraph 051.02.a.vi~~i~~ will be met by the new permittee; and ( )

iii. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify or revoke and reissue the permit. A modification under this paragraph may also be a minor modification under Subsection 057.04. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Subparagraph 05~~1~~7.06.b.ii. of this rule. ( )

07. Records. ~~(40 CFR 144.17)~~ The Director may require, by written notice on a selective well-by-well basis, an owner or operator of an injection well to establish and maintain records, make reports, conduct monitoring, and provide other information as is deemed necessary to determine whether the owner or operator has acted or is acting in compliance with these rules. ( )

058. -- 059. (RESERVED)

060. CLASS II: GENERAL PROVISIONS.

01. Obligation to Raise Issues and Provide Information During The Public Comment Period. ~~(40 CFR 124.13)~~ All persons, including applicants, who believe any condition of a draft permit is inappropriate or that the Director's tentative decision to deny an application, terminate a permit, or prepare a draft permit is inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period (including any public hearing) under Subsection 048.04. Any supporting materials which are submitted shall be included in full and may not be incorporated by reference, unless they are already part of the administrative record in the same proceeding, or consist of State or Federal statutes and regulations, or other generally available reference materials. Commenters shall make supporting materials not already included in the administrative record available to the Department as directed by the Director. (A comment period longer than 30 days may be necessary to give commenters a reasonable opportunity to comply with the requirements of this section. Additional time shall be granted under Subsection 048.04 to the extent that a commenter who requests additional time demonstrates the need for such time.) ( )

02. Stays of Contested Permit Conditions. ~~(40 CFR 124.16)~~ ( )

a. Stays. ( )

i. If an Administrative Appeal of a permit under Section 003 of these rules is filed, the effect of the contested permit conditions shall be stayed and shall not be subject to judicial review pending final agency action. Uncontested permit conditions shall be stayed only until the date specified in Subparagraph 0~~52~~60.02.a.ii.(1) of this rule. If the permit involves a new injection well, the applicant shall be without a permit for the proposed new injection well pending final agency action. ( )

ii. Uncontested conditions. ( )

(1) Uncontested conditions which are not severable from those contested shall be stayed together with the contested conditions. The Director shall identify the stayed provisions of permits for existing injection wells. All other provisions of the permit for the existing injection well become fully effective and enforceable 30 days after the date of the notification required in Subparagraph 0~~52~~60.02.a.ii.(2) of this rule. ( )

(2) The Director shall, as soon as possible after receiving a petition for review, notify the applicant and all other interested parties of the uncontested (and severable) conditions of the final permit that will become fully effective enforceable obligations of the permit as of the date specified in Subparagraph 0~~52~~60.02.a.ii.(1) of this rule. ( )

b. Any facility or activity holding an existing permit must: ( )

i. Comply with the conditions of that permit during any modification or revocation and reissuance proceeding under Subsection 057.01; and ( )

ii. To the extent conditions of any new permit are stayed under Subsection 0~~52~~60.02, comply with the conditions of the existing permit which correspond to the stayed conditions, unless compliance with the existing conditions would be technologically incompatible with compliance with other conditions of the new permit which have not been stayed. ( )

03. Effect of A Permit. ~~(40 CFR 144.35)~~ ( )

a. The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege. ( )

b. The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations. ( )

04. Noncompliance and Program Reporting By The Director. ~~(40 CFR 144.8)~~ The Director shall prepare quarterly and annual reports as detailed below. The Director shall submit any reports required under this section to EPA. ( )

a. Quarterly reports. The Director shall submit quarterly narrative reports for facilities as follows: ( )

i. Format. The report shall use the following format: ( )

(1) Provide an alphabetized list of permittees. When two (2) or more permittees have the same name, the lowest permit number shall be entered first. ( )

(2) For each entry on the list, include the following information in the following order: ( )

(a) Name, location, and permit number of the noncomplying permittees. ( )

(b) A brief description and date of each instance of noncompliance for that permittee. Instances of noncompliance may include one (1) or more the kinds set forth in Subparagraph 05~~2~~60.04.a.ii. of this rule. When a permittee has noncompliance of more than one (1) kind, combine the information into a single entry for each such permittee. ( )

(c) The date(s) and a brief description of the action(s) taken by the Director to ensure compliance. ( )

(d) Status of the instance(s) of noncompliance with the date of the review of the status or the date of resolution. ( )

(e) Any details which tend to explain or mitigate the instance(s) of noncompliance. ( )

ii. Instances of noncompliance to be reported. Any instances of noncompliance within the following categories shall be reported in successive reports until the noncompliance is reported as resolved. Once noncompliance is reported as resolved it need not appear in subsequent reports. ( )

(1) Failure to complete construction elements. When the permittee has failed to complete, by the date specified in the permit, an element of a compliance schedule involving either planning for construction or a construction step (for example, begin construction, attain operation level); and the permittee has not returned to compliance by accomplishing the required elements of the schedule within 30 days from the date a compliance schedule report is due under the permit. ( )

(2) Modifications to schedules of compliance. When a schedule of compliance in the permit has been modified under Subsections 057.02 or 057.04 because of the permittee's noncompliance. ( )

(3) Failure to complete or provide compliance schedule or monitoring reports. When the permittee has failed to complete or provide a report required in a permit compliance schedule (for example, progress report or notice of noncompliance or compliance) or a monitoring report; and the permittee has not submitted the complete report within 30 days from the date it is due under the permit for compliance schedules, or from the date specified in the permit for monitoring reports. ( )

(4) Deficient reports. When the required reports provided by the permittee are so deficient as to cause misunderstanding by the Director and thus impede the review of the status of compliance. ( )

(5) Noncompliance with other permit requirements. Noncompliance shall be reported in the following circumstances: ( )

(a) Whenever the permittee has violated a permit requirement (other than reported under Subparagraph 05~~2~~60.04.a.ii.(1) or 05~~2~~60.04.a.ii.(2) of this rule), and has not returned to compliance within forty-five

(45) days from the date reporting of noncompliance was due under the permit; or ( )

(b) When the Director determines that a pattern of noncompliance exists for a facility permittee over the most recent four (4) consecutive reporting periods. This pattern includes any violation of the same requirement in two (2) consecutive reporting periods, and any violation of one (1) or more requirements in each of four (4) consecutive reporting periods; or ( )

(c) When the Director determines significant permit noncompliance or other significant event has occurred, such as a migration of fluids into a USDW ( )

(6) All other. Statistical information shall be reported quarterly on all other instances of noncompliance by facilities with permit requirements not otherwise reported under Paragraph 0~~5~~260.04.a. of this rule.

( )

b. Annual reports. ( )

i. Annual noncompliance report. Statistical reports shall be submitted by the Director on UIC permittees indicating the total number reviewed, the number of noncomplying permittees, the number of enforcement actions, and number of permit modifications extending compliance deadlines. The statistical information shall be organized to follow the types of noncompliance listed in Paragraph 0~~5~~260.04.a. of this rule.

( )

ii. In addition to the annual noncompliance report, the Director shall: ( )

(1) Submit each year a program report to EPA (in a manner and form prescribed by EPA) consisting of: ( )

(a) A detailed description of the State's implementation of its program; ( )

(b) Suggested changes, if any to the program description which are necessary to reflect more accurately the State's progress in issuing permits; ( )

(c) An updated inventory of active underground injection operations in the State. ( )

c. Schedule. ( )

i. For all quarterly reports. On the last working day of May, August, November, and February, the Director shall submit to EPA information concerning noncompliance with permit requirements by facilities in the State in accordance with the following schedule. ( )

ii. For all annual reports. The period for annual reports shall be for the calendar year ending December 31, with reports completed and available to the public no more than 60 days later. ( )

061. -- 069. (RESERVED)

070. CLASS V: CRITERIA AND STANDARDS. (RULE 70)

[Moved from Section 030]

***03*0~~1~~. ~~Inventory Information And Permit Requirements -~~ Class V Shallow Injection Well~~s~~ Requirements *~~(Rule 30)~~*.** ( )

***01*~~a~~.** Authorization. As a condition of authorization, all owners or operators of shallow Class V injection wells, including improved sinkholes used for aquifer recharge, that dispose of nonhazardous and

nonradioactive wastes are required to submit a Shallow Injection Well Inventory Form to the Department no later than thirty (30) days prior to commencement of construction for each new well or no later than thirty (30) days after the discovery of an existing injection well that has not previously been inventoried with the Department. Forms are available from any Department office or at the Department website at http://www.idwr.idaho.gov. State or local government entities ~~*involved in highway and street construction and maintenance shall submit the following inventory information:*~~ shall submit the following inventory information for wells associated with highway and street construction and maintenance projects. ~~*(5-3-03)*~~( )

~~*a*~~i. Facility name and location; and (7-1-93)

~~*b*~~ii. County in which the injection well(s) is (are) located; and (7-1-93)

~~*c*~~iii. Ownership of the well(s); and (7-1-93)

~~*d*~~iv. Name, address and phone number of legal contact; and (7-1-93)

~~*e*~~v. Type or function of the well(s); and (7-1-93)

~~*f*~~vi. Number of wells of each type; and (7-1-93)

~~*g*~~vii. Operational status of the well(s). (7-1-93)

~~*02*~~**b.** Inventory Fees. For shallow injection wells constructed after July 1, 1997, the Shallow Injection Well Inventory Form shall be accompanied by a fee as specified in Section 42-3905, Idaho Code, payable to the Department of Water Resources. ~~*New shallow injection wells used for the disposal of storm water from building roof or foundation drains are exempt from Shallow Injection Well Inventory Form filing requirements and fees of this chapter.*~~ State or local government entities are exempt from Shallow Injection Well Inventory Form filing fees ~~of this chapter~~ Section 052 for wells associated with highway and street construction and maintenance, but shall comply with all other requirements of these rules. ~~*(5-3-03)*~~( )

~~*03*~~**c. Permit Requirements**. If operation of a shallow Class V injection well is causing or may cause unreasonable contamination of a ~~*drinking water source*~~ USDW, or cause a violation of the ground water quality standards at a place of beneficial use, the Director shall require immediate cessation of the injection activity. Where a Class V injection well is owned or operated by an entity other than a state or local entity involved in highway and street construction and maintenance, the Director may authorize continued operation of the well through a permit that specifies the terms and conditions of acceptable operation. ~~*(5-3-03)*~~( )

~~*04*~~**d. Permanent ~~*Abandonment*~~ Decommission**. Owners or operators of shallow injection wells shall notify the Director not less than thirty (30) days prior to permanent ~~*abandonment*~~ decommissioning of any shallow injection well. Permanent ~~*abandonment*~~ decommissioning shall be accomplished in accordance with procedures approved by the Director. ~~*An Injection Well Abandonment Form shall be submitted with each notification.*~~
~~*(5-3-03)*~~( )

~~*05*~~**e. Inter-Agency Cooperation**. The Department may seek the assistance of other government agencies, including cities and counties, health districts, highway districts, and other departments of state government to inventory, monitor and inspect shallow injection wells, where local assistance is needed to prevent deterioration of ground water quality, and where injection well operation overlaps with water quality concerns of other agencies or local governing entities. Assistance is to be negotiated through a memorandum of understanding between the Department and the local entity, agency, or department, and is subject to the approval of the Director. (5-3-03)

~~***031. -- 034. (RESERVED)***~~

[Moved from Section 035]

0~~*35*~~2. ~~**Application For Permit To Construct, Modify Or Maintain An Injection Well**~~Class V Deep

Injection Well Requirements ~~*(Rule 35)*~~.

( )

~~01~~a. Application Requirements ~~for All Class V Wells, Except Those Class V Wells Authorized Without Permit~~. (7-1-93)

~~a~~i. No person shall continue to maintain or use an unauthorized injection well after the effective date given in Section 42-3903, Idaho Code, unless a permit therefor has been issued by the Director. No injection well requiring a permit under ~~Rule 235~~Subsection 070.02 shall be constructed, modified or maintained after the effective date given in Section 42-3903, Idaho Code, unless a permit therefor has been issued by the Director. No injection well requiring a permit shall continue to be used after the expiration of the permit issued for such well unless another application for permit therefor has been received by the Director. All applications for permit shall be on forms furnished by the Director. ~~*(5-3-03)*~~( )

~~b~~ii. Each application for permit to construct, modify or maintain an injection well, as required by these rules, shall be accompanied by a filing fee as specified in Section 42-3905, Idaho Code, payable to the Department of Water Resources. For the purposes of these rules, all wells or groups of wells associated with a "Remediation Project" may be administered as one (1) "well" at the discretion of the Director. (5-3-03)

~~02~~b. Application Information Required. An applicant shall submit the following information to the Director for all injection wells to be authorized by permit, unless the Director determines that it is not needed in whole or in part, and issues a written waiver to the applicant: (5-3-03)

~~a~~i. Facility name and location; (7-1-93)

~~b~~ii. Name, address and phone number of the well operator; (7-1-93)

~~c~~iii. Class, subclass and function of the injection well (see Rule ~~25~~4035); ~~*(7-1-93)*~~( )

~~d~~iv. Latitude/longitude or legal description of the well location to the nearest ten (10) acre tract; (5-3-03)

~~e~~v. Ownership of the well; (7-1-93)

~~f~~vi. County in which the injection well is located; (7-1-93)

~~g~~vii. Construction information for the well; (7-1-93)

~~h~~viii. Quantity and general character of the injected fluids; (7-1-93)

~~i~~~~x~~ix. Status of the well ~~*(to be constructed, active, temporarily abandoned, etc.)*~~; ~~*(7-1-93)*~~( )

~~j~~x. A topographic map or aerial photograph extending one (1) mile beyond property boundaries, depicting: (7-1-93)

~~i~~(1). Location of the injection well and associated facilities described in the application; (7-1-93)

~~ii~~(2). Locations of other injection wells; (7-1-93)

~~iii~~(3). Approximate drainage area, if applicable; (7-1-93)

~~iv~~(4). Hazardous waste facilities, if applicable; (7-1-93)

~~v~~(5). All wells used to withdraw drinking water; (7-1-93)

~~vi~~(6). All other wells, springs and surface waters. (7-1-93)

~~k~~xi. Distance and direction to nearest domestic well; (7-1-93)

~~l~~xii. Depth to ground water; and (5-3-03)

~~m~~xiii. Alternative methods of waste disposal. (7-1-93)

~~03~~c. **Additional Information**. The Director may require the following additional information for Class V injection wells to assess potential effects of injection: (5-3-03)

~~a~~i. A topographic map showing locations of the following within a two (2) mile radius of the injection well: (5-3-03)

~~i~~(1). All wells producing water; (7-1-93)

~~ii~~(2). All exploratory and test wells; (7-1-93)

~~iii~~(3). All other injection wells; (7-1-93)

~~iv~~(4). Surface waters (including man-made impoundments, canals and ditches); (7-1-93)

~~v~~(5). Mines and quarries; (7-1-93)

~~vi~~(6). Residences; (7-1-93)

~~vii~~(7). Roads; (7-1-93)

~~viii~~(8). Bedrock outcrops; and (5-3-03)

~~ix~~(9). Faults and fractures. (7-1-93)

~~b~~iii. Additional maps or aerial photographs of suitable scale to accurately depict the following: (7-1-93)

~~i~~(1). Location and surface elevation of the injection well described in this permit; (7-1-93)

~~ii~~(2). Location and identification of all facilities within the property boundaries; (7-1-93)

~~iii~~(3). Locations of all wells penetrating the proposed injection zone or within a one-quarter (1/4) mile radius of the injection well; (7-1-93)

~~iv~~(4). Maps and cross sections depicting all underground sources of drinking water to include vertical and lateral limits within a one-quarter (1/4) mile radius of the injection well, their position relative to the injection zone and the direction of water movement: local geologic structures; regional geologic setting. (7-1-93)

~~c~~iv~~v~~ii. A comprehensive report of the following information: (7-1-93)

~~i~~(1). A tabulation of all wells penetrating the proposed injection zone, listing owner, lease holder and operator; well identification (permit) number; size, weight, depth and cementing data for all strings of casing; (7-1-93)

~~ii~~(2). Description of the quality and quantity of fluids to be injected; (7-1-93)

~~iii~~(3). Geologic, hydrogeologic, and physical characteristics of the injection zone and confining beds; (5-3-03)

~~iv~~(4). Engineering data for the proposed injection well; (7-1-93)

~~v~~(5). Proposed operating pressure; (7-1-93)

~~vi~~(6). A detailed evaluation of alternative disposal practices; (7-1-93)

~~vii~~(7). A plan of corrective action for wells penetrating the zone of injection, but not properly sealed or ~~abandoned~~ decommissioned; and ~~(5-3-03)~~( )

~~viii~~(8). Contingency plans to cope with all shut-ins or well failures to prevent the migration of unacceptable fluids into underground sources of drinking waters. (7-1-93)

~~d~~iv. Name, address and phone number of person(s) or firm(s) supplying the technical information and/or designing the injection well; (7-1-93)

~~e~~vi. Proof that the applicant is financially responsible, through a performance bond or other appropriate means, to ~~abandon~~ decommission the injection well in ~~accordance with the conditions of the permit~~ a manner approved by the Director. ~~(5-3-03)~~( )

~~04~~d. Other Information. The Director may require of any applicant such additional information as may be necessary to demonstrate that the proposed or existing injection well will not endanger ~~drinking water sources~~ a USDW. The Director will not complete the processing of an application for which additional information has been requested until such time as the additional information is supplied. The Director may return any incomplete application and will not process such application until such time as the application is received in complete form. ~~(7-1-93)~~( )

~~036. 039. (RESERVED)~~

[Moved from Section 040]

0~~40~~3. **Application Processing** ~~(Rule 40)~~. ( )

~~01~~a. **Draft Permit**. After all application information is received and evaluated, the Director will prepare a draft permit or denial, which will include the application for permit, permit conditions or reasons for denial, and any compliance schedules or monitoring requirements. ~~Closed-loop heat exchange wells (Subclass 5A7), as described by Rule Subsection 040.05 are exempt from the draft permit provisions of this rule.~~ In preparing the draft permit or denial, the Director shall consider the following factors: ~~(7-1-93)~~( )

~~a~~i. The availability of economic and practical alternative means of disposal; (7-1-93)

~~b~~ii. The application of best management practices to the facilities and/or area draining into the well; (7-1-93)

~~c~~iii. The availability of economical, practical means of treating or otherwise reducing the amount of contaminants in the injected fluids; (7-1-93)

~~d~~iv. The quality of the receiving ground water, its category, its present and future beneficial uses or interconnected surface water; (7-1-93)

~~e~~v. The location of the injection well with respect to drinking water supply wells; and (5-3-03)

~~f~~vi. Compliance with the IDAPA 58.01.11, "Ground Water Quality Rule." (5-3-03)

~~02~~b. **Public Notice**. The Director will provide public notice of any draft permit to construct, maintain or modify a Class V injection well by means of a legal notice in a newspaper of general circulation in the county in which the well is located. The Director may give additional notice as necessary to adequately inform the interested

public and governmental agencies. There shall be a period of at least thirty (30) days following publication for any interested person to submit written comments and to request a fact-finding hearing. The hearing will be held by the Director if deemed necessary. (7-1-93)

03c. **Review by the Directors of Other State Agencies**. The Directors of other state agencies, as determined by the Director, shall be provided the opportunity to review and comment on draft permits. Comments shall be submitted to the Director within thirty (30) days of the public or legal notice. (7-1-93)

04. Fact-Finding Hearings. At the Director's discretion, or upon motion of any interested individual, the Director may elect to hold a fact-finding hearing. Said hearing will be held at a location in the geographical area of the injection well, and may consider related groups of draft permits. Notice of said hearing will be provided at least thirty (30) days in advance of the hearing by regular mail to the applicant and to the person or persons requesting the hearing. Public notice of the fact finding hearing will be made by means of press release to a newspaper of general circulation in the county of the application. (7-1-93)

05d. *Closed* Open-Loop Heat *Exchange* Pump Return Wells (Subclass 5A7). ( )

i. An *closed* open-loop heat *exchange* pump return well greater than eighteen (18) feet in depth to be used solely for disposal of heat pump water at a rate not exceeding fifty (50) gpm does not require a draft permit and is not subject to a recurring permit cycle, however, registration of the well with the Department and submittal of a filing fee as specified in Section 42-3905, Idaho Code is required. The Director reserves the right to override the exemptions from the draft permit and permit cycle requirements. ( )

ii. *Public notification of the application shall be by a posted notice at the regional office of the Department where the application is made, or other method approved by the Director, and shall contain the following standard operating conditions: Rules for Construction and Use of Injection Wells shall be followed. Violation of the standards stated in Rule Subsection 050.04 is adequate cause for cancellation of the permit; Injection shall be restricted to heat pump water; A closed loop system shall be maintained to prevent contamination of the injected fluids. A protected air vent may be installed if needed, and a sampling port is required; Additives shall be used in the water only if approved by the Department of Water Resources; Should the use of the well lead to degradation of the quality of the ground water, this permit may be canceled; A well log shall be submitted to the Department within thirty (30) days of the completion of the well. Permits for large capacity closed loop heat exchange wells injecting over fifty (50) gpm will be processed with a draft permit and public notice as described in these rules.* An open-loop heat pump return well greater than eighteen (18) feet in depth to be used solely for disposal of heat pump return water at a rate exceeding fifty (50) gpm is subject to the requirements of Subsections 070.02 and 070.03 of these rules. *(5-3-03)*( )

e. Fact-Finding Hearings. At the Director's discretion, or upon motion of any interested individual, the Director may elect to hold a fact-finding hearing. Said hearing will be held at a location in the geographical area of the injection well. Notice of said hearing will be provided at least thirty (30) days in advance of the hearing by regular mail to the applicant and to the person or persons requesting the hearing. Public notice of the fact-finding hearing will be made by means of press release to a newspaper of general circulation in the county of the application. ( )

041. -- 044. (RESERVED)

[Moved from Section 045]

04*5*. **The Director's Action On Draft Permits And Duration Of Approved Permits** *(Rule 45)*. The role of the Director is to determine whether or not the injection wells and their respective owners or operators are in compliance with the intent of these rules, thus protecting the ground waters of the state against unreasonable contamination or deterioration of quality and preserving them for diversion to beneficial uses. (7-1-93)

01a. **Consideration**. The Director will consider the following factors in taking final action on draft permits: (7-1-93)

~~a~~i. The likelihood and consequences of the injection well system failing; (7-1-93)

~~b~~ii. The long term effects of such disposal or storage; (7-1-93)

~~c~~iii. The recommendations and related justifications of the Directors of other state agencies and the public; (5-3-03)

~~d~~iv. The potential for violation of ground water quality standards at the point of injection or the point of beneficial use; and (5-3-03)

~~e~~v. Compliance with the Idaho Ground Water Quality Plan. (5-3-03)

~~02~~b. **Issuance of Permit**. After considering the draft permit for construction, modification, or maintenance, and all matters relating thereto, the Director shall issue a permit if the standards and criteria of ~~*Rule 50*~~ Subsection 070.05 will be met and ~~*drinking water sources*~~ USDW's will not otherwise be unreasonably affected. If the Director finds that the standards and criteria cannot be met or that ground water sources cannot otherwise be protected from unreasonable contamination at all times, the draft permit may be denied or a permit may be issued with conditions designed to protect ground water sources. The Director's decision shall be in writing and a copy shall be mailed by regular mail to the applicant and to all persons who commented in writing on the draft permit or appeared at a hearing held to consider the draft permit. ~~(5-3-03)~~( )

~~03~~c. **Permit Conditions and Requirements**. Any permit issued by the Director shall contain conditions to insure that ground water sources will be protected from waste, unreasonable contamination, or deterioration of ground water quality that could result in violations of the ground water quality standards. In addition to specific construction, operation, maintenance and monitoring requirements that the Director finds necessary, each permit shall be subject to the standard conditions and requirements of this rule. (5-3-03)

~~04~~d. **Construction Requirements**. (7-1-93)

~~a~~i. Well drillers or other persons involved with the construction of any injection well requiring a permit shall not commence construction on the facility until a certified copy of the approved permit is obtained from the Director. (7-1-93)

~~b~~ii. Deep injection wells shall be constructed by a licensed water well driller to conform with the current Minimum Well Construction Standards and the conditions of the permit, except that a driller's license is not required for the construction of a driven mine shaft or a dug hole. (7-1-93)

~~c~~iii. Shallow injection wells authorized by permit shall be constructed in accordance with the conditions of the permit. Rule-authorized shallow injection wells shall be constructed as shown or described in the inventory submittal. (5-3-03)

~~d~~iv. Injection wells shall be constructed to prevent the entrance of any fluids other than specified in the permit. (7-1-93)

~~e~~v. Injection wells shall be constructed to prevent waste of artesian fluids or movement of fluids from one aquifer into another. (7-1-93)

~~f~~vi. When construction or modification of an injection well has been completed, the owner or operator shall inform the Director of completion on a form provided by the Department. (7-1-93)

~~g~~vii. A sampling port shall be provided if the injection well system is enclosed. (5-3-03)

~~h~~viii. All new injection wells constructed into alluvial formations shall have a minimum ten (10) foot separation from the bottom of the well and seasonal high ground water. (5-3-03)

~~i.~~(1) Injection wells installed into fractured basalt are exempt from separation distances. (5-3-03)

~~ii.~~(2) The Director may reduce separation distance requirements if the quality of injected fluids are improved through additional treatment or BMPs. (5-3-03)

(3) Heat pump return wells (sub-class 5A7) are exempt from the separation distance requirement of this section. ( )

~~05~~c. **Operational Conditions**. (7-1-93)

~~a~~i. The injection well shall not be used until the construction, operation and maintenance requirements of the permit are met and provisions are made for any required inspection, monitoring and record keeping. (7-1-93)

~~b~~ii. Injection of any contaminant ~~as defined in Rule 50~~ at concentrations exceeding the standards set in Paragraph 070.05.c. into a present or future drinking or other ground water source that may cause a health hazard or adversely affect a designated and protected use is prohibited. ~~(7-1-93)~~( )

~~c~~iii. The injection well owner or operator shall develop approved procedures to detect constructional or operational failure in a timely fashion, and shall have contingency plans to cope with the well failure. (7-1-93)

~~d~~iv. Authorized representatives of the Department shall be allowed to enter, inspect and/or sample: (7-1-93)

~~i.~~(1) The injection well and related facilities; (7-1-93)

~~ii.~~(2) The owner or operator's records of the injection operation; (7-1-93)

~~iii.~~(3) Monitoring instrumentation associated with the injection operation; and (7-1-93)

~~iv.~~(4) The injected fluids. (7-1-93)

~~e~~v. The injection facilities shall be operated and maintained to achieve compliance with all terms and conditions of this permit. (7-1-93)

~~i.~~(1) Proper operation and maintenance includes effective performance, adequate funding, operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures; (7-1-93)

~~ii.~~(2) If compliance cannot be met, the owner shall take corrective action ~~(See Rule 065)~~ as determined by the Director or terminate injection. ~~(5-3-03)~~( )

~~f~~vi. The owner shall mitigate any adverse effects resulting from non-compliance with the terms and conditions of the permit. (7-1-93)

~~g~~vii. If the injection well was constructed prior to issuance of the permit, the well shall be brought into compliance with the terms and conditions of the permit in accordance with the schedule of compliance issued by the Director. (7-1-93)

~~h~~viii. The permit shall not convey any property rights. (7-1-93)

~~06~~f. Conditions of Permanent ~~and Temporary Abandonment~~ Decommissioning. ~~(7-1-93)~~( )

~~a~~i. Notice of ~~abandonment for wells~~ intent to ~~be~~ permanently ~~abandoned~~ decommission a well shall be submitted ~~on a form provided by~~ to the Director not less than thirty (30) days prior to commencement of the ~~abandonment~~ decommissioning activity. ~~(5-3-03)~~( )

~~b~~ii. The method of permanent ~~abandonment~~ decommissioning for all injection wells shall be approved by the Director prior to commencement of the ~~abandonment~~ decommissioning activity~~ and shall be in accordance with current well construction standards. Permanent abandonment requires plugging the well bore with bentonite grout, cement grout, concrete, or other impermeable material to prevent the upward or downward migration of fluids~~. ~~(5-3-03)~~( )

~~c~~iii. Notice of completion of permanent ~~abandonment~~ decommission shall be submitted to the Director within thirty (30) days of completion. ~~(7-1-93)~~( )

~~d~~iv. All deep injection wells that are to be permanently ~~abandoned~~ decommissioned shall be plugged ~~with cement grout or other impervious material in such a manner as to prevent movement of fluids into or between drinking or other ground water sources~~ in accordance with current Well Construction Standards and/or ~~the conditions of the permit~~. ~~(7-1-93)~~( )

~~e~~v. Following permanent cessation of use, or where an injection well is not completed, the Director shall be notified. ~~Abandonment~~ Decommissioning procedures or other action, as prescribed by the Director, shall be conducted. ~~(7-1-93)~~( )

~~f~~vi. The injection well owner or operator ~~shall maintain the financial~~ has the responsibility to insure that the injection operation is ~~abandoned~~ decommissioned as prescribed. ~~(7-1-93)~~( )

~~g. Temporary abandonment, including use of a welded steel plate to cover the well opening, or a packer to occlude the well bore does not exempt the owner or operator from the requirement to obtain a permit. A well that is permitted as temporarily abandoned must receive a new permit in order to inject fluids. (7-1-93)~~

~~07~~g. Duration of Approved Permits. The length of time that a permit may be in effect for Class V wells requiring permits shall not exceed ten (10) years. (7-1-93)

~~046. -- 049. (RESERVED)~~

[Moved from Section 050]

05~~0~~. Standards For The Quality Of Injected Fluids And Criteria For Location And Use ~~(Rule 50)~~. ( )

~~01~~a. General. These standards, which are minimum standards that are to be adhered to for all deep injection wells and shallow injection wells requiring permits and rule-authorized wells not requiring permits, are based on the premise that if the injected fluids meet ground water quality standards for physical, chemical and radiological contaminants, and if ground water produced from adjacent points of diversion for beneficial use meets the water quality standards as defined ~~by Rule 010~~ in Section 010 of these rules, then that aquifer will be protected from unreasonable contamination and will be preserved for diversion to beneficial uses. The Director may, however, when it is deemed necessary, require specific injection wells to be constructed and operated in compliance with additional requirements, such as best management practices (BMPs), so as to protect the ground water resource from deterioration and preserve it for diversion to beneficial use. ~~(5-3-03)~~( )

~~02~~b. Waivers. A waiver of one (1) or more standards may be granted by the Director if it can be demonstrated by the applicant that the contaminants in injected fluid will not endanger a ground water source for any present or future beneficial use. (5-3-03)

~~03~~c. Standards for Quality of Fluids Injected ~~by~~ into Class V Wells. ~~(5-3-03)~~( )

~~a~~i. Ground water quality standards for chemical and radiological contaminants in injected fluids. After the effective date of these standards, the following limits shall not be exceeded in injected fluids from a well when such fluids will or are likely to reach a ~~drinking water source~~ USDW: ~~(5-3-03)~~( )

~~i.~~(1) Chemical contaminants. The concentration of each chemical contaminant in the injected fluids shall not exceed the ground water quality standard for that chemical contaminant, or the concentration of each contaminant in the receiving water, whichever requirement is less stringent; and (5-3-03)

~~ii.~~(2) Radiological contaminants. Radiological levels of the injected fluids shall not exceed those levels specified by the ground water quality standards. (5-3-03)

~~b~~ii. Restrictions on injection of fluids containing biological contaminants. The following restrictions apply to biological contaminants included in the ground water quality standard in injected fluids. Coliform bacteria: injected fluids containing coliform bacteria are subject to the following restrictions: (5-3-03)

~~i.~~(1) Contamination of ground water produced at any existing point of diversion for beneficial use, or any point of diversion for beneficial use developed in the future, by injected fluids is prohibited; ~~(5-3-03)~~(____)

~~ii.~~(2) The Director may require the use of best management practices (BMPs) to reduce the concentration of coliform bacteria in the injected fluids; (5-3-03)

~~iii.~~(3) The Director may require the use of water treatment technology, including ozonation and chlorination devices, sand filters, and settling pond specifications to reduce the concentration of coliform bacteria in injected fluids; (5-3-03)

~~iv.~~(4) Ground water produced from points of diversion for beneficial use adjacent to injection wells that dispose of fluids containing coliform bacteria in concentrations greater than the current ground water quality standard shall be subject to monitoring for bacteria by the owner/operator of the injection well. A waiver of the monitoring requirement may be granted by the Director when it can be demonstrated that injection will not result in unreasonable contamination of ground water produced from these adjacent points; (5-3-03)

~~v.~~(5) Construction of new Subclass 5F1 injection wells, and other shallow and deep injection wells, as specified by the Director, that are likely to exceed the current ground water quality standard for coliform bacteria at the point of beneficial use is prohibited; and (5-3-03)

~~vi.~~(6) At no time shall any fluid containing or suspected of containing fecal contaminants of human origin be injected into any Class V injection well authorized under these rules. (7-1-93)

~~c~~iii. Physical, visual and olfactory characteristics. The following restrictions apply to physical, visual and olfactory characteristics of injected fluids. Temperature, color, odor, turbidity, conductivity and pH: the temperature, color, odor, conductivity, turbidity, pH or other characteristics of the injected fluid may not result in the receiving ground water becoming less suitable for diversion to beneficial uses, as determined by the Director. (7-1-93)

~~d~~iv. Contamination by an injection well of ground water produced at an existing point of diversion for beneficial use, or a point of diversion for beneficial use developed in the future, shall not exceed water quality standards defined ~~by Rule~~ in S~~ubs~~ection 010~~.57~~ of these rules. ~~(5-3-03)~~(____)

~~04~~d. Criteria for Location and Use of Class V Wells Requiring Permits. (7-1-93)

~~a~~i. A Class V well requiring a permit may be required to be located a minimum distance, as determined from Table 1, from any point of diversion for beneficial use that could be harmed by bacterial contaminants. This requirement is not applicable to injection wells injecting wastes of quality equal to or better than adopted ground water quality standards in all respects. In addition, Class V wells may be required to be located at such a distance from a point of diversion for beneficial use as to minimize or prevent ground water contamination resulting from unauthorized or accidental injection, as determined by the Director. (5-3-03)

~~b~~ii. These location requirements in Table 1 may be waived, as per ~~Rule Subsection 050.02~~ Paragraph 070.05.b., when the applicant can demonstrate that any springs or wells within the calculated perimeter of the generated perched water zone will not be contaminated by the applicant's waste disposal or injection well.

Monitoring by the applicant of the production wells or springs in question may be required to demonstrate that they are not being contaminated.

Determined Radii of Perched Water Zones Based on Maximum Average Weekly Injection Rates (cfs) of Class V Injection Wells *	
Injection (cfs)	**Radius of Generated Perched Water Zone (ft)**
0 - 0.20	800
0.20 - 0.60	1,400
0.61 - 1.00	1,800
1.01 - 2.00	2,500
2.01 - 3.00	3,000
3.01 - 4.00	3,500
4.01 - 5.00	4,000
Greater than 5.00	As determined by the Director

* Injection rates shall be based on the average volume of wastes injected by the well during the week of greatest injection in an average water year. ~~*(5-3-03)*~~( )

~~*05*~~**c.** Standards for the Quality of Fluids Injected by Subclass 5A7 Wells (~~*closed*~~ open-loop heat ~~*exchange*~~ pump return). ~~*(7-1-93)*~~( )

~~*a*~~i. The quality of fluids injected by a Subclass 5A7 injection well shall comply with ground water quality standards or shall be equal to the quality of the ground water source to the heat ~~*exchanger*~~ pump, whichever is less stringent. ~~*(5-3-03)*~~( )

~~*b*~~ii. If the quality of the ground water source does not meet ground water quality standards, the injected fluids must be returned to the formation containing the ground water source. (5-3-03)

~~*c*~~iii. The temperature of the injected fluids shall not impair the designated beneficial uses of the receiving ground water. (7-1-93)

~~*d*~~iv. All Rule-authorized Injection Wells shall conform to the ground water quality standards at the point of injection and not cause any water quality standards to be violated at any point of beneficial use. (5-3-03)

~~*051. -- 054. (RESERVED)*~~

[Moved from Section 055]

0~~*55*~~6. **Monitoring, Record Keeping And Reporting Requirements** ~~*(Rule 55)*~~. The Director may require monitoring, record keeping and reporting by any owner or operator if the Director finds that the well may adversely affect a ground water source or is injecting a contaminant that could have an unacceptable effect upon the quality of the ground waters of the state. (5-3-03)

01. **a.** Monitoring. (7-1-93)

a. i. Any injection authorized by the Director shall be subject to monitoring and record keeping requirements as conditions of the permit. Such conditions may require the installation, use and maintenance of monitoring equipment or methods. The Director may require where appropriate, but is not limited to, the following: (7-1-93)

i. (1) Monitoring of injection pressures and pressures in the annular space between casings; (7-1-93)

ii. (2) Flow rate and volumes; (7-1-93)

iii. (3) Analysis of quality of the injected fluids for contaminants that are subject to limitation or reduction under the conditions of the permit; or contaminants which the Director determines could have an unacceptable effect on the quality of the ground waters of the state, and which the Director has reason to believe are in the injected fluids; (7-1-93)

iv. (4) Monitoring of ground water through special monitoring wells or existing points of diversion for beneficial use in the zone of influence as determined by the Director; (7-1-93)

v. (5) A demonstration of the integrity of the casing, tubing or seal of the injection well. (7-1-93)

b. ii. The frequency of required monitoring shall be specified in the permit when issued, except that the Director at any time may, in writing, require additional monitoring and reporting. (7-1-93)

c. iii. All monitoring tests and analysis required by permit conditions shall be performed in a state certified laboratory or other laboratory approved by the Director ~~*in accordance with the recommended methods set forth in the latest edition of "Standard Methods for the Examination of Water and Wastewater," American Public Health Association; "Methods for Chemical Analysis of Water and Wastes," EPA, American Society for Testing and Materials Standards; or other authority recognized by the Director*~~. ~~*(7-1-93)*~~( )

d. iv. Any field instrumentation used to gather data, when specified as a condition of the permit, shall be required by the Director to be tested and maintained in such a manner as to ensure the accuracy of the data. (7-1-93)

e. v. All samples and measurements taken for the purpose of monitoring shall be representative of the monitoring activity and fluids injected. (7-1-93)

02. **b.** Record Keeping. The permittee shall maintain records of all monitoring activities to include: (7-1-93)

a. i. Date, time and exact place of sampling; (7-1-93)

b. ii. Person or firm performing analysis; (7-1-93)

c. iii. Date of analysis, analytical methods used and results of analysis; (7-1-93)

d. iv. Calibration and maintenance of all monitoring instruments; and (7-1-93)

e. v. All original tapes, strip charts or other data from continuous or automated monitoring instruments. (7-1-93)

~~***03. Five Year Retention of Records.*** *The permittee shall retain for a period of five (5) years all records of monitoring, construction and application information. The period of retention shall be extended during the course of any litigation regarding the injection of contaminants by the permittee or when requested by the Director. This requirement shall continue in effect during the five (5) year period following permanent abandonment of a well.* *(7-1-93)*~~

~~04.~~ c. Reporting. (7-1-93)

~~a.~~ i. Monitoring results obtained by the permittee pursuant to the monitoring requirements prescribed by the Director shall be reported to the Director as required by permit conditions. (7-1-93)

~~b.~~ ii. The Director shall be notified in writing by the permittee within five (5) days after the discovery of violation of the terms and conditions of the permit. If the injection activity endangers human health or a public or domestic water supply, use of the injection well shall be immediately discontinued and the owner or operator shall immediately notify the Director. Notification shall contain the following information: (7-1-93)

~~i.~~ (1) A description of the violation and its cause; (7-1-93)

~~ii.~~ (2) The duration of the violation, including dates and times; if not corrected or use of the well discontinued, the anticipated time of correction; and (5-3-03)

~~iii.~~ (3) Steps being taken to reduce, eliminate and prevent recurrence of the injection. (7-1-93)

~~c~~ iii. Where the owner or operator becomes aware of failure to submit any relevant facts in any permit application or report to the Director, that person shall promptly submit such facts or information. (7-1-93)

~~d~~ iv. The permittee shall furnish the Director, within a time specified by the Director, any information which the Director may request to determine compliance with the permit. (7-1-93)

~~e~~ v. All applications for permits, notices and reports submitted to the Director shall be signed and certified. (7-1-93)

~~f~~ vi. The Director shall be notified in writing of planned physical alterations or additions to any facility related to the permitted injection well operation. (7-1-93)

~~g~~ vii. Additional information to be reported to the Director in writing: (7-1-93)

~~i.~~ (1) Transfer of ownership; (7-1-93)

~~ii.~~ (2) Any change in operational status not previously reported; (7-1-93)

~~iii.~~ (3) Any anticipated noncompliance; and (5-3-03)

~~iv.~~ (4) Reports of progress toward meeting the requirements of any compliance schedule attached or assigned to this permit. (7-1-93)

~~056. 059. (RESERVED)~~

[Moved from Section 060]

0~~60~~7. Permit Assignable ~~*(Rule 60)*~~. Permits ~~*shall*~~ may be assignable to a new owner or operator of an injection well if the new owner or operator ~~*shall*~~, within thirty (30) days of the change, notif~~y~~ies the Director of such change. The new owner or operator shall be responsible for complying with the terms and conditions of the permit from the time that such change takes place. ~~*(7-1-93)*~~( )

0~~7~~71. -- 999. (RESERVED)

IDWR UIC Responses to Comments
IDAPA 37.03.03 "Injection Well Rules"

(section citations have been updated to match version 8 of the rules)

1. The rules do not outline or mandate any base line testing of water wells or underground sources of drinking water (USDW) that exist within the area of review around an injection well. Likewise, there is no requirement that USDW be monitored in any way by the operator for contamination.

IDWR Response: CHANGE MADE
Language has been inserted into section 051.02.a.ix stating "If the collection and reporting of new or existing data to establish the background water quality of USDWs in the area of review has not been required, and subsequently performed, under any other permit regulating the injection well or project, the Director will require this data to be collected and background water quality established as a permit condition to be satisfied prior to injecting fluids into the injection well. The Director will specify the sampling locations, potential need for the construction of new monitoring wells, sampling frequencies, sampling duration, and analytes to be sampled for.

2. The individual bonding requirement for an injection well is $10,000 plus $1 per foot; which is incredibly low considering the documented increase in earthquakes and aquifer contamination by these wells. Also, the bond is released once the injection well has been plugged and abandoned. Considering these are disposal wells, meant for permanent storage of toxins, it would seem that there should also be a permanent bond or insurance policy in place for the well.

IDWR Response: NO CHANGE MADE
Section 045.04: The bonding amount required was determined to be sufficient and agreed upon by representatives of the oil/gas industry and the Idaho Conservation League during the negotiated rulemaking process. This bond amount is identical to that required by the Idaho Department of Lands for oil/gas production wells.

A performance bond is legal document which details tasks to be completed or measures to be taken before the bond can be released. Bond holders such as banks or insurance companies will not issue a bond or insurance policy that is to be held indefinitely. The bond required by these rules won't be released until IDWR inspects the well site and determines that the requirements have been met.

3. The construction requirements for these wells state that they must be separated from USDW by a zone free of known faults or fractures; and goes on to define what is 'known' as what is documented in public record. Much of Idaho's geology and fault zones have not been researched. Applicants should be responsible for completing fault zone surveys if none exist within the area of review.

IDWR Response: CHANGE MADE
Section 045.06.a will be revised by removing the word "known". It will state "…a confining zone that is free of open faults or fractures…" This will require the applicant answer the question as to whether or not the confining zone is free of open faults or fractures. The applicant will have to provide supporting information for either a "yes" or "no" answer to this question. This supporting information can be existing data or data collected by the applicant.

4. The construction requirements for a converted Class II well are not as stringent as those for an oil/gas well or for a new well drilled specifically to be an injection well. The way the rule reads, as long as the well in its initial incarnation was drilled in accordance to that well type's regulations, it can be converted to an injection well despite not meeting the casing requirements for a new injection well. So, in essence, even a water well drilled to the water well standards that turns out to be a dry well could conceivably be converted to an injection well.

IDWR Response: NO CHANGE MADE

Section 045.06.c: IDWR interprets this language as applying to two specific scenarios: (1) an existing Class II injection well in an existing field, and (2) newly converted Class II wells in existing fields.

Keep in mind that all Class II injection wells in Idaho will have to inject into aquifers that have been exempted as per the requirements of section 025 of these rules.

Scenario #1 refers to a case where initially the federal government had the jurisdiction for issuing a Class II injection well permit, but some time later the State applied for and was granted primacy for administering the UIC program. In this scenario, as long as regulatory controls for casing and cementing existed for those wells at the time of drilling and those wells are in compliance with those controls, and well injection will not result in the movement of fluids into an underground source of drinking water so as to create a significant risk to the health of persons, the construction requirements of this section need not apply. As there are no Class II injection wells currently in the State of Idaho, this phrase moot at the present time.

Scenario #2 refers to a case where a well that exists in an existing field has been newly converted. In most cases an existing oil/gas production well is what is being converted into a Class II injection well and in these cases the well has been constructed in a fashion that also meets the requirements for Class II injection wells. It is possible that the well being converted is not an existing oil/gas production well, however it is still required that well injection will not result in the movement of fluids into an underground source of drinking water so as to create a significant risk to the health of persons.

5. The State has determined that a minimum fixed radius around a well signifying the area of review is ¼ of a mile. This is ridiculously small. Consider the fact that Class I wells containing many contaminants that are similar to those used by the oil and gas industry have a fixed radius (for some wells) of 2 miles. The equation used to determine the size of the area of review is based on a series of assumptions that are often unrealistic.

IDWR Response: NO CHANGE MADE
Section 045.07: The Director can require the calculation of the area of review if it is determined that using a minimum fixed radius on one-quarter mile is not adequate for the geographic area or field.

In the scientific field of hydrogeology, determining how water flows through an aquifer is a fundamental question to be answered. There are multiple equations that have been developed, tested, and validated as being able to adequately characterize the ground water flow direction and velocity. Every one of these equations has assumptions built-in in order to make the equation useful to mankind and to also simplify the complex geologic structures and relationships that actually exist in the subsurface. The Theis equation was developed in 1935 and has been used successfully since then to answer ground water flow questions. The Theis equation is only one form which mathematical model may take to calculate the zone of endangering influence. The IDWR staff will be tasked with reviewing the area of review analysis submitted by the applicant to determine if the appropriate approach was used and if the results are realistic.

6. An injection well that does not pass a mechanical integrity test may be allowed to continue accepting injections for up to two years at the discretion of the Director. A failed mechanical integrity test means the well is not sound. The rules also allow for a new well to begin accepting injections prior to establishing mechanical integrity – again, at the discretion of the Director. This is unacceptable. In no case should a well that has not demonstrated mechanical integrity be allowed to begin operation or to commence operation.

IDWR Response: NO CHANGE MADE
Section 051.01.q.iii: The director may allow the continued use, to a maximum of two (2) years, of an injection well that lacks mechanical integrity only if the operator has made a demonstration to the satisfaction to the Director that there is no movement of fluid into or between USDWs. This envisions a scenario in which a well requires repair at some point within two (2) years, but the use of said well during this duration will not degrade USDWs or endanger human health or beneficial use of the ground water.

IDWR does not interpret any portion of the rules to allow injection prior to establishing mechanical integrity. If this comment is in reference to section 051.01.q.i, as a general condition of all injection well permits, the owner/operator must establish mechanical integrity prior to injecting or on a schedule determined by the Director. IDWR envisions a scenario in which the owner/operator of an existing oil/gas production well, which has been determined to have mechanical integrity, wishes to convert said production well into a Class II injection well. The Director, upon review of the existing data documenting mechanical integrity for the well, has the discretion to accept this data, determine a new mechanical integrity schedule, and allow the commencement of injection. The Director also has the discretion to disapprove the existing data and require that a mechanical integrity test be conducted to satisfy the requirements of 045.05.b.ii.

7. An operator can change the type or quantity of injected fluids listed on the original permit and this will be considered a 'minor modification.' As such, there is no requirement to notify the public of these changes.

IDWR Response: NO CHANGE MADE
Section 057.04.e: This is correct, minor modifications may be made without commencing formal public notification procedures. The specific case referred to in the comment is only allowed if "…they are within the capacity of the facility as permitted and, in the judgment of the Director, would not interfere with the operation of the facility or its ability to meet conditions described in the permit and would not change its classification." Permits are public information and anyone may request to view the permits to determine if a minor modification had been made.

8. Many of the rules are vague and leave definitions, variances and exemptions up to the discretion of the politically appointed Director – and not to sound science.

IDWR Response: NO CHANGE MADE.

9. 010.56 (Definition of Mechanical Integrity) The use of the word "significant" is vague. What does the State consider to be a significant leak? This needs to be defined. A preferable definition for mechanical integrity can be found in Wyoming's rules [found online at: http://deq.state.wy.us/wqd/wqdrules/Chapter_13.pdf]: "Mechanical integrity" means the sound and unimpaired condition of all components of the well or facility or system for control of a subsurface discharge and associated activities."

IDWR Response: NO CHANGE MADE
A well that does not meet the criteria set forth in section 054.02.b and 054.02.c is deemed to be leaking significantly.

10. 040.02.d (Authorizations, Prohibitions, Exemptions) The rule states that if any water quality monitoring of an underground source of drinking water indicates contamination, the Director shall make additional requirements. Yet nowhere in these rules does the state describe a requirement for monitoring drinking water quality near these sites – or for conducting baseline testing. Detailed monitoring and baseline testing should be incorporated into these rules.

IDWR Response: NO CHANGE MADE
See response to question #1.

11. 040.02.e This paragraph grants the Director the ability to take emergency action in the case of possible contamination of drinking water, yet again, nowhere in the rules is water monitoring laid out as a requirement.

IDWR Response: NO CHANGE MADE
The Director has the authority to require monitoring as per section 051.04.b.

12. 045.02.e.vii (Application Information Requirements) This section mentions a topographic map that identifies a variety of structures and water sources, but should also include the information listed in 045.05.a.ii (which includes faults) and 045.05.a.iii (which includes existing wells), for clarity and continuity.

IDWR Response: NO CHANGE MADE
The applicant may choose to compile the required information on one map. However the map scale for each map requested may need to be different making submission of two (2) separate maps appropriate. The map area required in section 045.02.e.vii must extend one (1) mile beyond the property boundaries and show the listed features within one-quarter (1/4) mile of the facility boundary, or within the area of review, whichever is greater. The map area required in section 045.05.a.ii is the area of review, which may only be one-quarter (1/4) mile. Additionally, this subsection includes existing wells. Section 045.05.a.iii requests a tabulation (a list), not a map.

13. 045.02.e.ix This paragraph states that the requirement to notify all land owners within a quarter mile of a well site could be waived in highly populated areas. This exemption should be removed. If more people live nearby, there's an even greater public interest in making sure they are informed and given the opportunity to comment. Also, what is the definition of "populous"?

IDWR Response: NO CHANGE MADE
The Director reserves the right to make this decision when it is impractical to notify each landowner individually. The Department is still required to notify the public and others as per section 048.04.c with information on proposed actions so the public still has an opportunity to comment.

14. 045.04.a (Bonding of Injection Wells, Individual Bond) The bond amount is unreasonably low in light of the documented risks. Considering the fact that these wells will be used as permanent storage for toxic waste, who would be responsible for contamination that occurs after the well has been plugged and abandoned? If there is resistance to using a bond to ensure compensation for contamination, another option would be to require an insurance policy to ensure replacement of water supplies and compensation of private property owners.

IDWR Response: NO CHANGE MADE
See response to question #2.

15. 045.05.a.ii (Information to be considered by the Director) This information should be copied and pasted under 045.02.e for clarity and continuity. Also, this paragraph states that the map should show faults if known. Considering Idaho's high seismic activity/potential, it would seem appropriate that if no survey of fault zones exists for an area of review, the applicant should have one completed.

IDWR Response: NO CHANGE MADE
The applicant may choose to compile the required information on one map. However the map scale for each map requested may need to be different making submission of two (2) separate maps appropriate. The map area required in section 045.02.e.vii must extend one (1) mile beyond the property boundaries and show the listed features within one-quarter (1/4) mile of the facility boundary, or within the area of review, whichever is greater. The map area required in section 045.05.a.ii is the area of review, which may only be one-quarter (1/4) mile. Additionally, this subsection includes existing wells. Section 045.05.a.iii requests a tabulation (a list), not a map.

See response to question #3 for updated language on the identification of faults or fractures.

16. 045.05.a.iv.3 The phrase "appropriate analysis" in this paragraph is vague. It behooves the state to have requirements that are clear.

IDWR Response: NO CHANGE MADE
Not all injection fluid is of the same quality, therefore the flexibility to determine what is "appropriate" on a case-by-case basis is advantageous to the Director and the citizens of Idaho.

17. 045.06.a (Construction Requirements) The paragraph states the requirement that Class II wells be sited so that they inject into a formation that is separated from any USDW by a fault and fracture free zone. Again, this rule should include the requirement that the area be surveyed if no public record exists.

IDWR Response: NO CHANGE MADE
See response to question #3.

18. 045.06.c This paragraph creates an exemption from injection well casing requirements for converted wells that were built to the original standards of the rules around that well type. Essentially, this reads as saying that any type of well can be converted to an injection well. If a water well was drilled to water well standards, and turned out to be a dry well, it could then be converted to an injection well. This exemption should be removed. Any well used as an injection well should meet at minimum the requirements for oil and gas wells. No exceptions.

IDWR Response: NO CHANGE MADE
See response to question #4.

19. 045.06.c.ii How would this be demonstrated or proven? The language in this paragraph must specify that it would be established by a mechanical integrity test that is required to be successfully conducted before operating a well (045.05.b.ii). It is also necessary to restate in this section that no injection well (including converted wells) should violate the provisions listed in 015.01, which are more stringent than creating "a significant risk to the health of persons."

IDWR response: NO CHANGE MADE
You are correct in that it would be demonstrated by passing the mechanical integrity test prior to operation of the well. Section 015.01 does not need to be repeated here as it applies to all injection wells and repeating it here will not result in a stronger rule.

20. 045.06.d This paragraph refers to a log interpretation report needing to be interpreted by a "knowledgeable log analyst." Again, this description is vague. The Department should outline this requirement in a way that will ensure accurate reports by qualified individuals.

IDWR Response: NO CHANGE MADE
The IDWR UIC Program will review any data submitted by the applicant and will, if necessary, discuss the results with other professionals from state or federal agencies to determine if the descriptive reports are valid. If the information is of suspect quality or has not fulfilled the requirements, it will be returned and have to be re-done and re-submitted. It is in the best interest of the applicant to submit quality information that satisfies all the requirements of these rules. Failure to do so will result in delays in the permitting process. The Department does not have the jurisdiction to mandate who the applicant chooses to prepare and submit the information.

21. 045.07 (Area of Review) Though the Department may solicit input from operators on appropriate methods for determining areas of review, it should be acknowledged that the operator benefits from making sure this area remains small. Therefore this input has the potential to be biased and inaccurate. More importantly, the Department should also be soliciting input from professional scientists and others with relevant expertise. All input, solicited or not, should be part of the public comment period – where it is transparent and accessible to all parties.

IDWR Response: NO CHANGE MADE
The Director may solicit information from well owners, other state agencies, professional geologists and engineers, or any other source that he determines has the ability to provide pertinent information to assist in the decision making process. Ultimately the Director has the authority to determine which method is appropriate and insist that the applicant use that method.

22. 045.07.b (Fixed Radius) A fixed radius of ¼ mile is inadequate. The zone of endangering influence is noted as being based on a number of assumptions. Duke University determined a zone of impact for gas and oil wells to be one mile. And many Class I injection wells have a fixed radius of two miles.

IDWR Response: NO CHANGE MADE
The Director can require the calculation of the area of review if it is determined that using a minimum fixed radius on one-quarter mile is not adequate for the geographic area or field.

In the scientific field of hydrogeology, determining how water flows through an aquifer is a fundamental question to be answered. There are multiple equations that have been developed, tested, and validated as being able to adequately characterize the ground water flow direction and velocity. Every one of these equations has assumptions built in order to make the equation useful to man and to also simplify the complex geologic structures and relationships that actually exist in the subsurface. The Theis equation was developed in 1935 and has been used successfully since then to answer ground water flow questions. The Theis equation is only one form which mathematical model may take to calculate the zone of endangering influence. The IDWR staff will be tasked with reviewing the area of review analysis submitted by the applicant to determine if the appropriate approach was used and if the results are realistic.

23. 045.09.a.iii (Emergency Permits) An operator citing a substantial delay in production of oil or gas resources should not qualify as an emergency.

IDWR Response: NO CHANGE MADE
It may be debated what qualifies as a need for an emergency permit, the fact remains that the issuance of an emergency permit "…will not result in the movement of fluids into an underground source of drinking water." The additional requirements listed in section 045.09.b(iii) and (vi) which provide protection for the USDWs.

24. 045.10.a (Request for Variance) An injection well sited *near* a USDW should not be exempt from the regular requirements. Also, how will the state determine whether or not a well is being drilled above or through a USDW in a remote area where a useable aquifer may exist but is not currently being tapped? It would seem that the prudent solution would be to require the same standards, best practices, for *all* Class II injection wells.

IDWR Response: NO CHANGE MADE
The responsibility of the UIC Program is to enforce the requirements of the Safe Drinking Water Act (SDWA) which are in place to protect underground sources of drinking water (USDW). Paragraph (a) of this section is describing a situation where a USDW is not present such that the injection does not occur "into, through, or above a USDW…" If there is no USDW present, the regulations of the SDWA do not apply as there is nothing to protect. Keep in mind that this paragraph also states that the Director "may consider a request for variance…" and that the "reduction in requirements will not result in an increased risk of movement of fluids into an underground source of drinking water."

As a default, all ground water in the State of Idaho is considered a general resource aquifer, and therefore a USDW subject to protection, until it is proven otherwise. The operator who requests this variance will have the burden of proving the case that this reduction in requirements is appropriate.

25. 045.10.b This variance seems like it would fall under the category of being an unrealistic radius, and the radius should default to the fixed radius. Again, err on the side of caution. If the well is being drilled through or above a USDW, the risks are high, and variances should not be granted.

IDWR Response: NO CHANGE MADE
This is a valid point. However, if upon review of the data and model results by the professional geologists and engineers employed by IDWR, the results are determined to be realistic, the Director "may authorize

a well or project…" to the extent that the "reduction in requirements will not result in an increased risk of movement of fluids into an underground source of drinking water."

26. 051.01.j.ii (Permit Conditions, Monitoring and Records) This paragraph needs to be clarified. It states that records must be held by the operator for three years, then goes on to say that the Director may require that these records be turned over at the end of this period. Then it states the operator must keep the records beyond the three years unless they are turned over or unless they get permission to discard them. This paragraph should state that the records must be turned over to the Director at the conclusion of the three-year period. It is critical that a permanent record exist describing the composition of injection fluid (and therefore the possible future contaminants of USDW) be kept on file with the State.

IDWR Response: NO CHANGE MADE
The information submitted to satisfy the reporting requirements of section 054.01.c, including any additional reporting requests specifically detailed in the injection well permit will be retained by IDWR as a permanent record in the public domain. The language has the desired effect that either the operator or the Department has the records.

27. 051.01.l.vi(1) The Department should require reporting of any monitoring or information which indicates *any movement of fluid* into or between USDWs.

IDWR Response: NO CHANGE MADE
Movement of fluid into or between aquifers due to injection activities violates the construction requirements of section 045.06.b(i). The detection of the movement of fluid into or between USDWs obtained through monitoring or other information is an indication that the USDW may be endangered and is therefore required to be reported under the terms of this sub-paragraph. Section 051.01.l.vi(2) also covers the request in this comment.

28. 051.01.m(2)(Requirements Prior to Commencing Injection) The Director/Department should inspect and review *all* injection wells prior to injection. The gap created by this paragraph is unacceptable. This section should also specify that the permittee has submitted all information required by 045.05.b.ii.

IDWR Response: NO CHANGE MADE
The Department intends to physically inspect all injection wells prior to their operation. This would coincide with the mechanical integrity tests required to be performed prior to injection as per section 045.05.b(ii) and 051.01.q(1). There is no need to repeat 045.05.b(ii) here.

29. 051.01.q.i (Duty to maintain mechanical integrity) The phrase "or on a schedule determined by the Director" should be deleted from the first sentence, as it conflicts with the requirement of 045.05.b.ii that mechanical integrity be demonstrated prior to commencing operation. In no case should a well that has not demonstrated mechanical integrity be allowed to begin operation.

IDWR Response: NO CHANGE MADE
IDWR does not interpret any portion of the rules to allow injection prior to establishing mechanical integrity. As a general condition of all injection well permits, the owner/operator must establish mechanical integrity prior to injecting or on a schedule determined by the Director. IDWR envisions a scenario in which the owner/operator of an existing oil/gas production well, which has been determined to have mechanical integrity, wishes to convert said production well into a Class II injection well. The Director, upon review of the existing data documenting mechanical integrity for the well, has the discretion to accept this data, determine a new mechanical integrity schedule, and allow the commencement of injection. The Director also has the discretion to disapprove the existing data and require that a mechanical integrity test be conducted to satisfy the requirements of 045.05.b.ii.

30. 051.01.q.iii (Duty to maintain mechanical integrity) A well that lacks mechanical integrity should not be allowed to operate under any circumstances, and certainly not for a period of two years. If a well fails a mechanical integrity test, it is leaking. And if a well is leaking, there is a risk to drinking water. This exemption should be removed.

IDWR Response: NO CHANGE MADE
The director may allow the continued use, to a maximum of two (2) years, of an injection well that lacks mechanical integrity only if the operator has made a demonstration to the satisfaction to the Director that there is no movement of fluid into or between USDWs, i.e., no risk. This envisions a scenario in which a well requires repair at some point within two (2) years, but the use of said well during this duration will not degrade USDWs or endanger human health or beneficial use of the ground water.

31. 057.04.e (Minor modifications of permits) Changing the type or quantity of injected fluids is not a minor modification. Under this classification, no public notification would be required. The public has a right to be notified of these changes.

IDWR Response: NO CHANGE MADE
This is correct, minor modifications may be made without commencing formal public notification procedures. The specific case referred to in the comment is only allowed if "...they are within the capacity of the facility as permitted and, in the judgment of the Director, would not interfere with the operation of the facility or its ability to meet conditions described in the permit and would not change its classification." Permits are public information and anyone may request to view the permits to determine if a minor modification had been made.

32. I'd like to recommend that we refuse to permit new gas development until they can assure that the affected communities understand the public health risks and that they will take all necessary steps to prevent those health risks.

IDWR Response: NO CHANGE MADE
The regulations of IDWR, IDEQ, and IDL with jurisdiction over oil and gas production and injection wells require transparency and public comment periods at specific steps in their respective processes. Notification of any unit of local government is required under section 048.04.c.i(4)(a). The public also has a responsibility to be active in their community in order to be aware of what activities might be contemplated and understand the positive or negative issues that might result from such activities.

33. We need to conduct health impact assessments on gas development, develop new measurements for testing air and water quality with baseline testing of water quality at the well site and in a radius including other wells near-by.

IDWR Response: CHANGE MADE
IDWR does not regulate air quality. See response to question #1.

34. Strengthen regulations on Class 2 injection wells to assure its mechanical integrity, checking for cracks in cement, air pressure testing and perhaps greater setbacks from neighboring wells.

IDWR Response: NO CHANGE MADE
IDWR interprets the proposed rules regarding mechanical integrity of Class II injection wells as being adequate. The logging requirements of section 054.02.c.ii are in place to "...demonstrate the presence of adequate cement to prevent such migration (of fluid through vertical channels adjacent to the injection well bore as per section 054.02.a.ii".

35. Strengthen enforcement by establishing a minimum inspector-to-well ratio and annual inspection per well requirements for each stage of development. Also establish formal notice-of violation procedures to use when the rules are broken and ensure penalties are significant enough to deter violations... document violations and make this information available to the public.

IDWR Response: NO CHANGE MADE
Penalties of 42-1701B are code and separate from UIC rule revisions. Changes to this statute must come from an entity or person other than IDWR. All violations and actions taken by the Department are in the public record and available for review. Internal discussions have been conducted between the Director and the Idaho Water Resource Board and a determination has been made that necessary staff is available for the anticipated workload.

36. 025.02 Petition Process for Aquifer Exemptions - EPA recommends that IDWR add language in this section that clearly states that EPA is the final approver of an aquifer exemption. This section should also describe the review process in a manner consistent with the process flowchart descriptions you provided to us on October 5. Note: Changing the classification or category of an aquifer does not remove that aquifer from the protection of the Safe Drinking Water Act unless EPA approves an exemption for that aquifer.

IDWR Response: CHANGE MADE
The process will be re-organized to show that EPA has the final approval authority for aquifer exemptions.

37. 40 CFR 144.5(b) - IDWR should add language that addresses 40 CFR 144.5(b), confidentiality of information.

IDWR Response: NO CHANGE MADE
UIC legal counsel advised against this as exemptions from disclosure are already addressed in Idaho's Public Records Act ("Act") found in Idaho Code 9-337 through 9-349. This Act is already referenced in the UIC rules in section 006. Unless a specific exemption is identified within the Act, all documents held by the agency are open to the public for inspection including those documents previously marked as "confidential" by the preparer.

38. 40 CFR 146.9 - Criteria for establishing permitting priorities – In the crosswalk provided, the Idaho referenced provision is 37.03.03.060.13. However, upon review of the draft regulations, this citation was not located.

IDWR Response: CHANGE MADE
This language has been added and appears in section 048.11.

39. 40 CFR 144.24(c) Idaho regulations do not clearly specify prohibition of injection for: 1) failure to submit permit in timely manner, 2) failure to submit inventory information, or 3) failure to comply with a request for information. The references cited in the crosswalk do not appear to contain equivalent language.

IDWR Response: NO CHANGE MADE
Regarding the concern over what the Department can do for a violation, Idaho Code Title 42, Chapter 1701B describes the administrative enforcement process that can be initiated by the Department when someone has violated any UIC regulation or permit condition. Upon discovery of a violation, the Department can issue a verbal demand instructing the violator to stop the activity followed by a written "notice of violation" with a "cease and desist" provision ordering the violator to stop the unauthorized activity immediately or within a designated time period. If the violator does not stop the activity within the time designated, the Department may seek injunctive relief from the courts to have the activity stopped. If the activity has the potential to cause immediate harm to public or the resource, the Director may skip the administrative enforcement process and seek immediate injunctive relief in civil court pursuant to I.C. § 42-1701(5)(a). Although due process can take some time for the enforcement agency to work through, the process summarized above may be accomplished in only a matter of days.

Regarding the items from above, Idaho Code 42-3911 speaks to violations for not submitting a permit or required information and 42-3916 describes the enforcement procedure and injunctive relief for violations.

(Item 1) The existing rules for Idaho and EPA do not define "timely" and it is not the intent of Idaho to define what timeframe "timely" is. Idaho rule 37.03.03.015.01(c) makes it a violation to fail to comply with any permit filing requirement. For wells requiring a permit, Idaho Code Title 42, chapter 3903 and rule 37.03.03.070.02(a)(i) state that the use of existing wells, wells yet to be constructed, and wells to be modified may not proceed without first being issued a permit by the Director. Constructing, operating, modifying, or maintaining an injection well requiring a permit, without first obtaining a permit, is a violation.

(Item 2) Idaho rule 37.03.03.070.01(a) states that owners and operators of shallow injection wells are required to submit a shallow injection well inventory form prior to construction of the new well or upon discovery of an existing well not yet inventoried with the State. Failure to comply with this requirement is a violation.

(Item 3) 40 CFR 144.24(c)(4) references 40 CFR 144.27 which is "For EPA administered programs only…", therefore it was not included in the Idaho rules. However, the Director may choose to delay issuance of a permit until all requests for information has been satisfied, and as described above in item 1, constructing or operating an injection well without a permit is a violation. The Director may also utilize 37.03.03.040.02(c) and 37.03.03.070.02(c) and (d) to request information from the operator to determine whether ground water contamination is occurring or not.

40. 010.06 – The definition of aquifer is not as inclusive as the federal language, which includes groups of formations and parts of formations. Also, why is the term "beneficial use" used instead of the federal language of "capable of yielding a significant amount of water to a well or spring"?

IDWR Response: NO CHANGE MADE
The UIC Program has utilized this definition since 2003 in an attempt to maintain consistency with other IDWR programs which define what an aquifer is. The UIC Staff does not believe this language affects the administration or intent of the rules.

41. 010.12 - Why is "sometimes" deleted from "cesspools have open bottoms"?

IDWR Response: CHANGE MADE
No explanation for this omission that has persisted since 2003. This will be revised to include "sometimes".

42. 010.17 – The federal rule does not contain the qualifier about contaminants that naturally occur.

IDWR Response: CHANGE MADE
This qualifier will be removed.

43. 010.31 - The definition of "endangerment" specifies injection of any fluid which exceeds Idaho ground water quality standards. Under the federal program, 40 CFR 144.12(a) states that the standards are the primary drinking water standards. Idaho state groundwater standards are as stringent as the federal drinking water standards in most but not all cases. This comment was provided in a previous email to you from Jennifer Parker on May 18, 2012, along with some options for alternate language.

IDWR Response: CHANGE MADE
The definition will be revised to read "Injection of any fluid which exceeds Idaho ground water quality standards or federal ground water quality standards, whichever is more stringent…"

44. 010.73 – The federal rule specifies a class V well. Is "point of injection" used more broadly here than in the federal rule?

IDWR Response: NO CHANGE MADE
Yes. Point of injection can apply to any class of injection well and is defined as the last possible sampling port where a grab sample can be collected prior to the fluid being injected into the subsurface.

45. 010.90 – The term "surface water runoff" does not appear to be used again, so why is it defined here? Also, why exclude runoff from streets, etc.?

IDWR Response: CHANGE MADE
This term will be deleted.

46. 010.92 - Why is transferee not defined?

IDWR Response: NO CHANGE MADE
This term is not used in the rules.

47. 045.05.b.iv – This appears to be a typo, as there does not appear to be a section 45.06.g. Also, the federal rule here requires "results of the formation testing program."

IDWR Response: CHANGE MADE
The reference to 045.06.g will be revised to 045.06.e. The information submitted to satisfy 045.06.e would comprise the "results of the formation testing program".

48. 045.07 - There appear to be several sections here where language is missing.

IDWR Response: NO CHANGE MADE
The language has been deleted because it references 40 CFR 122.38 and 122.39 which do not exist and applies to NPDES permits which are not in the jurisdiction of the UIC Program.

49. 048.01.c - Why is language from section 124.6(c) of the federal rule missing?

IDWR Response: NO CHANGE MADE
This language has been deleted because it references NPDES, RCRA, or 404 permits which are not in the jurisdiction of the UIC Program. The reference to 40 CFR 233.26 does not exist in the federal rule.

50. 048.01.e - Why is there no appeal language (i.e., 124.6(e))?

IDWR Response: NO CHANGE MADE
Language regarding appeals to the rules or actions taken under these rules are covered by section 003 "Administrative Appeals" which applies to Class II and V injection wells.

51. 048.04.c. - Why is 124.10(c)(1)(iii) language left out?

IDWR Response: NO CHANGE MADE
The deleted language actually corresponds to 40 CFR 124.10(c)(2)(i) and (ii). This language refers to NPDES, 404, sewage sludge land application, and RCRA permits which are not in the jurisdiction of the UIC Program so it was deleted from the text.

52. 048.08.a - Need to add a subsection "c" stating that the response to comments shall be available to the public.

IDWR Response: CHANGE MADE
This section will be added to include the phrase"…made available to the public upon request". By default, all decisions, correspondence, and records generated by the Department are inherently in the public record and available for review.

53. 048.09.b.vi - Why is there no mention of a transcript being made available?

IDWR Response: CHANGE MADE
This section will be added to state "recording of any contested case hearing initiated under the Appeals process of section 003 of these rules." Recordings are only generated for contested case hearings which

take place after the Director has made a final decision and the aggrieved party initiated the appeals process. According to UIC legal counsel, the parties typically pay to have written transcripts generated from recorded hearings: This is not something IDWR does automatically. The recordings are part of the administrative record for final permit.

54. 045.05.c - Item v. needs to reference 146.10(a).

IDWR Response: CHANGE MADE
Item "v" will be revised to state "the procedures to meet the requirements of section 054.03."

55. 051.02.a.iv – The applicable standards for managing hazardous waste need to be referenced.

IDWR Response: NO CHANGE MADE
This language comes from 40 CFR 144.52(a)(4) which is a general permit condition section for all classes of injection wells, including Class I injection wells which do inject hazardous wastes. Idaho rules do not allow for the injection of hazardous waste as stated in Idaho Code Title 42, Chapter 3902a and section 015.02 of the rules. Therefore this language does not apply here and has been deleted.

56. 054.01.b.ii.4 – The final sentence needs to be a separate paragraph, as it applies to items 1-4 in this section.

IDWR Response: CHANGE MADE
Language has been added to subsection b.ii and b.ii.4.

57. 054.02.b.ii - The language in items 1 & 2 in this section differs from the federal rule.

IDWR Response: NO CHANGE MADE
The IDWR UIC Program believes that including this language in rule rather than in guidance makes it crystal clear for the operators of a Class II injection well what the requirements for conducting and passing a mechanical integrity test are. IDWR is not authorizing a new, non-EPA approved test method with this language. IDWR is merely establishing objective criteria for the already EPA-approved pressure testing method.

The rules regarding mechanical integrity tests for other EPA Region X primacy states were reviewed by the IDWR UIC program to determine if additional language was necessary. Ultimately, a review of the state of Alaska and phone conversations with their UIC regulators helped IDWR decide to include additional language to this section. The language found in section 054.02.b.ii(1) regarding how to conduct a mechanical integrity test came from the Alaska Administrative Code, Title 20, Chapter 25, Section 412.c. The language found in section 054.02.b.ii(2) is included based on discussions with EPA staff (T. Cutler, EPA Region X) and subsequent comments to the draft rules reviewed by the aforementioned EPA staff member.

58. 054.02.b and c (40 CFR 146.8(c)) - MIT Tests- IDWR should remove MIT Tests listed in the draft regulations that are not EPA-approved, and instead follow a process outlined in 146.8.d to obtain EPA Administrator approval for these tests.

IDWR Response: NO CHANGE MADE
The test listed in section 054.02.b.ii(1) is EPA approved as they are part of the approved rules for the State of Alaska which is a primacy state for Class II injection wells. The criteria for a passing MIT in section 054.02.b.ii(2) is assumed to be approved as the 10% percent decline criteria is being presented by G. Robin (EPA Region IX) at the US EPA UIC inspectors training sessions.

59. 057.02.a.ii - Why has the corresponding federal "information" language in "ii" not been included?

IDWR Response: NO CHANGE MADE

This language references "Permits other than for Class II or III wells…", which means this section applies to Class I, IV, V, and VI injection wells. The only applicable well class this section applies to in Idaho are Class V wells. Because the IDWR UIC Staff wants to keep the existing Class V rules separate from the newly proposed Class II rules, this section has been deleted. Area permits are not included in the rules so this part does not apply.

60. 010.06 Aquifer - We have a concern that this definition would exclude the regulation of storage and recovery wells that are the sole source of water in an aquifer.

IDWR Response: NO CHANGE MADE
From EPA comments in the Idaho Primacy revision package submitted in 1982:

"While the state definition uses slightly different terminology from the comparable federal definition, the meaning is virtually identical, except for the condition attached to the state definition of aquifer. That condition, which states "except when the water in such formation results solely from injection through a waste disposal and injection well." is based on an interpretation of the Safe Drinking Water Act. A geologic formation, which did not produce water in a state of nature, does not become an aquifer subject to protection under the SDWA when an injection well provides the sole source of water to the geologic formation such that it now yields water to an extraction well."

No true ASR in Idaho. Once the treated water is injected into the aquifer, it commingles with the naturally recharged ground water and becomes indistinguishable from, and therefore part of, the public waters of Idaho. This is different from ASR, where the injected ground water is separate and distinguishable from the natural water resource. Because water injected into the aquifer becomes public water, it can be diverted pursuant to any valid water right authorizing the diversion of ground water.

61. 010.18 - The definition of "contamination" specifies the introduction of any material which exceeds Idaho ground water quality standards. As with the endangerment definition, our concern is that Idaho state groundwater standards are as stringent as the federal drinking water standards in most but not all cases.

IDWR Response: CHANGE MADE
Part (a) of this definition will be revised to read "…found in IDAPA 58.01.11 "Ground Water Quality Rule" or the federal ground water quality standards, whichever is more stringent; or"

62. 010.53 Large Capacity Septic System - This definition is less broad than the federal definition at 144.81(9). For example, if multiple dwellings are involved, the number of people it is designed to serve does not matter.

IDWR Response: CHANGE MADE
The volumes received and capacity have been removed.

63. 010.66 Permanent Decommission. - This definition is less stringent than the federal requirements at 144.82. Those include a requirement to manage materials in accordance with all federal state and local regulations and requirements.

IDWR Response: CHANGE MADE
The second sentence of 40 CFR 144.82(b) will be added to this definition describing the disposal and proper management of generated wastes.

64. 010.79 Remediation Project - We would suggest that there be a reference to IDEQ in this definition, since that agency has oversight responsibility for remediation projects in Idaho.

IDWR Response: CHANGE MADE

This definition has been refined by inserting the phrase "Use of an injection well for the…" to the beginning of the definition to make differentiate remediation projects that do not utilize an injection well from remediation projects that do.

65. 010.81 Sanitary Waste - This definition is less broad than the federal definition, which also includes commercial and industrial facilities provided that the waste is not mixed with industrial waste.

IDWR Response: NO CHANGE MADE
The UIC Program recognized that the previous definition of sanitary waste used the Idaho Department of Environmental Quality (IDEQ) definition of "waste water". As such, the definition of "sanitary waste" which is used in the context of passing regulation of septic systems to IDEQ was too broad and may have allowed non-domestic process fluids to be injected into septic systems without the requirement for that septic system to be registered with the IDWR UIC Program. The UIC program specifically chose the word "residential" but relates it to the activities, not to the setting where the fluids are being produced. The UIC Program interprets this definition to allow "domestic" fluids generated at any facility and purposely did not attempt to include a list of all the acceptable facilities.

66. 070.01.c - The clause "Where a Class V injection well is owned or operated by an entity other than a state or local entity involved in highway and street construction and maintenance" seems to imply that these types of facilities can not apply for a permit, and must therefore immediately cease injection activity. Is this what was intended?

IDWR Response: NO CHANGE MADE
Yes. The state or local entity shall cease the injection activity through a rule authorized shallow injection well and discuss strategies with IDWR on how to improve the injectate quality so that injection may resume.

67. 001.02 Scope

These Rules provide that; "All injection wells shall be permitted and constructed in accordance with the 'Well Construction Standards Rules.'" However, the Well Construction Rules do not contain sufficient provisions to develop wells intended for injection.

This matter was discussed at great length during prior meetings. Previously the Department had agreed to reference the well development standards that were developed by the Idaho Department of Lands since these IDL rules were more specific, more recently updated and more protective of groundwater. However, the Department has since removed this cross-reference to the IDL rules. We ask that the Department once again reference the more appropriate IDL rule for construction standards.

IDWR Response: NO CHANGE MADE
These proposed rules incorporate performance standards for construction which the owner/operator of a Class II injection well has to meet. These performance standards are listed in section 045.06 and although upon a cursory reading the requirements appear minimal, the standards are very clear on preventing the movements of fluids into or between underground sources of drinking water (USDW). This adopted federal language was carefully chosen to "…allow a variety of existing construction practices, provided such practices do not allow migration of fluids into USDWs." (See attached EPA guidance #25).

The Department will review each application to construct a new Class II injection well or convert an existing well to a Class II injection well to make sure the proposed construction methods and materials meet the performance standards. Language was added in section 001.02 which ties the construction of Class II injection wells to the IDWR Well Construction rules of IDAPA 37.03.09.

68. 010.09 Best Management Practice

The phrase Best Management Practice is defined however, nowhere else in this document are a list of Best Management Practices described. The Department should develop a list of Best Management Practices and include this list in its Rules.

IDWR Response: NO CHANGE MADE
This list, if generated, would be appropriate to publish in a guidance document. As various best management practices come into and fall out of favor, this list would be more efficiently revised if it were in guidance rather than in rule.

69. 010.48 Injection

This definition of 'injection' excludes the underground injection of natural gas.

Since the underground injection of natural gas is explicitly NOT covered by these rules, we wonder what rules do regulate this practice? If this activity is to be allowed to occur, specific rules need to be developed to regulate it.

IDWR Response: NO CHANGE MADE
This activity is not covered by federal law and left to the states to regulate. It does not appear that this practice is regulated by any current code or rule in Idaho.

70. 010.49.c. Injection Well

Subsection c provides that the injection of fluids into an 'improved sinkhole' constitutes an "injection well." However, this subsection is silent on the regulation of the placement of fluids via an 'unimproved sinkhole.' The implications/impacts of the placement of fluids is the same, whether or not the sinkhole used is improved or unimproved. By choosing to regulate only improved sinkholes, the Department is creating a loophole that will allow wastes to be injected into the ground without regulation. To remedy this matter, the Department needs to include 'unimproved sinkholes' in its definition of 'injection well.'

IDWR Response: NO CHANGE MADE
The current UIC staff agrees with your assessment that the quality of the fluid disposed of through an unimproved sinkhole could be identical to that disposed of through an improved sinkhole. However, to prevent "regulatory scope creep", jurisdictional boundaries must be created that define what features or practices are covered by a specific set of rules. In this case, the use of unimproved sinkholes does not fall within the jurisdiction of the Idaho UIC regulations nor the federal UIC regulations.

An early example of the need to develop jurisdictional boundaries came during deliberations for the Safe Drinking Water Act when, in 1974, the U.S. Congress recognized the existence of a wide variety of injection wells and struggled to provide a statutory definition that might include all possible injection well types and practices. Congress included the *"deeper than wide"* specification in the definition of an injection well in order to distinguish injection wells from pits, ponds, and lagoons, which were the subject of a different Federal initiative.

This does not imply that unimproved sinkholes may be used freely and without liability. The regulations of IDAPA 58.01.11, "Ground Water Quality Rule", would be called upon to regulate the use of an unpermitted, unimproved sinkhole that may cause a ground water quality standard to be exceeded or injures a beneficial use of the state's ground water.

71. 010.49.e. Injection Well

Just for the record, we continue to believe that the statutory language developed in HB 646, and included in these rules at section 010.49.e, creates an unlawful exemption to regulation for wells drilled for oil and gas activities.

IDWR Response: NO CHANGE MADE

The Federal definition and the State of Idaho definition are very clear on what constitutes a Class II injection well. IDWR does not interpret the language in this section as that which creates an exemption.

72. 010.56 Mechanical Integrity

Within the definition of "mechanical integrity" the word "significant" is used twice. However, "significant" is never defined in these rules. This will likely create confusion and dispute as these rules are applied. We recommend that the "significant" be stricken from this definition.

IDWR Response: NO CHANGE MADE
Given the nature of the measuring equipment and its inherent measurement error, and the nature of the materials used to construct the well, proving a well has absolutely no leakage is not possible/feasible. The combination of the 10% variation in the test pressure and the requirement for a stabilizing trend in the test pressure are an indicator that the well has mechanical integrity. Although the goal is to have zero leaks, the mechanical integrity test is a tool used to evaluate any leakage that might be occurring.

73. 025. Exemption from Drinking Water Source Designation

Generally, we do not believe that the public is well served by the Department providing a means to exempt aquifers from protections. We believe that all aquifers in Idaho should be protected from contamination. To this end, we believe that the Department should delete section 025 in its entirety from these Rules.

IDWR Response: NO CHANGE MADE
An aquifer exemption is a process by which the protections of the federal Safe Drinking Water Act are removed from an aquifer, or a portion of an aquifer, to allow the injection of waste fluids at levels exceeding drinking water standards. There are strict criteria which the aquifer must meet and high level scientific data required to be submitted in order to be eligible for exemption. For Class II oil/gas injection wells, the reasoning for aquifer exemptions is this: if there is a zone which is already unusable as a drinking water source now or in the future, why not utilize it to dispose of waste fluids if this use will not degrade a USDW.

The means to reduce regulations for activities with the potential to degrade aquifers has been in place in Idaho since at least 1997. Currently, the means to do this are covered by the regulations for the aquifer categorization process administered by the Idaho Department of Environmental Quality and are found in IDAPA 58.01.11.350. By including the aquifer exemption language in the UIC rules, the process for exempting an aquifer in Idaho becomes more robust and the level of oversight and review is increased from one state agency to two state agencies and one federal agency. In order for the State of Idaho to grant an aquifer exemption, IDWR, IDEQ and EPA must all agree that it is appropriate, then the Idaho Legislature must pass it as a rule.

74. 025.03.c.ii – regarding the exemption of aquifers

We believe that it is inappropriate for the Department to state that an exemption is deemed accepted if the Environmental Protection Agency has not disapproved the designation within 45-days. It is not appropriate for the Department to determine that inaction on the part of the EPA constitutes support for an exemption.

This subsection needs to be changed to provided that an exemption is not considered approved or final until such time as the EPA determines that the exemption is approved.

IDWR Response: CHANGE MADE
This language is federal law and describes the timeline EPA is held to in approving a state's request for an aquifer exemption. It is included here because it is part of the aquifer exemption process and it gives the state and applicants a complete picture of the various steps in the exemption process. The duration

reference has been deleted and the pertinent federal code reference has been inserted. The language will state "…has not disapproved the designation within the timeframe set forth in 40 CFR 144.7.b.3."

75. 025.04 Criteria for Exempted Aquifers

There appears to be a typo in this section. It references 025.03.a through 025.03.c. However, it appears that the correct reference is 025.04.a through 025.04.c.

IDWR Response: CHANGE MADE
These internal references will be revised.

76. 025.06 Specific Information to be submitted with a petition for exemption

This section fails to ask for information related to demonstrating that any wastes placed in an exempted aquifer will not result in the contamination of a USDW.

IDWR Response: NO CHANGE MADE
In addition to the specific information to be submitted, all petitions must include the general information of 025.05 which includes the "vertical confinement from other underground sources of drinking water".

Section 025 is not the appropriate place in the rules to request the aforementioned information. Although in Idaho, exempting an aquifer is a necessary step prior to approving injection into a Class II injection well, it is possible that an aquifer be exempted and never injected into.

As per section 045.07.a, the applicant is required to model the zone of endangering influence which is "That area the radius of which is the lateral distance in which the pressures in the injection zone may cause the migration of the injection and/or formation fluid into an underground source of drinking water" and submit this information with the permit application packet.

77. 040.02.d – regarding Authorizations, Prohibitions and Exemptions.

This subsection uses the work "significant." Significant is not defined. We recommend that it be deleted from this section so as to avoid future confusion.

IDWR Response: NO CHANGE MADE
While this term is not defined it gives the Department the flexibility to address these instances on a case by case basis and take the specific details of the occurrence into consideration. For example, the Department may deem degradation significant even if the contaminant hasn't exceeded numeric ground water quality standards.

78. 045.04. Bonding

Text should be added which provides that bond amounts should be regularly re-calculated and, if necessary, updated, to ensure that the facility's bond remains sufficient to cover costs. This is necessary because the life of these permits can be many, many years and inflation and changing labor and material costs can increase over time.

IDWR Response: NO CHANGE MADE
No change made. These rules do allow for the regular adjustment of the bond amount.

For wells with a lifetime permit, section 051.02.a.vi.2 gives the Director the ability to condition the permit to require that the operator periodically "estimate the resources necessary to plug and abandon the well". If this estimate is larger than the current bond amount the Director has the authority in the bond section to require a bond or other surety in an amount sufficient enough to cover the cost of proper plugging and abandonment.

For wells with a permit cycle less than the life expectancy of the well, section 057.04.g gives the Director the authority to accept an amended plugging and abandonment plan as a minor modification. A component of the plugging and abandonment plan is the cost estimate to properly plug and abandon the well. If this estimate is larger than the current bond amount the Director has the authority in the bond section to require a bond or other surety in an amount sufficient enough to cover the cost of proper plugging and abandonment.

79. 045.06.c. – exemptions to requirements

This subsection should be deleted. If an injection well is not build to the standards described in section 045.06.b, then there should not be a means of exempting the well from these requirements.

IDWR Response: NO CHANGE MADE
See response to question #4.

80. 045.09 Emergency Permits

This section authorizing "emergency permits" should be deleted. We can think of no good reason why an operator cannot navigate the regular application process.

IDWR Response: NO CHANGE MADE
The ability to issue emergency permits provides flexibility to the Department to address unforeseen circumstances. Examples of such circumstances are if (1) an existing Class II injection well fails the mechanical integrity test and is required to cease injection making a second Class II well necessary to dispose of the fluids, or (2) surface storage ponds holding oil/gas production waste fluids are at threat of overtopping and contaminating surface water unless an alternative disposal option is available. In these and other scenarios that may necessitate the use of an emergency permit, the applicant is still held to regular permitting process. As there are criteria within the emergency permit language that are there to protect from "imminent and substantial threat…", an emergency permit it is a tool for the Department to protect the public.

81. 045.10 Request for Variance

This section authorizing "request for variance" should be deleted. We can think of no good reason for IDWR to authorize an injection well that cannot demonstrate "mechanical integrity."

IDWR Response: NO CHANGE MADE
Variances cannot be issued if the conditions of such variance increase the risk of movement of fluids into an underground source of drinking water (USDW). Being able to determine what will be protective of a USDW on a case by case basis is exactly the kind of flexibility the Department needs to utilize its staff's professional judgment when reviewing a permit application.

82. 048.10 Duration of Permits

We do not believe that a permit should be issued for the 'operating life of the facility.' Rather, permits should be issued for terms of 5-years. This ensures that permits are periodically refreshed and that facilities are operating per current standards – recognizing that "current" standards" can and should evolve through time. Current language in the Rule regarding the Department 'reviewing' the permit every 5-yers is not sufficient. These permits should require reissuance every 5-years.

IDWR Response: NO CHANGE MADE
The Department has the opportunity to review all aspects of the injection well permit and operation to determine if revisions are necessary. Mechanical integrity tests are required to be conducted at least every five-years during the operating life of the injection well and IDWR staff will be present during these tests to observe and conduct an inspection. As per section 057.02, if any information gathered during the inspection suggests that any cause listed in section 057.02.a or (b) for permit modification or revocation

and re-issuance exists, the entire permit or specific conditions may be modified and a draft permit issued for public comment.

As per section 057.02.a.ii if the regulations for class II injection wells "evolve through time" the permit may be modified, or revoked and re-issued.

83. 051.01.q.iii

This subsection should be deleted. We can think of no good reason for IDWR to authorize an injection well that cannot demonstrate "mechanical integrity."

IDWR Response: NO CHANGE MADE
As per the specific language in the subsection, the only way this scenario would be approved is if the lack of mechanical integrity will not result in the movement of fluids into or between USDW. The well owner/operator must demonstrate this to the satisfaction to the Department. This language recognizes that not all leaks translate into a loss of fluid into a USDW. A two year maximum time limit on the operation of a well under this rule has been added.

84. 051.02 Establishing Permit Conditions

This section needs to include a subsection stating that permits restrict the type of wastes that can be injected into the well.

IDWR Response: NO CHANGE MADE
This section relates to Class II injection wells. Injection wells are classified based on the type of fluids they receive and whether they inject below, into, or above underground sources of drinking water. Class II wells and the general nature of the fluids they are authorized to receive are detailed in Section 035.01.b.

85. 051.03 – regarding schedule of compliance

We believe that it is inappropriate to allow injection to occur or resume until a facility has returned to a state of compliance. IDWR needs to add language to this section that clarifies this.

IDWR Response: NO CHANGE MADE
The primary concern with a non-compliance issue is whether or not it will result or may result in migration of fluids into an underground source of drinking water. A schedule of compliance is used when a permitted well falls out of compliance and the Department and the well owner/operator work to develop a timeframe for completing tasks that will result in the well being returned to compliance.

A well can be out of compliance via an administrative violation, such as missing a deadline to submit a report, or via an operational violation, such as failing a mechanical integrity test (MIT). The Department views these scenarios of non-compliance differently: the operational non-compliance has the potential to contaminate the aquifer and the administrative non-compliance does not.

If the owner/operator is out of compliance via an administrative violation it is highly probable that the Department would allow the operator to continue injecting while they return to compliance. However, records of administrative violations will be kept and habitual occurrences on the part of the owner/operator are not acceptable.

If the owner/operator is out of compliance for an operational violation, most likely for a failed MIT, the Department would require that the owner/operator cease injection activities until the problem is determined as per section 051.01.q.ii. Once the problem is determined the owner/operator has three (3) options:

1. Correct the problem, document that the well has mechanical integrity, and submit the results to the Department to obtain approval to resume injection activities.

2. Plug and abandon the well as per section 051.03.b.

3. Determine if the rules of section 051.01.q.iii allow for resumed injection activities until the problem is corrected.

86. 054.01.c Reporting Requirements

This section needs to include a requirement that reports be submitted monthly, not merely annually.

IDWR Response: NO CHANGE MADE
IDWR interprets the language of "…at a minimum…" as giving the Director the flexibility to request more frequent reporting if needed on a case by case basis.

87. 054.02.a.i and ii – regarding mechanical integrity

These subsections used the word "significant," however this word is not defined. The term "significant" should be removed from these subsections.

IDWR Response: NO CHANGE MADE
Given the nature of the measuring equipment and its inherent measurement error, and the nature of the materials used to construct the well, proving a well has absolutely no leakage is not possible/feasible. The combination of the 10% variation in the test pressure and the requirement for a stabilizing trend in the test pressure are an indicator that the well has mechanical integrity. Although the goal is to have zero leaks, the mechanical integrity test is a tool used to evaluate any leakage that might be occurring.

88. 070.01.a –regarding Class V wells

This section needs to incorporate "unimproved sinkholes" into this regulation.

IDWR Response: NO CHANGE MADE
To prevent "regulatory scope creep", jurisdictional boundaries must be created that define what features or practices are covered by a specific set of rules. In this case, the use of unimproved sinkholes does not fall within the jurisdiction of the Idaho UIC regulations nor the federal UIC regulations.

This does not imply that unimproved sinkholes may be used freely and without liability. The regulations of IDAPA 58.01.11, "Ground Water Quality Rule", would be called upon to regulate the use of an unpermitted, unimproved sinkhole that may cause a ground water quality standard to be exceeded or injures a beneficial use of the state's ground water.

89. 070.02.a

This section makes reference to "class V wells authorized without a permit." The Department needs to provide more information regarding specifically what sort of class V well is authorized without a permit and how the Department expected this wells to be operated.

IDWR Response: CHANGE MADE
"Class V wells authorized without a permit" refers to shallow injection wells (those less than 18-feet deep) and the requirement in Section 070.01.a that owners or operators of shallow Class V injection wells submit an inventory form.

For clarity, section 070.01 has been revised to read "Class V Shallow Injection Well Requirements". Section 070.02 has been revised to read "Class V Deep Injection Well requirements". Section 070.02.a has been revised to read "Application Requirements".

90. There needs to be baseline testing of water wells or underground sources of drinking water in the area of review around an injection well. Additionally, there should be ongoing monitoring for contamination by the operator of the injection well.

IDWR Response: CHANGE MADE
See response to question #1

91. I am very concerned about converted Class II wells that may not meet the casing requirements for a new injection well. There are many "old" water wells that are dry that could be converted to an injection well and they were drilled to water well standards only and could be old in years as well. The pressures used in these wells could be detrimental to the surrounding water aquifers if the well casings do not hold up.

IDWR Response: NO CHANGE MADE
See response to question #4

92. The minimum fixed radius of the area of review around an injection well should be at least ½ mile at the least.

IDWR Response: NO CHANGE MADE
See response to question #5

93. As with many of the issues surrounding this industry, the monitoring and enforcement of problems appears to be very lacking. If a well is found to be leaking these rules state that the well can continue to accept injections for up to 2 years at the discretion of the Director. Problems with these wells are beginning to surface (no pun intended) nationwide and they may have been a problem for a long time due to the fact they are not inspected or the water tested on a regular or frequent basis.

IDWR Response: NO CHANGE MADE
Section 051.01.q.iii: The director may allow the continued use, to a maximum of two (2) years, of an injection well that lacks mechanical integrity only if the operator has made a demonstration to the satisfaction to the Director that there is no movement of fluid into or between USDWs. This envisions a scenario in which a well requires repair at some point within two (2) years, but the use of said well during this duration will not degrade USDWs or endanger human health or beneficial use of the ground water.

94. Once again, the bonding amounts that have been set are unbelievably low! These wells are meant to be permanent storage therefore the bonding amount should be larger. Who will be responsible in 5 or 10 or 15 years if the well causes an earthquake or aquifer contamination?

IDWR Response: NO CHANGE MADE
See response to question #2

95. I want to know if the operator changes what he/she is putting down the well. It may be a "minor Modification" to some people but to the person living near the injection well it is major! I think it is time for Idaho to set the standard in this industry for the rest of the nation to follow. I for one do not want to wait for something to happen that may not be reversible. I would request that you err on the side of protection and strengthen these rules sufficiently in order to minimize the risk of problems with these wells. I am not a scientist but I can certainly appreciate that fact that things below the surface will change if you do enough forcefully "sucking out" (fracking) natural gas and then injecting, under pressure, the by-products of gas and oil development - produced water, brine water and the fracking fluid that has been pumped back out of a well after fracking.

IDWR Response: NO CHANGE MADE
See response to question #7

96. Although there are many concerns I have about the proposed injection well rules, my biggest concern is that there is no requirement for baseline or ongoing testing for injection well chemicals in surrounding water wells. Allowing owners/operators of injection wells to inject chemicals into the ground, whether those wells have been used for production or have been specifically drilled for storage and then assuming those chemicals will not migrate based solely on the mechanical integrity of the well itself is inadequate. Even assuming the well itself has mechanical integrity, there is no guarantee over long term storage, that the chemicals will not migrate into underground drinking water sources and so contaminate those sources. Not requiring the owners/operators to do the testing means that your rules are putting the requirement for testing on the landowners and/or municipalities. Testing can be an expensive proposition for water users, due to the number and types of chemicals involved, when they are not the ones putting the water sources at risk, nor are they who are making money from putting the water at risk. The people who are putting the water at risk should be the one who pay for baseline and continued testing. At the VERY minimum, baseline testing should be mandatory to preclude any question about what local water sources contain. This both covers the well owner from invalid accusations and it protects the water users in case contamination occurs that it will not be deemed as "naturally occurring" if, in fact, it is caused by contamination.

IDWR Response: CHANGE MADE
See response to question #1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

19930

DATE: JUL 27 1981

SUBJECT: Casing and Cementing Requirements for Existing Class II Wells. Ground-Water Program Guidance No. 25 (GWPG #25) UIC

FROM: Victor J. Kimm, Deputy Assistant Administrator
Office of Drinking Water (WH-550)

TO: Water Division Directors Regions I - X
Water Supply Branch Chiefs
UIC Representatives

PURPOSE

Questions have been raised by industry and states concerning construction requirements for existing Class II wells as outlined in §146.22(b) and as applied in certain circumstances in paragraph (e). This guidance is intended to respond to these inquiries.

BACKGROUND

Casing and cementing practices for existing Class II wells show considerable disparity across the nation. As a result of geological and hydrological conditions it is possible that a variety of construction practices may be effective in preventing migration of fluids into underground sources of drinking water (USDW).

GUIDANCE

Questions have been raised as to whether specific construction designs were intended to be required by §146.22 (b). The wording in §146.22(b) is as follows: "All Class II wells shall be cased and cemented to prevent movement of fluids into or between underground sources of drinking water." The Agency was careful in selecting this wording, since our intent was to allow a variety of existing construction practices, provided such practices do not allow migration of fluids into USDWs. Furthermore, it is conceivable that existing casing and cementing practices which are not "typical," may be considered as adequate under §146.22(e) if it can be demonstrated that they have not resulted in contamination of USDWs and will not do so in the future. (For example, local geologic and hydrologic conditions such as competent bedrock or plastic shales may make it possible to construct wells without long string casing or cement recirculated to the surface, as long as the

injection zone is adequately isolated and there is no significant movement of fluids between aquifers through the well bore.) Such a demonstration should involve a monitoring program which will satisfy the Director that the project has not contaminated USDWs, provided that the project has been in operation for a time sufficient to assure that migration of fluids into USDWs would have occurred if such an event was possible.

It should be noted that a change to existing operations such as an increase in the injection pressure at which the wells operate, would necessitate confirmation of the adequacy of the construction practices. In specifying monitoring requirements, the Director should consider the following criteria:

- Pressure of the injection zone/hydrostatic level of water in wells penetrating the injection zone
- Base of lowermost formation containing an USDW
- Depth of the injection zone
- Permeability/transmissivity of the injection zone, and the aquifers containing the USDW(s)
- Hydraulic gradient/flow direction of aquifers containing an USDW
- A density of monitoring wells sufficient to assure early detection of fluid movement, if it should occur, into an USDW
- Location of water supply wells in the vicinity.

IMPLEMENTATION

Regional offices are instructed to use this guidance in operating UIC programs where EPA has primary enforcement responsibility. They are further instructed to make this guidance available to States working towards primacy and to advise the State Director that these interpretations represent EPA policy.

FILING INSTRUCTIONS

This guidance should be filed as Ground-Water Program Guidance No. 25.

ACTION RESPONSIBILITY

For further information on this guidance contact:

John Atcheson
U.S., Environmental Protection Agency
Office of Drinking Water
401 M Street, SW
Washington, DC 20460
(202) 426-3983

Blackfoot River Equitable Adjustment Settlement Agreement
Pursuant to the 1990 Fort Hall Indian Water Rights Settlement Agreement
Confidential and Subject to IRE 408
February 23, 2012
Tribes' and United States' Revised Version, April 11, 2012
Parties' Revised Version, April 13, 2012
Tech Revised Version, August 31, 2012
Shoshone-Bannock Tribes' Revised Version, September 28, 2012
State Revised Version, October 1, 2012
Revised October 17, 2012

Introduction

This Settlement Agreement ("Agreement") by and between the Shoshone Bannock Tribes ("Tribes"), the United States, the State of Idaho ("State"), and the Committee of Nine, hereinafter referred to as the "Parties" sets forth the terms and conditions of the Equitable adjustment provided for in paragraph x.d of water right no. 27-11375. This Agreement is an addendum to the Partial Final Consent Decree Determining The Rights of the Shoshone-Bannock Tribes to the Use of Water in the Upper Snake River Basin, dated August 2, 1995 ("Consent Decree").

Objective

Implementation of management of Article 7 of the 1990 Fort Hall Indian Water Rights Agreement ("Fort Hall Agreement"), and Section II of the Consent Decree relative to the diversion of natural flows for the benefit of persons diverting natural flow from the Blackfoot River prior to January 1, 1990 ("Basin 27 Water Users") pursuant to paragraph x.d of water right no. 27-11375 recognizing the variability of water supplies available on a year-to-year basis. The Parties have developed and agreed to the Blackfoot River Management Plan that tracks the use and quantifies all Basin 27 diversions occurring as a direct result and benefit of paragraph x.d of water right No. 27-11375.

Pursuant to the credit and water accounting system described below, water is conserved and accrues in good water years to the benefit of the Parties in water scarce years. All water right holders in Basin 27, including tribal and non-tribal diversions, are responsible for diverting or calling for only the amount of water needed for authorized beneficial uses. The terms identified herein, together with the Blackfoot River Management Plan approved by the Parties and this Agreement form the basis for the equitable management of the Blackfoot River drainage and for the equitable adjustment of water right 27-11375.

Definitions

The following definitions apply for purposes of this Agreement:

a) "Basin 27 Water Users" means persons diverting natural flow from the Blackfoot River prior to January 1, 1990, exclusive of the Fort Hall Irrigation Project and *de minimis* domestic and stock water uses (where the corresponding water right carries a diversion limit of 13,000 gallons per day or less, or 14.5 ac-ft per year or less for storage). "Basin 27 Water Users" includes the Miners Ditch water bypassed as mitigation for water right no. 27-7577 in the name of the City of Blackfoot.[1]

b) "Basin 27 Primary Volume" is the cumulative annual volume of water diverted by the Basin 27 Water Users during the irrigation season as a direct result of being allowed to divert water ahead of the Tribes as provided by the Fort Hall Agreement and described in water right 27-11375. The calculation of the Basin 27 Primary Volume is described in Section 4.i) of the Management Plan.

c) "Committee of Nine" means the advisory committee of Water District 01.

d) "Fort Hall Agreement" means the 1990 Fort Hall Indian Water Rights Agreement executed by the Shoshone-Bannock Tribes of the Fort Hall Reservation, the State, the United States, and the Committee of Nine.

e) "IDWR" or the "Idaho Department of Water Resources" means the executive agency of the State of Idaho created by Idaho Code § 42-1701, or any successor agency.

f) "Natural Flow" means the natural flow of the Blackfoot River and its tributaries that is available for diversion by Basin 27 Water Users, as referred to in section x.d of water right 27-11375.

g) "Parties" means the Committee of Nine, State, Tribes, and United States.

h) "Plan" means the Blackfoot River Water Management Plan.

i) "SRBA District Court" means the District Court of the Fifth Judicial District, State of Idaho, in and for the County of Twin Falls that is Assigned Civil Case No. 39576.

j) "State" means the State of Idaho, admitted to the Union on July 3, 1890.

k) "Tribes" or "Tribal" means the Shoshone-Bannock Tribes of the Fort Hall Reservation in Idaho as the collective successors-in-interest of Indian signatories to the Second Treaty of Fort Bridger of July 3, 1868, 15 Stat. 673, and subsequent Tribal/federal agreements.

[1] All or part of 16 water rights may be diverted into the Miners Ditch, none of which are in the name of Miners Ditch nor do they include any designation they are to be bypassed for mitigation purposes. Those 16 water rights are: 27-3G, 27-17, 27-20A, 27-20B, 27-22A, 27-23E, 27-35A, 27-10296, 27-10341, 27-10344, 27-10505, 27-10756, 27-10790, 27-10999, 27-11117, 27-11940.

l) "United States" means the United States of America acting through the United States Department of the Interior, Bureau of Indian Affairs.

m) "Water District 01" means the instrumentality created by the Director of the IDWR pursuant to Idaho Code § 42-604 (1992).

n) "Water District 27" means the water district designated by the Director of IDWR pursuant to Idaho Code § 42-604 (1992) for the distribution of water in the Blackfoot River Basin and any successor thereto.

o) "Watermaster" means the person elected by Water District 27 and appointed by the Director of IDWR to distribute water within Water District 27.

Terms and Conditions

1. Basin 27 Credit Account.

The Parties agree to establish and utilize a credit account based on the natural flows of the Blackfoot River basin. This credit account will be used to allow Basin 27 Water Users to continue to divert Blackfoot natural flow, if available, in years when their actual beneficial use exceeds 45,000 acre-feet. The credit account shall be administered as follows:

a) Basin 27 Water Users may accrue credits when the total annual Basin 27 Primary Volume diversions are less than 45,000 acre-feet per year. Credit accrual is limited by the natural flow supply of the Blackfoot River basin when the supply is less than 45,000 AFY. Credit accrual is calculated as follows:

Credit Accrual = (Lesser of 45,000 afy or available natural flow supply) – Basin 27 Primary Volume Diversions

The total natural flow supply available to the Basin 27 Water Users is described in Section 4.k) of the Plan.

b) Basin 27 Water Users can utilize credits if Basin 27 Primary Volume diversions exceed 45,000 acre-feet per year. Credit use provides the Basin 27 Water Users the ability to divert natural flows of the Blackfoot River, if available, in excess of 45,000 acre-feet and does not represent carryover of water supplies between irrigation seasons or use of storage water.

c) The credit account available for use by the Basin 27 Water Users shall have the following conditions and limitations:

1. Maximum Credit Balance: 40,000 acre-feet
2. Annual Maximum Credit Accrual: 20,000 acre-feet per year
3. Annual Maximum Credit Use: 12,000 acre-feet per year

These conditions are put in place to protect the Tribes' ability to utilize natural flows of the Blackfoot River while enabling the Basin 27 Water Users to continue to divert that volume of water historically diverted from Basin 27 on an annual basis, as provided for in the Fort Hall Agreement.

d) The Plan includes an annual accounting of the Basin 27 credit balance, credit accrual, and/or credit use each year, and the Watermaster shall provide the Basin 27 Water Users and Committee of Nine with this information at or prior to the annual meeting of Water District 27 or March 1st, whichever is earlier. The credit balance at the start of the irrigation season is the available credit for use by the Basin 27 Water Users in that year.

The Basin 27 Water Users shall start the irrigation season of the calendar year in which this Agreement is adopted by the SRBA District Court with a credit balance of 20,000 acre-feet.

2. Equitable Adjustment Water.

A separate equitable adjustment water account will be maintained for the Tribes to allow Basin 27 Water Users to continue to divert Blackfoot River natural flows, if available, in excess of 45,000 acre-feet per year plus any available credits. The equitable adjustment water is not intended to be utilized on a regular basis, and represents a supplemental water supply for purpose of allowing the Basin 27 Water Users to continue to divert Blackfoot natural flow, if available, consistent with the terms of this equitable adjustment agreement. The equitable adjustment water account shall be administered as follows:

a) Equitable adjustment water is only available for use if the Basin 27 Water Users have committed and used the maximum available credits for the current year.

b) The equitable adjustment water account shall be replenished at a fixed rate of 1,000 acre-feet per year. The account will be replenished prior to the beginning of the irrigation season.

c) The equitable adjustment water account shall have a maximum balance of 10,000 acre-feet. The account balance at the start of the irrigation season is the available equitable adjustment water for that irrigation season.

d) Equitable adjustment water will be available to the Tribes on an acre-foot for acre-foot basis of Basin 27 Primary Volume in excess of 45,000 acre-feet per year plus all available credits (up to the annual maximum credit use).

e) Any Basin 27 Primary Volume diversions in excess of 45,000 acre-feet per year plus available credit shall not exceed the amount of equitable adjustment water available to the Tribes.

1. The Tribes shall inform the Basin 27 Watermaster if delivery of equitable adjustment water is desired and the points of diversion for receipt of the water.

2. The Committee of Nine shall take the necessary steps to ensure that a firm supply of water is available to the Tribes on a yearly basis to fulfill any equitable adjustment water need. On an annual basis, the Parties will confirm the source of water to be provided to the Tribes if equitable adjustment water is needed.

3. The source of equitable adjustment water to be provided to the Tribes shall allow the Tribes to utilize the water source in a manner consistent with water right no. 27-11375, without the need to construct additional conveyance or diversion works.

4. Nothing herein precludes the Committee of Nine from implementing actions to increase the supply of Blackfoot River natural flow. The Parties agree that the obligation of Committee of Nine to provide equitable adjustment water will be reduced to the extent of any increase of the Blackfoot River natural flow resulting from such actions.

f) The Plan includes an annual accounting of the equitable adjustment water account balance, equitable adjustment water accrual, and/or equitable adjustment water use each year, and the Watermaster shall provide the Basin 27 Water Users and Committee of Nine with this information at or prior to the Water District 27 annual meeting or March 1st, whichever is earlier. The equitable adjustment water account balance at the start of the irrigation season is the amount of equitable adjustment water available for use that same year.

The irrigation season of the calendar year in which this Agreement is approved by the SRBA District Court shall begin with an equitable adjustment water account balance of 5,000 acre-feet.

3. Exercise of Water Right No. 27-11375.

Water right no. 27-11375 shall be exercised pursuant to paragraph x.d, as provided for in the Fort Hall Agreement, to the extent that Basin 27 Primary Volume diversions are less than or equal to the following quantity:

45,000 afy + annual credit used + equitable adjustment water used

At any point during the irrigation season when the Basin 27 Primary Volume exceeds the above quantity, water right no. 27-11375 will be administered by water right priority, and the provisions of paragraph x.d of water right no. 27-11375 shall no longer apply.

4. Blackfoot River Diversions and Measurements

The Plan shall govern the diversion, use and measurement of water. The Parties in conjunction with the Basin 27 Watermaster shall develop a diversion and accounting protocol pursuant to the Plan, which shall track the Basin 27 Water Users' credit account and provision of equitable adjustment water deliveries to the Tribes as follows:

a) On a weekly basis, the Basin 27 Watermaster will calculate and publish the Basin 27 diversions and Primary Volume. When the Primary Volume is within 5,000 AF of 45,000 AFY plus the available credit, then the Watermaster will notify the Tribes, Basin 27 Water Users and the Committee of Nine that an equitable adjustment water condition is approaching and take further steps as outlined below.

b) The Basin 27 Watermaster makes a projection of the following quantities for the coming week: total annual Basin 27 diversions, the cumulative Basin 27 Primary Volume, the use of credits, and any equitable adjustment water supply due to the Tribes. These projections shall be based on the pattern of diversions in prior years and the magnitude of diversions occurring the previous week, estimated available natural flow water supplies and changes in requested Basin 27 diversion demands as per the Plan. The projections shall be provided to the Parties and Basin 27 Water Users for review.

c) When based upon the accounting in subparagraph b) above, a delivery of equitable adjustment water is owed to the Tribes in the upcoming week, then that quantity of water shall be provided to the Tribes as governed by paragraph 5 below.

d) This process is repeated until the Tribes have ceased diversions for the year, until no further equitable adjustment water is available, or if the Tribes' water right no. 27-11375 is filled.

5. Equitable Adjustment Water Delivery to Tribes

When, based upon the accounting protocol developed and the application of the credit system described above, an equitable adjustment water delivery is owed to the Tribes, then the Tribes and Committee of Nine shall be notified by the Basin 27 Watermaster. The Tribes shall inform the Basin 27 and Water District 01 Watermasters when delivery of the equitable adjustment water is desired and the points of diversion for receipt of that water. The Committee of Nine shall be obligated to deliver equitable adjustment water at the rates specified by the Tribes over the week, at the identified diversion points consistent with water right no. 27-11375.

6. Equitable Adjustment Water Supply to Tribes

The Committee of Nine shall take the necessary steps to ensure that a firm supply of water is available to the Tribes on a yearly basis to fulfill any equitable adjustment water obligation. On an annual basis the Committee of Nine will confirm water is available and the source(s) of said supply with the Parties.

7. Savings Clause

Nothing herein alters or amends the Sand Creek exchange or the mitigation obligations of Mitigation Inc.

8. Binding Effect.

This Agreement shall bind and inure to the benefit of the respective successors of the Parties.

9. Entire Agreement

This Agreement sets forth all understandings between the Parties with respect to the equitable adjustment provided for water right no. 27-11375. There are no other understandings, covenants, promises, agreements, conditions, either oral or written between the Parties other than those contained herein.

10. Effect of Headings

Headings appearing in this Agreement are inserted for convenience and reference and shall not be construed as interpretations of the text.

11. Multiple Originals

This agreement is executed in quintuplicate. Each of the five (5) Agreements with an original signature of each Party shall be an original.

12. Effective Date

This Agreement shall be effective upon approval by the Fifth Judicial District of the State of Idaho in and for the County of Twin Falls, case no. 39576.

The Parties have executed this Blackfoot River Equitable Adjustment Settlement Agreement on the date following their respective signatures.

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE BLACKFOOT RIVER EQUITABLE ADJUSTMENT SETTLEMENT AGREEMENT	))))	A RESOLUTION

WHEREAS, the Blackfoot River Equitable Adjustment Settlement Agreement (Agreement) by and between the Shoshone Bannock Tribes, the United States, the State of Idaho, and the Committee of Nine sets forth the terms and conditions of the equitable adjustment provided for in paragraph x.d of water right no. 27-11375; and

WHEREAS, the Agreement is an addendum to the Partial Final Consent Decree Determining The Rights of the Shoshone-Bannock Tribes to the Use of Water in the Upper Snake River Basin, dated August 2, 1995; and

NOW THEREFORE BE IT RESOLVED that the Idaho Water Resource Board (Board) hereby approves the Blackfoot River Equitable Adjustment Settlement Agreement and authorizes the Board's Chairman to execute the Agreement on behalf of the Board.

DATED this _____ day of November, 2012.

_____
TERRY T. UHLING, Chairman
Idaho Water Resource Board

ATTEST _____
BOB GRAHAM, Secretary

MEMO

To: Idaho Water Resource Board
From: Brian W. Patton
Subject: Water Resource Projects Funding Program Status Report
Date: November 14, 2012

As of **September 1st** the IWRB's available and committed balances in the Revolving Development Account and Water Management Account are as follows:

Revolving Development Account (main fund)

Committed but not disbursed	
Loans for water projects	$3,849,776
Water storage studies	2,700,901
Total committed but not disbursed	$6,550,678
Loan principal outstanding	8,361,374
Uncommitted balance	2,010,880
Estimated revenues next 12 months	1,900,000
Commitments from revenues next 12 months	0
Estimated uncommitted funds over next 12 months	3,910,880

Rev. Dev. Acct. ESPA Sub-Account

Committed but not disbursed		
CREP	2,419,581	
Aquifer recharge	350,000	
Bell Rapids	361,620	
Palisades storage	10,000	
Black Canyon Exchange	509,445	
Loan for water project	250,000	
Total committed but not disbursed		$3,900,645
Loan principal outstanding		347,893
Uncommitted balance		113,619
Estimated revenues next 12 months		172,000
Commitments from revenues over next 12 months		0
Estimated uncommitted funds over next 12 months		285,619

Rev. Dev. Acct. Bell Rapids Sub-Account

Committed but not disbursed (finance costs)	$179,420
Estimated revenues next 12 months *(1)*	2,000
Commitments from revenues over next 12 months	2,000
Estimated uncommitted funds over next 12 months	0

Rev. Dev. Acct. Dworshak Hydropower (2)

Committed but not disbursed (repair fund, etc.)	$1,336,576

Estimated revenues next 12 months *(3)*		200,000
Commitments from revenues over next 12 months		200,000
Estimated uncommitted funds over next 12 months		0

Rev. Dev. Acct. Pristine Springs Sub-Account

Committed but not disbursed		
Repair fund	$1,164,228	
Total committed but not disbursed		$1,164,228
Loan principal outstanding		7,475,750
Uncommitted balance		0
Estimated revenues next 12 months		1,732,000
Commitments from revenues over next 12 months		1,732,000
Estimated uncommitted funds over next 12 months		0

Rev. Dev. Acct. Rathdrum Prairie & Treasure Valley Sub-Acct.

Committed but not disbursed	$500
Uncommitted Balance	$161,743
Estimated revenues next 12 months	200,000 (from Pristine/Dworshak hydropower)
Commitments from revenues over next 12 months	0
Estimated uncommitted funds over next 12 months	$361,743

Rev. Dev. Acct. Upper Salmon/CBWTP Sub-Account

Committed but not disbursed		$2,626,487
(Upper Salmon flow enhancement projects)		
Estimated revenues next 12 months *(4)*		30,000
Commitments from revenues over next 12 months		30,000
Estimated uncommitted funds over next 12 months		0

Water Management Account

Committed but not disbursed:	$111,376
Loan principal outstanding	4,435
Uncommitted balance	2,006
Estimated revenues next 12 months	2,000
Commitments from revenues over next 12 months	0
Estimated uncommitted funds over next 12 months	$6,441

Secondary Aquifer Planning, Management, and Implementation Fund

Committed but not disbursed	$1,666,979
Uncommitted Balance	1,867,746
Estimated revenues next 12 months	750,000 (from Pristine Springs Sub-Account)
Commitments from revenues over next 12 months	0
Estimated uncommitted funds over next 12 months	2,617,746

Total committed but not disbursed	**$17,536,889**
Total loan principal outstanding	**16,189,453**

Total uncommitted balance	**4,200,997**
Total estimated uncommitted funds over next 12 months	**7,182,429**

(1) Exclusive of pass-through payments made by the U.S. Bureau of Reclamation.
(2) Excess funds generated by the Dworshak Hydropower Project are deposited into the Revolving Development Account (Main Fund) on a monthly basis. To the date of this report this has totaled $2,165,371.
(3) This line item includes power sales and interest income after removing debt service. Debt service is paid prior to the funds being deposited in the Revolving Development Account.
(4) Exclusive of project funds provided by Bonneville Power Administration or federal appropriation sources. These funds are provided to the Board based on individual project proposals.

The IWRB will be considering a loan application from the **Canyon County Drainage District No. 2** for $35,000 to replace a failed agricultural drainage pipeline. This has been challenging because there is no clear path in statute for a drainage district to incur debt except for original construction. Based on a recommendation from the Attorney General's Office, the Drainage District petitioned the court for approval to incur debt through a loan agreement with the IWRB, which was approved by the court (copy is attached in application materials.) We have been told there are several other drainage districts in the agricultural areas of southwest Idaho that also need to borrow funds to replace ageing infrastructure. This "Judicial Approval" process appears to provide a path forward for these drainage districts to borrow funds and rehabilitate their systems.

The IWRB will also be considering changing the **bond trustee** on the IWRB's existing revenue bonds due to office consolidations and closures by the current trustee.

The following is a list of potential loans:

Potential Applicant	Potential Project	Preliminary Loan Amount	Comment
Marysville Canal Company	Phase 3 of gravity pressure pipeline project	$2,000,000	Waiting on outcome of federal (NRCS) grant request; IWRB has financed Phases 1 & 2 with $1.725M in loans
Cub River Irrigation Company	Gravity pressure pipeline	$1,000,000	Waiting on outcome of federal (BOR) grant request

Patton, Brian

From: Jim Wrigley [Jim.Wrigley@wedbush.com]
Sent: Friday, November 16, 2012 9:28 AM
To: Patton, Brian
Subject: FW: IWRB Successor Documentation for Board Meeting
Attachments: IWRB- Successor Trustee BNY Mellon Fee 11-13-12.doc; Sample Letters New.doc; Successor Trustee BNY Mellon -IWRB.ppt; Timeline for Successor Trustee New.doc; Tripartite Agreement new.doc; BNY Mellon_At a Glance_2Q2012.pdf; BNYM Corporate Trust Successor Trustee Services Info Sheet.pdf

Mr. Chairman, Members of the Idaho Water Resource Board;

Attached are documents for your consideration at the Board meeting scheduled for 11/28/2012. These documents will put in place an action to replace Wells Fargo Corporate Trust as trustee for all outstanding bonds issued by the Idaho Water Resource Board to fund various water projects which currently utilize the services of Wells Fargo Corporate Trust for Trustee / Paying Agent services.

Several borrowers funded with IWRB bonds have experienced difficulties with Wells Fargo trustee services prior to and particularly since the movement of its operations from Boise to Portland in October 2011. Existing relationship officers, client institutional memory and in some instances, records have been lost through office moves. IWRB projects such as the Bear Basin Local Improvement District pooled bonds and the Caldwell Lateral Irrigation District (CLID) pooled bonds have experienced service, communication and record keeping difficulties. Considerable time has been expended by various personnel associated with these projects to clarify questions, rectify faulty records, and educate new Wells Fargo personnel on the outstanding bonds and their procedural obligations. Careful audit and analyses of the Caldwell Lateral bonds revealed that misinformation had been provided to CLID management for several years resulting in faulty district thinking and audit reporting. Outstanding indebtedness was thought to be approximately $1,500,000. The actual outstanding indebtedness is approximately $600,000. CLID is now taking the appropriate action to correct the misstated annual audits at its expense.

Wells Fargo Trust notified clients that its Portland trust office would be closed with accounts moved to Denver effectively at the end of October 2012. This second move will require additional time and expense to educate new trust personnel with the high potential for inadequate service and communication difficulty.

Based on the less than satisfactory service experienced by IWRB clients, staff and outside advisors it is recommended that trust services currently provided by Wells Fargo Trust be transferred to Bank of New Your Mellon (BNYM). BNYM enjoys broad market acceptance and has a reputation for professional and highly accurate trustee services. The various documents above will implement this change. There will be no additional cost to the IWRB or its borrowers. There may in fact be some fee savings.

This Action requires a simple IWRB resolution to transfer trustee service and authorize the execution of the Tripartite Agreement attached above.

Jim C. Wrigley
Sr. Vice President, Public Finance
Wedbush Securities Inc.
950 West Bannock Street, Suite 600
Boise, Idaho 83702

(208) 331-5163 direct
(208) 861-0903 mobile
(208) 331-1562 fax

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF REVENUE BOND TRUSTEE SERVICES	)))	A RESOLUTION

WHEREAS, the Idaho Water Resource Board (Board) from time-to-time issues revenue bonds to finance water projects consistent with the State Water Plan; and

WHEREAS, Wells Fargo Trust Services has provided trustee services on revenue bonds issued prior to 2012; and

WHEREAS, Wells Fargo Trustee Services in 2011 closed its Boise office and moved those services to Portland, Oregon, and is now in the process of further consolidating these services and moving them to an office in Denver, Colorado; and

WHEREAS, these office closures and consolidations have made it difficult for the Board and some of the borrowers to obtain accurate information concerning these bonds; and

WHEREAS, the Board's revenue bond financial advisor has recommended that the trustee services currently being provided by Wells Fargo Trust Services be transferred to Bank of New York Mellon.

NOW THEREFORE BE IT RESOLVED that the Idaho Water Resource Board (Board) hereby authorizes transferring the trustee services currently being provided by Wells Fargo Trust Services to Bank of New York Mellon, subject to the condition that this action must result in no increased costs for trustee services to the Board or its borrowers

DATED this 28th day of November, 2012.

_____
TERRY T. UHLING, Chairman
Idaho Water Resource Board

ATTEST _____
BOB GRAHAM, Secretary

BNY MELLON

Idaho Water Resource Board-Successor Trustee

Successor Trustee, Paying Agent, Registrar and Dissemination Agent
November 13, 2012

Presented By:
Michael A. Jones
Vice President

The Bank of New York Mellon Trust Company, N.A.

601 Union Street, Suite 520

Seattle, WA 98101

Phone: 206.336.1616
Mobile: 206.336.1616

Michael.a.Jones@BNYMellon.com

Transfer of Duties to a Successor Trustee:

- Successor Trustee
- Paying Agent and Registrar
- Dissemination Agent

Safest Bank in the U.S.

World's 50 Safest Banks
2011

Global Finance

BNY MELLON

Fee Schedule

Upon appointment of The Bank of New York Mellon Trust Company N.A. ("BNYM Trust Company, N.A."), as Successor Trustee, Paying Agent, Registrar and Dissemination Agent, Idaho Water Resource Board shall be responsible for the payment of the fees, expenses and charges as set forth in this Fee Schedule.

General Fees

Acceptance Fee	Waived

The Acceptance Fee shall be waived. Included in our acceptance procedures is the review and execution of the documents submitted in support thereof; coordination of Successor Trustee logistics with the Issuer, Attorneys, Note-holders and other related parties; establishment of required accounts; set-up and controls and the establishment of the debt issues and bondholder records on our recordkeeping system.

Annual Fee	$1,500 Per Issue

An annual fee of $1,500.00 Per Issue is applicable and covers the duties and responsibilities related to account administration and bondholder services, which may include maintenance of accounts on various systems, collection and payment of principal and interest to bondholders, the preparation and distribution of any redemption notices and the monitoring of issuer compliance. This fee is payable in advance for the year and shall not be prorated.

Additional Service:	
Annual Dissemination Agent Fee	$250 Per Issue
Arbitrage Compliance Services	Quote Available Upon Request

Dissemination Agent Services: Includes dissemination of financial information and notices as required under the Disclosure Agreement.

Arbitrage Compliance Services: BNYM Trust Company has a specialized team dedicated to providing arbitrage compliance services for issuers of tax-exempt bonds. When BNYM Trust Company is the trustee and/or paying agent for tax-exempt bonds, we can simplify the process and provide seamless arbitrage reporting and information.

Investment Compensation	See explanation

With respect to investments in money market mutual funds the investment maintenance fee will be -0- basis points. With respect to investments in money market mutual funds for which BNYM Trust Company, N.A. provides shareholder services BNYM Trust Company, N.A. (or its affiliates) may also receive and retain additional fees from the mutual funds (or their affiliates) for shareholder services as set forth in the Authorization and Direction to BNYM Trust Company, N.A.to Invest Cash Balances in Money Market Mutual Funds.

INVESTMENT AGREEMENT, OR REPURCHASE/ FORWARD PURCHASE AGREEMENT (if applicable)

BNYM Trust Company, N.A. will charge a one-time fee in the amount of $750 for review and acceptance of any investment agreement or repurchase agreement, which includes in house legal review. BNYM Trust Company, N.A. will charge an annual fee of $500 to cover all transactions for principal adjustments to the Investment Agreement, deposits, withdrawals and reconciliation's during each twelve month period (no charge per transaction). Should opinions be required whether related to guaranteed investments, repurchase or forward delivery agreements, etc., the expense for such opinions shall be passed through at cost.

Counsel Fees – Internal	Waived*

A fee covering the reasonable fees and expenses of Counsel for its services, including review of governing documents, communication with members of the closing party (including representatives of the issuer, investment banker(s), attorney(s) and (BNYM Trust Company, N.A.), attendance at meetings and the closing, and such other services as BNYM Trust Company, N.A. may deem necessary. The Counsel fee will be the actual amount of the reasonable fees and expenses charged by Counsel and is payable at closing. Should closing not occur, you shall still be responsible for payment of reasonable Counsel Fees and expenses. Should a trustee counsel opinion be needed, outside counsel will need to provide such opinion(s) and an additional fee will be charged.

Out of Pocket Expenses	At Cost

Additional out-of-pocket expenses may include, but are not limited to statutory filing charges, including UCC amendments, continuations, and termination fees; and expenses of BNYM Trust Company, N.A.'s representative(s) and Counsel for travel costs for attending the closing and special meetings. Fees and expenses of BNYM Trust Company, N.A.'s representatives and Counsel will be charged at the actual amount of fees and expenses charged.

Miscellaneous Fees & Services	See explanation

The fees for performing extraordinary or other services not contemplated at the time of the execution of the transaction or not specifically covered elsewhere in this schedule will be commensurate with the service to be provided and will be charged in BNYM Trust Company, N.A.'s sole reasonable discretion. These extraordinary services may include, but are not limited to, supplemental agreements, consent operations, unusual releases, and the preparation of special or interim reports. Counsel, accountants, special agents and others will be charged at the actual amount of reasonable fees and expenses billed.

Default Administration Fees and Expenses	

In the event that a default occurs and is not cured within the appropriate time period required by the governing document, BNYM Trust Company, N.A. shall be paid a Default Administration Fee calculated in accordance with BNYM Trust Company, N.A.'s hourly rate in effect at the time of the default and as may be modified by BNYM Trust Company, N.A. in its sole discretion from time to time thereafter, plus all expenses incurred by BNYM Trust Company, N.A., which expenses will include the fees and expenses of Counsel. In addition, if BNYM Trust Company, N.A. is required to advance any payments, BNYM Trust Company, N.A. shall be entitled to charge interest on such advances at The BNYM Trust Company, N.A.'s (or one of its affiliates) prime rate in effect on the date of the advance.

Terms and Disclosures

TERMS OF PROPOSAL

Final acceptance of the appointment as trustee, paying agent and registrar is subject to approval of authorized officers of BNYM Trust Company, N.A. and full review and execution of all documentation related hereto. We reserve the right to terminate this offer if we do not enter into final written documents within three months from the date this document is first transmitted to you. Fees may be subject to adjustment during the life of the engagement.

MISCELLANEOUS

BNY MELLON

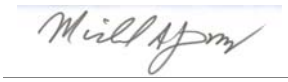
The terms of this Fee Schedule shall govern the matters set forth herein and shall not be superseded or modified by the terms of the Indenture. This Fee Schedule shall be governed by the laws of the State of Idaho without reference to laws governing conflicts. BNYM Trust Company, N.A. and the undersigned agree to jurisdiction of the federal and state courts located in the State of Idaho. Idaho Water Resource Board shall be responsible for filing any applicable information returns with the U.S. Department of Treasury, Internal Revenue Service in connection with payments made by BNYM Trust Company, N.A. to vendors who have not performed services for BNYM Trust Company, N.A.'s benefit under the various note issuances or other undertakings contemplated by this fee agreement.

CUSTOMER NOTICE REQUIRED BY THE USA PATRIOT ACT

To help the US government fight the funding of terrorism and money laundering activities, US Federal law requires all financial institutions to obtain, verify, and record information that identifies each person (whether an individual or organization) for which a relationship is established.

What this means to you: When you establish a relationship with BNYM Trust Company, N.A., we will ask you to provide certain information (and documents) that will help us to identify you. We will ask for your organization's name, physical address, tax identification or other government registration number and other information that will help us to identify you. We may also ask for a Certificate of Incorporation or similar document or other pertinent identifying documentation for your type of organization.

We thank you for your assistance.

Accepted By:		For BNYM Trust Company, N.A.:
Signature:	_____	
Date:	_____	November 2, 2012
Name:	_____	Michael A. Jones
Title:	_____	Vice President/Business Development Officer

Upon acceptance, an authorized representative of the Issuer/Obligor is responsible for signing the fee schedule and returning an original.

(Letter from City to Existing Trustee)

(Date)

(Prior Trustee)
(Prior Trustee Address)

Re: (Name of Issue)

Dear :

Please be advised that pursuant to Section XXXXX of the Indenture/Trust Agreement dated XXXXXXXXXXXXX related to the above referenced transaction, the City of XXXXXXXXXXX (the "City") hereby request the resignation of XXXXXXXXXXXX as trustee to the above referenced issue.

Furthermore, the City has agreed to appoint The Bank of New Mellon Trust Company, N.A. as successor trustee ("Successor Trustee") on the subject issue and request that you fully cooperate with the Successor Trustee to ensure a smooth transaction of the account.

You will be receiving a letter from the Successor Trustee outlining all documents, records, and other information required to effectuate the transfer of the account.

Thank you for your cooperation in this matter.

Sincerely,

(Authorized Signature)

cc: The Bank of New York Mellon Trust Company, N. A.
100 Pine Street, Ste 3100
San Francisco, CA 94111

(Letter from City to Letter of Credit Bank)

(Date)

(Letter of Credit Company)

Re: XXXXXX Letter of Credit

Dear :

Please be advised that the City of XXXXXXXXXXXXXX (the "City") has requested the resignation of XXXXXXXXXXXXX as trustee on the above referenced issue in accordance with the provision set forth in the Trust Agreement dated XXXXXXXXXXX by and between the above parties. Furthermore, the Corporation and the City have agreed to appoint The Bank of New York Mellon Trust Company, N.A. as successor Trustee (Successor Trustee") on the subject issue.

In accordance with the requirements for resignation of the Trustee set forth in the above mentioned Trust Agreement, we are hereby requesting the consent of XXXXXXXXXXX as the Letter of Credit Bank to effectuate the resignation of XXXXXXXXXXXXX as Prior Trustee and the appointment of Successor Trustee as trustee moving forward.

Further, we hereby authorize and direct (the Letter of Credit Bank) to take any and all actions, as necessary, to effect the change of beneficiary of the Letter of Credit from the Prior Trustee to the Successor Trustee.

Please sign below acknowledging your consent to the above stated action and return a copy of this letter with an original signature to the attention of the undersigned as soon as practicable.

Thank you for your cooperation in this matter.

Sincerely,

We hereby acknowledge and consent to the resignation of XXXXXXXXX as Trustee to on the above referenced issue.

By: _____
Print Name:
Title:
Date:

cc: The Bank of New York Mellon Trust Company, N. A.

100 Pine Street, Ste 3100
San Francisco, CA 94111

(Letter from BNYM Trust Company to Prior Trustee)

(Date)

(Prior Trustee)

Re: (Name of Issue)

Dear :

We have been notified by the City of XXXXXXXXX of our appointment as Successor Trustee on the above referenced issue pursuant to Section XXXX of the XXXXXXXXXXXXXX Trust Agreement dated XXXXXXXXXXX.

In order to ensure a smooth transition of the account, we hereby request that you forward all items outlined on the attached Exhibit "A" to the attention of the undersigned at the address listed below on or before XXXXXXXXXXX. You may forward the items via Airborne Express overnight mail and charge our account number XXXXXXXXXXX.

In addition, we have included a list of the items our Operations Department will require (Exhibit "B")in order to effectuate the transfer of the issue. Please forward this information to the appropriate individual in your Operations Department and request they provide us with this information on or before XXXXXX, XXXXXXXXXXXX.

Thank you for your cooperation in this matter. If you have any questions, please do not hesitate to call me at (213) 630-XXXX.

Sincerely,

XXXXXXXXX
Relationship Manager

cc:

EXHIBIT "A"

Documents to be delivered to Successor Trustee:

1. Executed copy of Trust Agreement dated as of XXXXXXXXXXXX

2. Conformed copy of Trust Agreement

3. File of Closing Documents

4. Copies of any and all of the most recent compliance certificates of other documents as required under the Trust Agreement and other governing documents

5. Certified List of Holders as of XXXXXXXX, including Certificate detail and all "stop transfers" and the reason for such "stop transfers" (or, alternatively, if there are a substantial number of registered Holders, the computer tape reflecting the identity of such Holders)

6. Copies of any official notices sent by the Trustee to all the Holders of the Certificates pursuant to the terms of the Trust Agreement during the past twelve months

7. Copies of current account balances

8. Copy of the Letter of Credit

EXHIBIT “B”

BNY MELLON CORPORATE TRUST OPERATIONS
SUCCESSOR INFORMATION REQUIREMENTS

Issue Name: (Name of Issue)
Effective Date of Succession: XXXXXXX, XXXXXXXXXX
First BNY Mellon Payment Date: XXXXXXX, XXXXXXXX (Variable Issue-Pays 1st Bus. Day Mo.)

Please contact XXXXXXXXXXX , The Bank of New York Mellon Debt Operations at (212) XXXXXXX prior to the effective date of succession noted above.

The following information will be required by our Operations Department:

- Number of holders
- Number of certificates
- Former agent processing system
- Certified cash balances
- Certified detailed unpresented list
- Certified listing of cusip numbers, rates, maturities, and outstandings
- Certified registered holders list including name, address, TIN#, payment instructions, complete certificate detail and outstanding
- Certified record of outstanding bearer certificate detail including prefix, number, denomination and outstanding by cusip
- Certified bearer held alive manifest by cusip
- Bearer held alive inventory
- Certified cut & endorse coupon manifest by cusip
- Cut and Endorse coupon inventory (clipped thru effective date)
- Unissued registered vault inventory and over-silvering agreement
- Certified certificate stop record with qualification codes
- Financial call notices for the current and prior year
- All escheatment records and filings
- Post conversion contact for research and customer service
- Agreement for forwarding post conversion presentments

Tax Reporting – BNY Mellon will report on transactions <u>processed</u> from our appointment date only

TRANSFER OF DUTIES TO A SUCCESSOR TRUSTEE
THE PROCESS

Most Trust Indentures/Agreements contain language which allows for the removal or resignation of the Trustee or Agent by the Issuer. This however is allowed only in the event a Successor Trustee meets the specific qualifications contained in the documents. These qualifications often include capitalization requirements as well as office locations. In addition, there may be instances whereby the approval of a letter of credit bank or insurer must be sought (typically if the successor fails to meet all requirements of the Trustee). In certain cases Notes, Deeds of Trust or Uniform Commercial Code financing statements must be prepared, executed, and filed where necessary.

While the replacement of a trustee or agent requires a certain amount of paperwork, it is in fact the new or successor trustee that is responsible for bearing most of the administrative burden connected with the replacement. The following documentation is typically all that is required to effect a transfer of duties with our commitment to ongoing quality evidenced by our initial synopsis.

- Attached is a sample "time-line" listing duties involved (most by the successor trustee) in the process of transfer.

- To effect the transfer of duties from the Trustee to a Successor Trustee, a Tri-Partite Agreement is executed. Attached is a sample of an Agreement of Resignation, Appointment and Acceptance Form (or Tri-Partite Agreement).

  Note: In the case of a "true" agency appointment (i.e., Registrar, Transfer, Paying Agent) a Tri-Partite agreement is usually not required.

- Samples of the following letters which may be needed in conjunction with the above form in order to effectuate the appointment of a successor is attached. They include the following:

  1. A letter from the issuer requesting the resignation of the prior Trustee (see attached sample)
  2. If applicable, a letter from the Issuer requesting the consent of an L/C Bank to the appointment of a successor. This could be utilized for a Bond insurer or agreement provider.
  3. A letter by BNYM Trust Company to the prior Trustee requesting specific administrative and operational material.

- Finally, attached please find a sample account synoptic, which we have committed to preparing for each successor trustee appointment, as a courtesy to our clients for their trust in our services.

Successor Trustee Services

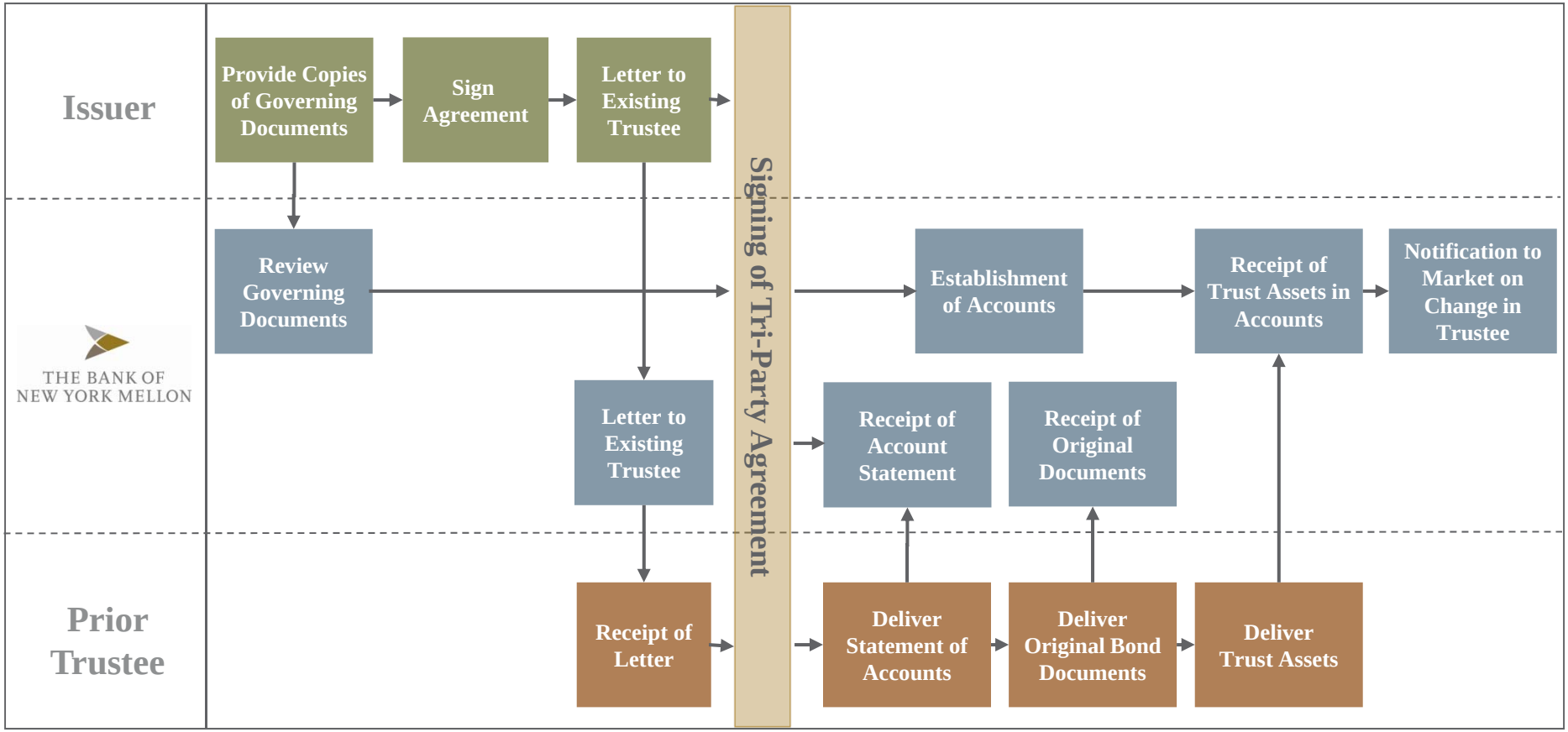
- For more than a decade, the corporate trust industry has been steadily consolidating. While other banks have exited the business, The Bank of New York Mellon has significantly increased its commitment, expanding into new markets and continuing to acquire new books of business.

- Our dedication to this business is evidenced by our acquisition of more than 40 corporate trust businesses since 1994.

- Our ability to provide uninterrupted, high-quality service has enabled us to seamlessly integrate acquired businesses, build new client relationships and enhance our existing long-term relationships.

- When choosing The Bank of New York Mellon as successor trustee, clients benefit from the experience we have gained efficiently completing thousands of conversions for clients around the world.
  - Experienced Business Unit
  - Standardized Documentation
  - Security Owner Notification

Transition Workflow



STATE OF IDAHO

Idaho Water Resource Board
322 East Front Street
PO Box 83720
Boise, ID 83720
Phone (208) 287-4800
Fax (208) 287-6700

To: Idaho Water Resource Board

From: Stuart VanGreuningen

Date: November 1, 2012

Subject: Canyon County Drainage District #2 – Drain tile replacement

1.0 INTRODUCTION

The Canyon County Drainage District #2 (CCDD2) is requesting $35,000 in financing to replace 1300 feet of failed drainage tile.

2.0 BACKGROUND

The CCDD2 was formed in 1918 and services 2300 acres of agriculture and rural development in southwestern Idaho in the counties of Payette and Washington. The project is located in the northern most end of CCDD2 service area along the Payette-Washington County line about 5 ½ miles north of Payette.

The drainage section of concern was installed about 90 years ago and is approximately 1300 feet in length. The original drain piping consisted of 12 inch diameter, 30 inch long concrete pipe segments with joint cracks left open for water infiltration. Over time the pipe segments have become filled with silt which caused the pipe to shift resulting in a plugged and misaligned pipe.

The drain pipe is needed to remove the subsurface water that would otherwise affect the agriculture in the area which produces fruit, onions, and seed crops

3.0 PROPOSED PROJECT

The purposed project is to replace 1300 feet of drainage tile that has stopped working. The project will install new piping to remove the excess water and allow for normal crop production to continue. The estimated replacement costs are:

Drainage pipe	$9,375
Rock	$6,925
Filter fabric	$3,000
Installation	$13,700
Engineering	$2,000
	$35,000

4.0 FINANCIAL ANALYSIS

Canyon county Drainage District #2 is requesting funding in the amount of $35,000. This amount at an interest rate of 5.5% returns the following:

Estimated Payment	Years	Estimated cost per acre
$4,643	10	$2.02

4.0 DRAINAGE DISTRICT

Drainage districts in the State of Idaho can be formed where ever a county requires drainage or diking or both. The district is made up of a judicially appointed board of commissioners. These commissioners are empowered to maintain the drainage or diking system as required. The commissioners are empowered to assess upon the lands within the district boundaries a sufficient amount to pay the expenses of maintaining the drains and dikes.

5.0 REPAYMENT

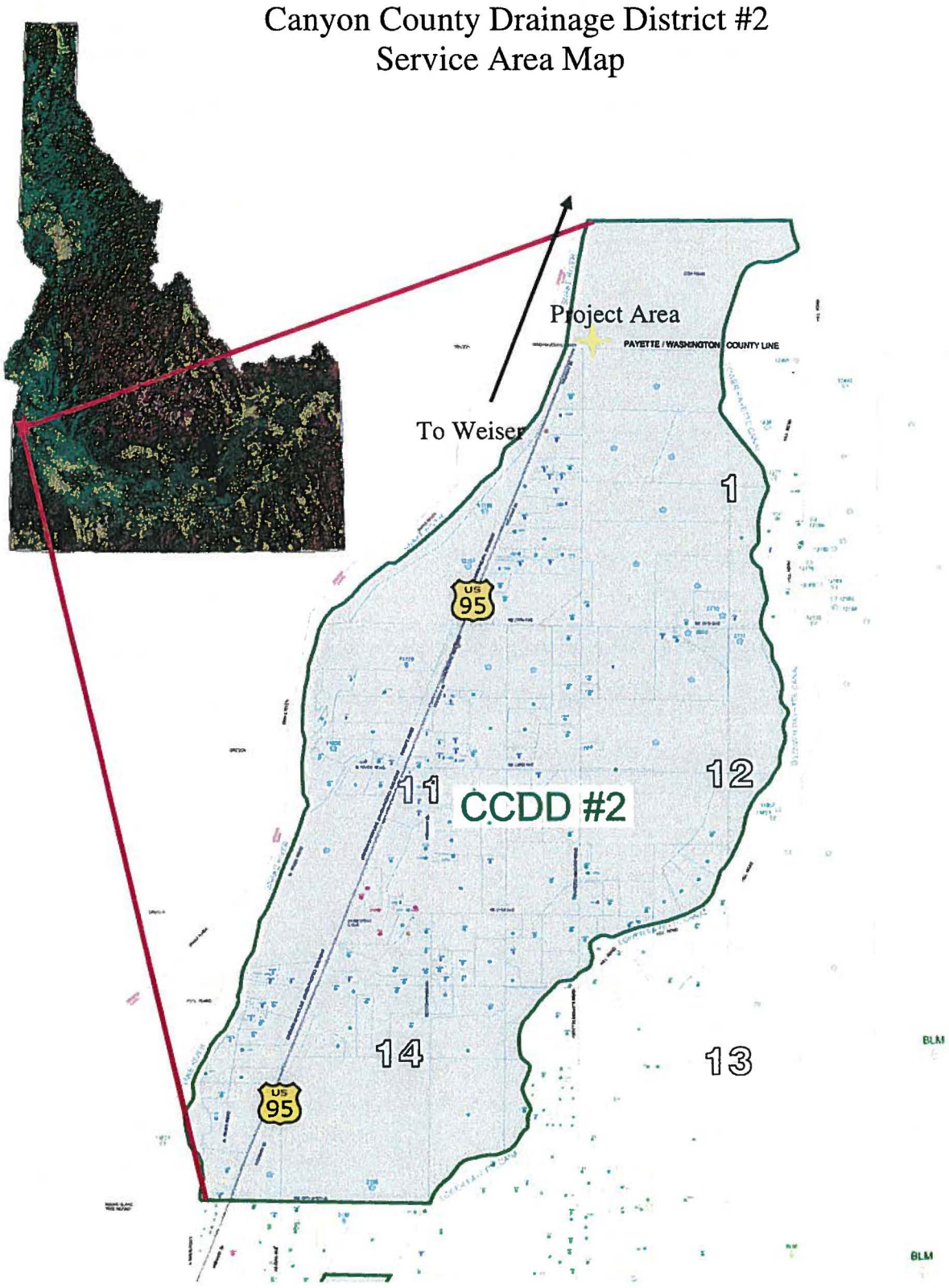
The drainage district board voted in the summer of 2012 to increase the levy to obtain the funds necessary for the repayment of the loan. Upon passing the levy increase the drainage district informed the counties of Payette and Washington who will increase the assessment on the properties within the district boundaries. This increase will take place with the payment of the 2013 property taxes.

Idaho Statues do not address the issue the ability of drainage districts to incur debt in the form of a loan. Under advisement from the Attorney Generals Office the Idaho Water Resource Board staff requested and received from CCDD2 a judicial confirmation that the drainage district could incur debt in the form of a loan.

6.0 CONCLUSION AND RECOMMENDATION

The funding requested by the Canyon County Drainage District #2 is for the replacement of drainage tile that failed in the fall of 2011. CCDD2 has passed a levy increase to cover the cost of the loan and has received judicial confirmation that CCDD2 can incur debt in the form of a loan for the repair/replacement of the drainage tile. The judicial confirmation is on record with the IWRB.

Staff recommends a loan in the amount of $35,000 at 5.5% with terms to be specified in the resolution for the loan.



BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE CANYON COUNTY DRAINAGE DISTRICT #2	)))	A RESOLUTION TO MAKE A FUNDING COMMITMENT

WHEREAS, as the Canyon County Drainage District #2 (District) has submitted an application to the Idaho Water Resource Board (Board) requesting a loan in the amount of $35,000.00; and

WHEREAS, the District operates and maintains an agricultural drainage system for its members in Payette and Washington counties; and

WHEREAS, one of the District's drainage pipelines is plugged and no longer draining the associated fields; and

WHEREAS, these funds would be used to replace the plugged pipeline; and

WHEREAS, The District has receive judicial confirmation that it can obtain debt in the form of a loan and this confirmation is on file with the Board; and

WHEREAS, the District is a qualified applicant and the proposed project qualifies for a loan from the Revolving Development Account; and

WHEREAS, the proposed project is in the public interest and in compliance with the State Water Plan.

NOW THEREFORE BE IT RESOLVED that the Board approves a $_____ loan from the Revolving Development Account, at _____% interest with a ____ year repayment term, and the Board provides authority to the Director of the Idaho Department of Water Resources to enter into contracts with the Association on behalf of the Board.

BE IT FURTHER RESOLVED that this resolution and the approval of the loan is subject to the following conditions:

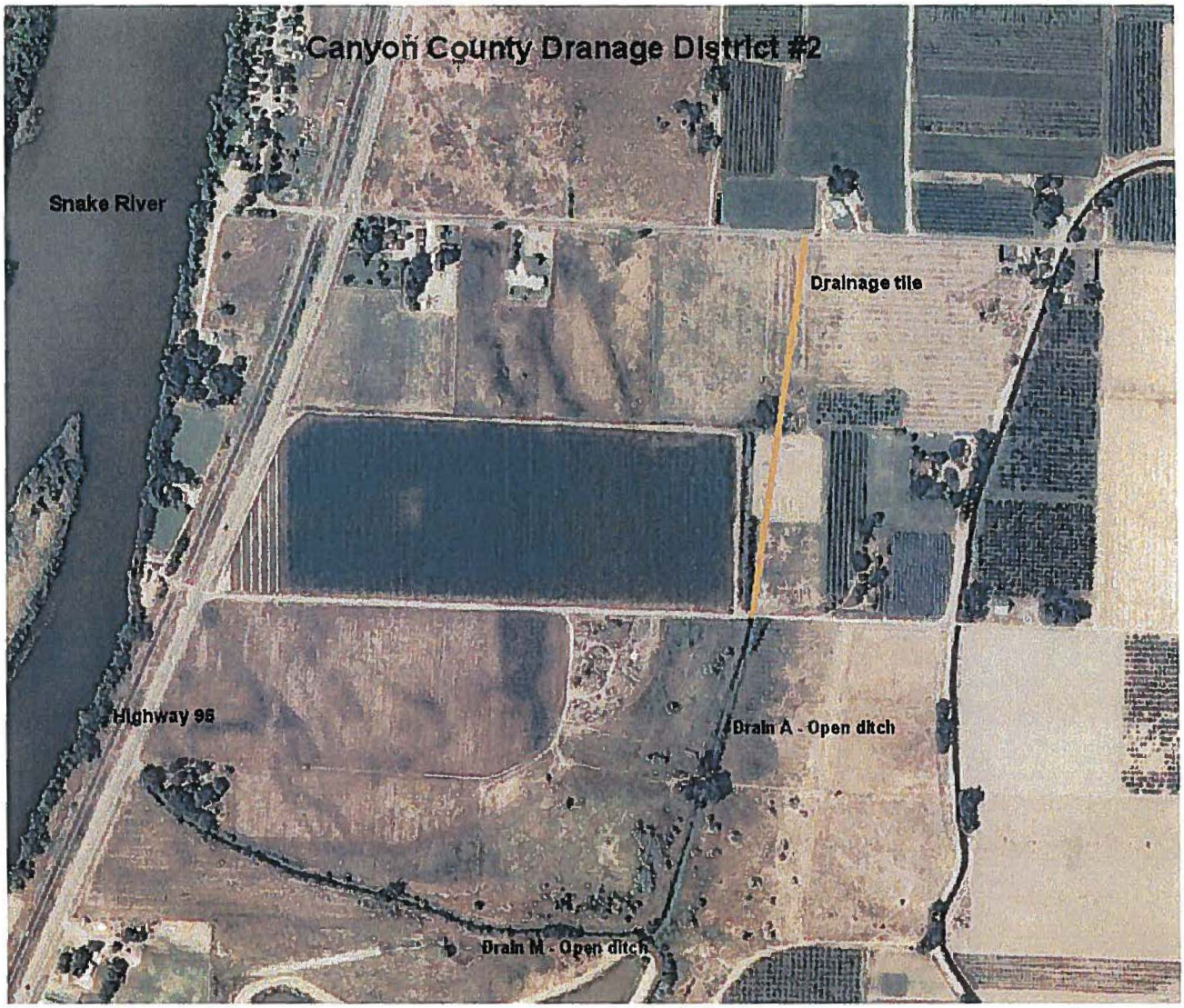
1. The District shall comply with all applicable rules and regulations that apply to the proposed project.

DATED this 28th day of November, 2012.

_____
ROGER W. CHASE, Vice Chairman
Idaho Water Resource Board

ATTEST _____
BOB GRAHAM, Secretary

Project Location Map



P

April 3, 2012

Canyon County Drainage District No. 2
2730 NE 25th Ave.
Payette, ID 83661

Idaho Water Resources Board
322 East Front Street, Statehouse Mail
Boise, ID 83720

Attn: Water Resources Board

Re: Revolving Development Fund Loan Program Application

The Canyon County Drainage District No. 2 (CCDD2) of Payette and Washington Counties, Idaho, wishes to apply for a loan and sponsor a repair-replacement project for a failed section of agricultural drain maintained by the district.

The drain section of concern is approximately 1300 ft of subsurface drain tile which was installed 90 years ago and has finally failed. The original system consisted of 12-inch diameter, 30-inch long, concrete pipe segments with the joint cracks left open for water infiltration. Over time, subsurface water flows brought in soil particles filling the pipe with silt and caused the segments to settle. The resulting misaligned segments eventually blocked subsurface water flow, disrupting the agricultural drain's function. The proposed project will be to install an updated drain tile design of perforated plastic pipe in a gravel bed surrounded by filter cloth.

CCDD2 Chairman, Bill Ford, contacted the IWRB Financial Program Coordinator, Stuart VanGreuningen, in early 2012 to discuss qualification of the drainage district's proposed project for the IWRB loan program. Our district does not have a reserve fund at this time for this large project. A loan could assist our district with repair costs. The loan would be repaid with an increased tax levy to our service area.

Enclosed please find our loan application and required documents for our proposed 2012 subsurface drain tile replacement project.

Respectfully,

William Ford
Chairman

ENC

IDAHO WATER RESOURCE BOARD
322 East Front Street, Statehouse Mail
Boise, Idaho 83720
Tel: (208) 287-4800
FAX: (208) 287-6700

APPLICATION FOR FINANCIAL ASSISTANCE FOR NON-POTABLE WATER SYSTEM CONSTRUCTION PROJECT

Answer the following questions and provide the requested material as directed. All pertinent information provided. Additional information may be requested by the Idaho Water Resource Board (IWRB) depending on the scope of the project and amount of funding requested. For larger funding amounts an L.I.D. may be required.

Incomplete documents will be returned and no further action taken will be taken by IWRB staff. All paperwork must be in twenty eight (28) working days prior to the next bi-monthly Board meeting.

Board meeting agendas can be found at: http://www.idwr.idaho.gov/waterboard/

I. Prepare and attach a "Loan Application Document".

The Loan Application Document requirements are outlined in the Water Project Loan Program Guidelines. The guidelines can be found at: http://www.idwr.idaho.gov/waterboard/Financial%20program/financial.htm. You can also obtain a copy by contacting IWRB staff.

II. General Information:

A. Type of organization: (Check box)

- ☐ Irrigation District
- ☐ Canal/Irrigation Company
- ☐ Lateral Association
- ☐ Flood Control District
- ☐ Homeowners Association
- ☐ Water User's Association
- ☐ Municipality
- ☐ Reservoir Company
- ☒ Other

Explain: Drainage District

Canyon County Drainage District No. 2
Organization name

William Ford/Chairman
Name and title of Contact Person

2730 NE 25th Ave.
PO Box/Street Address

(208) 642-2721
Contact telephone number

Payette, Payette County, ID 83661
City, County, State, Zip Code

wjf@fmtc.com
e-mail address

Project location legal description: Section 36, T10N, R5W (Washington County) and Section 1, T9N, R5W (Payette County)

B. Is your organization registered with the Idaho Secretary of State's office? Yes ☐ No ☒

C. Purpose of this loan application.

- ☐ New Project
- ■ Rehabilitation or replacement of existing facility
- ☐ DEQ requirement
- ☐ Other: _____

D. Briefly describe the project:

Replace 90-year-old failed concrete subsurface drainage tile with new plastic pipe, drain rock and fabric filter (segment Tile "A")

III. WATER SYSTEM:

A. Source of water:

- ☐ Stream
- ☐ Reservoir
- ■ Groundwater
- ☐ Other

B. Water Right Numbers:

Water Right	Stage	Priority Date	Source	Amount
NONE				

Note: Stage refers to how the water right was issued. (License, Decree, or Permit)

C. If irrigation/lateral system:

Number of acres served: _____
Number of shareholders served _____
Water provided annually (acre-feet) _____

D. If flood control system, drainage system, groundwater recharge, or other type of system:

Number of acres within District or service area: 2300 acres
Number of people within District or service area: 217 land parcels

E. If an Association/Municipality the number of residences served by the system:

Number of residences served: _____
Number of hookups possible: _____

IV. USER RATES:

A. How des your organization charge users rates?

- ☐ Per acre
- ☐ Per share
- ☐ Per hook up
- ■ Tax assessment

Explain what a share is: _____

☐ Other, explain _____

B. Current rate? $ 16% per of benefit value
(Share, hook-up, month, year, etc.)

C. When was the last rate change? Tax year 2011 (month/year)

D. Does your organization measure water use? Yes ☐ No ■
If yes, explain how: _____

E. Does you organization have a regular assessment for a reserve fund? Yes ☐ No ■
If yes, explain how it is assessed:

_____

F. Does your organization have an assessment for some future special need? Yes ☐ No ■
If yes, explain for what purpose and how it is assessed:

_____

V. PROPOSED METHOD FOR REVENUE FOR REPAYMENT OF LOAN

How will you plan to assess for the annual loan payments?

Check revenue sources below:

■ Tax Levies
☐ Capital Improvement Reserve Account or Sinking Fund
☐ User Fees and Tap/Hookup Fees
☐ Other (explain) _____

Will an increase in assessment be required? Yes ■ No ☐
When will new assessments start and how long will they last?

_____

VI. SECUREMENT OF LOAN

List all land, buildings, waterworks, reserve funds, and equipment with estimated value that will be used as collateral for the loan:

Property	Estimated Value

For property Securement, attach a legal description of the property being offered along with a map referencing the property.

VII. FINANCIAL INFORMATION:

A. Attach a copy of each of the last 3 year's financial statement. **(Copies must be attached)**

B. Reserve fund (current) _____

C. Cash on hand $12,032.51 (as of March 31, 2012)

D. Outstanding indebtedness:

To Whom	Annual Payment	Amt. Outstanding	Years Left
NONE			

E. What other sources of funding have been explored to fund the project? (example: NRCS, USDA Rural Development, Banks, Local Government, etc.)

Banks, county government, Idaho Soil & Water Conservation Com., Irrigation Districts

VIII. ORGANIZATION APPROVAL:

Is a vote of the shareholders, members, etc. required for loan acquisition? Yes ☐ No ■
If yes, a record of the vote must be attached.

Amount of funds requested: $35,000.00

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature& date: William Ford

S. BRYCE FARRIS (ISB #5636)
RINGERT LAW CHARTERED
455 S. Third Street, P.O. Box 2773
Boise, Idaho 83701-2773
Telephone: (208) 243-4591
Fax: (208) 342-4657

Attorneys for Petitioner
Canyon County Drainage District No. 2

IN THE DISTRICT COURT FOR THE THIRD JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF PAYETTE

In the Matter of: CANYON COUNTY DRAINAGE DISTRICT NO. 2 of the County of Payette and Washington, State of Idaho.	CASE NO. CV-2012-613 **ORDER GRANTING PETITION FOR JUDICIAL CONFIRMATION**

Petitioner Canyon County Drainage District No. 2 (hereinafter referred to as "District"), by and through its attorney of record, Ringert Law Chartered, filed a Petition for Judicial Confirmation on June 27, 2012. A hearing for said Petition was held on October 19, 2012.

This Court having reviewed the Petition, and for good cause appearing, IT IS HEREBY ORDERED that said Petition is GRANTED and that the District is hereby authorized to obtain a loan from the Idaho Water Resource Board or other appropriate lending institution to fund and repay the expenses for the "ordinary and necessary expenses" to the District's drainage system and pipe, for the reasons set forth on the record.

DATED this 19 day of October, 2012.

SUSAN E. WIEBE
District Judge

The Honorable Susan E. Wiebe
District Judge

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing document was served on the following on this 19 day of October, 2012 by the following method:

S. Bryce Farris
Ringert Law Chartered
455 S. Third Street
P.O. Box 2773
Boise, Idaho 83701-2773
Telephone: (208) 342-4591
Facsimile: (208) 342-4657
Attorneys for Canyon County Drainage District No. 2

[ ] U.S. First Class Mail, Postage Prepaid
[ ] U.S. Certified Mail, Postage Prepaid
[ ] Federal Express
[✓] Hand Delivery
[ ] Facsimile
[ ] Electronic Mail

Person ~~mailing~~ documents

Memorandum

To: Idaho Water Resource Board

From: Morgan Case

Date: November 28, 2012

Re: Idaho Water Transaction Program Update

September 31st marked the end of the Federal fiscal year and the end of the FY 2012 contract with the Columbia Basin Water Transactions Program (CBWTP). With the support of the CBWTP and the Idaho Fish Accords, the Board's 2012 water transactions added 26.48 cfs to the existing 102.88 cfs protected instream in Upper Salmon tributaries. Staff has secured a FY 2013 programmatic CBWTP contract for $209,127 and $123,996 remains in the two-year Accord programmatic contract. Funding in FY 2013 will support personnel costs, travel, and subcontracts related to transaction development, outreach, and monitoring.

Transactions in Development

Pole Creek 2013 – Staff is working with the CBWTP and Salmon Falls Land and Livestock to renew the 6 cfs minimum flow agreement on Pole Creek. A project proposal has been submitted to the CBWTP technical advisory committee and has been recommended by the Streamflow Enhancement and Minimum Stream Flow Committee (SFEMSF).

Pole Creek 2014 – Two six-inch monitoring wells have been constructed near Pole Creek in preparation for the 16-inch test well (currently being drilled) that will help determine whether it is feasible to proceed with some conversion from surface water to groundwater. Review of the well logs for the two monitoring wells reveals favorable conditions for groundwater pumping. Other options on the table include elimination of the hydropower, reduction of irrigated ground, reconfiguration of the pivot system, permanent minimum flow agreements, and late season leases.

Lower Lemhi Cerise - The Lower Lemhi Cerise easement transaction is awaiting The Nature Conservancy ranch purchase. The transaction is now slated for funding FY 2013, but there is a possibility that it will not be completed. If purchased, the easement will protect up to **4.32 cfs** in the Lower Lemhi River. If finalized, the total flow permanently secured towards the 35 cfs goal would be **23.1 cfs**.

Lower Lemhi Annual 2013 – Staff is pursuing funding approval for another year of annual agreements to secure 16.2 cfs of water for the minimum flow of 25-35 cfs in the Lower Lemhi River. The proposal has been submitted to the CBWTP for technical advisory committee ranking and will be added to the Idaho Fish Accord Water Transaction Fund FY2013 contract if approved by the Board.

Upper Bohannon Creek Eagle Valley Ranch – Contractor Bob Loucks has met with Eagle Valley Ranch to determine the fiscal impact to the agricultural production of a 2-3 cfs minimum flow agreement below the diversion consolidation being implemented by IDFG. Discussions with the Ranch manager revealed concerns that will be discussed when the owners return to the area in the winter. Board staff will meet with the owners then.

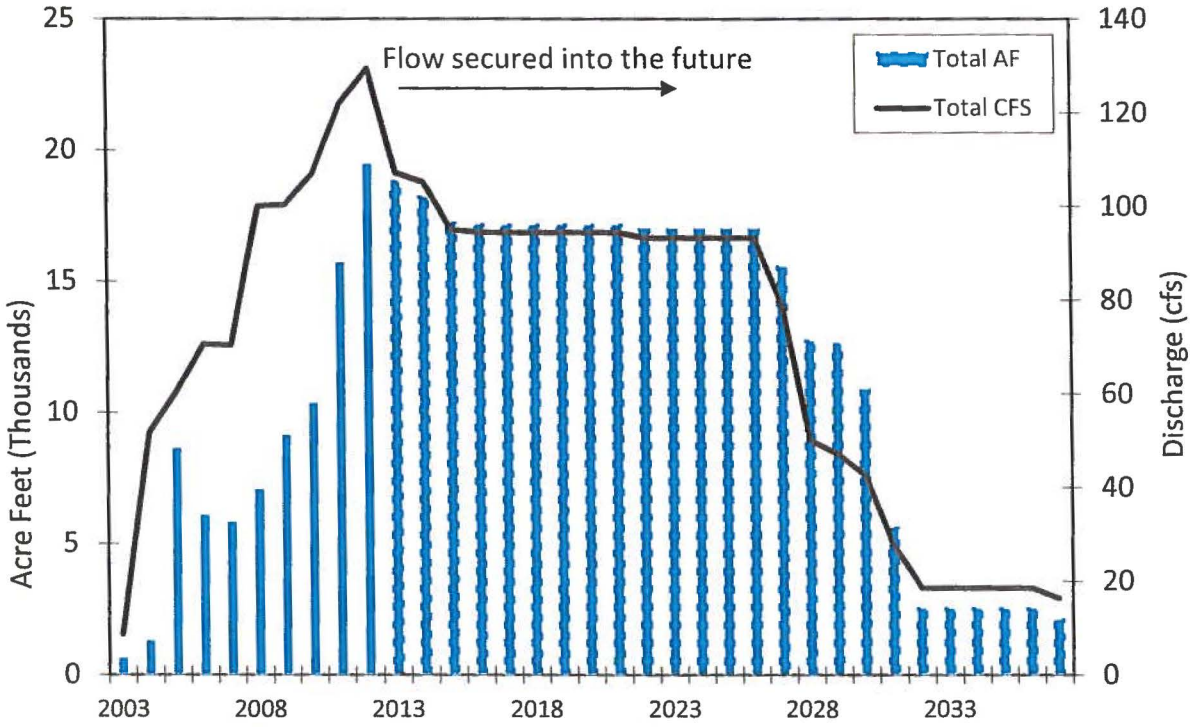
Bohannon Creek 3 Source Switch – The Bohannon Creek 3 diversion dewaters lower Bohannon Creek during base flow conditions. Staff met with the Bohannon Creek 3 water users and IDFG to discuss a

potential source switch to eliminate the diversion and pump out of the Lemhi River or an exisiting Lemhi River ditch. The water users are going to consider the idea and staff will follow up soon.

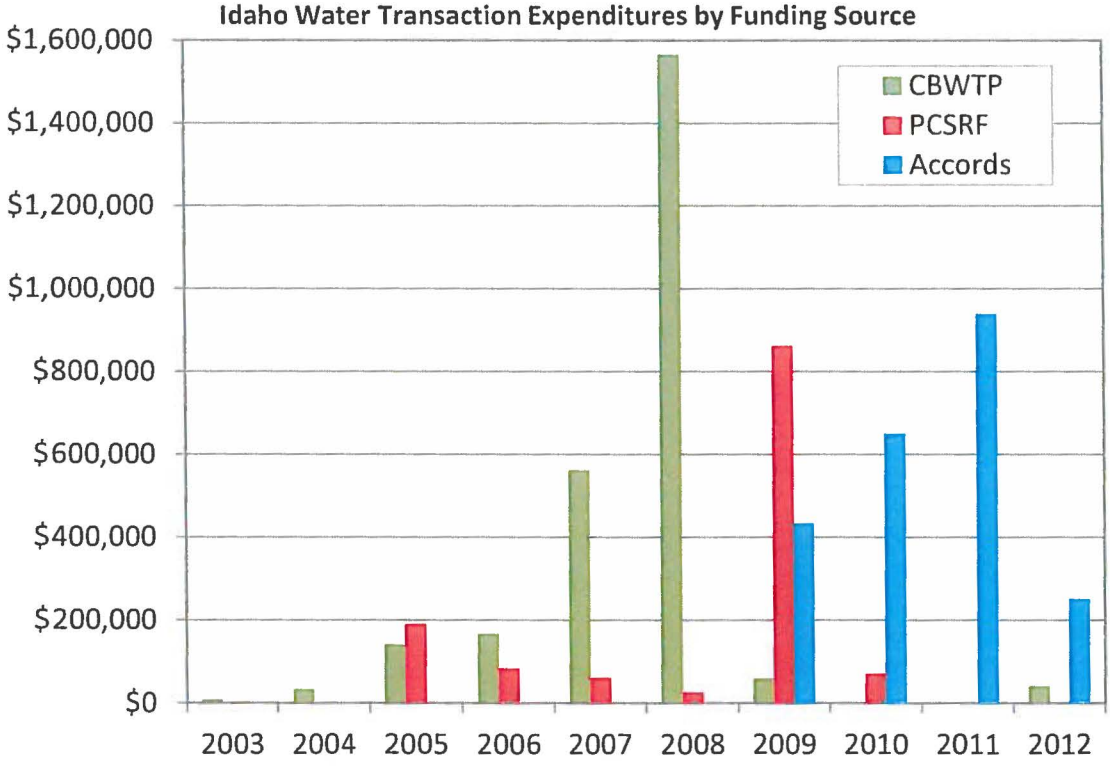
Kenney Creek- Staff has prepared and submitted a project proposal to the Columbia Basin Water Transactions Program. The project would leave 0.14 cfs in Kenney Creek and allow the water user to pump from a wastewater ditch. Although a small amount of water, this project wraps up a suite of flow restoration projects in Kenney Creek. The 20-year agreement not to divert would be funded through the Idaho Fish Accords.

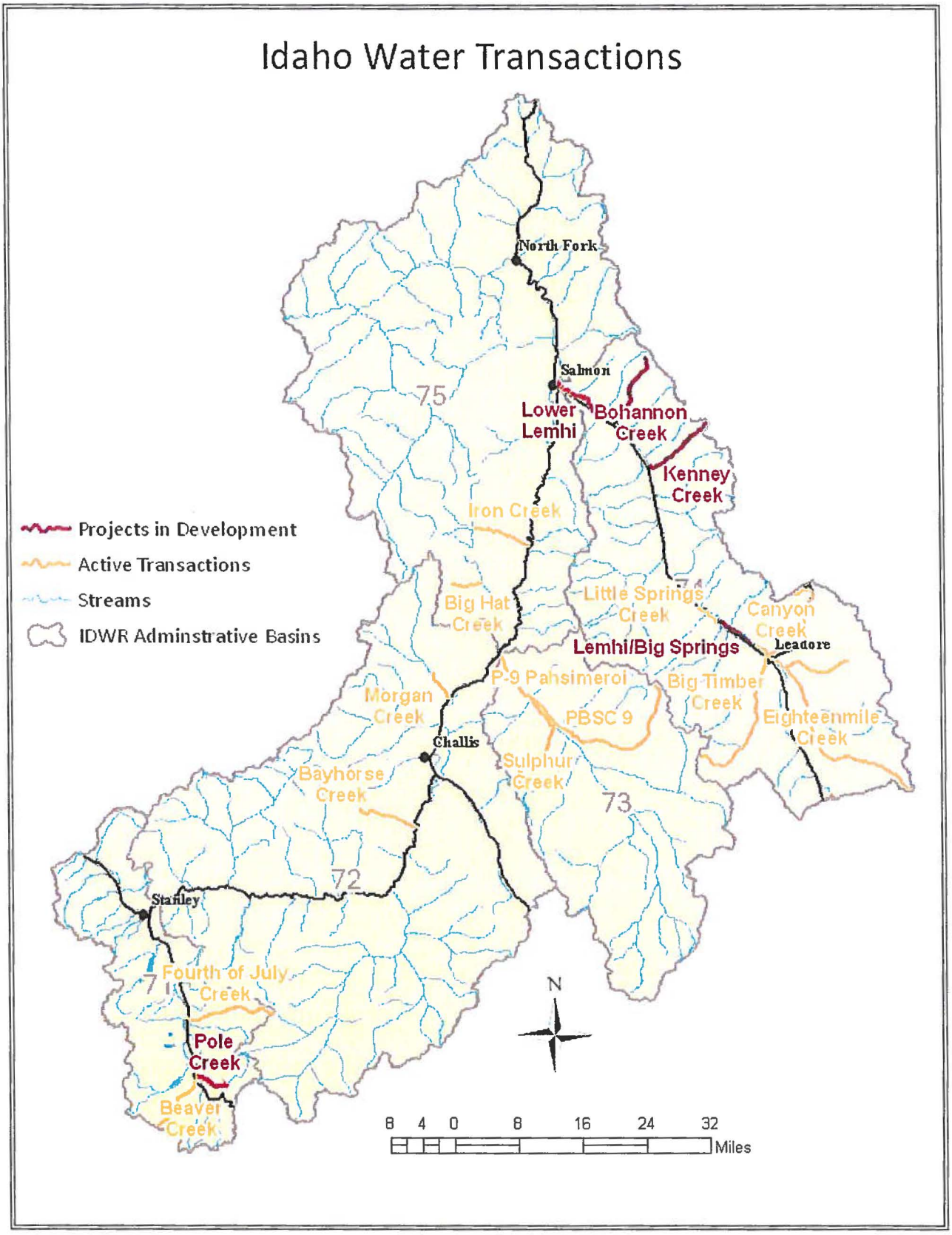
Lemhi River and Big Springs – The Lemhi River and Big Springs project has been ranked by the CBWTP technical advisory committee and approved by the Board. Staff will be adding the project to the Idaho Fish Accord contract with the next contract amendment. The project would consolidate diversion from Big Springs Creek and several Lemhi River diversions into an existing Lemhi River Ditch. An additional 1.36 cfs would flow in Big Springs Creek, while several miles of the Lemhi River would see a 4.64 cfs flow improvement. The 20-year agreement not to divert would compensate the water users for the increased cost of operation.

Idaho Water Transactions 2003-2012



Idaho Water Transaction Expenditures by Funding Source




Idaho Water Transactions
Projects in Development
Active Transactions
Streams
IDWR Adminstrative Basins
North Fork
Salmon
Challis
Stanley
Leadore
Lower Lemhi
Bohannon Creek
Kenney Creek
Iron Creek
Big Hat Creek
Little Springs Creek
Canyon Creek
Lemhi/Big Springs
P-9 Pahsimerol
Big Timber Creek
Eighteenmile Creek
Morgan Creek
PBSC 9
Sulphur Creek
Bayhorse Creek
Fourth of July Creek
Pole Creek
Beaver Creek
75
74
73
72
71
N
8 4 0 8 16 24 32
Miles

Memorandum

To: Idaho Water Resource Board

From: Morgan Case

Date: November 28, 2012

Re: Water Transactions Program – Pole Creek 2013

Action Item: Extension of Pole Creek contract.

Pole Creek is a tributary to the Salmon River near the headwaters in the Sawtooth Valley. Pole Creek has the potential to provide high quality habitat for threatened Chinook salmon and bull trout. There is one active diversion on Pole Creek which can seasonally dewater a 2 mile reach of the creek. Salmon Falls Land and Livestock has irrigation and hydropower rights that can divert up to 22 cfs at that diversion. (See attached map.)

Salmon Falls Land and Livestock has been working with the Sawtooth National Recreation Area (SNRA) to develop a flow and habitat restoration plan that will allow authorization of their ditch on Federal land. One of the strategies to increase streamflow would be to convert some or all of the irrigation to groundwater for a portion of the irrigation season. In order to evaluate the feasibility of this option, project partners have been moving forward with construction of monitoring and test well. Two 8-inch monitoring wells were drilled to monitor any effects from an extended pumping test planned for the as-yet-to-be-drilled test well. Early indications from the monitoring well logs are that the aquifer could support large irrigation wells. Due to delays in construction of the test well, there will not be enough time to develop and implement any long-term flow restoration projects before the 2013 irrigation season.

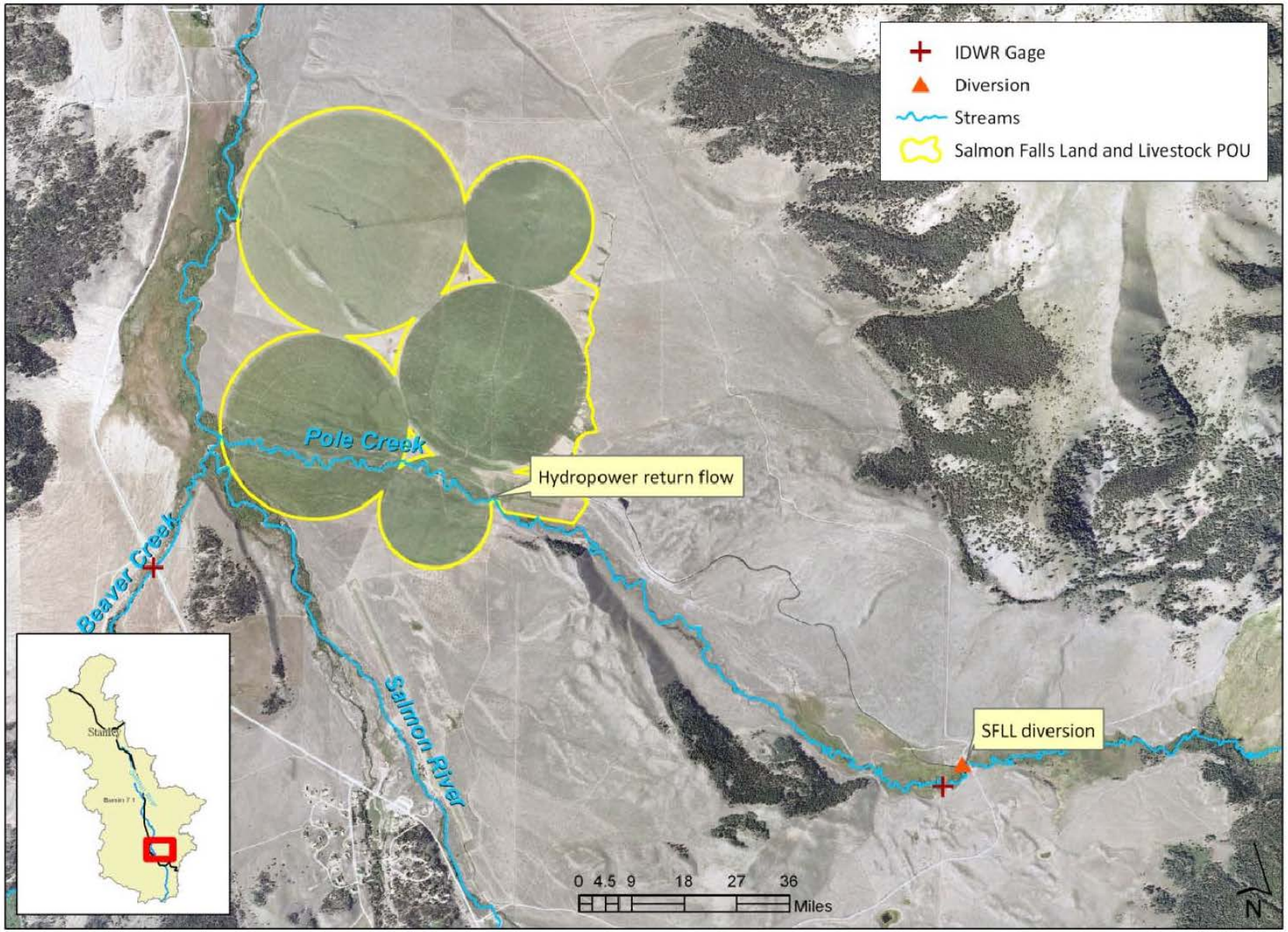
From 2006-2010, the Board had a transaction on Pole Creek which maintained a minimum stream flow of 5 cfs in Pole Creek. When flows dropped below 5 cfs, SFLL would turn off the hydropower plant, leave 5 cfs instream, and run a Board-owned diesel generator (purchased using US Fish and Wildlife grant) to turn their pivots.

In 2011, the Board approved a one-year transaction to maintain a 6 cfs minimum flow. During the 2011 irrigation season, flows in Pole Creek exceeded 6 cfs without any diversion reduction. That agreement was extended through 2012 because the budgeted $50,000 for the 2011 agreement was not expended.

Staff proposes again extending the existing Pole Creek minimum flow agreement (to maintain 6 cfs instream) through the 2013 irrigation season. If the Board approves, staff will prepare a contract amendment to extend the term of the existing agreement through the 2013 irrigation season. Funds are still available from the Columbia Basin Water Transactions Program to cover the maximum payment of $50,000.

The Streamflow Enhancement Minimum Stream Flow Committee recommends funding this transaction.

Pole Creek - Salmon Falls Land and Livestock Irrigation



BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE POLE CREEK)
SALMON FALLS LAND & LIVESTOCK)
COMPANY WATER TRANSACTION)
CONTRACT EXTENSION)
_____)

RESOLUTION

WHEREAS, Chinook salmon, steelhead, and bull trout habitat in the Upper Salmon River basin is limited by seasonally disconnected tributaries; and

WHEREAS, it is in the interest of the State of Idaho to reconnect Pole Creek to encourage recovery of ESA-listed Chinook salmon, steelhead, and bull trout fish; and

WHEREAS, staff negotiated a one-year minimum flow agreement for Pole Creek to reconnect stream flow for anadromous and resident fish in 2011; and

WHEREAS, the Board renewed that agreement through the 2012 irrigation season since no funds were expended due to the high natural flows ; and

WHEREAS, high flows in Pole Creek in 2012 again resulted in a flows of 6 cfs or higher, without the need for payment under the contract; and

WHEREAS, funding allocated for 2012 is available to extend the existing contract to protect a minimum flow in Pole Creek during the 2013 irrigation season; and

WHEREAS, the water user will maintain a flow of 6 cfs in Pole Creek, as measured at the Idaho Department of Water Resources Gage, through the 2013 irrigation season; and

WHEREAS, the Board will compensate Salmon Falls Land and Livestock Company for every day that it is necessary to run a diesel generator to power the pivot irrigation system; and

WHEREAS, funds are available from the Bonneville Power Administration through the Columbia Basin Water Transaction Program; and

WHEREAS, the Pole Creek transaction is in the public interest and consistent with the State Water Plan.

NOW THEREFORE BE IT RESOLVED that the IWRB authorizes the Chairman to extend the contract one-year with Salmon Falls Land and Livestock Company and/or subsequent owners for a minimum flow agreement in Pole Creek.

NOW THEREFORE BE IT FURTHER RESOLVED that the IWRB authorizes the Chairman to enter into a one-year, no-cost lease with Salmon Falls Land and

Livestock Co. for the use of the Board-owned diesel generator.

NOW THEREFORE BE IT FURTHER RESOLVED that this resolution is subject to the condition that the IWRB receives the requested funding from the Bonneville Power Administration through the Columbia Basin Water Transaction Program in the amount of fifty thousand dollars and no cents ($50,000).

DATED this 28th day of November, 2012.

_____
TERRY T. UHLING, Chairman
Idaho Water Resource Board

ATTEST: _____
BOB GRAHAM, Secretary

Memorandum

To: Idaho Water Resource Board

From: Morgan Case

Date: November 28, 2012

Re: Water Transactions Program – Kenney Creek 2012

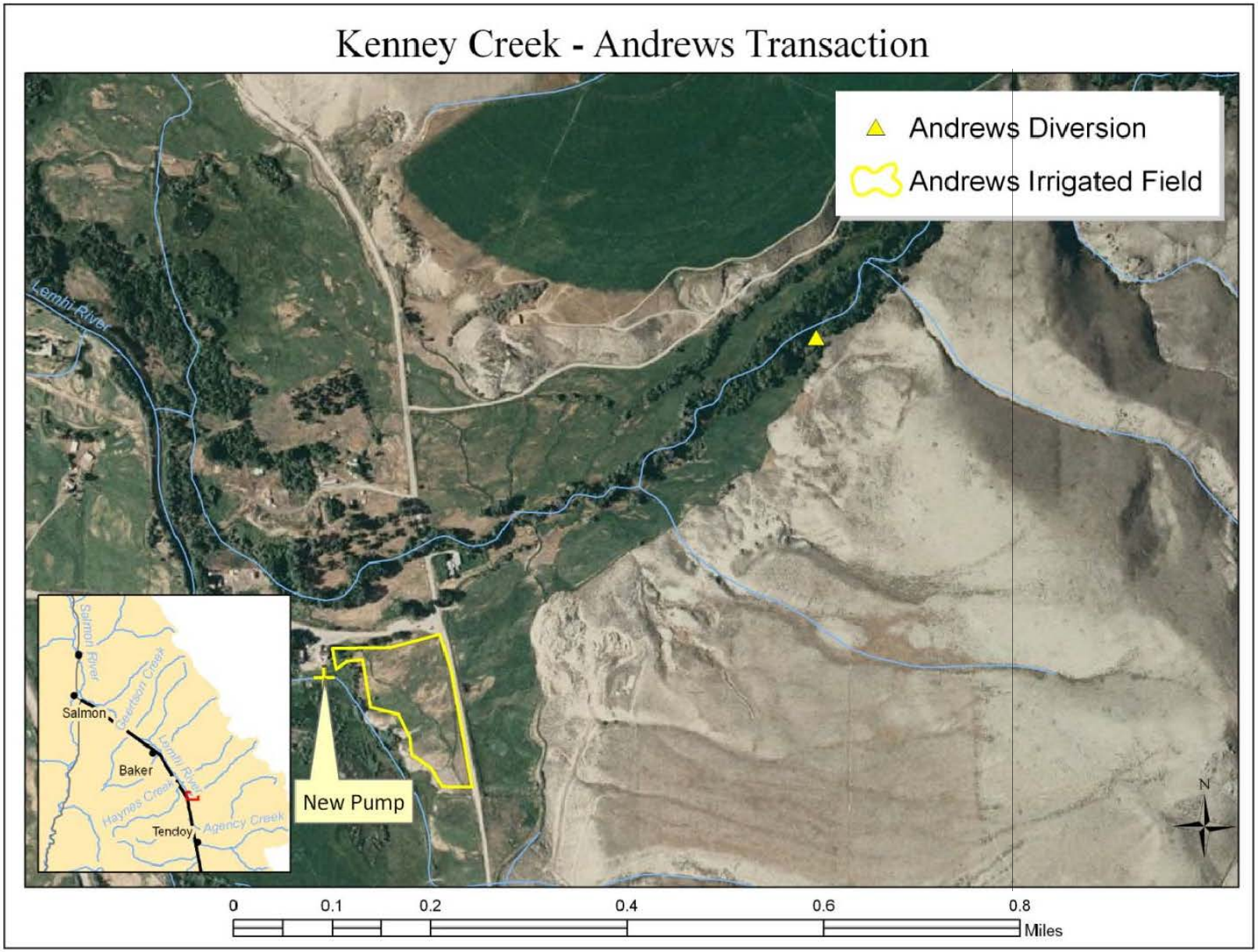
Action Item: Attached is a resolution authorizing the Board to enter into a 20-year agreement not to divert 0.14 cfs out of Kenney Creek with the Andrews Family and authorizing the Board to expend $28,106.06 from the Idaho Fish Accords Water Transaction Fund.

Background

At the September 7, 2012 Idaho Water Resource Board meeting, the Board approved a resolution for funding in support of the Kenney Creek 2012 water transaction. The 20-year agreement not to divert involves leaving water in Kenney Creek and pumping out of a wastewater ditch. Project costs were based upon power estimates. In September, those estimates put the Kenney Creek transaction cost at $9,919.79.

A new irrigation system and pumping station were installed and functioning in July of this year. Power bills incurred by the Andrews revealed that the actual power costs were almost 3 times the estimate. This may be due to the small size of the irrigation system and the increased costs for non-irrigation power. Using the Andrews' power bills from July through September, staff re-calculated a project cost of $28,106.06.

Adequate funding is available through the Idaho Fish Accords for the increased cost. Staff proposes to resubmit the transaction with the updated figures. If the Board concurs, a funding resolution for $28,106.06 is attached.


Kenney Creek - Andrews Transaction
Andrews Diversion
Andrews Irrigated Field
Lemhi River
New Pump
Salmon River
Salmon
Baker
Tendoy
Agency Creek
Haynes Creek
Lemhi River
N
0
0.1
0.2
0.4
0.6
0.8
Miles

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE KENNEY CREEK TRANSACTION	)	A RESOLUTION TO MAKE A FUNDING COMMITMENT

WHEREAS, Chinook salmon and steelhead habitat in the Lemhi River basin is limited by low flow and seasonally disconnected tributaries; and

WHEREAS, it is in the interest of the State of Idaho to restore flow in the Lemhi River and tributaries to encourage recovery of ESA-listed Chinook salmon and steelhead fish; and

WHEREAS, the diversions on Kenney Creek, tributary to the Lemhi River reduce stream flow in key spawning and rearing reaches of the Lemhi River Basin; and

WHEREAS, staff has developed a twenty-year agreement not to divert water from Kenney Creek to improve stream flow for anadromous and resident fish; and

WHEREAS, the water user has changed the point of diversion to pump from a wastewater ditch and the funds paid under the agreement will approximate the power expenses incurred, over a 20-year period, by changing the points of diversion; and

WHEREAS, funds are available from the Bonneville Power Administration through the Idaho Fish Accord Idaho Water Transaction Fund; and

WHEREAS, staff anticipates the funds being placed into the Idaho Water Resource Board (IWRB) Revolving Development Account for annual payment to the water right owners; and

WHEREAS, the Kenney Creek transaction is in the public interest and consistent with the State Water Plan.

NOW THEREFORE BE IT RESOLVED that the IWRB authorizes the Chairman to enter into contract with Gail Andrews and/or subsequent owners for an agreement not to divert out of Kenney Creek 5 in the amount of twenty-eight thousand one hundred six dollars and six cents ($28,106.06).

NOW THEREFORE BE IT FURTHER RESOLVED that this resolution is subject to the condition that the IWRB receives the requested funding from the Bonneville Power Administration through the Idaho Water Transaction Program in the amount of twenty-eight thousand one hundred six dollars and six cents ($28,106.06).

DATED this 28th day of November, 2012.

_____
TERRY T. UHLING, Chairman
Idaho Water Resource Board

ATTEST: _____
BOB GRAHAM, Secretary

Memorandum

To: Idaho Water Resource Board

From: Morgan Case

Date: November 28, 2012

Re: Water Transactions Program – 2013 Lower Lemhi Annual Transaction

Action Item: Attached is an expenditure of funds resolution for the annual Lower Lemhi 2012 agreements not to divert 16.22 cfs in order to bridge to gap between the permanent acquisitions and the flow target in the Lower Lemhi River. The agreement not to divert contracts will not exceed **$82,343.65** and the Water District 74 contract will not exceed **$12,800.00.**

Background

The Lemhi River Basin is an important basin for the spawning, migration and rearing of Chinook salmon, summer steelhead, westslope cutthroat trout, and bull trout. During the irrigation season, low flows at the L-6 diversion can cause migration barriers for out-migrating juvenile Chinook salmon and in-migrating adult Chinook salmon and steelhead. The State of Idaho has committed to maintaining flows between 25 and 35 cfs at the L-6 diversion (See attached map). The 35 cfs flows are needed for out-migration in the spring and 25 cfs is needed for in-migrating adults in the mid- to late-summer.

For the past several years, the Board has been working to meet the 35 cfs target. Efforts have led to the following:

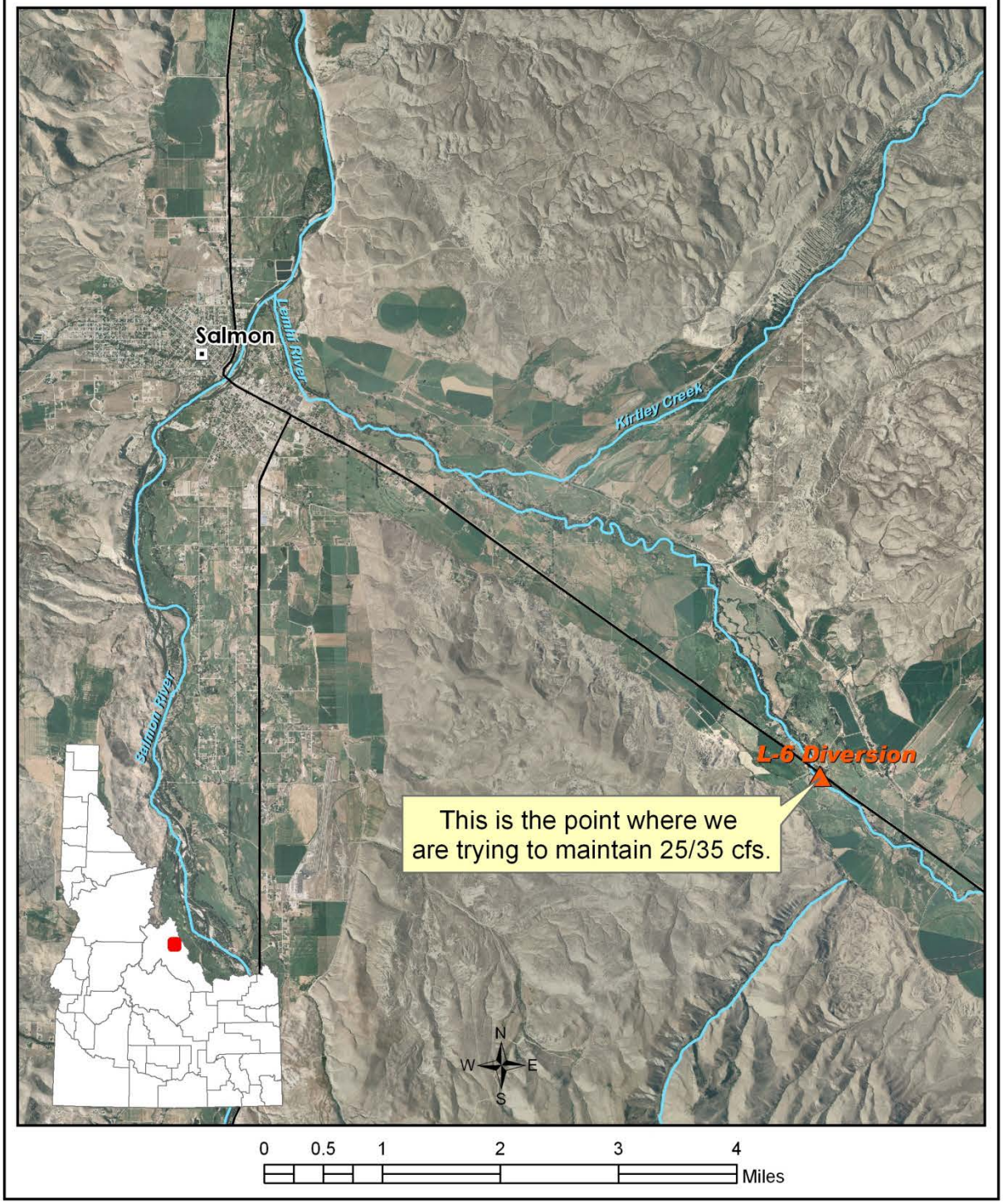
Flow Target:	35 cfs
Currently Protected:	
Permanent Easements	(14.93)
Thomas Agreement	(1.14)
TNC Donation	(0.30)
City of Salmon	(2.42)
Unmet Target	**16.21**

These agreements have been administered according to a contract between the Board and Water District 74. The annual leases have been done for several years. As permanent agreements have been acquired the amount needed from annual leases has decreased.

Funds would be provided to the Board from the Idaho Fish Accord Water Transactions Fund. Payment is based on the number of days the irrigators are turned off. Compensation is $80.65/24-hour cfs. Funding for administration by the WD 74 Watermaster will come from the Accord and funds placed in the Board's Revolving Development Water Transactions sub-account, in proportion to the flows secured by each method.

The agreements not to divert will cost no more than $82,343.65, with no more than $12,800 in administration costs. The IWRB Streamflow Enhancement and Minimum Stream Flow Committee recommends funding for this transaction.

Lower Lemhi River
Reach of Concern - L-6 to Salmon River



BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE LOWER LEMHI 2013 ANNUAL WATER TRANSACTION AND MINIMUM FLOW ADMINISTRATION CONTRACTS	))))))	A RESOLUTION TO MAKE A FUNDING COMMITMENT AMENDED

WHEREAS, the Idaho Water Resource Board holds eight conservation easements, restricting diversion from the Lemhi River; and

WHEREAS, staff has developed draft one-year agreements not to divert water from the Lemhi River to improve stream flow for anadromous and resident fish; and

WHEREAS, $88,343.65 is available through the Idaho Fish Accord – Idaho Water transactions Fund to fund the cost of said agreements; and

WHEREAS, for all agreements, the water users have agreed to limit their diversions during times of low flow; and

WHEREAS, the 2013 Lower Lemhi transactions are in the public interest and in compliance with the State Water Plan.

NOW THEREFORE BE IT RESOLVED that the IWRB authorizes the Chairman to enter into contracts with lower Lemhi River irrigators to not divert out of the Lemhi River, using an amount not to exceed $82,343.65.

NOW THEREFORE BE IT FURTHER RESOLVED that the IWRB authorizes the Chairman to enter into contract with Water District 74 to administer said agreements and previous conservation easements using an amount not to exceed $12,800.00, with $6,000.00 coming from the Idaho Fish Accords and $6,800.00 coming from funds in the Revolving Development Transactions Sub-account

NOW THEREFORE BE IT FURTHER RESOLVED that this resolution is subject to the condition that the IWRB receives the requested funding from the Bonneville Power Administration through the Idaho Fish Accord – Idaho Water Transactions Fund in the amount of $88,343.65.

DATED this 28th day of November, 2012.

_____
TERRY T. UHLING, Chairman
Idaho Water Resource Board

ATTEST: _____
BOB GRAHAM, Secretary

MEMORANDUM

To: **Idaho Water Resource Board**

From: **Sarah Rupp**

Date: **November 1, 2012**

Re: **Water Transactions Program – Teton River Basin – Spring Creek Transactions**

Action Item: Attached are two expenditure of fund resolutions. The first resolution authorizes the Board to expend $3,480.63 to pay for the application and administrative fees associated with the donation of Spring Creek water rights for a term of five years. The second resolution authorizes the Board to expend $7,463.31 to fund the lease/rental of Spring Creek water rights for a term of 5 years.

Spring Creek is a tributary to the upper Teton River, near Tetonia, Idaho. The tributary offers excellent fish and wildlife habitat and historically supported a robust Yellowstone cutthroat trout population. There are several active diversions on Spring Creek that annually create low flow conditions. Low flow conditions occasionally prevent juvenile Yellowstone cutthroat trout (age class 0-1) from out-migrating to the Teton River in the fall, reduce valuable rearing habitat, and increase stream temperatures. Restoring flows in Spring Creek will have a positive impact on the fishery as a whole and help encourage the recovery of Yellowstone cutthroat trout populations in the upper Teton River.

Friends of the Teton River has been working with four water right owners who divert water at the Tetonia Canal point of diversion off of Spring Creek. These four water right owners include the following: The City of Tetonia, Mitchell Smaellie, Richard LaVere Beard, and Richard & Ella Beard. Each is committed to working through Idaho's Water Transaction Program to protect their water rights instream for a term of five years.

Two of the water right owners – the City of Tetonia and Mitchell Smaellie – propose donating their rights to the IWRB to put into the Water Supply Bank for a term of five years. If approved, the IWRB can then rent the water rights out for delivery to the Teton River minimum stream flow right. Approximately 128.5 acres of land will be fallowed throughout the five year term - 125 acres of land (4.0 cfs) irrigated by the City of Tetonia and 3.5 acres of land (0.07 cfs) irrigated by Mitchell Smaellie. A proposal to fund these donations has been submitted to the Columbia Basin Water Transaction Program in the amount of $3,480.63. The requested funds will be placed into the Board's revolving development water transaction subaccount to pay the fees associated with the lease/rental of water in the Idaho Water Supply Bank (the $250/water right application fee and 10% administrative fee).

The other two water right owners – Richard LaVere Beard and Richard & Ella Beard – propose leasing their rights into the Water Supply Bank for a term of five years. If approved, the IWRB can then rent the water rights out for delivery to the Teton River minimum stream flow right. Approximately 14.3 acres of land will be fallowed throughout the five year term - 5.8 acres of land (0.11 cfs) irrigated by Richard LaVere Beard and 8.5 acres of land (0.17 cfs) irrigated by Richard & Ella Beard. Bob Loucks valued the water rights at $87.65/acre. The valuation is based upon the historical use of the water rights, which

included generating one cutting of hay and then pasturing the aftermath. The valuation was presented to the water right owners and found acceptable. A proposal to fund these transactions has been submitted to the Columbia Basin Water Transaction Program in the amount of $7,463.31. The requested funds will be placed into the Board's revolving development water transaction subaccount to be paid out annually to the water right owners, and to cover the fees associated with the lease/rental of water in the Idaho Water Supply Bank (the $250/water right application fee and 10% administrative fee).

Each of the water rights and the proposed lease/rental has been reviewed by Lyle Swank and Tony Olenichak of Water District 1 (WD1). No concerns have been raised with the ability to deliver the water through the reach of concern (located on Spring Creek) to the new point of diversion (located on the Teton River). Friends of the Teton River will work with WD1 prior to the 2013 irrigation season to establish a measurement point below the last diversion on Spring Creek, to facilitate the delivery of transaction water through the reach of concern to the Teton River minimum stream flow. E-mail correspondence from Mr. Swank and Mr. Olenichak regarding this matter has been attached to this briefing memorandum.

The Streamflow Enhancement and Minimum Stream Flow Committee met on October 4, 2012 to review and make recommendations on several water transactions, including these. The committee recommended all of these transactions for approval.

Summary of Proposed Spring Creek Water Transactions

City of Tetonia

- Water Right # 22-11579
  - Quantity: 1.5 cfs
  - Tool: Donation
  - Duration: 5 years
  - Price: $250 Water Supply Bank Application Fee + Board's 10% fee
- Water Right # 22-13536
  - Quantity: 2.5 cfs
  - Tool: Donation
  - Duration: 5 years
  - Price: $250 Water Supply Bank Application Fee + Board's 10% fee

Mitchell Smaellie

- Water Right # 22-00380B
  - Quantity: 0.07 cfs
  - Tool: Donation
  - Duration: 5 years
  - Price: $250 Water Supply Bank Application Fee + Board's 10% fee

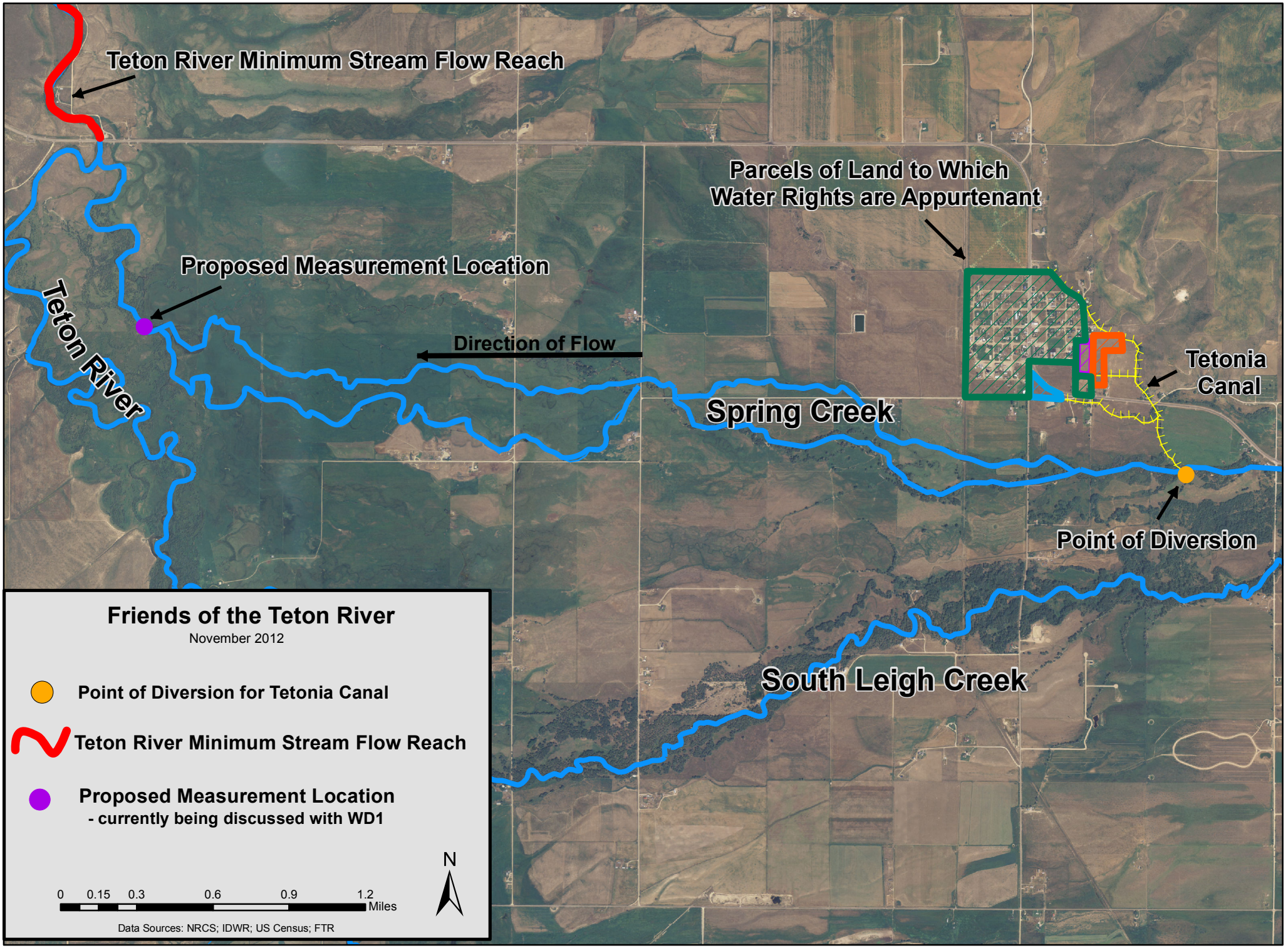
Richard Lavere Beard

- Water Right # 22-00380C
  - Quantity: 0.11 cfs
  - Tool: Lease
  - Duration: 5
  - Price: $250 Water Supply Bank Application Fee, Board's 10% fee, + $508.37/year

Richard and Ella Beard

- Water Right #22-11993
  - Quantity: 0.17 cfs
  - Tool: Lease
  - Duration: 5
  - Price: $250 Water Supply Bank Application Fee, Board's 10% fee, + $745.02/year

Spring Creek Water Transactions



From: Swank, Lyle
To: Olenichak, Tony; Case, Morgan
Cc: Sarah Rupp
Subject: RE: Teton River Basin Transaction
Date: Tuesday, October 30, 2012 9:40:49 AM

Tony,

My analysis of the proposed change of the 5 water right identified from Tetonia Canal on Spring Creek to the mouth of Spring Creek is the same as yours. Because this particular Creek is a gaining stream, moving to the mouth of Spring Creek should not adversely impact the users between the Tetonia Canal and Spring Creek mouth.

Based on my knowledge of the local hydrology this is a gaining reach. Unless there are diversions between the previous point of diversion and the new location of the water use, and who have benefited either directly or indirectly from the previous localized diversions, we do not anticipate injury. If, during the time period this water is in the Water Bank, there is shown to be an adverse impact or injury to other water users, the water bank transaction could be allowed to expire and would not need to be renewed.

This particular situation does not necessarily apply to other tributaries who may have different hydrological circumstances.

Morgan, please use this email as my response to the requested watermaster remarks.

Lyle Swank, P.E.
Watermaster,
Water District 1

From: Olenichak, Tony
Sent: Thursday, October 25, 2012 11:04 AM
To: Swank, Lyle
Cc: Case, Morgan; Sarah Rupp (sarah@tetonwater.org)
Subject: FW: Teton River Basin Transaction

Lyle,

A request is being made to change the delivery of 5 water rights from the Tetonia Canal on Spring Creek near the Town of Tetonia through the State Water Bank, moving the point-of-diversion for the 5 rights downstream approximately 3 ½ miles from the Tetonia Canal to a measured point on Spring Creek near the Breckenridge diversion where Spring Creek meets the Teton River. The 3 ½ mile section of Spring Creek between the Tetonia Canal and the newly proposed delivery point is perennial and likely never falls under the guise of futile call. Assuming a measurement-section can be established at the newly proposed delivery point at the mouth of Spring Creek and there is no loss of water through the 3 ½ mile section, it appears to me there wouldn't be any impact on other Spring Creek water users if the 5 water rights were delivered to the new measurement point in contrast to delivering the water rights to the Tetonia Canal headgate when the water rights are in priority.

If you agree with this analysis or have any other thoughts, would you please forward your Watermaster response to Morgan Case so she can proceed with processing of the water transaction?

Tony Olenichak
Program Manager
Water District #1
208-525-7171

From: Case, Morgan
Sent: Tuesday, October 23, 2012 12:40 PM
To: Olenichak, Tony
Subject: Teton River Basin Transaction

Tony,

As you are aware, Friends of the Teton River is partnering with the Idaho Water Resource Board to develop a flow restoration project (water transaction) in the Teton River Basin. Sarah Rupp, from FTR, has identified several water users who are willing to lease their Spring Creek water rights into the Water Supply Bank for delivery to the Teton River Minimum Stream Flow.

The Board would like your perspective as the watermaster about these transactions. Specifically, whether it is possible to deliver the water rights in priority.

I have attached the proof reports for the 5 water rights under consideration.

Thank you for your time and consideration of this matter.

Morgan

Morgan Case
Staff Biologist
Idaho Department of Water Resources
7600 Mineral Dr. Suite 100
Coeur d'Alene, ID 83815
Phone 208.762.2803
Fax 208.287.2819

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE SPRING CREEK RENTAL WATER TRANSACTION AGREEMENT	))))	A RESOLUTION TO MAKE A FUNDING COMMITMENT

WHEREAS, Spring Creek is a tributary to the Teton River that provides quality spawning and rearing habitat for Yellowstone cutthroat trout and other resident fish, but is flow and passage limited at certain times of the year; and

WHEREAS, it is in the interest of the State of Idaho to increase stream flow in the Teton River and its tributaries to encourage recovery of Yellowstone cutthroat trout, which are currently designated as an Idaho Species of Greatest Conservation Need; and

WHEREAS, staff has developed a five-year lease/rental agreement with Richard LaVere Beard to improve stream flow for fish in Spring Creek; and

WHEREAS, staff has developed a five-year lease/rental agreement with Richard & Ella Beard to improve stream flow for fish in Spring Creek; and

WHEREAS, the water rights shall be leased into the Board's Idaho Water Supply Bank, to be rented by the Idaho Water Resource Board (IWRB) for the beneficial use of instream flow in the Teton River, for a period of five years; and

WHEREAS, a proposal in the amount of $3,074.28 has been submitted to the Columbia Basin Water Transaction Program to be used to fund the Richard LaVere Beard lease/rental agreement, including the associated Idaho Water Supply Bank application fee ($250.00) and 10% administrative fee ($282.43); and

WHEREAS, a proposal in the amount of $4,389.03 has been submitted to the Columbia Basin Water Transaction Program to be used to fund the Richard & Ella Beard lease/rental agreement, including the associated Idaho Water Supply Bank application fee ($250.00) and 10% administrative fee ($413.90); and

WHEREAS, staff anticipates the funds being placed into the IWRB Revolving Development Account for annual payment to the water right owners and the Idaho Water Supply Bank; and

WHEREAS, the Spring Creek transactions are in the public interest and in compliance with the State Water Plan.

NOW THEREFORE BE IT RESOLVED that the IWRB authorizes the Chairman to enter into a lease/rental agreement with Richard LaVere Beard, and/or his successors, and Richard & Ella Beard, and/or their successors, for water rights 22-00380C and 22-11993 for delivery to minimum stream flow 22-7369, using an amount not to exceed $7,463.31.

NOW THEREFORE BE IT FURTHER RESOLVED that this resolution is subject to the condition that the IWRB receives the requested funding from the Columbia Basin Water Transaction Program in the amount of $7,463.31.

DATED this 28th day of November, 2012.

_____
TERRY T. UHLING, Chairman
Idaho Water Resource Board

ATTEST: _____
BOB GRAHAM, Secretary

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE SPRING CREEK WATER DONATION TRANSACTIONS	))))	A RESOLUTION TO MAKE A FUNDING COMMITMENT

WHEREAS, Spring Creek is a tributary to the Teton River that provides quality spawning and rearing habitat for Yellowstone cutthroat trout and other resident fish, but is flow and passage limited at certain times of the year; and

WHEREAS, it is in the interest of the State of Idaho to increase stream flow in the Teton River and its tributaries to encourage recovery of Yellowstone cutthroat trout, which are currently designated as an Idaho Species of Greatest Conservation Need; and

WHEREAS, staff has developed a five-year donation agreement with the City of Tetonia to improve stream flow for fish in Spring Creek; and

WHEREAS, staff has developed a five-year donation agreement with Mitchell Smaellie to improve stream flow for resident in Spring Creek; and

WHEREAS, the donated water rights shall be leased into the Board's Idaho Water Supply Bank, to be rented by the Idaho Water Resource Board (IWRB) for the beneficial use of instream flow in the Teton River, for a period of five years; and

WHEREAS, a proposal to fund the City of Tetonia donation in the amount of $3,156.25 has been submitted to the Columbia Basin Water Transaction Program, to be used to pay the Idaho Water Supply Bank Application Fees ($500.00) and 10% Idaho Water Supply Bank Administrative Fee ($2,656.25); and

WHEREAS, a proposal to fund the Smaellie donation in the amount of $324.38 has been submitted to the Columbia Basin Water Transaction Program, to be used to pay the Idaho Water Supply Bank Application Fee ($250.00) and 10% Idaho Water Supply Bank Administrative Fee ($74.38); and

WHEREAS, staff anticipates the funds being placed into the IWRB Revolving Development Account for payment to the Idaho Water Supply Bank; and

WHEREAS, the Spring Creek donation transactions are in the public interest and in compliance with the State Water Plan.

NOW THEREFORE BE IT RESOLVED that the IWRB authorizes the Chairman to enter into a lease/rental agreement with the City of Tetonia, and/or its successors, and Mitchell Smaellie, and/or his successors, for water rights 22-11579, 22-13536, and 22-00380B for delivery to minimum stream flow 22-7369, using an amount not to exceed $3,480.63.

NOW THEREFORE BE IT FURTHER RESOLVED that this resolution is subject to the condition that the IWRB receives the requested funding from the Columbia Basin Water Transaction Program in the amount of $3,480.63.

DATED this 28th day of November, 2012.

_____
TERRY T. UHLING, Chairman
Idaho Water Resource Board

ATTEST: _____
BOB GRAHAM, Secretary

Memorandum

To: Idaho Water Resource Board

From: Helen Harrington

Date: November 16, 2012

Re: Idaho State Water Plan

ACTION TO BE CONSIDERED:

Adoption of the 2012 Revised Idaho State Water Plan

The Planning Committee has held meetings on October 10, October 25, November 5 and November 12 since the close of the public comment period of the Proposed Revision of the Idaho State Water Plan. During these meetings, the committee has reviewed comments received during the 90-day comment period which ran from June 19 through September 22, 2012 and testimony heard during the seven hearings held around the state.

Fifty-five written comments were received and participation in the public hearings is shown below.

Mtg #	Date	City	No. Attendees	No. Testified
1	July 18	Twin Falls	10	1
2	August 13	Salmon	15	3
3	August 16	Soda Springs	12	0
4	August 16	Idaho Falls	22	5
5	August 30	Boise	10	4
6	Sept. 6	Lewiston	6	1
7	Sept. 12	Coeur d'Alene	17	4

The Planning Committee has recommended changes to the Plan in response to the comments and testimony. The recommended changes are show in a copy of the Proposed Plan in the Work Session section of the Board books. This version displays the version distributed for public comment with strike out and/or insertions recommended by the committee.

Attached to this memo is a final version of the Idaho State Water Plan as unanimously recommended by the Planning Committee and a resolution for the IWRB to consider for adopting the 2012 Revised Idaho State Water Plan.

BEFORE THE WATER RESOURCE BOARD

OF THE

STATE OF IDAHO

IN THE MATTER OF THE)
)
IDAHO STATE WATER PLAN)
_____

A RESOLUTION

WHEREAS, the Idaho Water Resource Board (Board) conducted public meetings to gather public input concerning policies contained in the Idaho State Water Plan ; and,

WHEREAS, the Board, based on input from the public, has proposed changes to existing policies and suggested new policies; and,

WHEREAS, the Board has provided a 90-day public comment period and has conducted seven public meetings and hearings providing opportunities for public input; and,

WHEREAS, the Board has reviewed the public record consisting of oral testimony and written comments and has modified their proposed changes accordingly.

NOW, THEREFORE, BE IT RESOLVED that, having considered the proposed revised Idaho State Water Plan and the public record, the Board hereby adopts the Idaho State Water Plan dated November 2012 and directs that it be provided to the Idaho Legislature for their consideration.

PASSED AND APPROVED this 28th day of November, 2012.

_____
TERRY T. UHLING, Chairman
Idaho Water Resource Board

ATTEST: _____
BOB GRAHAM, Secretary

IDAHO
STATE WATER PLAN

IDAHO WATER RESOURCE BOARD

November 2012

State of Idaho

THE STATE WATER PLAN

C.L. "Butch" Otter, Governor

Idaho Water Resource Board

Terry T. Uhling
Chairman

Roger W. Chase
Vice-Chairman

Robert Graham
Secretary

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

Idaho Water Resource Board
November 2012

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Robert M. Bandy, Priest River
Brent J. Bell, Rexburg
Mary T. Brooks, Boise
Jack Buell, St. Maries
Gary Chamberlain, Challis
George Crookham, Caldwell
Sally L. Cupan, Sandpoint
J. David Erickson, Buhl
Leonard E. Graham, Rigby
Gene M. Gray, Payette
Robert M. Hammes, St. Maries
M. Reed Hansen, Idaho Falls
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Franklin Jones, Boise
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William S. Platts, Boise
Erval Rainey, Sandpoint
Scott Reed, Coeur d'Alene
Edward Reichert, Filer
Jerry Rigby, Rexburg
F. Dave Rydalch, St. Anthony
D. Mike Satterwhite, Lewiston
Edwin Schlender, Malta
James Sawver, Eden
LeRoy Stanger, Idaho Falls
Claude Storer, Idaho Falls
John F. Streiff, Lewiston
Richard W. Wagner, Lewiston
J.D. Williams, Boise
D. Richard Wyatt, Lewiston
George L. Yost, Emmett

To the Citizens of Idaho:

Water is the lifeblood of Idaho. The optimum use of our water will keep Idaho a vital and prosperous state as we grow and change in the future. The Idaho State Water Plan is a dynamic set of policies which guides our use, management, development, and conservation of water for all citizens.

This is the fifth revision of the State Water Plan since the first plan was adopted in 1976. Each revision reflects the changing landscape of water in Idaho. Many changes have occurred since the last Plan was adopted in 1996 and this revision reflects those changes. For the first time, this Plan includes implementation strategies and milestones which will guide the execution of the policies and evaluate the effectiveness of each policy.

Competing demands for water has increased conflicts, with a positive result of innovative solutions. These solutions demonstrate that the water resources of Idaho can meet emerging water demands while respecting existing water users. As water demands increase, it is critical that we use the technical tools available to assess strategies to plan for meeting our water needs. Understanding the complexity and interaction of our water resources and using that knowledge to manage water is crucial to using our water resources effectively.

The policies and actions in this Plan reflect a keen awareness of the uncertainty of future conditions of water supply and demand. The intent of the Plan is to establish policies and actions which can adapt to changing circumstances.

Public involvement has been and continues to be a cornerstone of developing the Idaho State Water Plan. The Idaho Water Resource Board appreciates your participation and interest in ensuring that Idaho's water is meeting our needs and making our state the best it can be.

Sincerely,

Terry Uhling
Chairman

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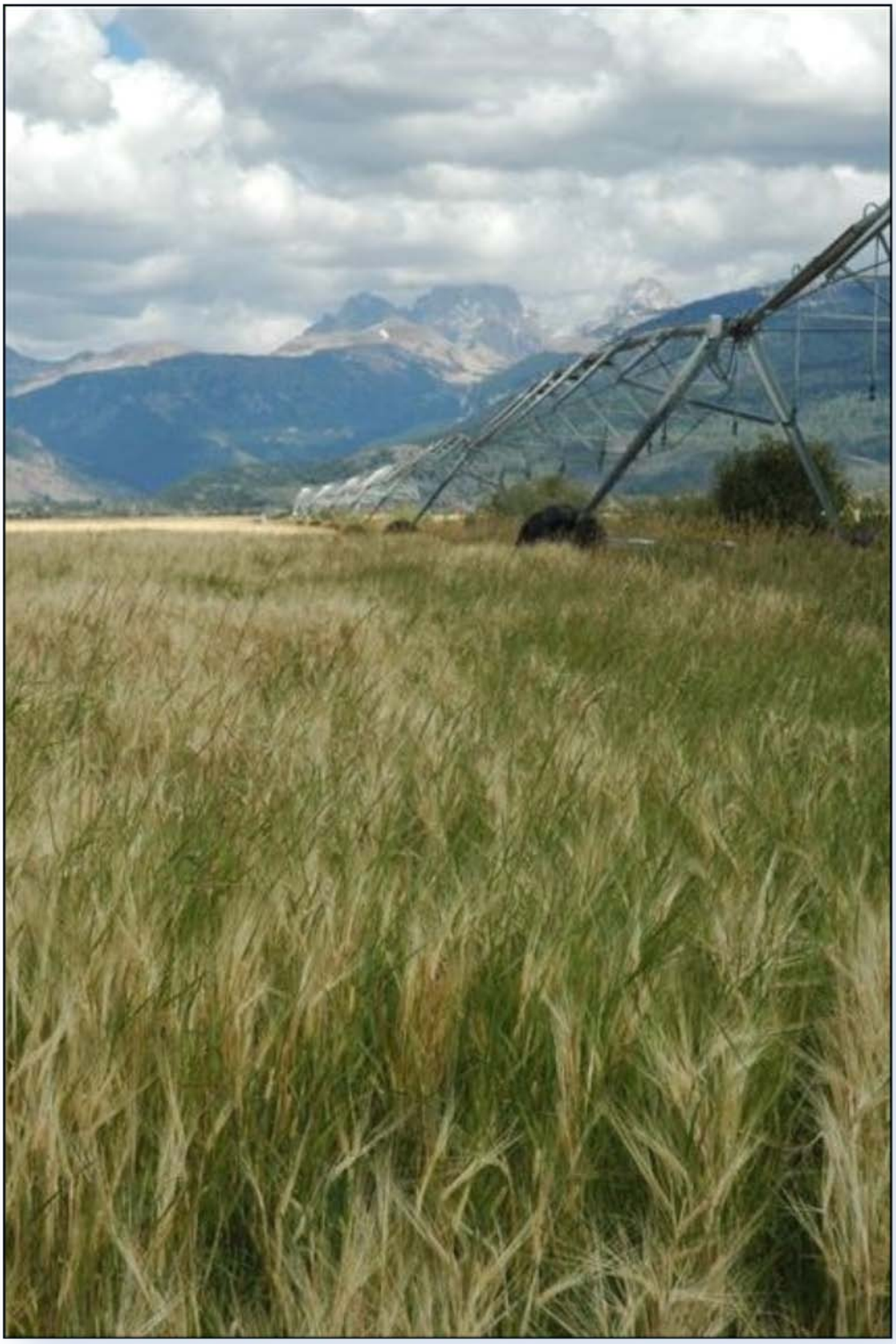

Photo: Wheat Field
Photo Courtesy of Idaho Department of Agriculture

THE WATER PLANNING PROGRAM

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

Constitutional Authority

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

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

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

> *The right to divert and appropriate the unappropriated waters of any natural stream to beneficial uses, shall never be denied, except that the state may regulate and limit the use thereof for power purposes. Priority of appropriation shall give the better right as between those using the water; but when the waters of any natural stream are not sufficient for the service of all those desiring the use of the same, those using the water for domestic purposes shall (subject to such limitations as may be prescribed by law) have the preference over those claiming for any other purpose; and those using the water for agricultural purposes shall have preference over those using the same for manufacturing purposes. And in any organized mining district those using the water for mining purposes or milling purposes connected with mining have preference over those using the same for manufacturing or agriculture purposes. But the usage by such subsequent appropriators shall be subject to such provisions of law regulating the taking of private property for public and private use, as referred to in section 14 of article I of this Constitution.*

Legislative Authority

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

> *The board shall, subject to legislative approval, progressively formulate, adopt and implement a comprehensive state water plan for conservation, development, management and optimum use of all unappropriated water resources and waterways of this state in the public interest… In adopting a comprehensive state water plan the board shall be guided by these criteria:*
>
> > *(a) Existing rights, established duties, and the relative priorities of water established in article XV, section 3, of the constitution of the state of Idaho, shall be protected and preserved;*
> > *(b) Optimum economic development in the interest of and for the benefit of the state as a whole shall be achieved by integration and coordination of the use of water and the augmentation of existing supplies and by protection of designated waterways for all beneficial purposes;*
> > *(c) Adequate and safe water supplies for human consumption and maximum supplies for other beneficial uses shall be preserved and protected;*
> > *(d) Subject to prior existing water rights for the beneficial uses now or hereafter prescribed by law, minimum stream flow for aquatic life, recreation and aesthetics and the minimization of pollution and the protection and preservation of waterways in the manner hereafter provided shall be fostered and encouraged and consideration shall be given to the development and protection of water recreation facilities;*
> > *(e) Watershed conservation practices consistent with sound engineering and economic principles shall be encouraged.*

Idaho Code § 42-1734A(1).

These criteria recognize that exclusive authority over the appropriation of public surface and ground waters of the state is vested in the Department of Water Resources ("Department") [Idaho Code § 42-201(7)] and require that the Plan be consistent with state law.

To assist the Board in its duties, the legislature also provided for the Director of the Department:

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

Idaho Code § 42-1805(6).

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

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

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

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

Idaho Code § 42-1734A(2).

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

Idaho Code § 42-1734A(1).

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

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

Idaho Code § 42-1779.

Idaho Water Resource Board Programs

Pursuant to its constitutional and statutory authorities, the Board:

1. Formulates, adopts, and implements the State Water Plan, River Basin Plans, and Comprehensive Aquifer Management Plans ("CAMPs").

2. Designates natural and protected rivers and files applications for and holds minimum stream flow water rights.

3. Provides financial assistance for water development and conservation projects in the form of revenue bonds, loans, and grants.

4. Establishes programs that address specific water resource issues at the direction of the Idaho legislature.

5. Adopts rules governing:
    - Well Construction
    - Well Driller Licensing
    - Construction and Use of Injection Wells
    - Drilling for Geothermal Resources
    - Mine Tailings Impoundment Structures
    - Safety of Dams
    - Stream Channel Alteration

    The Department administers these programs.

6. Hears appeals challenging the Department's administrative decisions pursuant to programs administered under the Board's administrative rules.

7. Administers the Idaho Water Supply Bank.

8. At the request of the Governor, appears on behalf of and represents the state in proceedings, negotiations, or hearings involving the federal government, Indian tribes, or other states.

9. Files applications and obtains permits to appropriate, store, or use unappropriated waters, and acquires water rights subject to the provisions of applicable law.

10. Investigates, undertakes, and promotes water resource projects deemed to be in the public interest. While all state agencies are required to exercise their duties in a manner consistent with this Plan [Idaho Code § 42-1734B], the Plan contemplates the implementation of water resource projects through cooperation and collaboration with the numerous units of state and local governments with statutory responsibilities for the conservation of Idaho's water resources.

11. Cooperates and enters into contracts with federal, state, and local units of governmental and private entities for water studies, planning, research, and activities.

12. Studies water pollution and advises the Idaho State Board of Environmental Quality regarding the establishment of water quality criteria in the context of the optimum development of the state's water resources.

13. Formulates and recommends legislation for water resource conservation, development, and utilization.

Comprehensive State Water Plan Formulation

Formulation of the State Water Plan is a dynamic process. Adoption of The State Water Plan – Part One, The Objectives, in 1974, and The State Water Plan - Part Two, in 1976,

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

Planning Process

The planning process encompasses five steps:

1. A comprehensive public involvement program to determine public views and interests regarding resource problems, needs, and opportunities as they relate to water use and management;

2. An ongoing evaluation of the state's water resources and uses and estimation of the future availability and demands on the resource;

3. A comprehensive evaluation of the effects resulting from the development and protection of the state's water resources;

4. Adoption of the Plan by the Board as required by Article XV, section 7 of the Idaho Constitution; and

5. Approval by the Idaho legislature as provided by law.

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

COMPREHENSIVE STATE WATER PLAN

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

Objectives

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

1. **Water Management** - Encourage the quantification of water supplies, water uses, and water demands for all water rights within the state. Encourage integrated, coordinated, and adaptable water resource management and the prudent stewardship of water resources.

2. **Public Interest** - Ensure that the needs and interests of the public are appropriately considered in decisions involving the water resources of the state.

3. **Economic Development** - Encourage and support economic development through the optimum use of water resources. Promote the integration and coordination of the use of water, the augmentation of existing supplies, and the protection of designated waterways for all beneficial purposes. Idaho Code § 42-1734A(1)(b).

5. **Environmental Quality** - Maintain, and where possible enhance water quality and water-related habitats. Study and examine the quality of rivers, streams, lakes, and ground water [Idaho Code § 42-1734(15)], and ensure that due consideration is given to the needs of fish, wildlife, and recreation in managing the water resources of the state. Where appropriate, initiate state protection of waterways or water bodies with outstanding fish and wildlife, recreation, geologic, or aesthetic values.

6. **Public Safety** - Encourage programs ensuring that life and property within the state are not threatened by the management or use of the state's water resources.

Policies

A main goal of this document is to help water managers, planners, and users formulate management strategies and policies needed to meet growing and changing water use needs.

The Board adopts the following policies for the conservation, development, management, and optimum use of all the unappropriated water resources and waterways of this state in the public interest. Idaho Code § 42-1734A.

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

1. OPTIMUM USE

It is in the public interest to establish policies, initiatives, and programs that lead to optimum use of the water resources of the state. Water is essential to the vitality and prosperity of the state.

1A - STATE SOVEREIGNTY

The State asserts sovereignty over the development and use of Idaho's water resources for the benefits of its citizens. Any action by the federal government or other states that would impair Idaho's sovereignty over its water resources is against state policy.

Discussion:

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

Implementation Strategies:

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

Milestones:

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

1B - BENEFICIAL USE OF WATER

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

Discussion:

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

Implementation Strategies:

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

Milestones:

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

1C – CHANGE IN USE

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

Discussion:

The demand for water increases every year while the volume of unappropriated water within the state continually decreases. Many basins do not provide a dependable water supply for current uses. Allowing for changes in the use of water rights provides flexibility in water allocation to meet changing conditions. Idaho Code §§ 42-108 and 42-222 provide for changes in point of diversion, place of use, period of use, or nature of use with the approval of the Department, while also providing for the protection of other water users, the agricultural base of a region, and the local public interest. Pursuant to state law, priority dates are retained when other water right holders are not injured. The Board is responsible for the implementation of voluntary programs also designed to meet changing water use needs.

Implementation Strategies:

- Review existing statutes and regulations and recommend revisions as necessary to establish a more efficient process for changes in the use of water rights.

- Review Department policies and procedures and recommend revisions as necessary to implement a more efficient process for changes in the use of water rights.

Milestones:

- Number of changes in the use of water rights that meet emerging needs.

1D - WATER SUPPLY BANK

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

Discussion:

As the state approaches the time when there is little or no unappropriated water, the Water Supply Bank, established by Idaho Code § 42-1761, provides an efficient mechanism for the sale or lease of water from natural flow and storage. The purpose of the Water Supply Bank is to obtain the highest duty of water, provide a source of adequate water supplies to benefit new and supplemental water users, and provide a source of funding for improving water use facilities and efficiencies. By aggregating water available for lease, rental pools operating under the authority of the Water Supply Bank can supply the water needs of many users, provided there is no injury to other right holders, or enlargement of the use of the water rights, and the change is in the local public interest. Idaho Code § 42-1763.

Photo: Shoshone Falls near Twin Falls *(IDWR Photo)*

The Idaho Water Resource Board has adopted rules governing the sale or lease of water through the Water Supply Bank. IDAPA 37.02.03. Pursuant to state law, the Board has authorized local entities to operate storage and natural flow rental pools in numerous water districts that meet regional needs. The Shoshone-Bannock Tribes are also authorized by the state to operate a storage water rental pool.

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

Implementation Strategies:

- Monitor existing procedures, statutes, and rules of the Water Supply Bank to determine whether additional strategies are needed to meet current and future water use demands.
- Establish through state action, natural flow and storage rental pools in basins where local water users have identified the need for rental pools.
- Develop a public information and education program to promote use of the Water Supply Bank.

Milestones:

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

1E - CONJUNCTIVE MANAGEMENT

Where a hydraulic connection exists between ground and surface waters, they should be conjunctively managed to maintain a sustainable water supply.

Discussion:

Region-specific factors impact the available supply of ground and surface water and effect changes in regional water budgets. This can result in insufficient water supplies to satisfy beneficial uses and may result in increased administrative curtailment, conflict among water users, and litigation.

This policy addresses conjunctive management 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, the legislature has determined that it is in the public interest to adopt plans and policies that facilitate and encourage a resolution of

conflicts that occur in water basins where there is a hydraulic connection between ground and surface waters. Quantification and monitoring is a key component of conjunctive management and necessary for the development of plans and projects designed to maintain a stable balance between supply and demand.

Implementation Strategies:

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

Milestones:

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

1F - GROUND WATER WITHDRAWAL

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

Discussion:

Idaho Code § 42-226 protects senior ground water appropriators in the maintenance of reasonable pumping levels in order to obtain full economic development of the state's underground water resources. The Director of the Department is authorized to establish reasonable ground water pumping levels when necessary to protect prior appropriations of ground water. Idaho Code § 42-237a provides that the Director may prohibit or limit the withdrawal of water from a well if withdrawal would result in diversion of the ground water supply at a rate beyond the reasonably anticipated average rate of future natural recharge. The Director may allow withdrawals to exceed natural recharge if a program exists to increase recharge or decrease withdrawals and senior water rights are protected. Idaho Code §§ 42-233a and 42-233b authorize the Director to designate areas as either Critical Ground Water Areas or Ground Water Management Areas. Designating a ground water basin as a Critical Ground Water Area or Ground Water Management Area

provides management options to prevent excessive withdrawals from an aquifer. Where such designations are made, the Department requires additional measurement and reporting to determine available ground water supplies and use.

The comprehensive aquifer management planning initiated by the Idaho Water Resource Board discussed in Policy 1E provides opportunities for stakeholder participation in ground water management. Local advisory committees help the Board establish goals, objectives, and strategies to maximize available water supplies and assist with plan implementation. Public participation is key to the development of innovative approaches for meeting current and future demands on the state's ground water resources.

Implementation Strategies:

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

Milestones:

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

Photo: Alfalfa field near Glenns Ferry
Photo Courtesy of Idaho Department of Agriculture

1G - INTERSTATE AQUIFERS

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

Discussion:

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

Implementation Strategies:

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

Milestones:

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

1H - QUANTIFICATION AND MEASUREMENT OF WATER RESOURCES

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

Discussion:

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

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

Implementation Strategies:

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

Milestones:

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

1I - AQUIFER RECHARGE

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

Discussion:

Managed aquifer recharge: Managed recharge projects may be an appropriate means for enhancing ground and surface water supplies, providing mitigation for junior ground water depletions, or to help maintain desirable aquifer levels. In addition, managed recharge may help optimize existing water supplies by changing the timing and availability of water supplies to meet demand. Managed recharge may also be used as an adaptive mechanism for minimizing the impacts of variability in climate conditions. Idaho Code § 42-234(4) requires that managed recharge projects do not injure existing water rights and gives the Director authority to approve, disapprove, or require alterations in the methods employed to achieve ground water recharge. The effects on ground water and surface water budgets from managed recharge projects must be monitored to determine the effectiveness of such projects after implementation..

The Board supports and assists in the development of managed recharge projects that further water conservation and increase water supplies available for beneficial use. Projects involving the diversion of natural flow water appropriated pursuant to Idaho Code § 42-234 for managed recharge in excess of ten thousand (10,000) acre-feet on an average annual basis must be submitted to the Idaho Water Resource Board for approval prior to construction. Idaho Code § 42-1737.

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

Incidental aquifer recharge: The incidental recharge of aquifers occurring "as a result of water diversion and use that does not exceed the vested water right of water right holders is in the public interest." Idaho Code § 42-234(5)]. Incidental recharge may be an important component of some aquifer water budgets.

Implementation Strategies:

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

Milestones:

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

1J - WATER QUALITY

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

Discussion:

Water quality impacts the usability of water for a variety of purposes and it is essential that the quality of Idaho's water resources be protected for public safety and economic stability and growth. The Department of Environmental Quality ("DEQ") is the lead state agency charged with maintaining and improving surface and ground water quality through regulatory and permitting programs and coordination with other state agencies. DEQ's Surface Water Program measures and assesses the levels of pollutants in surface waters. Pursuant to the Ground Water Quality Protection Plan, adopted by the legislature in 1992, the Department administers a statewide ambient ground water quality monitoring network and the Environmental Data Management System. The system collects, and makes available to the public, data obtained from ground water monitoring networks across the state.

When water quality fails to meet state standards, DEQ works with communities, industry, agricultural interests, state and federal agencies, and other stakeholders to develop water quality improvement plans, known as total daily maximum loads or TMDLs. These plans outline actions needed to restore impaired water bodies so that they support designated uses.

The use of water flow to dilute pollution is not a substitute for adequate water quality treatment. The Idaho Agriculture Pollution Abatement Plan ("Ag Plan") is a guidance document that describes the state's process for the control and abatement of agricultural nonpoint source pollution as it relates to water quality. The Ag Plan provides for the review and identification of specific watershed management strategies that contribute to the full support of beneficial uses through enhancement and maintenance of the quality of surface and ground water, to the extent they are impacted by nonpoint source agricultural pollutants. Water quality improvement strategies for non point sources are implemented through voluntary programs. Numerous state agencies and local units of government participate in plan implementation, including: the Idaho Soil and Water Conservation Commission, DEQ, Soil Conservation Districts, Idaho State Department of Agriculture ("ISDA"), University of Idaho – Cooperative Extension System, the Department, the Board, IDFG, the Idaho Department of Lands, and the Office of Species Conservation ("OSC"). Where the quality of surface and ground water depends on land and water-use practices within a watershed, water users, land managers, state and federal agencies, and other units of local government are working together to implement through voluntary mechanisms best management practices and other strategies that reduce impairments to beneficial uses.

Implementation Strategies:

- Coordination and integration of monitoring programs with public and private entities.
- Ongoing analysis of statewide water quality monitoring programs to identify need for modifications.
- Participate with state agencies to integrate water management programs and policies that promote the improvement of the quality of the state's surface and ground water through voluntary mechanisms.
- Ongoing monitoring of baseline conditions and trends.

Milestones:

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

1K - COMPREHENSIVE AQUIFER MANAGEMENT PLANS

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

Discussion:

Idaho Code §§ 42-1779 and 42-1780 established the Statewide Comprehensive Aquifer Planning and Management Program and the Aquifer Planning and Management Fund, which are designed to provide the Board and the Department with the necessary information to develop comprehensive aquifer management plans, ("CAMPs") throughout the state. The program will be implemented in three phases. First, technical information describing the hydrology of the ground and surface water systems and the relationship between surface and ground water in a designated basin will be compiled. Second, the Board, with the assistance of an advisory committee, will develop a management plan, based on an assessment of current and projected water uses and constraints, to address water supply and demand issues specific to each basin. Finally, the Board will be responsible for implementing the CAMPs to obtain sustainable water supplies and provide for the optimum use of a region's water resources.

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

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

Implementation Strategies:

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

Milestones:

- Number of CAMPs completed.
- Number of CAMPs implemented.

1L - SURFACE WATER SUPPLY ENHANCEMENT

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

Discussion:

Future economic development, population growth, and evolving priorities will bring additional demands on Idaho's water resources, and surface water development will continue to play an important role in the state's future. The construction of new reservoirs, enlargement of existing reservoirs, and development of off-stream storage sites could increase water supplies necessary to meet increased demand. These strategies are also important for flood management, hydropower generation, and recreation use.

Engineering, economic, legal, political, and environmental issues associated with water development projects affect decisions concerning the construction of reservoir facilities. In addition, changes in climate conditions will likely be an important factor in determining the costs and benefits of additional storage. As required by Idaho Code § 42-1736B(3)(c), the Idaho Water Resource Board maintains an inventory of potential storage sites. An inventory of reservoir sites with apparent high potential for development is set forth in Table 1.

Implementation Strategies:

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

Milestones:

- Complete annual review of potential storage site inventory and revise as appropriate.
- Initiate construction of additional storage to meet current and expected needs by 2025.

Table 1 Reservoir Sites with Apparent High Potential for Development

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

1M - WEATHER MODIFICATION

Weather modification offers the possibility of augmenting water supplies.

Discussion:

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

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

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

Implementation Strategies:

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

Milestones:

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

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

1N - HYDROPOWER

Appropriation of water for hydropower should be subordinated to subsequent upstream beneficial uses to assure an adequate supply of water for all future beneficial uses and minimum stream flows for hydropower projects should be established by state action.

Discussion:

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

Small hydropower projects using existing water flows and infrastructure can be cost-effective and provide for the optimum utilization of the water resource. Recognizing the benefits of such projects, loans are available through the Board's programs to study the feasibility and for development of such projects. The FERC provides a permitting exemption to certain qualifying facilities. The National Hydropower Association's Small Hydro Council recently issued a set of recommendations that would streamline FERC's conduit and small hydropower permitting process.

Implementation Strategies:

- Ensure that all future applications, permits and licenses for the appropriation of water for hydropower purposes contain a subordination provision.
- Establish minimum stream flows through state action to protect base flows for future hydropower water rights as necessary.

- Define, through agreements with the holders of existing hydropower water rights, the relationship between such rights and existing and future depletionary water rights.

Milestones:

- Execution of subordination agreements and establishment of minimum stream flows through state action for existing hydropower facilities.
- Loans provided to study the feasibility and development of small hydropower projects.

Photo: Swan Falls Dam (*photo by IDWR Dam Safety Program)*

2. CONSERVATION

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

2A - WATER USE EFFICIENCY

Water conservation and water use efficiency should be promoted.

Discussion:

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

Photo: Idaho Irrigation (*IDWR Photo*)

Implementation Strategies:

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

Milestones:

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

2B - FEDERALLY LISTED AND OTHER AQUATIC SPECIES

The state asserts primacy over the management of its fish and wildlife and water resources. Accordingly, any reintroduction or introduction of federally listed species or other aquatic species without state consultation and approval is against the policy of the State of Idaho because it would impair or impede the state's primacy over its water resources.

Discussion:

The intersection between state water rights and the Endangered Species Act ("ESA") requires development of integrated solutions to water allocation conflicts. Pursuant to Idaho Code § 36-103, the Idaho Fish and Game Commission, through the IDFG, is responsible for the preservation, protection, perpetuation, and management of all wildlife, including aquatic species, within Idaho. IDFG also maintains a list of Species of Greatest Conservation Need, species that are low in numbers, limited in distribution, or have suffered significant habitat losses. The OSC is responsible for the coordination of all state activities affecting endangered, threatened, and candidate species, and species petitioned to be listed under the ESA, and rare and declining species. Idaho Code § 67-818. OSC coordinates state implementation and response to federal recovery plans and participates in regional efforts with state and federal agencies and tribes on issues related to such species. Idaho Code § 67-818. Pursuant to Chapter 19, Title 22, Idaho Code, the ISDA is responsible for the regulation of aquatic invasive species. All activities related to the introduction or reintroduction of aquatic species that would affect Idaho's fish and

wildlife and water resources should be coordinated through these agencies, including species listed under the ESA.

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

The Idaho Water Resource Board holds minimum stream flow water rights for 205 river reaches important to ESA-listed species and established as part of the Snake River Water Rights Settlement Act of 2004 ("2004 Snake River Water Rights Agreement"). The minimum stream flow water rights provide significant protection for ESA-listed species in the Salmon and Clearwater River basins. The water rights for streams in watersheds with substantial private land ownership and private water use were established after consultation with local communities. Where the minimum stream flow water rights are higher than existing flows, the state works with water users on a voluntary basis to rent or otherwise acquire water to return to the streams. The Water Supply Bank and Idaho Water Transactions Program are used to achieve these objectives. In conjunction with the minimum stream flows, the state agreed to work with local stakeholders and communities to address habitat concerns on a limited number of streams with degraded habitat. The work plans include measures to remove barriers to fish passage, revegetate stream banks, and restore wetlands to proper functioning. These programs also assist in the implementation of the Columbia Basin Fish Accords in which the state, the Bonneville Power Administration, and the U.S. Army Corps of Engineers ("USACE") agreed to address issues associated with the direct and indirect effects of the Federal Columbia River Power System and U.S. Bureau of Reclamation's ("USBOR") Upper Snake River Project on the fish and wildlife resources in the Columbia River Basin. As discussed in Policy 6B, these projects target flow-related limiting factors in the Lemhi and Pashimeroi rivers.

The 2004 Snake River Water Rights Agreement also provides for the development of agreements to assist in the recovery of ESA-listed species, under Section 6 of the ESA. The plans are to be developed in collaboration with local landowners and water users, affected Indian tribes, and state and federal natural resource agencies. Section 6 agreements will provide incentives for conservation through the granting of incidental take coverage to participants in the program. Such agreements would provide participating water users with protection against uncertainty and regulatory delays while contributing to the recovery of listed species. Section 6 of the ESA may also provide opportunities for the implementation of voluntary conservation plans developed in collaboration with local water users and stakeholders in other regions of the state. The Board, in collaboration with other state agencies and local units of government, develops

local and regional conservation strategies that contribute to the recovery of ESA-listed species and Species of Greatest Conservation Need.

Implementation Strategies:

- Participate in the development and implementation of habitat conservation plans pursuant to Section 6 agreements.
- Collaborate with OSC, IDFG, other state and federal agencies, affected Indian tribes, local units of government and local stakeholders to develop and implement conservation programs that preclude the need for listing of species and contribute to listed species' recovery.
- Coordinate with OSC and IDFG to integrate water resource programs with species protection and recovery, including the establishment of minimum stream flows and state designation of protected rivers.

Milestones:

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

2C – MINIMUM STREAM FLOWS

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

Discussion:

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

In 1925 and 1927, the legislature declared that the preservation of certain lakes for scenic beauty, health, and recreation was a beneficial use of water. In 1971, the legislature authorized the first formal appropriation of minimum stream flows by directing the Idaho Department of Parks and Recreation to appropriate a specific reach of Niagara Springs in the Malad Canyon area for instream flow purposes. The 1976 State Water Plan called for, and eventually legislation was enacted, creating a state-wide minimum stream flow program. Chapter 15, Title 42, Idaho Code, authorizes the Idaho Water Resource Board to appropriate the minimum flow of water required to protect designated uses if the appropriation is in the public interest and will not interfere with any vested water right, permit, or water right application with a senior priority. Idaho currently has 297 licensed or permitted water rights for minimum stream flow purposes, including six minimum lake level water rights held by the state. At the legislature's direction, 205 of the

minimum stream flow water rights were adopted pursuant to the 2004 Snake River Water Rights Agreement which, as discussed more fully in Policy 6B, provided a programmatic approach to addressing the needs of species listed under the ESA. Similarly, the legislature has authorized the Board to appropriate minimum stream flow water rights in the Lemhi and Wood River basins where the rights are maintained through operation of a Water Supply Bank. These locally managed programs are used to maintain or enhance instream flow in a manner that respects water use practices and addresses community concerns.

The Water Supply Bank and local rental pools are tools that can be used to improve instream flows through voluntary cooperation and to meet local needs. It is important to monitor existing mechanisms for establishing local rental pools to determine whether additional strategies are required to meet local needs. It is also important to monitor whether existing mechanisms for meeting instream flow needs are adequate.

Implementation Strategies:

- Monitor whether existing mechanisms for meeting instream flow needs are adequate.
- 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 existing mechanisms for establishing local rental pools to determine whether additional strategies are required to meet local needs.
- Establish local rental pools to meet instream flow needs as requested.

Milestones:

- Annual inventories of minimum flow water rights completed.
- Minimum stream flow water rights established.
- Instream flow needs met.

2D - STATE PROTECTED RIVER SYSTEM

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

Discussion:

Idaho Code § 42-1734A(1) authorizes the Board to protect highly valued waterways as state protected rivers. The authority to designate "protected rivers" derives from the state's ownership of the beds of navigable streams and the state's right to regulate all waters within the state. The Idaho Water Resource Board has consistently recognized the

value of free-flowing waterways by designating specific streams and rivers as natural or recreational rivers.

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

Implementation Strategies:

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

Milestones:

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

2E - RIPARIAN HABITAT AND WETLANDS

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

Discussion:

Functional riparian zones and wetlands contribute to water quality protection, storm water control, and ground water protection and provide important habitat for fish and wildlife. Riparian and wetlands areas provide support to numerous species across much of the state. Riparian zones and wetlands should be protected to preserve their ecological values and functions. The Board supports voluntary efforts to restore riparian zones and wetlands.

The integration of water resource and land use planning activities that affect riparian zones and wetlands requires coordination among various local, regional, and state authorities. The Department regulates the alteration of stream channels and stream beds below the mean high watermark. Idaho Code §§ 42-3801 - 42-3812. Local governments

are authorized to regulate land use and development. The DEQ administers the state's Nonpoint Source Management Program which is based upon strong working partnerships and collaboration with state, tribal, regional, and local entities, private sector groups, citizens' groups, and federal agencies and the recognition that a successful program must be driven by local wisdom and experience.

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

Implementation Strategies:

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

Milestones:

- Project and funding proposals submitted.
- Projects implemented.

2F - STREAM CHANNEL REHABILITATION

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

Discussion:

Functional stream channels provide ecological goods and services desired by the public. Ecological goods are those qualities that have economic value, such as timber resources, habitat that supports fishing and hunting, and aesthetic qualities of landscapes that would attract tourists. Ecological services include systems that best manage water resources, such as the regulation of runoff and flood waters, or the stabilization of landscapes to prevent erosion. Damage and destruction of stream channels can result from natural and human-caused changes and disturbances. Where current practices, legacy effects of past

activities, or natural disturbances threaten public safety, private property, or the overall quality and quantity of water produced in the affected watershed, it is in the state's interest to take remedial action in a cost-effective manner. In many instances, historical targets for restoration are not practical and therefore restoration efforts should be designed to be sustainable in a rapidly-changing environment. Preventing damage to a stream channel and adjacent property is more cost effective than restoration. In addition, it is in the state's interest to ensure that the stream channels of the state and their environments are protected and restored through the implementation of voluntary restoration projects.

Implementation Strategies:

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

Milestones:

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

2G - SAFETY MEASURES PROGRAM

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

Discussion:

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

Implementation Strategies:

- Secure and provide funding for the construction and maintenance of safety features at water distribution and storage facilities.

- Encourage the implementation of public safety awareness programs.

Milestones:

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

2H - FLOOD HAZARD AREAS

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

Discussion:

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

Implementation Strategies:

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

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

Milestones:

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

2I - FLOOD DAMAGE REDUCTION LEVEE REGULATION

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

Discussion:

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

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

Implementation Strategies:

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

Milestones:

- State levee safety program established.
- Levee failures in Idaho decreased.
- Reduction in property loss resulting from levee failures.

3. MANAGEMENT

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

3A - REVIEW OF FEDERAL RESERVOIR WATER ALLOCATION

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

Discussion:

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

Implementation Strategies:

- Review status of existing cooperative agreements related to review of proposed allocations and revise accordingly.
- Identify opportunities for additional agreements providing for review of proposed allocations.
- Work with the USACE to determine if cooperative agreements addressing water allocations in other parts of the state would be in the state's interest.

Milestones:

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

Photo Courtesy of Idaho Department of Agriculture

3B - HYDROPOWER SITING

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

Discussion:

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

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

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

Implementation Strategies:

- Provide information and technical assistance to local communities through participation in an Energy Facility Site Advisory Team.
- Include evaluation of hydropower generation potential in feasibility studies for water storage projects.

- Provide information and technical assistance to proponents of projects that increase energy efficiency, increase generation capacity, or retrofit existing dams or other facilities for hydroelectric generation.

Milestones:

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

3C - RESEARCH PROGRAM

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

Discussion:

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

Implementation Strategies:

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

Milestones:

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

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 may 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 Board's Revolving Development Fund and Water Management Account are supported by appropriations 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 or the Idaho Water Resource Board.

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

The ESPA CAMP provides 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. As discussed in Policy 4E, the Board has entered into agreements with the USACE and the USBOR 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.

As demands for water increase, the need for water-related planning escalates. The planning process provides opportunities for involving all affected parties – water users, resource managers, and policymakers, identifies problems, alternatives, and solutions, and allows for continuous updating and revisions in light of new problems and opportunities.

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 CAMPs.
- 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. "A general adjudication is an action for both the judicial determination of the extent and priority of the rights of all persons to use water from any water system within the state of Idaho that is conclusive as to the nature of all rights to the use of water in the adjudicated water system, except as provided in section 42-1410, Idaho Code and for the administration of those rights." Idaho Code § 42-1401A(5). 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. 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. Successful agreements were negotiated resolving federal reserved water 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.

Implementation Strategies:

- As requested by the Governor, provide coordination and negotiation of 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 the SRBA.
- Coeur d'Alene Spokane River Basin adjudication completed.

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 management 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 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.

The Snake River 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 agencies 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 Marine 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 guidance for the management of the Snake River in the public interest. When competing demands for Idaho's unappropriated water resources arise, the laws of the State of Idaho and the policies in this Plan establish the blueprint for management of the resource.

This plan sets forth ten Snake River Basin policies. Policy 4A describes the minimum stream flow management framework that provides for the optimum development of the water resources of the Snake River Basin. Policy 4B reaffirms the Milner Zero minimum average daily flow policy that guides the optimum development of unappropriated flows of the Snake River Basin above Milner Dam. Policy 4C addresses reallocation of Snake River trust water in the Milner to Murphy reach of the Snake River Basin. Policy 4D addresses conjunctive management of the Eastern Snake Plain Aquifer and the Snake River. Policy 4E addresses the need for development of storage in the Snake River Basin. Finally, Policies 4F through 4J set forth policies for agriculture, DCMI (domestic, commercial, municipal and industrial), hydropower, navigation, fish, wildlife, recreation, and scenic values.

Photo: Milner Dam
Photo Courtesy of IDWR Dam Safety Program

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
Johnson Bar	5,000 cfs
Lime Point	13,000 cfs

These minimum stream flows provide the management framework for the optimum development of water resources of the Snake River Basin. The minimum stream flows 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. Although the Snake River Basin represents 50% of the water resources of the State, it is the water supply for 76% of Idaho's population. Thus, the Snake River Basin is the backbone of Idaho's economy. Effective management of this resource is essential to protecting existing water rights, supporting agriculture, sustaining economic growth, maintaining base flows for hydropower generation, and preserving fish, wildlife, and other environmental values.

The Milner, Murphy and Weiser minimum stream flows have been an integral part of the State Water Plan since their adoption in 1976. They establish a balance between diversion of water for consumptive uses and preservation of Snake River flows for instream uses. The Johnson Bar and Lime Point minimum flows were added in 1978 and 1985, respectively, to address navigational concerns below the Hells Canyon Complex (HCC).

The Snake River minimum stream flow policy evolved over the course of the 20th Century in connection with efforts 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 as context for the Snake River policies that follow.

The inherent tension between diversion of water for consumptive uses and retention of flows for instream uses became apparent with the simultaneous development of the irrigable lands within the Snake River Basin and the development of the hydropower

[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.

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.

The initial effort to create a balance between irrigation and hydropower development arose out of a 1920 plan prepared by the Board of Engineers "for the development of the remaining resources of the Snake River water supply on a broad and comprehensive basis which would insure to the state the maximum utility of the possibilities of the stream." Report of Board of Engineers (dated April 10, 1920). The Board of Engineers consisted of the State Commissioner of Reclamation and engineers representing the U.S. Reclamation Service and private irrigation interests. The plan was based on the physical division of the Snake River Basin at Milner Dam. Upstream from Milner Dam the Snake River is not deeply entrenched, but below the dam the river enters a deep canyon. This physical characteristic of the Snake River led the Board of Engineers to propose that the Snake River above Milner Dam be dedicated to irrigation because of the ease of diverting the flow through gravity irrigation. The Board of Engineers proposed that the main stem Snake River below Milner Dam should be devoted to hydropower because the flow of the river was largely inaccessible for agricultural development at that time.

The 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. Because it would take a number of years to develop the water supply above Milner Dam for agricultural purposes, the Board of Engineers' report recommended hydropower water rights be conditioned to prevent them from interfering with future upstream development. This limitation on hydropower water rights 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' viewed the plan 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 existing and anticipated development above and below Milner Dam, evolved over time to the commonly-held view of the Snake as consisting of "two rivers." The "two rivers" concept recognizes that separating water administration at Milner Dam and precluding downstream calls for the water above Milner, the optimum development of the water supply above Milner Dam can be achieved. The "two rivers" concept has been repeatedly reaffirmed as part of every major Snake River water project and resolution of every major water controversy. For example, Idaho Power Company's "HCC" water rights were subordinated 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 establishing a zero flow at Milner Dam was to allow for existing uses to be continued and for some new uses to be developed. The 1986 State Water Plan, however, recognized that the Milner zero minimum average daily flow policy meant "that river flows downstream from that point to Swan Falls Dam may consist almost entirely of ground-

water discharge during portions of low-water years." The 1992 State Water Plan further clarified that the Milner zero minimum stream flow "is not a target or goal to be achieved, and may not necessarily be desirable." The 1996 State Water Plan was amended by the Idaho Legislature to provide that "the exercise of water rights above Milner Dam has, and may reduce flow at the dam to zero."

The 1976 State Water Plan established minimum average daily flows[2] at the Murphy gage of 3,300 cfs, and the Weiser gage of 4,750 cfs "to maintain water for production of hydropower and other main stem uses." In 1985, the Murphy minimum stream flow was increased to an average daily flow of 3,900 cfs during the irrigation season and 5,600 cfs during the non-irrigation season as part of the resolution of the Swan Falls controversy, which dealt with whether Idaho Power Company's hydropower water rights were subordinate to upstream uses. The 1986 State Water Plan described the Murphy and Weiser minimum stream flows as "management constraints" to "insure that minimum flow levels of Snake River water will be available for hydropower, fish, wildlife and recreational purposes." The 1986 Plan also recognized the hydraulic connection between the Eastern Snake Plain Aquifer and directed that it "be managed as an integral part of the river system."

In 1978, the Idaho Legislature established a minimum stream flow of 5,000 cfs at the Johnson Bar Gaging Station "to retain the stream flows and hydro-base." Chapter 345, 1984 Idaho Sess. L. 884, 886. As part of the Swan Falls Settlement, a minimum flow of 13,000 cfs was established at the Lime Point Gaging Station. These minimum stream flows were initially established to protect navigational flows below the HCC, but now serve to protect flows of the main stem Snake River below the HCC for instream uses. As discussed in Policy 4I, however, the Johnson Bar and Lime Point minimum stream flows are not enforceable against water rights diverting from the waters of the Snake River or surface or ground water tributary to the Snake River upstream of the HCC. Additionally, the Lime Point minimum stream flow cannot be enforced against water rights diverting waters of the Salmon River or surface or ground water tributary to the Salmon River.

To summarize, the Milner, Murphy and Weiser minimum stream flows establish the management framework for optimum development of the water resources of the Snake River Basin above the HCC. The Johnson Bar and Lime Point minimum stream flows protect main stem Snake River flows below the HCC for instream uses.

Implementation Strategies:

- Develop a monitoring program 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.

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

- Develop by 2014 management scenarios to ensure that Snake River flows at the Murphy and Weiser Gages remain above established minimum stream flow levels.

Milestones:

- Snake River minimum stream flows 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.

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 "[f]or the purpose of the determination and administration of rights to the use of the waters of the Snake River or its tributaries downstream from Milner Dam, no portion of the waters of the Snake River or surface or ground water tributary to the Snake River upstream from Milner Dam shall be considered." This provision was enacted in 1986 to confirm and clarify the Milner zero minimum stream flow and the "two rivers" concept. Policy 4B reaffirms the Milner zero minimum stream flow and the "two rivers" concept, which have appeared in each successive revision of the Idaho State Water Plan.

Figure 1 shows the annual volume of natural flow passing Milner Dam from 1980 through 2010. Because of year-to-year variability of the natural flow passing Milner Dam, the optimum development of the natural flow will be achieved through storage in surface water reservoirs above Milner Dam and in the ESPA.

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, this target should be phased in to allow for informed water management and planning." The Phase I managed recharge hydrologic target for the Snake River Basin above Milner is to recharge between 100,000 and 175,000 acre-feet on an average annual basis. Based upon data gathered during this initial phase of managed recharge, the Board will consider in 2019 whether to implement the ESPA long-term managed recharge hydrologic target.[3]

[3] The Board entered into a Memorandum of Agreement with Idaho Power Company as part of the 2009 Framework Reaffirming the Swan Falls Settlement dated May 6, 2009, that sets forth additional understandings between the Idaho Power Company and the Board regarding implementation of managed recharge.

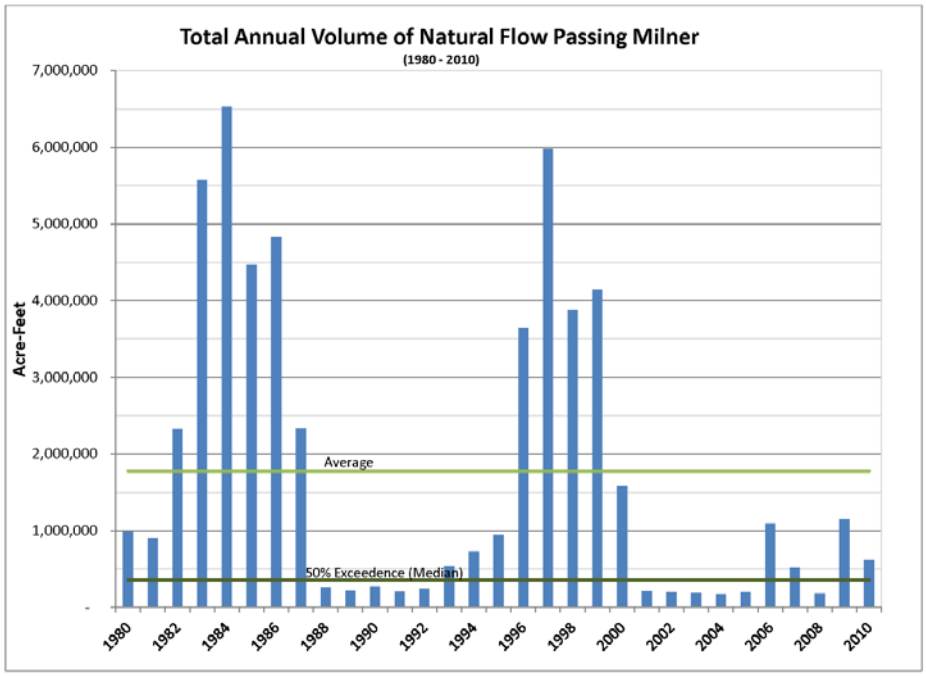

Figure 1 Total Annual Volume of Natural Flow Passing Milner Dam

As discussed in Policy 4E, development of new surface 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 unappropriated flows for hydropower and other uses below Milner Dam.

Consistent with Idaho Code § 42-203B(2), no use of 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.
- Address water management and reservoir operation needs through the Upper Snake River Advisory Committee.
- Measurement and Monitoring Implementation Strategy:
    - Continuously improve the Eastern Snake River Aquifer Model ("ESPAM"), the Snake River Planning Model ("SRPM"), and the Snake River Water Right Accounting Program.

  - 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.

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 term “trust water” refers to water made available for future development as a result of the 1984 Swan Falls Settlement, which 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. A brief overview of the trust created by Idaho Code § 42-203B(2), however, is provided as context for this policy.

A core principle of the Swan Falls Settlement is that flows 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 are 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 such flows up to the licensed amount of the hydropower water rights “pending approval of depletionary future beneficial uses.”

These dual objectives were implemented through, a trust, established by Idaho Code § 42-203B(2), which operates for the joint benefit of Idaho Power Company and the people of the State of Idaho. The statutory trust consists of twenty-five hydropower water rights originally appropriated by Idaho Power Company for flows in excess of the Murphy minimum flow, and now held by the State, by and through the Governor. Idaho Power Company uses the flows available under the water rights held in trust for hydropower purposes until those flows are appropriated to new uses approved pursuant to state law, including Idaho Code §§ 42-203A and 42-203C. The "reallocation" is accomplished through subordination of the hydropower water rights held in trust to the new uses, pursuant to Idaho Code § 42-203B(2).

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 2 (the "Trust Water Area").[4]

The Swan Falls Settlement and the implementing statutes did not attempt to define the specific amount of trust water available for future development. Rather, the availability of trust water is linked to the Murphy minimum flow and a number of other statutory factors. "The actual amount of development that can take place without violation of the [Murphy] minimum stream flows will depend on the nature and location of each new development, as well as the implementation of new practices to augment the stream flow."

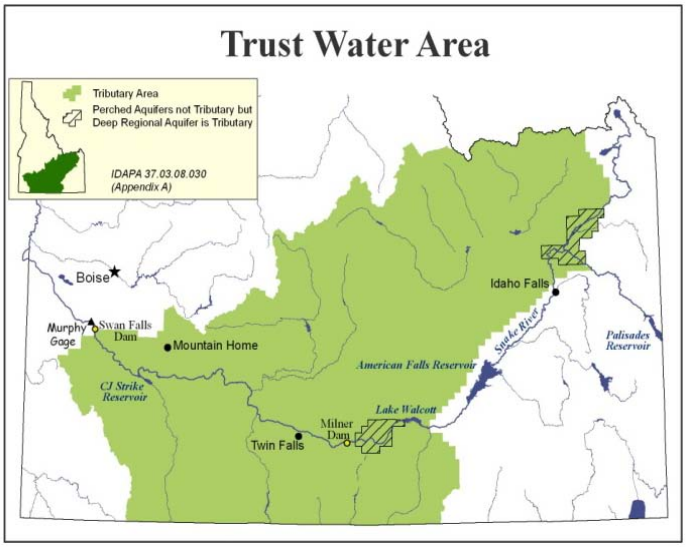

Figure 2 Trust Water Area

Figure 3 shows the

[4] 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.

portions of the hydrograph at Murphy deemed to be "minimum stream flows" and "trust water." [5] A similar hydrograph was prepared in 1988 in connection with the implementation of the Swan Falls Settlement, and included the 1961 average daily flow at the Murphy Gage as representative of the then-existing low flow year. Figure 3 includes average daily flow data from 1984 through 2011 to show the relative change in flow at the Murphy Gage since implementation of the Swan Falls Settlement.

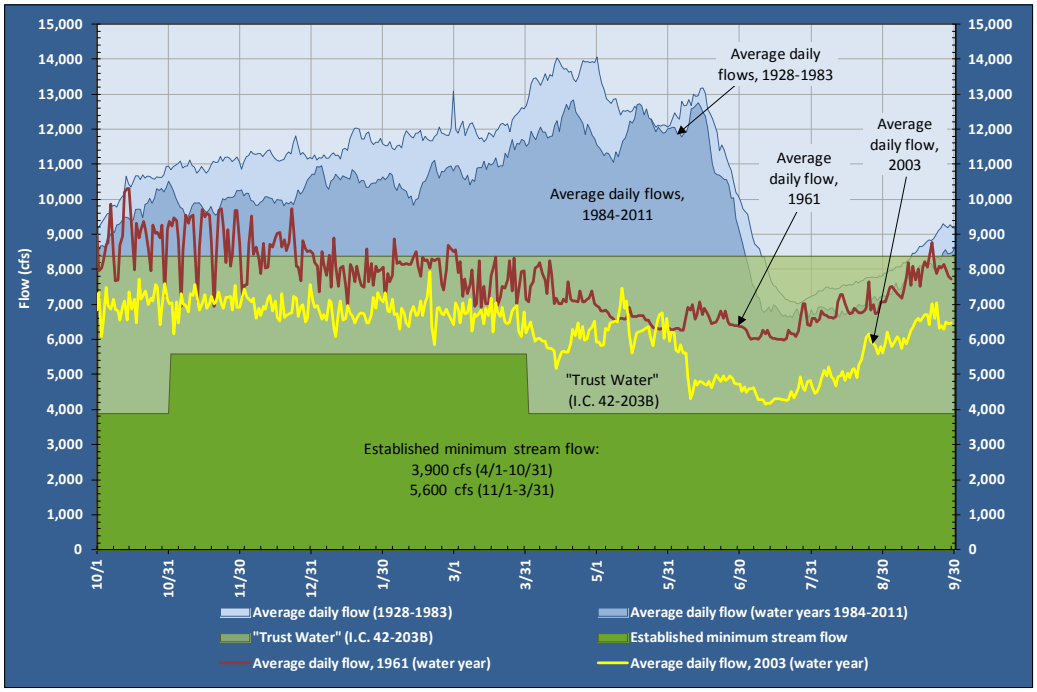

Figure 3 Swan Falls Trust Water Flows

While flows are beginning to approach the minimum average daily flow at the Murphy Gage at certain times in low flow years, Snake River flows in most years are significantly above the Murphy minimum average daily flow.

The opportunity for further development of trust water is currently limited by three factors. First, there is uncertainty regarding the administration of surface and ground

[5]Figure 3 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 1988 graph plotted average monthly flows, but since that time, technology has made it easier to graph average daily flows. Thus, Figure 3 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. (The Swan Falls Settlement excludes fluctuations resulting from the operation of Idaho Power Company facilities from the calculation of the minimum average daily flow at Murphy. The methodology for calculating the minimum average daily flow is currently being refined.) The upper limit of the "trust water" portion of the hydrograph at any given location between Milner and Murphy is defined by the hydropower water rights held in trust by the State for the corresponding Idaho Power Company facility. Figure 3 applies only to Murphy, where trust water is limited to that flow between the Murphy minimum stream flow and 8,400 cfs, the amount of the Swan Falls hydropower water right held in trust. The "trust water" available at locations upstream from Murphy is the difference between the Murphy minimum stream flow and the amount of the water rights held in trust for each upstream facility.

water rights other than hydropower. 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, the amount of trust water that remains to be developed is uncertain because some trust water rights were issued for a term of years. Those permits are nearing the end of their terms and are subject to review by the Director. Third, in almost all cases, a moratorium precludes 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 any 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:

The ESPA is approximately the size of Lake Erie and underlies more than 10,800 square miles of southern Idaho, stretching from St. Anthony to King Hill. It is one of the largest and most productive aquifers in the world, estimated to contain 1 billion acre feet of water. Most of the ESPA is in direct hydraulic connection with the Snake River. The Snake River alternately contributes water to and receives water from the ESPA.

The volume of water stored in the ESPA derives from natural inputs (precipitation, tributary underflow, seepage from rivers) and from irrigation related inputs (seepage from canals and farm fields). The volume of water stored in the ESPA increased dramatically during the first half of the 20th century as large irrigation canals transported millions of acre feet of water from the Snake River out on to the Eastern Snake River Plain. Crops were irrigated by flood irrigation, and the water not consumed by the crops percolated

into the ESPA as "incidental recharge. As a result, the groundwater table rose across the ESPA by as much as 30-50 feet. The flow of springs near American Falls and in the Thousand Springs reach also increased dramatically. Thousand Springs flows increased from 4,200 cfs prior to irrigation to about 6,800 cfs by the late 1950s. Since then spring flows have declined as a result of more efficient surface water irrigation practices, the termination of winter canal flows, ground water pumping, and drought. Spring flows in the Thousand Springs reach currently are about 5,200 cfs, a decline of just over 20% over the past sixty years. While spring discharges from the ESPA remain above pre-irrigation levels, the decline from peak levels has created conflicts between surface and groundwater users, and in some instances between senior and junior groundwater users.

In most years when irrigation demands exceed water being accumulated to upstream storage reservoirs, flows at Milner Dam are reduced to zero until the end of the irrigation season. At these times the Snake River flow at the Murphy Gage consists mostly of ESPA discharge from the Thousand Springs area.

Recognizing a hydraulic connection between the ESPA and the Snake River, the 1986 State Water Plan identified the need conjunctive management of ground and surface water resources. 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 the Murphy minimum stream flows. 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." [6]

Building on the existing conjunctive management efforts, the Idaho Legislature in 2006, adopted Senate Concurrent Resolution 136, which requested the Idaho Water Resource Board to develop a CAMP for the Eastern Snake River Plain Aquifer. In January 2009, the Board adopted the ESPA CAMP the goal of which 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

[6] 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. As noted in Policy 1E conjunctive management is broader and encompasses actions 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.

Eastern Snake Plain, increasing recharge to the aquifer, and reducing withdrawals from the aquifer.

The long-term objective 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 reduce demand on and to augment 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 I of the 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 ground- to-surface water irrigation conversions, managed aquifer recharge, and augmentation of supplies through demand reduction and weather modification. ESPA CAMP Phase I strategies are to be implemented 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.

Policy 4D embraces the 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, may result 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.

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 river flows in the Milner to Murphy reach 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 future spring discharge trends. Such a monitoring program needs 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 that take into account the complex and interrelated nature of Snake River subbasins, 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.
- Create a working group to assist in the development of a spring monitoring program.
- Update the Snake River: Milner Dam to King Hill Part B State Water Plan to incorporate ESPA CAMP goals and objectives and to account for water management developments since its adoption.

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 for impacts on hydropower generation.

Discussion:

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.

Surface Water Projects

New Snake River surface storage projects should be investigated and constructed if determined to be feasible. 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.

Diversion of water from the main stem of the Snake River between Milner and the Murphy Gaging station for storage during the period November 1 to March 31 will have a significant impact on hydropower generation. Thus, any new storage projects in this reach should be coupled with provisions that mitigate for the impact of such storage 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 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 moving forward:

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.
- Evaluate the economic, social and environmental benefits and costs of the proposed surface projects.

Milestones:

- Aquifer recharge program implemented.
- Actions taken to determine feasibility of identified storage projects.

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 and other beneficial uses in the Snake River Basin above the Dam.

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 agricultural 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, the flow of the Snake River between Milner Dam and the Murphy Gage is approaching the Murphy minimum flow of 3,900 cfs at certain times in low flow years. Implementation of the strategies in Policy 4D is essential to identifying the amount of trust water available to meet future DCMI uses in this reach of the Snake River.

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 § 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. 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 Swan Falls 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 affected by the project. The Board is participating in the FERC licensing proceeding to ensure 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 for power generation.

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 stream 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 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.

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.

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

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 Bar or Lime Point.

In 1978, the Idaho Legislature, through enactment of Idaho Code § 42-1736A, created a minimum stream flow at Johnson 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 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 Federal Power Act 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 FERC will set forth navigational flow conditions in the final license for the HCC. The Board will participate in the FERC relicensing process to ensure navigational flow conditions are consistent with the State Water Plan.

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 Snake River fish, wildlife, recreation, and scenic values in the main stem Snake River below Milner Dam. Protection for fish, wildlife, recreation, and scenic uses in tributaries to the Snake River should be addressed through Part B of the State Water Plan and the establishment of minimum stream flows pursuant to Chapter 15, Title 42, Idaho Code. The Board finds that implementation of the collaborative agreements provide benefits for fish, wildlife, recreation, and scenic values.

Discussion:

In addition to the Policy 4A main stem Snake River minimum stream flows, over fifty minimum stream flows have been established in the Snake River Basin above the HCC and protected rivers have been designated through the adoption of Part B state water plans. Additional protections for fish, wildlife, recreation, and scenic resources in Snake River tributary streams should be pursued through the Board's minimum stream flow and water planning processes.

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. The agreements described below.

Snake River Flow Augmentation

The State of Idaho, as part of the 2004 Snake River Water Rights Agreement, established a flow augmentation program that provides water for salmon and steelhead listed under the ESA. Pursuant to the provisions of the biological opinion for the Federal Columbia River Power System ("FCRPS"), and the 2004 Snake River Water Rights 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 uncertainty regarding 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 project operations in Idaho.

This flow augmentation program consists of two tiers. Tier 1 minimum flows are those established through implementation of 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 Snake River Water Rights Agreement. The 2004 Snake River Water Rights 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, 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 existing minimum stream flows and evaluate the need for additional minimum stream flows.
- 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 HCNRA and the Owyhee wild and scenic rivers.

Milestones:

- Minimum stream flows maintained and new minimum stream flows are established as needed.
- 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 IN THE BEAR RIVER BASIN

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 more 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.

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 IN THE BEAR RIVER BASIN

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 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 CAMP, 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 IN THE BEAR RIVER BASIN

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 IN THE BEAR RIVER BASIN

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 FERC 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 2004 Bear Lake Settlement Agreement.
- Cooperative programs addressing interstate issues of concern related to water quality, recreation, and sensitive species implemented**.**

6. SALMON/CLEARWATER RIVER BASINS

6A - CONSERVATION PLANS IN THE SALMON/CLEARWATER RIVER BASINS

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.

- **2004 Snake River Water Rights Agreement**

The 2004 Snake River Water Rights Agreement resolved all of the issues related to the Nez Perce Tribe's water right claims in the SRBA. 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 OSC, 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 2004 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 existing and future water right uses.

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 IN THE SALMON/CLEARWATER RIVER BASINS

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 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. Continued implementation of the Columbia Basin Water Transactions Program in the Salmon and Clearwater basins will keep agriculture productive and improve instream flows for ESA-listed and other sensitive fish species.

- **Section 6 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 2004 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 Board's instream flow programs are central to the development and implementation of Section 6 Conservation Plans.

- **Pacific Coast Salmon Restoration Fund**

The Pacific Coast Salmon Restoration 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 Restoration 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 USACE, and the USBOR addresses issues associated with the direct and indirect effects of construction, inundation, operation and maintenance of the Federal Columbia River Power System, and USBOR'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 IN THE PANHANDLE RIVER BASINS

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 a stable 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 Department, 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 Department, 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 Department 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 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 CAMP 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 and for interstate cooperation. Pursuant to Idaho Code § 42-1406B, the Director of the Department 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 Fiscal Year 2018.

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 CAMP for the Rathdrum Prairie.
- Evaluate timing for developing a CAMP for the Palouse River Basin that establishes 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 CAMP action items.
- Development and implementation of Palouse CAMP.
- Aquifer studies completed.
- Northern Idaho Adjudication completed.

7B - MINIMUM STREAM FLOWS IN THE PANHANDLE RIVER BASINS

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 water 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 IN THE PANHANDLE RIVER BASINS

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 FERC 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 IDFG 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 USACE 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 Lakes 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 Courtesy of Mike McVay*)


GREAT SEAL OF
ESTO PERPETUA
THE STATE OF IDAHO

Memorandum

To: Idaho Water Resource Board

From: L. Neeley Miller

Date: November 15, 2012

Re: Treasure Valley Comprehensive Aquifer Management Plan (TV CAMP)

ACTIONS TO BE CONSIDERED:

1. Consider adoption of Treasure Valley Comprehensive Aquifer Management Plan (TV CAMP) through attached resolution.

At the March 2012 IWRB meeting, the recommended Treasure Valley CAMP was transmitted to the Board from the Treasure Valley CAMP Advisory Committee. The Board assigned the Water Resource Planning Committee to work with Board staff to review the Recommended Plan and to recommend suggested revisions and to refine those elements where it was difficult for the Advisory Committee to reach consensus.

On April 19th, the Water Resource Planning Committee met to review and approve suggested revisions, and to finalize language related to the Municipal Water Rights Act of 1996.

In May 2012, the IWRB accepted for public comment a draft Treasure Valley Comprehensive Aquifer Management Plan (TV CAMP). The Board scheduled a 60-day comment period from August 1, 2012 through September 30, 2012. Public hearings were held at the Caldwell Public Library on September 10th and at the Idaho Water on September 11th 2012.

Nine individuals provided oral testimony at the public hearings and thirty-four individuals submitted comment letters during the 60-day comment period. Testimony and comments were considered by the Board's Water Resource Planning Committee meetings on October 25, November 5, and November 12th.

The Water Resource Planning Committee recommends several revisions to the proposed Plan prior to adoption by the full Board. A track-changes copy of the plan that highlights the Water Resource Planning Committee's recommended revisions is included in the materials from the work session.

Attached to this memo are: 1) a final version of the plan the Water Resource Planning Committee is recommending the Board consider for adoption, and 2) A resolution for your consideration.

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE PROPOSED)
TREASURE VALLEY COMPREHENSIVE) RESOLUTION
AQUIFER MANAGEMENT PLAN)

_____

WHEREAS, the Idaho Water Resource Board (IWRB), pursuant to its planning authorities in Article XV, Section 7 of the Idaho Constitution, and the Idaho Code 42-1734A and 42-1779, has completed a Comprehensive Aquifer Management Plan for the Treasure Valley as directed by House Bill No. 428 passed and approved by the 2008 Idaho Legislature; and

WHEREAS, the Board is directed to identify challenges, priorities and opportunities, as well as to make recommendations for improving, managing, developing and conserving the water resources of the aquifer in the public interest; and

WHEREAS, the Board has sought and received substantial public participation and comment throughout the planning process; and

NOW, THEREFORE, BE IT RESOLVED that the IWRB hereby adopts the attached Treasure Valley Comprehensive Aquifer Management Plan and directs that it be submitted to the Idaho Legislature.

DATED this 28th day of November, 2012.

_____
TERRY T. UHLING, Chairman
Idaho Water Resource Board

ATTEST_____
BOB GRAHAM, Secretary

Harrington, Helen

From: Norm Semanko [norm@iwua.org]
Sent: Wednesday, November 28, 2012 12:01 AM
To: Harrington, Helen
Cc: Shelley Davis; Dan Steenson; Andy Waldera
Subject: TV CAMP

Helen,

At Tuesday's Work Session, one of the Water Board members (Pete V.) said it would be nice to have a summary of the issues addressed in our proposed rewrite, in addition to the rewrite itself.

Accordingly, here is a summary of some of the issues that resulted in many of the changes that we proposed in our comments:

1. The TV CAMP states that "the long-term management of the water resources of the Treasure Valley must be acceptable to the local community and take into account the social and economic interests of the residents and public interest." TV CAMP, pp. 1, 3. Water management is a matter of State law, not a local popularity contest.

2. The TV CAMP states that "implementation of the plan will require the participation and cooperation of stakeholders and governmental entities with jurisdictional authorities and responsibilities." TV CAMP, p. 2. Nothing in the plan should be mandated on these entities.

3. The TV CAMP states that typical winter flow out of Lucky Peak (Nov - Mar) is approximately 250 cfs" (p. 8) or "240 cfs" (p. 19). Which is it?

4. The TV CAMP notes "there is no Treasure Valley drought plan." TV CAMP, p. 12. There is no need for one and such a plan would only cause confusion and conflict. There is already a State drought plan and state laws provide for regulation of water rights during drought.

5. The TV CAMP states that a distribution system "provides irrigation to 350,000 acres of land" (p. 14) or "more than 330,000 irrigated acres" (p. 22). Which is it?

6. The TV CAMP states that there is a "need to modernize existing infrastructure to optimize the beneficial use of water" (p. 16) and calls for actions to "support the rehabilitation and modernization of water delivery infrastructure" (p. 28). This implies that current irrigation delivery systems are somehow inefficient or otherwise unacceptable and need to be fixed to operate correctly. There is no basis for this conclusion.

7. The TV CAMP states: "A recent study projects up to 650 KAF (WRIME 2010) could transition use from agricultural to DCMI". TV CAMP, p. 21. This is a highly questionable conclusion and fails to distinguish between "agricultural" and "irrigation" water uses.

8. The TV CAMP states: "Water managers and water users will be challenged to voluntarily and collaboratively provide functional habitats and mitigate the impacts of water diversions and discharges on the natural environment." TV CAMP, p. 21. There is no basis to conclude that any such mitigation is necessary or that the burden of performing such mitigation should fall on water managers/users.

9. The TV CAMP states that "it is expected" that, after completion of the SRBA, ground water rights "may be included in a water district and conjunctively administered in priority." TV CAMP, p. 22. Inclusion in a water district is mandatory; so is conjunctive management.

10. The TV CAMP states: "Use of the Rental Pool appears to be low compared with other rental pools despite the rapid growth of DCMI uses in the basin." TV CAMP, p. 24. It also says that the Boise River Rental Pool "has a lower level of activity when compared with the Payette and Upper Snake Rental Pools, despite the Treasure Valley having rapidly growing water needs." TV CAMP, p. 25. It is unclear what the basis of these statement is. DCMI uses are primarily ground water; the rental pool is composed of storage water. Also, the Payette and Upper Snake Rental Pools are relied upon heavily to provide flow augmentation pursuant to the terms of the Nez Perce Water Rights Agreement. It also fails to account for that fact that much of the growth in the Treasure Valley has been accommodated by existing irrigation water supplies.

11. The TV CAMP states: "Another tool is the Municipal Water Rights Act of 1996 which provides for growing municipalities to acquire water rights based on future growth projections." TV CAMP, p. 25. This fails to recognize the role of existing irrigation water supplies or the need to protect them from potential injury.

12. The TV CAMP states: "Reducing demand through water conservation should be adopted". TV CAMP, p. 27. Such a blanket, one-size-fits-all strategy threatens to do more harm than good. It is not enough to just call for "taking into consideration the benefits of incidental recharge". TV CAMP, p. 27.

13. The TV CAMP includes the following action: "Consider conservation requirements for new water appropriations". TV CAMP, p. 27. There is no legal authority for this.

14. The TV CAMP includes actions "to ensure orderly transition of water use from agriculture to DCMI" (p. 27), including: "Encourage the use of water marketing. . .including the use of the Rental Pool and Bank" (p. 27). Such marketing is not needed to continue to allow existing irrigation water supplies to be used for new residential/commercial developments.

15. The TV CAMP calls for actions to: "Explore opportunities to minimize fish entrainment in the canal systems". TV CAMP, p. 28. This has absolutely nothing to do with aquifer management.

16. The TV CAMP provides that the Board "may continue to convene the [Advisory] Committee" (p. 29) for certain purposes, including "evaluating and addressing environmental issues" (pp. 29, 31). This ill-defined statement is well-beyond the scope of aquifer management or anything the Advisory Committee has done.

I have copied the other attorneys that submitted our joint comments, in the event that they have anything to add to this list of issues.

Thank you.

Norm Semanko
Idaho Water Users Association

Sent via BlackBerry by AT&T

Treasure Valley
Comprehensive Aquifer Management Plan

IDAHO WATER RESOURCE BOARD

The vision of the Treasure Valley CAMP is to promote and protect Treasure Valley water resources through:

- *Respect for Idaho water law and water rights*
- *A sustainable framework of collaboration, cooperation, and stewardship*
- *A commitment to ongoing research, data collection and analysis*

Treasure Valley Comprehensive Aquifer Management Plan

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Executive Summary

The Treasure Valley Comprehensive Aquifer Management Plan (Plan) provides a framework for long-range management of the aquifer. The Plan describes the overarching goals and actions that can be implemented to successfully accomplish the stated goals for local residents and the state of Idaho and to promote productive regional cooperation to benefit the area over the next 50 years. The planning area for this Plan covers Ada and Canyon counties and portions of Elmore, Boise, Gem and Payette counties.

The Treasure Valley is in southwestern Idaho. The Treasure Valley Aquifer System (TVAS) is a valuable and significant resource to the region and the state of Idaho. The aquifer is a key part of the regional water resources that make the area attractive for economic growth and an appealing place to live and work.

At the direction of the Idaho Water Resource Board (IWRB) and Idaho Legislature, the Plan is founded on recommendations developed collaboratively by the Treasure Valley Comprehensive Aquifer Management Plan (CAMP) Advisory Committee (Committee). This Plan will be a component of the State Water Plan, which guides the development, use, conservation, and management of water resources in Idaho.

The IWRB recognizes that the long-term management of the water resources of the Treasure Valley must be acceptable to the local community and take into account the social and economic interests of the residents and public interest. The long-range plan must also be consistent with the legal constraints and laws of Idaho.

The Committee developed the following vision for the Plan:

The vision of the Treasure Valley CAMP is to promote and protect Treasure Valley water resources through:

- ***Respect for Idaho water law and water rights***
- ***A sustainable framework of collaboration, cooperation, and stewardship, and***
- ***A commitment to ongoing research, data collection, and analysis***

The Treasure Valley CAMP Committee identified several challenges facing the region over the next 50 years (these actions have not been ranked or placed in order of priority):

- Predicted future demand cannot be met solely by readily available ground water supplies in some areas
- Uncertainty for meeting existing and future needs utilizing the existing water supply infrastructure will increase as annual precipitation variability increases
- Natural flow in the summer and fall is predicted to be reduced
- Currently there is no Treasure Valley drought plan
- Ability of water infrastructure to meet existing and future needs
- Management of interconnected sources
- Meeting water needs and uses associated with future development patterns in a manner that minimizes conflict
- Maintaining quality of life
- Meeting environmental needs
- Meeting water supply needs
- Lack of an organizational structure for ground-water users to collectively plan for and respond to future challenges
- Advanced technical capabilities are needed to meet increasingly complex water management challenges
- Existing water management tools that appear to be under-utilized could help provide solutions to meeting water needs in the future

Guided by the CAMP goals and vision, the Committee identified several recommended actions for addressing the challenges discussed in this plan. Understandably, these actions will need to be more fully refined during the implementation phase, but the Plan, by adopting a mix of strategies, represents a balanced approach to addressing the future water challenges in the Treasure Valley (these actions have not been ranked or placed in order of priority):

- Enhance water data collection, analysis, and planning
- Support investigations of additional storage and supply
- Reduce demand through water conservation taking into consideration the benefits of incidental recharge
- Preserve and protect water delivery infrastructure
- Use tools associated with the Municipal Water Rights Act of 1996 (placeholder)
- Encourage the use of water marketing to address the conversion of water use throughout the valley

Management of the Treasure Valley Aquifer affects numerous stakeholders. Effective implementation of the Plan will require the participation and cooperation of stakeholders and governmental entities with jurisdictional authorities and responsibilities. The IWRB may continue to convene the Committee to guide and make recommendations concerning the implementation of management strategies and review of goals and objectives.

1. Introduction

In 2008, the Idaho Legislature passed House Bills 428 and 644, establishing the statewide comprehensive aquifer planning and management effort and creating a fund to support the effort. The Idaho Water Resource Board (IWRB) and the Idaho Department of Water Resources (IDWR) initiated work in the Treasure Valley to establish a framework and path forward that will lead to sustainable water supplies, optimum use of the aquifer, and development of strategies to minimize potential future conflicts.

This effort was conducted under the leadership of the IWRB. The IWRB is the constitutionally established agency responsible for formulating and implementing the State Water Plan for optimum development of the water resources in the public interest. This Plan is a component of the State Water Plan, which guides the development, use, conservation, and management of water resources in Idaho. The specific goals of the statewide Comprehensive Aquifer Management Plan (CAMP) program are to:

- Provide reliable sources of water, projecting 50 years into the future
- Develop strategies to avoid conflicts over water resources
- Prioritize future investments in water

The IWRB recognizes that the long-term management of the water resources of the Treasure Valley must be acceptable to the local community and take into account the social and economic interests of the residents and public interest. The long-range plan must also be consistent with the legal constraints and laws of Idaho. The IWRB appointed an Advisory Committee (Committee) to consider these interests and develop recommendations for this Plan. For a list of Committee members see Appendix 2.

As the Committee progressed in their work, the members built on the CAMP goals and developed a unanimously supported vision for the Treasure Valley CAMP.

This Plan and the recommended actions described are guided by this vision:

The vision of the Treasure Valley CAMP is to promote and protect Treasure Valley water resources through:

- ***Respect for Idaho water law and water rights***
- ***A sustainable framework of collaboration, cooperation, and stewardship, and***
- ***A commitment to ongoing research, data collection, and analysis***

2. Background and Current Condition

The Treasure Valley water system is a complex system of dynamic hydrologic interconnection. The connection between these waters is a critical element in the location and availability of water for the needs of the Treasure Valley. Water used in one location will likely be the supply for a different water need elsewhere in the basin. Although comprehensive studies have been undertaken, and continue today, the full extent of when, how, and where the ground and surface waters interact is not fully understood. The contribution of surface water to recharge of the aquifer system and the importance of aquifer discharge to drains and the rivers does, however, require that any discussion of the Treasure Valley Aquifer System (TVAS) will inevitably be a discussion about both ground and surface water.

Hydrology and Water Supply

Most of the surface water used in the Treasure Valley originates as snow in the higher elevations of the upper Boise basin where precipitation can be as high as 60 inches annually. This upper basin supplies an estimated 90 percent of the water for the Treasure Valley. The snowpack is important to the Boise River as the March-July runoff season provides 77 percent of the annual stream flow at the Boise River near the Boise gaging station while only 23 percent of the natural flow occurs during the August-February season. The upper Boise basin is approximately 2,650 square miles and consists of four major tributaries, including the North, Middle, and South Forks of the Boise River, and Mores Creek. From Lucky Peak Dam, the lower Boise River flows about 64 (river) miles northwestward through the Treasure Valley to its confluence with the Snake River.

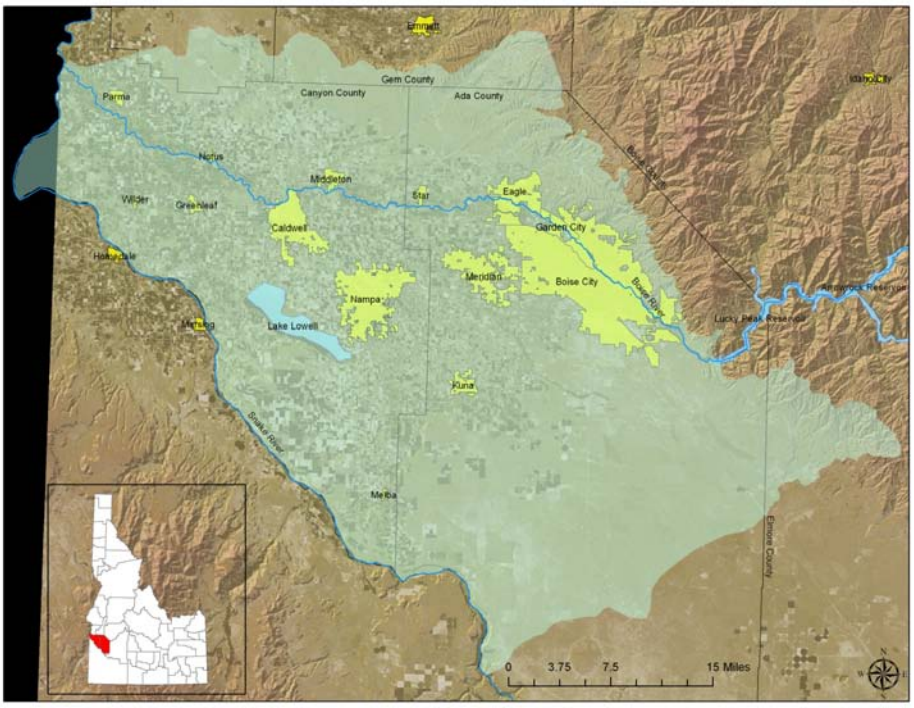

Figure 1. Map of the Treasure Valley Study Area (green-shaded area)

Hydrogeology

The TVAS underlies the lower Boise basin in southwestern Idaho (Figure 1). The TVAS extends downstream from Lucky Peak Dam to the confluence with the Snake River and serves as the primary source of drinking water for the communities and residents within the Treasure Valley. Approximately 95 percent of the valley's drinking water is pumped from the TVAS.

The TVAS can be conceptualized as a complex system of shallow, intermediate, and deep aquifers (Figure 2). The depths and thicknesses of the aquifers vary spatially and are controlled by geologic faulting, topography, and local land use characteristics (e.g., flood irrigation). The hydraulic communication between the various aquifers varies throughout the Treasure Valley adding to the complexity. Hydraulic connections to aquifers underlying areas to the north (Boise foothills to the Payette River) and to the east (Mountain Home Plateau) are currently not fully understood.

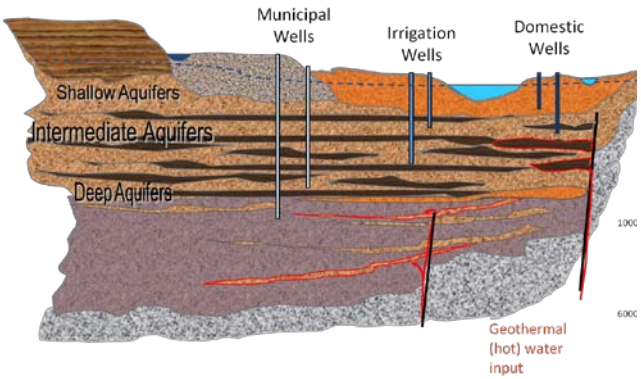

Figure 2. Conceptual Schematic of the Treasure Valley Hydrogeology

The Aquifer system in the Treasure Valley consists of:

- Shallow aquifers – These aquifers supply water to rural domestic and some irrigation wells. Shallow aquifers are generally in direct hydraulic communication with surface water features and form localized flow systems with the nearest surface water body. The shallow aquifers are generally unconfined (the water level represents the top of the saturated zone), and water levels are typically controlled by topography (e.g., the elevations of canals or drains).
- Intermediate aquifers – These aquifers supply water for domestic, irrigation, and municipal uses. The hydraulic communication between the intermediate aquifers and the surface water features of the valley is unknown.
- Deep aquifers – Municipal, industrial, and some irrigation wells typically draw water from deeper aquifers. The hydraulic communication between the deeper aquifers and the surface water features of the valley is limited due to the depths below land surface where the deeper aquifers are found. The deeper aquifers are generally confined (water levels rising above the depth of the water bearing zone), and flowing artesian wells exist within the Treasure Valley. The hydrology of the deeper aquifers is not fully understood.

Ground Water Flow Direction and Water Levels

The ground water flow direction in the TVAS is generally east to west and follows the course of the Boise River. In the southern portion of the TVAS, ground water flows to the south and discharges into the Snake River. Locally, ground water flow

directions are dependent on the location (spatially) within the valley.

Water level trends are a good indication of a stable storage of water in an aquifer system. Rising water levels indicate an increase in water stored, and declining water levels indicate a reduction in water stored. Stable water levels generally indicate an aquifer storage that is in equilibrium.

In the early to mid 1900s, water levels in the shallow aquifer rose significantly because of the development of the valley's irrigation network and continued to rise until the aquifer system eventually reached equilibrium with the drains and river, as indicated by stable water levels. In general, water levels in the shallow aquifer system have remained stable and are controlled by the operation and elevation of the surface water features. Water levels in the intermediate and deep aquifers also appear relatively stable, but some areas of water level decline have been identified in the valley, particularly in the southeast Boise and Lake Lowell vicinities (Petrich and Urban, 2004).

There are existing mathematical models of the Treasure Valley aquifer of various ages and scopes; however they are not adequate to address aquifer management needs.

TVAS Ground Water Budget

The annual ground water budget for the TVAS varies from year to year (Table 1). For illustration purposes, estimates for water year 2000 are used to show the components of the annual water budget for the TVAS because total precipitation and temperature during the 2000 water year were near normal.

The shallow aquifers of the TVAS are generally in direct hydraulic communication with the Boise River and to a lesser extent the Snake River throughout most of the Treasure Valley. The aquifer discharges directly to the rivers and the ground water drainage network constructed in the Treasure Valley to drain shallow ground water from low-lying areas. It is estimated that over 80 percent of the TVAS total discharge enters the rivers and the drain network. Some of the drain water is also re-diverted and used for irrigation by

Table 1. Summary of TVAS Ground Water Budget (modified from Urban, 2004).

Sources of Recharge and Discharge	Estimated Recharge and Discharge for 2000	
	(acre-feet)	(% of total)
Recharge		
Canal seepage	521,500	50
Flood irrigation	404,400	35
Other sources	172,800	15
Total Recharge	**1,098,700**	**100**
Discharge		
Discharge to rivers and drains	881,600	83
Pumping from wells	175,000	17
Total Discharge	**1,056,600**	**100**

downstream users. The amount of water leaving the TVAS through discharge to the drains, tributaries, or the rivers in 2000 was over 881,000 acre-feet (Urban, 2004).

Surface Water Flows

Unregulated natural flow volumes in the Boise River basin have varied from a low of 676,000 acre-feet annually to a high of 3.6 million acre-feet (MAF) annually. The average unregulated natural flow (1929 – 2010) is 1.9 MAF annually. These volumes were calculated at Lucky Peak and are published by the U.S. Bureau of Reclamation (USBOR). On average 1.6 MAF annually are diverted for irrigation and serves as a significant source of recharge to the TVAS (BOR, 2007). Table 2 displays a summary of historical Boise River (Nov 1 – Oct 31) runoff (at Lucky Peak), outflow (near Parma), and reservoir storage on November 1. Figure 3 shows the variation of runoff (at Lucky Peak) and November 1 storage from 1929 to 2010.

The average annual basin outflow (1972 – 2010) is 1.1 MAF, with outflow volumes varying from 334,000 acre-feet annually to 2.8 MAF annually. The basin outflow is measured at the Boise River near Parma gage, which is operated by the U.S. Geological Survey (USGS) in cooperation with IDWR.

Table 2. Summary of Historical Boise River Nov. 1 – Oct. 31 Runoff and Outflow (IDWR, 2011)

	Boise River Runoff (at Lucky Peak)		Boise River Outflow (near Parma)		November 1 Storage	
	Acre-Feet	Years	Acre-Feet	Years	Acre-Feet	Years
Long-term average	1,929,000	1929-2010	1,120,000	1972-2010	390,000	1956-2010
Maximum	3,673,000	1965	2,820,000	1983	665,000	1965
Minimum	676,000	1977	334,000	1992	65,000	1992

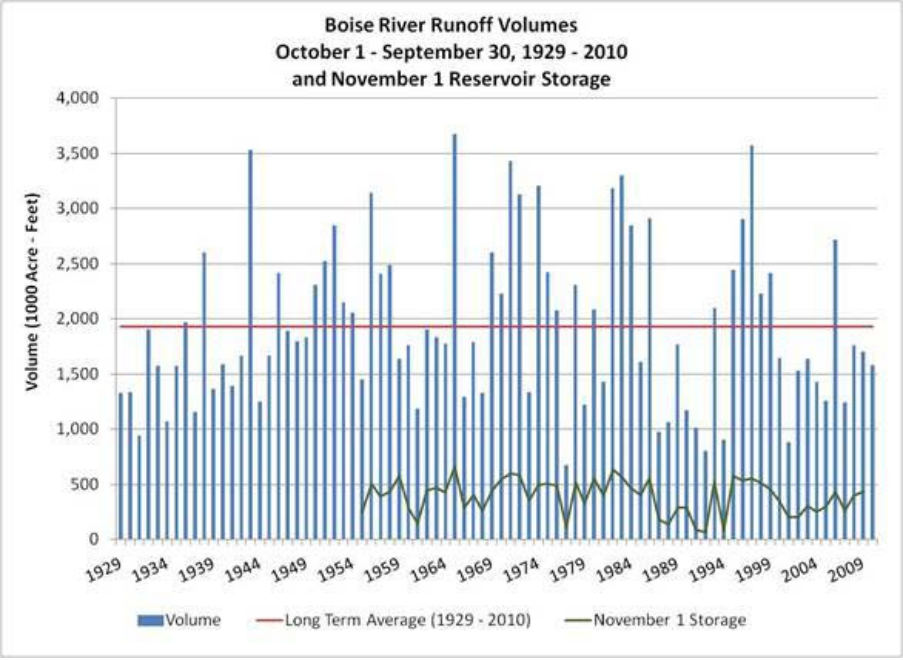

Figure 3. Boise River Annual Unregulated Natural Flow Volumes 1929-2010 and November 1 Reservoir Storage Volumes (U.S. Bureau of Reclamation Hydromet, 2011)

The remaining storage water left in the reservoirs (Arrowrock, Anderson, and Lucky Peak) at the end of an irrigation season is highly dependent on snowfall and irrigation demand for that season. The average reservoir storage on November 1 (1956 – 2010) is 390,000 acre-feet and has varied from a low of 65,000 acre-feet to a high of 665,000 acre-feet. The availability of this "carry over" water reduces the risk of a shortage of irrigation water in the succeeding year. Wise and efficient use of water from year to year helps to ensure better carryover storage for the next year, especially during consecutive dry years.

The hydrograph below (Figure 4) summarizes the historical data from the Boise River at Glenwood Bridge for the period of record (1982 – 2010). The U.S. Army Corps of Engineers (USACE) utilizes the Boise River gage at Glenwood Bridge to monitor and evaluate flood impacts on the river. Currently, flood stage as measured at the Glenwood Bridge gage is 10.01 feet (approximately 7,000 cfs). The maximum discharge since the completion of the reservoir system was 9,840 cfs on June 13, 1983 (USGS, 2011). Typical winter flow out of Lucky Peak (November – March) is approximately 250 cfs. Typical flow at Glenwood after the spring runoff and during the irrigation season (July – September) is approximately 1,000 cfs.

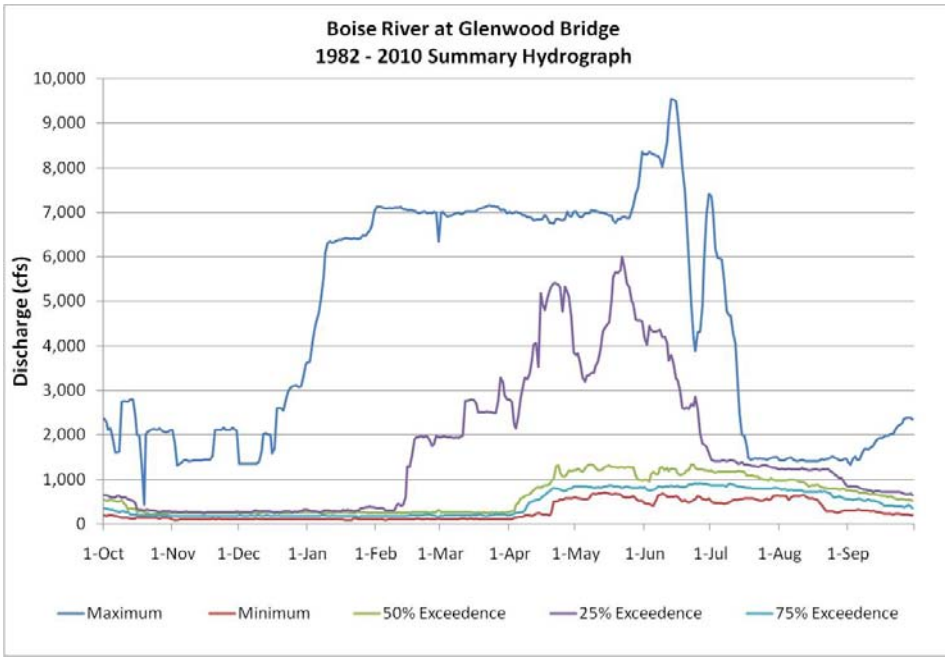

Figure 4. Summary Hydrograph of Boise River Flow from 1982 through 2010 at the Glenwood Bridge

Note: 25% exceedence means that for the specified day of the year the flow was greater than this value 25% of the time for the same day from 1982 through 2010. 50% exceedence is the median and means that for the specified day of the year the flow was greater than this value for 50% of the time for the same day from 1982 through 2010. 75% exceedence means that for the specified day of the year the flow was greater than this value 75% of the time for same day from 1982 through 2010.

During the irrigation season, the Boise River from Lucky Peak Dam to Middleton does not have enough natural flow to meet irrigation demands. Irrigators rely on storage water to supplement the limited natural flow supplies. Below Middleton, there are often enough return flows from drains or ground water seepage into the river to satisfy existing irrigation demands. On average, there are approximately 310,000 acre-feet per year of gain in flow between the Middleton and Parma gages. These gains, 310,000 acre-feet, make up 28 percent of the 1,112,000 acre-feet of outflow from the basin near Parma. The return flows that increase river flows downstream are important and help to provide the necessary water and elevation head to deliver water in the lower Treasure Valley. These base flows play an important role in efficiently delivering irrigation water in the Treasure Valley.

Climate Variability

Climate variability adds another element of uncertainty to planning for future water needs. The IWRB contracted with Boise State University to evaluate potential changes to water supply and demand that might result from climate variability on a watershed scale. There is a large range of uncertainty to climate model predictions; however, general trends are indicated.

Multiple studies of climate change in the Pacific Northwest and northern Rockies estimate increases in mean monthly temperatures of 0.86 to 5.49 Fahrenheit for the 2040 irrigation season compared to the 1971 – 2010 temperature average (BOR, 2008, 2011).

Regional studies for the northwest United States indicate greater climate variability conditions (floods and droughts) will be more severe and change the flow regime on which current hydrologic operating procedures are based. For example, temperature increases would allow more winter precipitation to fall as rain instead of snow, and will result in earlier snow melt. On average, peak flows in the Boise River basin may be higher in the future than current historic high flows. Timing of spring runoff is complex and a function of climatic indexes (e.g., El Niño-southern oscillation, Pacific decadal oscillation), forest fires, and climatic change. Analysis of stream flow measurements shows peaks are occurring a few weeks earlier as also predicted by the climate change models. Peak flow and trends are also influenced by phenomenon such as El Nino and La Nina and other longer term climatic cycles. The earlier melting of snowpack will lead to lower summer stream base flows at a time when evapotranspiration is expected to increase because of increases in temperature. Fall precipitation could occur more frequently as rain and less frequently as snow.

Climate change projections indicate the Boise River basin may experience wetter wet years and drier dry years. However because our water storage capacity in the basin is fixed, the increased water supplies during the wet years cannot be captured and held over for use during the dry years. Consequently, wet years do not offset dry years.

Drought

Drought is a significant concern for all Treasure Valley water interests. The most severe droughts occur when there are two or three consecutive dry years when annual runoff is below average and carryover storage is minimal because of water use in previous dry years. The Boise reservoir system is designed to provide carryover storage to get through consecutive dry years. The drought that occurred from 1987-1992 had a major impact on the Treasure Valley. During those six years, the Palmer Drought Severity Index (Figure 5) classified conditions as extreme drought for 28 of the 36 months that comprised the irrigation seasons in the Treasure Valley. The series of dry, hot summers made the reservoir system response more difficult than the drought of 1977. Although 1977 set the record low flow for the upper Boise River, 1976 and 1978 had wet irrigation seasons that reduced the stress on water supply.

The Idaho Drought Plan (IDP) encourages local communities to plan and mitigate for future droughts. The IDP describes the authority counties and cities have to restrict water use and raise funds through ordinances, rules, regulations, proclamations, and short-term levies. It also authorizes the IDWR to take actions to provide for full use of the available water supply in accordance with valid rights for its use during shortages by increasing supervision of water distribution from adjudicated sources, increasing water-right enforcement for non-adjudicated sources, and defining procedures to expedite processing of applications for replacement water supplies.

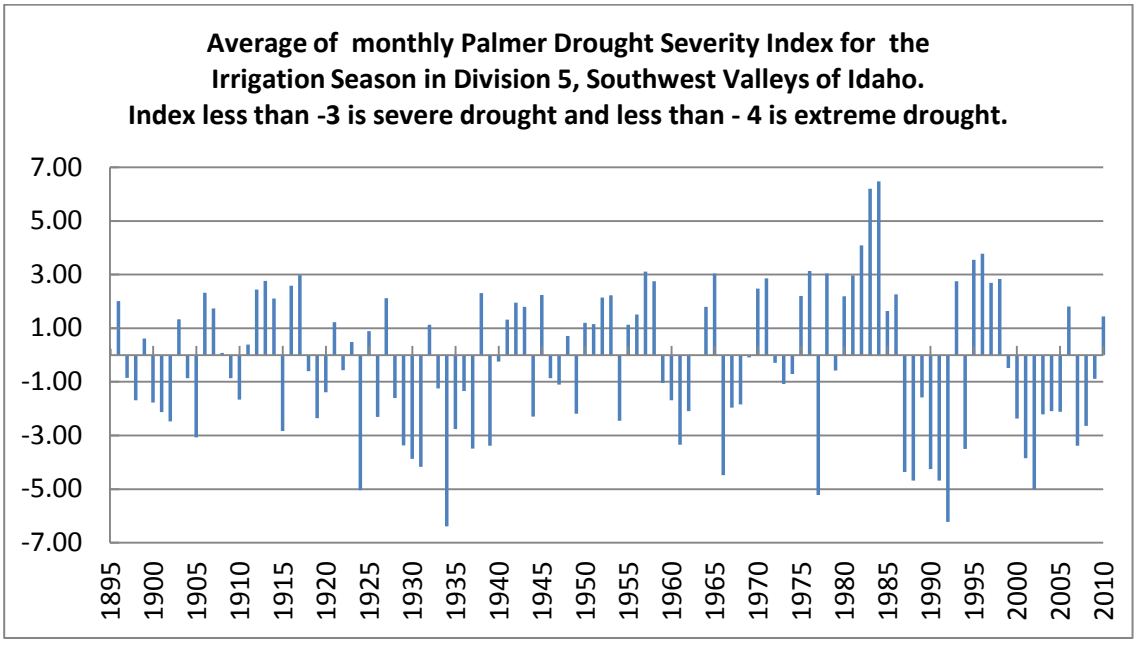

Figure 5. Historic Drought during the Irrigation Season in Southwest Valleys of Idaho. (NOAA and National Climate Data Center http://www.ncdc.noaa.gov/sotc/drought)

In conjunction with the IDWR's Drought Plan and Water Supply Committee, the Natural Resource Conservation Service (NRCS) compiles a monthly Surface Water Supply Index to illustrate the total seasonal water supply. NRCS uses 1.5 MAF as the threshold for when water supply shortages start to appear in the Treasure Valley. This is based on past years when shortages were realized by irrigation districts. For the period 1987 – 1992, 5 of the 6 years had shortages and below normal carryover storage (Figure 6).

Available records indicate that during drought years surface water irrigation is supplemented with ground water by as much as 300,000 acre-feet. This situation places additional stress on ground water supplies.

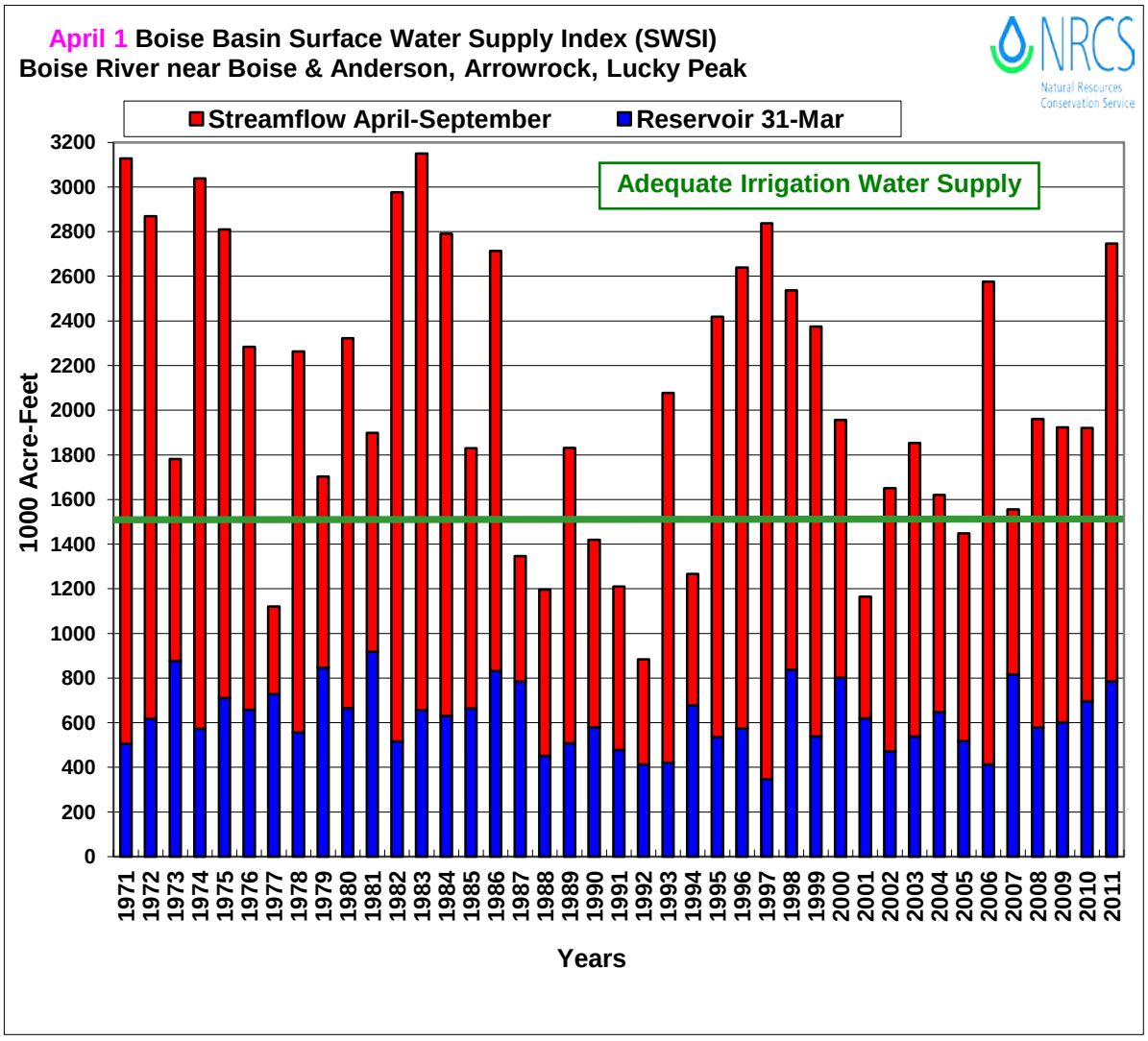

Figure 6. April 1 Boise Basin Surface Water Supply Index

Challenges, Priorities and Opportunities Associated with Water Supply:

Predicted future demand cannot be met solely by readily available ground water supplies in some areas.

Ground water supplies are not infinite. There is potential for additional ground water development, however the Treasure Valley aquifer is not homogeneous. Characteristics vary locally and regionally (and by depth). This variation results in limited availability of ground water supplies to meet existing and future needs in some areas. Ground water supplies are especially limited in southeast Ada County and the Lake Lowell area. There are also concerns about ground water levels in the north foothills. (IDWR data was used.)

Uncertainty for meeting existing and future needs utilizing the existing water supply infrastructure will increase as annual precipitation variability increases.

Historical hydrological records may not be sufficient for forecasting future conditions because of increased variability. Water supply solutions may include better monitoring to improve flow predictions, which allow better planning in the short-term while planning for future longer-term needs in the valley.

Natural flow in the summer and fall is predicted to be reduced.

Reduced natural flows will result in less water available to fill natural flow water rights. This phenomenon results in increased use of stored water from the reservoirs leading to less reservoir carryover. Warmer temperatures during the growing season would increase water demand for all uses.

Currently there is no Treasure Valley drought plan.

Lack of a comprehensive regional response before the next drought will delay demand reduction actions needed to reduce the negative impacts of drought and increase the likelihood of conflict between water-right holders.

Distribution

Reservoir System

The irrigation water supply of the Treasure Valley relies upon a reservoir system capable of storing approximately 1,000,000 acre-feet of water (as shown in Table 3). This equals about one-half of the average annual inflow of the Boise River. Four reservoirs make up the reservoir system. Three of those reservoirs—Arrowrock, Anderson Ranch, and Lake Lowell—were constructed in the early to mid-1900s by the USBOR as part of the development of the Boise Project Board of Control (BPBC). A fourth reservoir, Lucky Peak, was constructed in 1957 by the USACE for flood control, irrigation, and other congressionally authorized purposes. Combined, these reservoirs provide water supplies for congressionally authorized purposes.

To meet irrigation demand, flows past Lucky Peak Dam average approximately 3,900 cfs during the irrigation season, which spans April through October. During periods of peak irrigation demand, flows past the dam are kept at about 4,500 cfs. Reservoir space is allocated to storage users according to terms set out in spaceholder contracts entered into between the various users and the Secretary of Interior through the USBOR. While the majority of the contracted reservoir space is used for irrigation storage, approximately 5,000 acre-feet in Anderson Ranch Reservoir is used to store water for municipal and industrial purposes.

Arrowrock, Anderson Ranch, and Lucky Peak are operated as a unified system for flood control and refill purposes. Flood control operations are governed by flood control rule curves developed by the USACE. Taking into account various hydrological data, the rule curves attempt to fix the amount of empty reservoir space needed to intercept and capture peak spring runoff flows in order to minimize the effects of flooding downstream. Presently, the flood control objective is to limit flood flows to 6,500 cfs at the Glenwood Bridge.

Table 3. Capacities of Federal Reservoirs in the Boise Basin (Source: USACE).

Reservoir	Elevation at Full Pool	Capacity (Acre-Feet)			
		Active	Inactive	Dead	Total
Lake Lowell	2531.2	159,400	--	--	159,400
Arrowrock	3216.0	272,200	--	--	272,200
Anderson Ranch	4196.0	413,100	37,000	24,900	475,000
Lucky Peak	3055.0	264,370	28,730	--	293,100

Note: Active capacity is space from which water can be released for specifics purposes. Inactive capacity is space from which water can be released but is normally retained for a specific purpose, for example, Anderson Ranch inactive space is reserved for power head. Dead capacity is space from which water cannot be released by gravity because it is below the elevation of the lowest outlet.

Operation of the reservoir system, with the exception of Lake Lowell, is coordinated between the USBOR, which operates Arrowrock and Anderson Ranch, and the USACE, which operates Lucky Peak. By agreement between the two federal agencies, the storage system is operated as a unified system to maximize the capabilities of the reservoirs. Reservoir operations are generally defined by three operating periods, which are based on climatological patterns, runoff, and irrigation demand as shown below in Figure 7.

During the maintenance period, the system is operated primarily for carry over and storage as allowed by flood control requirements; however, storage releases continue for municipal/industrial and stream flow maintenance uses. During the flood control and refill period, operation is adjusted continually based on runoff forecasts to provide space for flood control and to assure storage refill for water users, while releasing water necessary to satisfy irrigation demand. The drawdown period is operated for release of irrigation storage water. To the extent possible, water is typically stored as high in the system as possible, although storage accrues to accounts in order of priority. During the summer, Lucky Peak is held near full pool for recreation purposes, and water is released from Arrowrock and Anderson Ranch Reservoirs to meet irrigation demand.

Lake Lowell is operated by the BPBC to store water and regulate water supplies for the lower end of the project. Lake Lowell is drawn down during the summer when irrigation demands exceed the capacity of the New York Canal.

Canals

An extensive distribution system carries water to 75 points of diversion and provides irrigation to 350,000 acres of land below Diversion Dam. Most large canals branch into sub-canals and laterals to distribute water throughout the valley. Irrigation districts and canal companies maintain their individual systems of delivery for their patrons. There are approximately 1,170 miles of major irrigation canals (see Figure 8).

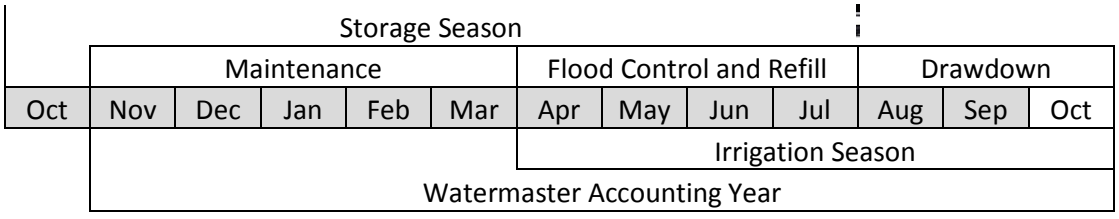

Figure 7. Operating Periods and Seasons (water year shown by shaded blocks) (Source: USBOR)

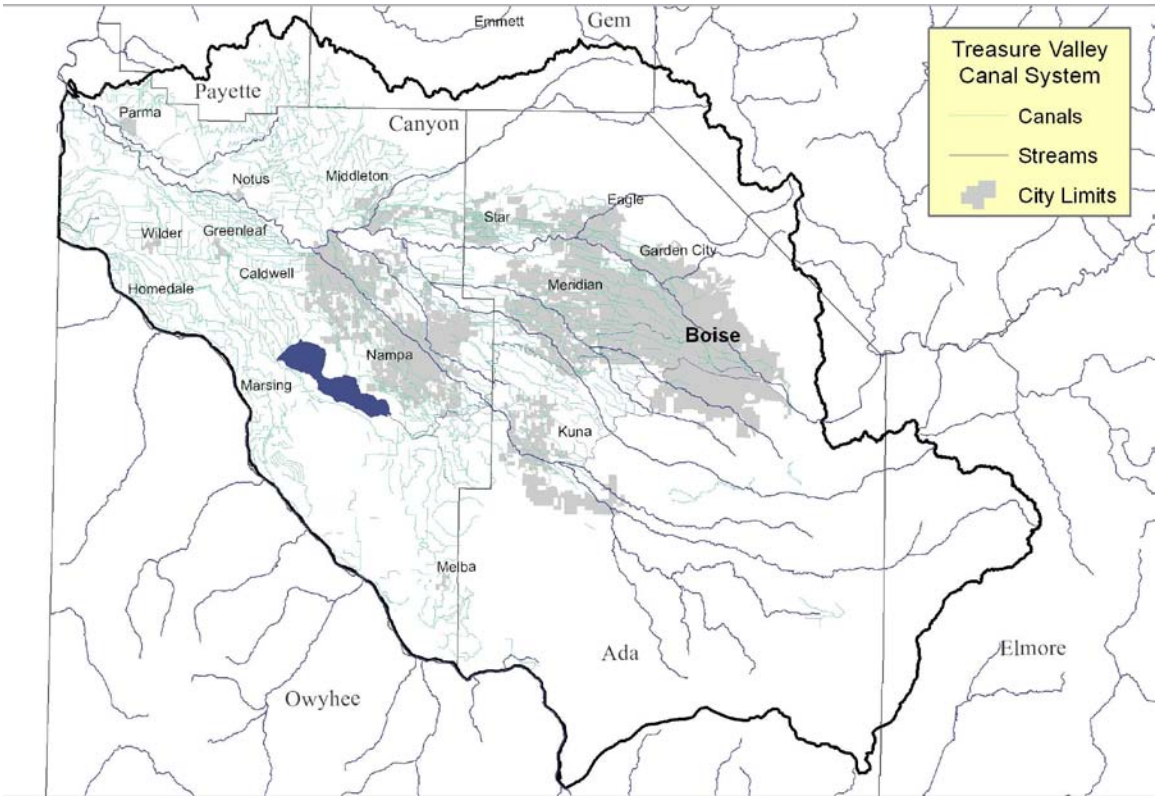

Figure 8. Treasure Valley Canal System

Drains

Approximately 195 miles of drains channel water out of low lying areas and 11 principle drain systems discharge into the Boise River. Most drains were constructed to drain ground water from shallow aquifers and reduce the incidence of water logged soils. Some of these drains were modified or expanded existing natural drainage systems. Some drains also serve as canals, providing additional irrigation water through re-diversion. Some drains flow year round because of ground water discharge. Ground water discharge to the drains will fluctuate due to water table changes. These fluctuations can be caused by seasonal changes, ground water withdrawals, irrigation practices, recharge, drought, and other changes in the water budget. Studies are currently underway to better understand the drainage system and quantify seasonal and annual flows.

Challenges, Priorities and Opportunities Associated with Distribution:

Ability of water infrastructure to meet existing and future needs

Mechanisms to protect the existing infrastructure of wells, canals, ditches and collection systems have existed for decades. It is important to retain this protection for the current and future benefit of the region. An additional challenge is the need to modernize existing infrastructure to optimize the beneficial use of water.

Management of interconnected sources

Surface water and ground water are hydraulically connected. This interconnection presents a challenge for future management of surface and ground water rights, which historically have been managed separately. Further complicating this challenge is the recognition that while we understand that a connection exists, our understanding of the timing, extent, and location of the interconnected sources is limited and needs further study in order to provide effective management.

Water Use and Needs

Ninety-five percent of the Treasure Valley water use falls into one of two major categories: domestic, commercial, municipal, and industrial use (DCMI); and irrigation. While not always included in water-use estimations (Figure 9), water is used to recharge the aquifer, support the river and tributary biological systems, and provide delivery head to convey irrigation water (including conveyance losses). Some municipal and industrial systems implement aquifer storage and recovery techniques to store treated water off peak and re-pump during summer demand. Water leaving the Valley passes through downstream hydropower plants that generate low-cost electricity used in the valley.

In the Treasure Valley, the principal source of water for DCMI is ground water. For DCMI, 94 percent of the water comes from ground water sources and six percent comes from surface water sources. For irrigation water, three percent of water comes from ground water sources and 97 percent comes from surface water sources. Large and small community systems, as well as individual wells, all provide water for domestic use in the Treasure Valley. Per Capita daily use is approximately 160 gallons (WRIME 2010, USGS 2005).

Individual homes that are not on a water supply system use ground water for drinking water, culinary uses, and irrigation. There are over 23,500 domestic wells in the Treasure Valley. This is a minimum number because there are domestic wells that have not been documented in IDWR records.

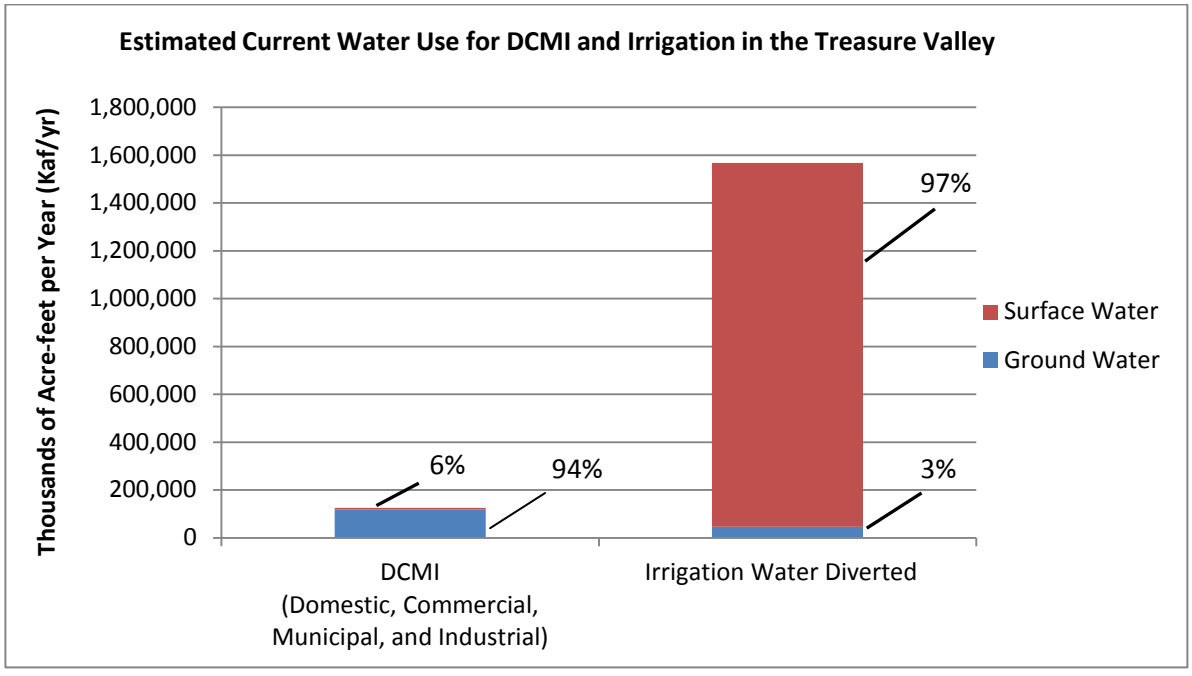

Figure 9. Estimated Current Water Use for DCMI and Irrigation in the Treasure Valley (Urban, 2004)

The single largest supplier of ground water is United Water Idaho, whose service area includes the City of Boise and part of Ada County. United Water is currently the only municipal supplier that also delivers treated surface water for DCMI uses. They serve a population of approximately 240,000. United Water produces about 45,000 acre-feet/year (32,000 acre-feet from ground water and 13,000 acre-feet from surface water) and regularly updates its water demand projections based on records of customer usage and modeling future growth. The other large suppliers are the Meridian Water Department (78,000 people served), City of Nampa (81,000 people served), and the City of Caldwell (46,000 people served). These three systems use ground water exclusively for supply.

While surface water is the primary source of water for irrigation, ground water is also a source for irrigation. The annual demand varies because some irrigators rely on ground water every year and some use it to supplement surface water. Weather conditions strongly influence irrigation demand and therefore the necessity of using ground water in a particular year.

The IDWR records show there are almost 30,000 total wells in the Treasure Valley. Ground water quality in the Treasure Valley Shallow and Treasure Valley Deep hydrogeologic subareas is regularly determined from data collected through the Statewide Ambient Ground Water Quality Monitoring Program. The statewide program is administered by the IDWR in cooperation with the USGS. The Treasure Valley Shallow and Treasure Valley Deep subareas are located primarily in Ada and Canyon Counties and generally correspond to the Treasure Valley CAMP study area. USGS in cooperation with the IDEQ has performed a comprehensive survey of existing wells in the Treasure Valley CAMP study area from 1992 to 2000.

Water Quality

Water quality is an important characteristic in meeting future water needs in the Treasure Valley. Ground water in the TVAS is generally of good quality for drinking and other uses. Surface water quality is variable and has been impacted by both natural and anthropogenic sources. Public drinking water systems are required to monitor their water supply for compliance with drinking water regulations and report the results to their users. Individual private wells generally do not have this requirement. Overall, the water quality throughout the system could constrain the availability of water supplies to meet current and future water needs if the water quality is degraded.

The IDWR has statutory authority for statewide administration of the rules regarding well construction, licensing of drillers, and proper abandonment of wells in Idaho. Well construction standards are designed to protect the quality of water in the aquifer. Additionally, the IDEQ administers the Idaho Wellhead Protection Program. The purpose of this program is to prevent the contamination of ground water that is used for drinking water. The Idaho Wellhead Protection Program is voluntary for local government and water purveyors to implement.

Degraded water quality can impact both supply as well as significantly increase costs for ground water providers and surface water users.

Fisheries and Biological Flows

Native coldwater species, including trout and whitefish, inhabit the middle and upper reaches of the Boise River from Lucky Peak Dam to Star. Winter stream flows below Lucky Peak Dam are the largest constraint on fish populations. Prior to the 1990s, winter flows were often 150 cfs or lower, providing only marginal overwinter habitat for wild trout and other sportfish.

The USBOR holds 152,300 acre-feet of un-contracted storage space that it has used in consultation with the IDFG to provide flows in the Boise River below Lucky Peak Dam during the non-irrigation season. Storage releases have increased typical winter flows to 240 cfs, which requires approximately 86,000 acre-feet of storage for about 180 days. During drought periods, these flows have been reduced to avoid exhausting the winter storage supply. Since winter flows increased in the mid-1990s, wild trout populations have increased 17-fold, with an estimated 2,000 fish per mile in some reaches.

The Boise River is generally a gaining reach from Star to its confluence with the Snake River and therefore has good stream flows, but water quality conditions can only seasonally support a cold-water fishery. This section of river supports a fair fishery for introduced sport fish, including largemouth bass, smallmouth bass, and channel catfish. The Lake Lowell fishery consists primarily of largemouth bass, smallmouth bass, yellow perch, black crappie, bullhead, bluegill, and channel catfish.

Some tributaries to the lower Boise were channelized and capacities have changed, which may have altered aquatic and riparian habitat. Functional riparian zones and wetlands adjacent to the Boise River and tributaries provide ecological services, such as water quality protection, storm water control, aquifer recharge, and ground water protection and provide important habitat for fish and wildlife. Riparian and wetlands support a disproportionately large number of species and diversity relative to other areas.

Recreation and Aesthetic Values

The Boise River contributes greatly to the quality of life in the Treasure Valley and is partly responsible for the growth in the area. Cultural attractions include a string of city parks and greenbelt trails, undeveloped areas within an urban setting, and sportsman's access areas. Natural attractions along the river range from basalt cliffs to a gallery of cottonwood forests and an extensive riparian zone.

There are water recreation opportunities available from the upper reaches of the Boise basin, on each of the reservoirs, and on the Boise River below Lucky Peak.

Boaters, fisherman, and waterfowl hunters access the lower Boise River from Lucky Peak Dam to the confluence with the Snake River. Floating the five-mile reach from Barber Dam to the center of Boise is especially popular in the hot summer

months. Likewise, water skiing is popular on Lucky Peak Reservoir.

Hydropower

Hydropower is generated below the reservoirs at both federal and non-federal hydroelectric power plants. Federal reclamation power plants were constructed at Anderson Ranch Dam (40,000 kW) and Boise Diversion Dam (1,500 kW) as part of the development of the Boise Project. These power plants provide power to operate project facilities and to help reduce power costs to Project farmers who depend on pumping water for irrigation. In 1988, four of the five irrigation districts that make up the BPBC completed construction of a power plant at Lucky Peak Dam (101,250 kW). Power generated at the facility is under contract with the Seattle Light Company. I In 2010, the BPBC completed construction of a hydropower facility on the Boise River at Arrowrock Dam (18,000 kW). Ada County owns a 3,700 kW power plant located at Barber Dam that is located just upstream of Boise. Upstream of the reservoir system the Atlanta Power Company owns a 187 kW hydro power plant at Kirby Dam that supplies electricity to the town of Atlanta. A number of hydro plants have been constructed on canal drops in the Treasure Valley. Water leaving the Boise River basin enters the Snake River and continues to generate low-cost electricity at Idaho Power's Hells Canyon Complex for Idaho Power customers in the Treasure Valley.

Anticipated Changes in Water Use

Water demand in the Treasure Valley is expected to increase, although there is no consensus on the amount as demonstrated by three recent studies. The USBOR projected in a 2006 assessment level study that annual consumptive water demand in the Boise basin could increase by as much as 124, 085 acre-feet by 2050. WRIME's detailed 2010 demand study determined that annual demands for water in the Treasure Valley would increase by 82,880 acre-feet by 2060. The IDWR staff estimates that new water demands and shortfalls in water supply for existing demands could result in a need for new annual water supplies of approximately 170,000 acre-feet.

New water needs are difficult to quantify because there are areas of uncertainty, along with many variables that will determine actual water use and need. Changing land uses and social attitudes, as well as economic conditions, are all factors that will affect water use in the Treasure Valley.

Future water demand, driven mostly by increased population and economic growth, may be partially met by water conservation and land use and water use changes. Particularly difficult to anticipate is what proportion of growth will be on undeveloped land, rather than farm land, and what industrial or commercial uses might develop. Those changes are most likely to increase demand for water above current usage.

Challenges, Priorities and Opportunities Associated with Water Use and Needs:

Meeting water needs and uses associated with future development patterns in a manner that minimizes conflict

The Treasure Valley population and economy has grown over the past decade and is expected to do so in the future. A recent study projects up to 650 KAF (WRIME 2010) could transition in use from agricultural to DCMI although a wide range of possible scenarios could occur.

The Treasure Valley must begin to evaluate how best to fulfill the anticipated new demand for water, actively planning for expansion, while encouraging conservation and protecting existing uses and benefits.

Maintaining quality of life

A challenge for the Treasure Valley will be to preserve the quality of life while being sensitive to the changing needs of the Treasure Valley into the future. Quality of life can include aesthetics, recreational needs, property values, socio-economic values, and influences economic development. Issues of quality of life are often subjective and water management decisions can affect quality of life in the Treasure Valley. How these issues influence water management will remain a challenge.

Meeting environmental needs

A challenge over the next 50 years will be to conserve and protect the water resources in the Treasure Valley's streams and aquifers and the riparian habitat it supports, while providing the water supplies for the current and future use. An incomplete understanding of the effect of water diversions for both consumptive and non-consumptive uses on the surface water and ground water leads to a difficulty in assessing their impact on the natural environment. Water managers and water users will be challenged to voluntarily and collaboratively provide functional habitats and mitigate the impacts of water diversions and discharges on the natural environment.

Meeting water supply needs

A challenge for the Treasure Valley will be to meet new and on-going water demands over the next 50 years. The size and location of future water demands, as well as projections for shortfalls in meeting current demands, is uncertain. Water supply solutions involve resolving difficult social and economic issues depending on form, size, and location. Some solutions, such as ground water and surface water storage proposals, require a long lead time to plan and construct so must be commenced long before there is consensus regarding the size and scope of future water demands. The challenge will be to conduct wise, proactive planning and marrying that with careful monitoring of demand increases and supply shortfalls to develop appropriate, timely, and economical water supply solutions.

Management and Administration

A long history of water development and legal decisions has led to a complex system of interaction among water managers in the Treasure Valley. Water administration is under the authority of the Director of the IDWR. However, numerous organizations and agencies are involved in the practical management of water. The IWRB is a constitutionally created body responsible for formulating, adopting, and implementing a comprehensive State Water Plan for conservation, development, management, and optimum use of all unappropriated water resources and waterways of this state in the public interest. The State Water Plan is a guiding document for all state actions and activities. The IWRB undertakes water projects for a variety of purposes throughout the state. The IWRB also provides financing for local water entities, such as canal companies, irrigation districts, cities, and others to undertake water projects, including improvement, expansion, and reconstruction of facilities.

Water District #63 was created by the Director of the IDWR to administer surface water rights from the Boise River currently subject to administration. The administration is carried out under state water law and court decrees. Water rights to more than 330,000 irrigated acres are administered in the Treasure Valley from the Boise River. In addition to irrigation, water rights for other uses are also administered.

Throughout the water year, the watermaster works closely with the NRCS Snow Survey, IDWR, the USBOR, and the USACE. The information provided by these agencies helps the water users understand predictions for the total amount of water available each year. Water District #63 currently records 75 points of diversion weekly during the irrigation season. This information is used with the IDWR accounting program to track natural flow and storage use at each diversion. Data from the water district, the USGS, the USBOR, and Idaho Power Company are compiled to run the water rights accounting model. The IDWR operates the daily water rights accounting model, and the water master uses the model output to administer the water rights and storage water in the basin.

Ground Water Rights not Currently Administered (as of 2012)

The administration of water rights generally refers to the curtailment of junior water rights to satisfy senior water rights. Water rights are administered by a watermaster appointed by the IDWR. In order to administer water rights, they must be legally quantified through adjudication or other administrative action, such as a license.

In the Treasure Valley, only surface water rights are currently administered by the watermaster because ground water rights have not been fully adjudicated. Following the completion of the Snake River Basin Adjudication (SRBA), it is expected that ground water rights may be included in a water district and conjunctively administered in priority. Conjunctive administration is the term used to describe

administration of both ground water and surface water under a common system. Administration of ground water rights, or the implementation of conjunctive administration in the Treasure Valley, is not currently underway.

The legislature adopted the Ground Water District Act in 1995 to create a mechanism to allow ground water users to organize and to formulate mitigation plans to provide protection for senior surface water rights that otherwise would be materially injured by ground water pumping. To date, the ground water users in the Treasure Valley have not elected to form such a district.

Irrigation Districts/Canal Companies/Lateral Associations

There are 47 Irrigation entities that operate within the Treasure Valley. These entities were created locally for the purpose of new irrigation development. Irrigation entities usually hold water rights and own diversion facilities and infrastructure. The majority of storage space in the reservoir system is used for irrigation by these entities that hold spaceholder contracts with the USBOR.

State Law Associated with Requiring the Continued Use of Irrigation Water for Landscaping

In 2005, the Idaho Legislature adopted Idaho Code 67-6537, which encourages the use of surface water for irrigation, a requirement directed at applications for land use changes, such as from agricultural land to residential subdivisions. The law amended the Local Land Use Planning Act and requires that if land has irrigation water appurtenant and is reasonably available, access and use of the surface water for irrigation will be used.

Flows Regulated to Star

Average summer flows at Star vary with irrigation demand but 250 cfs is the target flow for the administration of water deliveries below Star. Surface water in the Boise River and its tributaries upstream from Star is considered fully appropriated during the irrigation season and during much of the rest of the year. In 1995, the Director of the IDWR issued a moratorium order stating that new applications for water would be denied unless they included an acceptable plan to mitigate or avoid injury to existing water rights. The order also describes an area in which applications for ground water shallower than 200 feet below the surface would only be processed if they included mitigation measures or could show no adverse impacts to existing water rights.

Downstream from Star, surface water (as well as ground water) is available for new appropriation, but the actual amount will vary from year to year and season to season.

Salmon Flow Augmentation

The USBOR holds 40,932 acre-feet of storage space in Lucky Peak Reservoir to be used for downstream salmon flow augmentation. This is a component of the (up to) 427,000 acre-feet of storage water that USBOR delivers from the Snake River above Brownlee Reservoir every year for salmon flow augmentation, consistent with the Nez Perce term sheet and Idaho Code 42-1763B. If replacement water supplies

could be found in another basin (consistent with the Nez Perce term sheet) and delivered for salmon flow augmentation, this 40,932 acre-feet in Lucky Peak could potentially be made available to help meet future water needs in the Treasure Valley.

Water Markets

The Idaho Water Supply Bank (Bank) was legislatively recognized in 1979 (Section 42-1761, Idaho Code) and is operated under the authority of the IWRB. The state program includes two distinct programs, **Rental Pools** and the **Water Supply Bank**, which are both essentially water exchange markets intended to assist in the marketing of natural flow and water stored in Idaho reservoirs. They also provide a mechanism by which water rights and stored water that is not being used can be made available for use by others through a lease and rental process.

The Bank includes water rights from surface water and ground water sources throughout Idaho. Water rights may be leased (deposited) to the Bank if not currently in use and then rented (withdrawn) from the Bank by another water user for beneficial uses such as commercial, industrial, irrigation, or mining. In addition, water rights leased to the Bank are protected from forfeiture. Applications to lease and rent water from the Bank are currently received and processed by the IDWR. The Boise River drainage had the most activity in the state in 2010 for leasing water rights into the Bank but only 9% of these rights were rented back out for actual use (2010 Water Supply Bank Annual Report, IDWR).

Water District #63 Rental Pool (Rental Pool) is a mechanism for reservoir spaceholders to make stored water available to other entities in short supply in a given year. The Rental Pool also provides a source of revenue for Water District #63 to make improvements in water distribution while encouraging the maximum beneficial use of stored water. The Rental Pool is under the jurisdiction of and operated by the local committee appointed by the IWRB. The local committee develops the rules of procedure, lease pricing, and operation requirements for their Rental Pool, which then must be approved by the IWRB. The USBOR must also approve the rules and rates for Federal storage as a facility owner. The watermaster administers the Rental Pool under the guidance of the local committee.

The Rental Pool has rented an average of 6,236 acre-feet over the past 8 years, excluding the USBOR-held uncontracted space. Use of the Rental Pool appears to be low compared with other rental pools in the state despite the rapid growth of DCMI uses in the basin.

Challenges, Priorities and Opportunities Associated with Management and Administration:

Lack of an organizational structure for ground water users to collectively plan for and respond to future challenges

Solutions to meeting long-term water needs and avoiding conflict may require action beyond single individuals. Long term successful solutions may require cooperative/collaborative efforts within and among ground water users who share a common interest.

Advanced technical capabilities are needed to meet increasingly complex water management challenges

Although we understand a great deal about the regional hydrology, our information does not provide a full understanding of the localized interaction between ground and surface water, and between the shallow aquifer and deep aquifer. Knowledge is not sufficient to fully characterize the hydrologic system which results in difficulty predicting system responses to management actions. Historical hydrological records may not be sufficient for forecasting future conditions. Existing ground water models do not incorporate newer information or forecasts.

Existing water Management tools that appear to be under-utilized could help provide solutions to meeting water needs in the future

Several water management tools exist that could be utilized to help meet future water needs, but currently appear to be under-utilized. The Boise River (Water District 63) Rental Pool, which facilitates marketing of reservoir storage water, has a lower level of activity when compared with the Payette and Upper Snake Rental Pools, despite the Treasure Valley having rapidly growing water needs. The Water Supply Bank facilitates marketing of natural flow and ground water rights. Bank records show that in the Treasure Valley there is considerable activity to lease water rights into the Bank, but little demand to rent water rights out of the Bank even with the Treasure Valley having rapidly growing DCMI water needs. Another tool is the Municipal Water Rights Act of 1996 which provides for growing municipalities to acquire water rights based on future growth projections.

3. Recommendations

Guided by the CAMP goals and vision, the Committee identified several recommended actions for addressing the challenges discussed in previous sections of this Plan. Understandably, these actions will need to be more fully refined during the implementation phase, but the Plan, by adopting a mix of strategies, represents a balanced approach to addressing the future water challenges in the Treasure Valley. These actions have not been ranked or placed in order of priority.

Enhance Water Data Collection, Analysis, and Planning

Several types of data are needed to effectively manage the water resource. Water planning and management tools should be developed and updated using accurate data. These tools are needed to reduce uncertainty and improve effectiveness and efficiency. Taking the following actions will contribute to successful water management that protects the public health and safety, minimizes conflicts, and promotes the economic and environmental health of Idaho:

- Improve ground water models and technical tools to meet administrative purpose and to facilitate decision making;
- Support water supply modeling and stream flow monitoring;
- Measure water-use changes and report demand trends to the IWRB;
- Support drought planning to increase the resiliency of the water supply specific to the Boise drainage;
- Support efforts at assessing potential effects of water management on the natural environment;
- Create a mechanism for coordination within the ground water community;
- Continue to increase transparency of planning process;
- Organize a periodic Water Forum ("Water Summit") to assess the state of the aquifer and discuss emerging issues and opportunities.

Additional Storage and Supply

Additional storage or other sources of water supply may be needed in the future to offset the increased variability of water supply and additional water demand. Because of the extended lead time required for initiating storage and water supply projects, study of these projects should be continual. This will ensure the information is available when decisions need to be made. The following actions should be part of the evaluation of future supply options:

- Continue the study of the feasibility of potential surface water storage projects in a manner that comprehensively addresses supply options and avoids conflict;
- Investigate the feasibility of utilizing managed recharge for meeting future water demands;
- Support the exchange of the USBOR's salmon flow augmentation space in Lucky Peak (excluding stream flow maintenance) with replacement water supply consistent with the Nez Perce term sheet;
- Evaluate augmentation of existing cloud-seeding programs as an option for increasing water supply.

Reducing Demand through Water Conservation

Reducing demand through water conservation should be adopted as one of the strategies for meeting future water needs in the Treasure Valley. Capital costs associated with new supply may be avoided through the reduction of per capita demand. Addressing these issues is a multi-jurisdictional responsibility; therefore the IDWR should work in cooperation with water users and water providers to collaboratively develop incentives to reduce demand. The following actions should be taken to conserve water and reduced demand:

- Use education to encourage conservation;
- Encourage conservation and efficient use of ground water;
- Encourage conservation and efficient use of surface water, where a viable opportunity exists, taking into consideration the benefits of incidental recharge;
- Support efforts for retrofitting neighborhoods with pressurized irrigation;
- Encourage and support wastewater/gray water reuse;
- Encourage or support incentives for conservation;
- Develop guidelines for conservation programs;
- Consider conservation requirements for new water appropriations.

Potential Conversion of Water Use from Agriculture to Other Uses

Urbanization has changed some water demand from agricultural irrigation to residential irrigation and other uses. This trend is expected to continue into the future as additional growth occurs. The intent of these actions is to ensure irrigation water is available for residential use and irrigation entities continue to have financial viability and protection of infrastructure. Domestic irrigation provided through the canal systems is also beneficial because it reduces the amount of water that municipal water systems need to provide. The following actions should be undertaken to ensure orderly transition of water use from agriculture to DCMI and other uses:

- Continue to support the use of surface water on those lands that convert from agriculture to DCMI and other uses utilizing the existing irrigation entities;
- Support voluntary cooperative arrangements between irrigation entities and municipal providers to deliver surface water recognizing the long-term challenges associated with maintaining Homeowners Association-owned systems;
- Encourage the use of water marketing to meet current and future needs including the use of the Rental Pool and the Bank.

Municipal Water Rights Act of 1996

The Municipal Water Rights Act of 1996 is a tool available to municipal providers to secure water rights for growing municipal water demands based upon anticipated future needs.

Preserve and Protect Water Delivery Infrastructure

The integrity of the delivery system is vital to the optimal use of water in the Treasure Valley. The following actions recognize specific components of the water delivery system that will ensure continued integrity into the future:

- Support voluntary arrangements between irrigation entities and municipalities to ensure long-term maintenance of new residential irrigation systems;
- Seek funding from a diversity of sources;
- Ensure easements/access to canals for maintenance in face of growth;
- Continue to support considerations of security, both in terms of infrastructure and on water quality;
- Support the rehabilitation and modernization of water delivery infrastructure;
- Explore opportunities to minimize fish entrainment in the canal systems;
- Inform land-use entitlement and transportation authorities at both the local and state level to help the irrigation community protect its easements and right- of-way to maintain the canals and ditches that provide irrigation water.

4. Treasure Valley CAMP Implementation

Management of the Treasure Valley Aquifer affects numerous stakeholders. Effective implementation of the Plan will require the participation and cooperation of stakeholders and governmental entities with jurisdictional authorities and responsibilities.

The IWRB staff will provide leadership and coordinate activities for the implementation of this plan.

The IWRB may continue to convene the Committee to guide and make recommendations concerning the implementation of management strategies and to review goals and objectives. The Committee could provide a forum for discussing implementation, establishing benchmarks for evaluating the effectiveness of actions, coordinating with water users and managers, evaluating and addressing environmental issues, and identifying and pursuing funding opportunities.

The Committee will continue to include interest groups currently represented and may expand or contract as appropriate to include other interested people, per the IWRB direction. In addition, the IWRB will appoint at least one of its members to serve as a liaison between the Committee and the IWRB. The Committee will serve at the pleasure of the IWRB and provide a forum for public participation. The IWRB staff will facilitate the work of the Committee and provide the technical information needed for its deliberations. The IWRB will make all final decisions concerning Plan project priorities, implementation, and funding.

As various programs are implemented, additional monitoring or modifications will likely be needed. Specific projects may require site-specific measurement and analysis that are not currently available. Additional analysis will likely be required to assist the IWRB and the Committee.

Outreach and Education

During implementation of the Treasure Valley CAMP, the Committee will help develop a plan for broad water education and outreach, building on existing efforts and programs. Emphasis will be placed on education efforts that promote conservation and a reduction in consumptive use.

Funding

Effective implementation of the CAMP actions will require a partnership among the state, local and federal governments, stakeholders, water users, and non-governmental organizations. These partnerships will advance the goals of CAMP because capabilities and resources can be combined to accomplish the shared goals. The costs of implementation are anticipated to be shared among willing partners. As the implementation plan is developed, the funding needs for the Plan components will be evaluated and potential funding sources, including federal grants, will be identified.

The many existing activities for maintaining the health of the Treasure Valley Aquifer reflect the value and importance the aquifer and water resources have to the region. These existing activities are

undertaken by all levels of government. These activities are funded through various sources and through various programs. The IWRB supports existing programs that protect and enhance the water resources of the area. Opportunities to combine resources and leverage existing programs with CAMP implementation will be encouraged and supported.

Additionally, the IWRB has an existing financial program that can provide financial assistance to improve infrastructure for irrigation and community water supplies and for flood control and hydroelectric power. This assistance is provided in the form of loans and IWRB-issued revenue bonds.

Adaptive Management

The goal of adaptive management is to support improved decision making and performance of water management actions over time.

Key principles fundamental to this approach include:

1. Anticipating possible future uncertainties and contingencies during planning
2. Employing science-based approach to build knowledge over time
3. Designing projects that can be adapted to uncertain or changing future conditions

Adaptive management involves taking actions, testing assumptions, and then monitoring and adapting/adjusting the management approach as necessary. It is a way of taking action in a complex system with many variables and constant change.

Developing perfect knowledge concerning any system, including the Treasure Valley Aquifer, is impossible. Therefore, an adaptive management approach is critical to the successful attainment of the qualitative and quantitative goals set forth in the Plan. Successful adaptive management requires patience and long-term commitment, just as acquiring enough data to make decisions about program changes takes time.

The adaptive management strategy will allow the IWRB to:

- Develop protocols for revising management actions;
- Compare costs and impacts of different actions on the Treasure Valley Aquifer;
- Adjust funding allocation between projects to get the most “bang for the buck”;
- Concentrate funding on management actions that produce results;
- Make adjustments and revisions to the Plan as new information becomes available or in response to changing water supply and demand needs;
- Proceed with flexibility, depending on results and analysis of monitoring and measurement data.

Coordination and Implementation

Management of the Treasure Valley Aquifer affects numerous stakeholders within Idaho and requires coordination. The Committee will be charged with providing guidance and recommendations concerning the implementation of management strategies. The Committee will provide a forum for discussing implementation, establishing

benchmarks for evaluating the effectiveness of actions, coordinating with water users and managers, evaluating and addressing environmental issues, and identifying and pursuing funding opportunities.

Monitoring and Data Gathering

The Advisory Committee and Board staff will be able to assess the impacts of various management activities using data gathered through the monitoring process. In some cases, it may take a number of years to obtain sufficient data to achieve a comprehensive understanding of the effects of particular actions. Regardless, the success of the plan depends upon the development and maintenance of state-of-the-art monitoring and evaluation tools that provide the information necessary to make sound planning decisions for the future.

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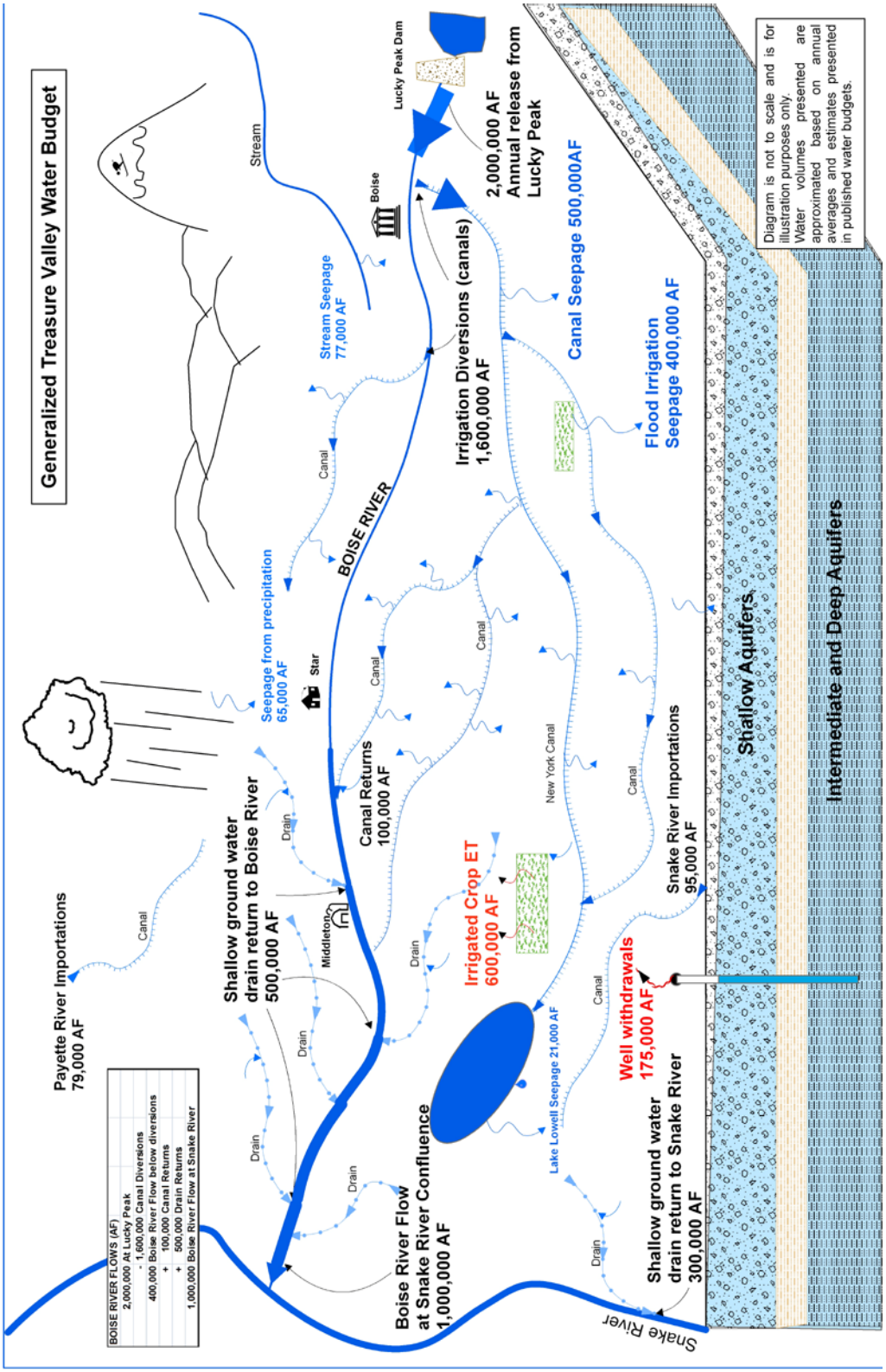
Appendices

Appendix 1. Water Budget Schematic



Appendix 2. Treasure Valley Comprehensive Management Plan Advisory Committee Members and Affiliations

TV CAMP MEMBER*	AFFILIATION
Abramovich, Ron	Natural Resources Conservation Service
Adamson, Brent	Boise County
Amick, Doug	City of Greenleaf
Anderson Jamie	Boise County
Barrie, Rex	Water District #63
Case, Vern	Wilder Irrigation District
Berggren, Ellen	U.S. Army Corps of Engineers
Bowling, Jon	Idaho Power Company
Burnell, Barry	Idaho Department of Environmental Quality
Dane, Russ	Keller Williams Realty
Decker, Kevin	Idaho Wildlife Federation
Deveau, Paul	Boise Project Board of Control
Dixon, Dave	Greenleaf Farms Inc.
Duspiva, Gary	Canyon County Planning and Zoning Commission
Echeita, Mike	City of Eagle
Funkhouser, Allen	Drainage District # 2
Fuss, Michael	Nampa Public Works
Goodson, Stephen	Governor's Office
Howard, Matt	U.S. Bureau of Reclamation
Jones, Chris	Ted Trueblood Chapter, Trout Unlimited
Kennedy, Ben	Micron Technology, Inc.
Larson, Bill	Treasure Valley Partnership
Leatherman, Megan	Ada County
McKee, Lynn	Ada County Soil and Water Conservation District
Nelson, Greg	Idaho Farm Bureau
Patton, Brian	Idaho Department of Water Resources
Peter, Kathy	Unaffiliated
Pline, Clinton	Nampa-Meridian Irrigation District
Prigge, John	Sorrento Lactalis
Rhead, Scott	United Water of Idaho
Ronk, Jayson	Idaho Association of Commerce & Industry
Schmillen, Bob	City of Middleton
Shoemaker, Gary	City of Caldwell
Stewart, Lon	Sierra Club
Stewart, Warren	City of Meridian
Telford, Craig	City of Parma
Thornton, John	North Ada County Technical Working Group
Ward, Rick	Idaho Department of Fish and Game
Woods, Paul	City of Boise
Yerton, Janice	City of Kuna
Zirschky, Mark	Pioneer Irrigation District

*Former members: Gayle Batt, Michelle Atkinson

Appendix 3. Abbreviations and Terms

acre-foot	A volume of water equivalent to one acre covered in water one foot deep. One acre-foot (af) equals 325,851 gallons
aquifer	Any geologic formation that will yield water in sufficient quantities to make the production of water from the formation feasible for beneficial use.
Bank	Water Supply Bank
CAMP	Comprehensive Aquifer Management Plan
cfs	Cubic feet per second. A rate of flow equal to one cubic foot of water passing a point each second. One cfs equals approximately 7.48 gallons per second or 449 gallons per minute.
Committee	Treasure Valley CAMP Advisory Committee
consumptive use	Consumptive use is water that is actually consumed and not returned to the immediate water environment. It is the portion of water that evaporates, is used in products or crops, or consumed by humans or livestock.
DCMI	Domestic, Commercial, Municipal, and Industrial
GWMA	Ground Water Management Area
IDP	Idaho Drought Plan
KAF	Thousand acre-feet
kW	Kilowatt, one thousand Watts of electric power
MAF	Million acre-feet
Plan	Treasure Valley Comprehensive Aquifer Management Plan
Rental Pool	Water District #63 Rental Pool
SRBA	Snake River Basin Adjudication
TVAS	Treasure Valley Aquifer System

Appendix 4. Key Agencies/Entities

BPBC	Boise Project Board of Control
IDEQ	Idaho Department of Environmental Quality
IDWR	Idaho Department of Water Resources
IDFG	Idaho Department of Fish and Game
IDWR	Idaho Department of Water Resources
IWRB	Idaho Water Resource Board
NRCS	Natural Resources Conservation Service
USACE	U.S. Army Corps of Engineers
USBOR	U.S. Bureau of Reclamation
USGS	U.S. Geological Survey
WRIME	Water Resources & Information Management Engineering, Inc.

Appendix 5. Resource Directory

For more information about the Comprehensive Aquifer Management Planning Program:
http://www.idwr.idaho.gov/waterboard/WaterPlanning/CAMP/CAMP.htm

For information about the Idaho Water Resource Board:
http://www.idwr.idaho.gov/waterboard/

For information about the Idaho Department of Water Resources:
http://www.idwr.idaho.gov/

For additional information on Water District #63:
http://www.idwr.idaho.gov/WaterManagement/waterDistricts/BoiseRiver/default.htm

For information on the Water Supply Bank and Water District #63 Rental Pool:
http://www.idwr.idaho.gov/WaterManagement/WaterRights/WaterSupply/ws_default.htm

For additional information on the Boise Project Board of Control:
http://www.boiseproject.org/
http://www.usbr.gov/projects/Project.jsp?proj_Name=Boise+Project

For information on the Treasure Valley Hydrologic Project:
http://www.idwr.idaho.gov/WaterInformation/projects/tvhp-revised/

For additional USGS water data:
http://id.water.usgs.gov/water_data/

For additional information on ground water levels in the Treasure Valley:
Public access to ground-water measurement data is available at Hydro.Online or by contacting IDWR staff

For additional information on hydropower production in the region:
http://www.idahopower.com/AboutUs/OurPowerPlants/Hydroelectric/hydroelectric.cfm

For additional information on water quality, see the Idaho Department of Environmental Quality:
http://www.deq.idaho.gov/

For more information on the Idaho Snow Survey Program, see the Natural Resource Conservation Service:
http://www.id.nrcs.usda.gov/

For more information on Bureau of Reclamation activities in the region:
http://www.usbr.gov/pn/

For more information on US Army Core of Engineers activities in the region:
http://www.nww.usace.army.mil/boise/outreach.html

Appendix 6. References and Information Sources

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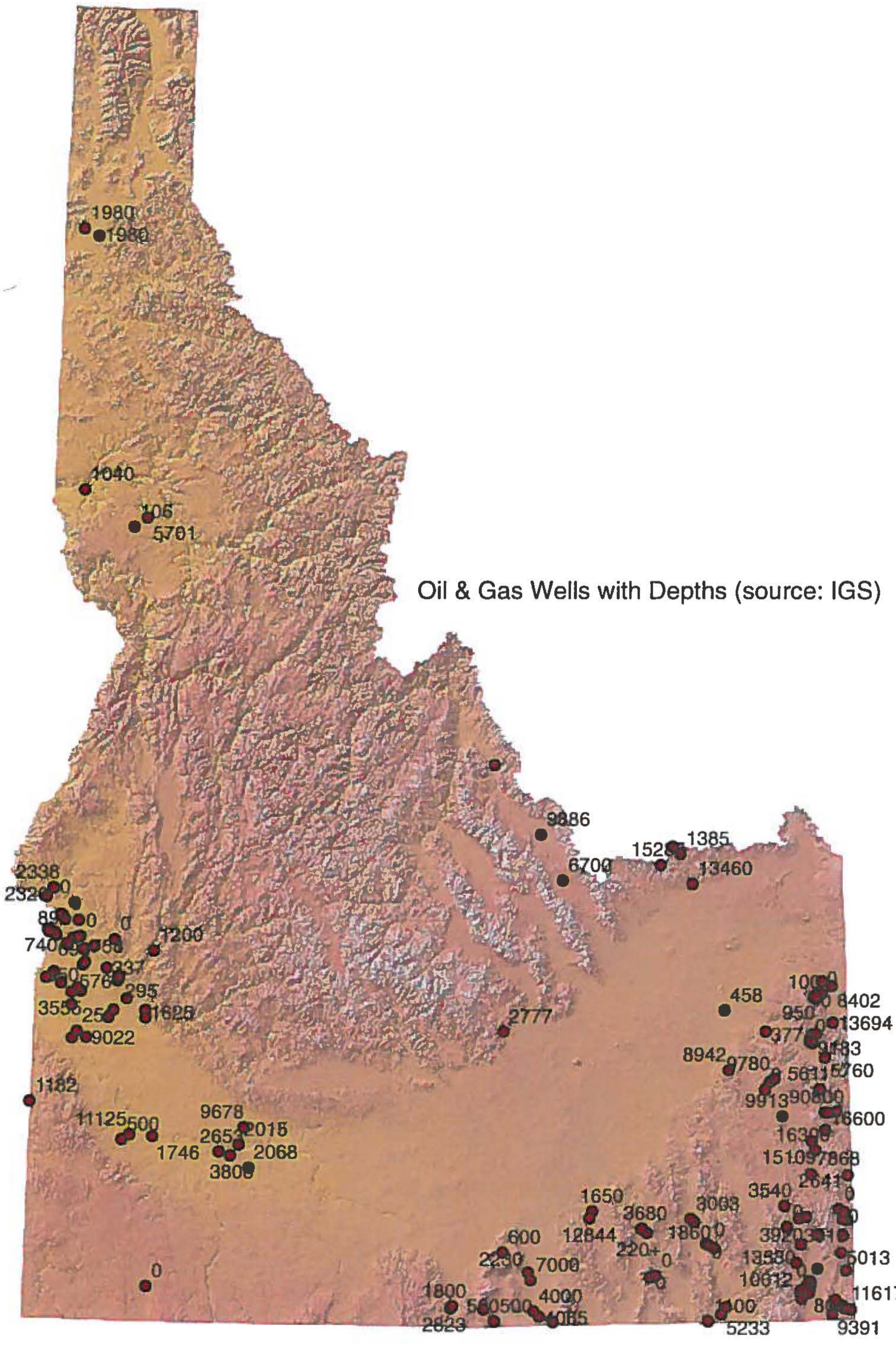


Oil & Gas Wells with Depths (source: IGS)

Memorandum

To: Idaho Water Resource Board

From: Neal Farmer

Date: November 13, 2012

Re: Late Season Recharge Update

No action requested

2012 Late-Season Recharge — Summary of Activities

Late season recharge activities started on October 22 with North Side Canal Company (NSCC) opening their gates at Milner. NSCC turned off irrigation deliveries 5 days prior on October 16. An amendment to the existing contract with NSCC was signed to allow for additional fall recharge. Numerous meetings were held with canal companies and other vested parties to discuss fall recharge potential and their operations. A summary of fall 2012 preliminary values to date are shown below and subject to change upon receipt of official values later and any spill returns.

Canal	Total Acre Feet (est.)	Total Cost (est.)
North Side Canal Company	14,793	$44,379
Southwest Irrigation District	0	0
Big Wood Canal Company	2500	$7,500
Fall Total (to date)	**17,293**	**$51,879**
Year to Date Total	**124,664**	**$294,842**
Projected Fall	**24,000**	**$72,000**
Projected Year Total	**131,371**	**$314,963**

The Milner pool level needed to be lowered to enable an inspection of the dam so the initial flow rates for NSCC were over 600 cfs for several days but then stabilized at about 540 cfs which is about as low as NSCC can run without damage to some of their equipment. The pool level has been slow to rise and NSCC has been trying to divert the smallest amount of flow possible to help the rise of the pool level and not cause damage to their equipment. When the pool level rises enough then Southwest Irrigation District (SWID) can start recharge. SWID plans to pump about 25 cfs from 11 pm to 7 am then turn off the rest of the day. This averages to about 8 cfs per day or 16 acre feet per day.

The Big Wood Canal Company (BWCC) needed to draw down Magic Reservoir to work on the inlet structure for the hydropower generation plant. BWCC expects to release approximately 20,000 acre feet of water out of Magic. This was unexpected but we are working with BWCC and Water District 37 to take advantage of this

situation to accomplish additional recharge. Some water released from Magic is flowing down the Richfield Canal to the Devil's Headgate recharge site with a flow of approximately 64 cfs. Some water is flowing further down the canal to the Little Wood drainage and the rest is flowing down the Big Wood River.

NSCC is delivering some recharge water to an off canal pilot test recharge site northwest of Wendell by 4 miles (see picture) referred to as the "W40" site. Approximately 20 cfs is being diverted from the site. This site may have the potential to become a large-capacity off-canal recharge site. Another pilot test site is the Neilson site as shown below.

Pilot test at W40 off canal recharge site

Pilot test at Neilson off canal recharge site

Recharge water passing gates into North Side Canal System

Memorandum

To: Idaho Water Resource Board

From: Neal Farmer

Date: November 13, 2012

Re: Mile Post 31 Recharge Site Update

No action requested

Summary of Activities for the Aquifer Recharge Site at Mile Post 31 on the Milner Gooding Canal

- In 1999, the Idaho Department of Water Resources issued a feasibility report for aquifer recharge describing numerous potential sites including the Mile Post 31 located on the Milner Gooding canal 10 miles north of Eden.
- In 2010, a pilot scale test demonstrated the basin has good leakage rates.
- In 2011 ideas and preliminary plans were discussed and in 2012 the Board approved $6,000 under Resolution "Attachment 04, Meeting No. 3-12", dated March 16th for engineering design and cost estimates for expansion of recharge capacity at Mile Post 31. American Falls Reservoir District 2 (AFRD2) contracted a local engineering firm and received the final engineering plans.
- In 2012 the Lower Snake Aquifer Recharge District agreed to pay for the water quality monitoring costs at the Mile Post 31 site.
- On September 9th, 2012 the Board approved a resolution for construction at Mile Post 31 in an amount not to exceed $35,000 and %40 of project costs.
- On November 5th AFRD2 began construction work at the Mile Post 31 site

Construction of new diversion headworks at MP31

TO: Idaho Water Resource Board

FROM: Mat Weaver, PE

Date: November 6, 2012

RE: Recharge Considerations and Decision Tree

During the Idaho Water Resource Board's (Board) September 7, 2012, board meeting, Chairman Uhling requested staff prepare a document summarizing considerations that define, limit or affect recharge efforts in the Snake River Basin above Milner Dam and a "decision tree" to assist the Board in implementing an Upper Snake River Basin recharge program. This memorandum responds to your request.

Legal and Scientific Considerations That Define or Limit the Scope of Recharge in the Snake River above Milner Dam

- The Milner Zero Minimum Flow Principle (Idaho Code § 42-203B(2)).
- Eastern Snake Plain Aquifer (ESPA) Comprehensive Aquifer Management Plan (CAMP), Adopted by the Board January 2008, and Signed into Law April 2009 (HB 264)
- Swan Falls Reaffirmation Agreement, Memorandum of Understanding Signed March 2009
- Board Resolution Authorizing and Funding Managed Aquifer Recharge for Five Years, Adopted January 2012
- Prioritization of Aquifer Recharge Sites Based on Hydrologic Benefits Study, Conducted by Gary Johnson April 2012
- Enhanced Snake River Plain Aquifer Model Development and Utilization, Recharge Analysis by Mike McVay and the Idaho Department of Water Resources Technical Services Group, Ongoing.
- United States Bureau of Reclamation's (Bureau) Unsubordinated Minidoka Power Water Rights for 2,700 cfs (water rights 01-217 & 01-218)

Practical Considerations That Influence Recharge Decisions

- Fill and Re-Fill of Reservoir Storage Content in the Upper Snake River Basin
- Irrigation Entity Cooperation and Partnership (for delivery systems participating in recharge)
- Weather (specifically cold weather conditions that preclude recharge in many systems)
- Water Quality and Other Environmental Concerns Above Milner Dam (ex. ESA list species, UIC Rules (IDAPA 37.03.03))
- Competing Private Recharge Efforts
- Lower Valley vs. Upper Valley Relationship Tensions
- Surface Water Quality Concerns in the Snake River Below Milner Dam
- 2004 Snake River Water Rights Agreement

Although each consideration delineated in the two lists above may influence and affect individual aquifer recharge efforts, only three considerations directly affect all recharge efforts above Milner Dam.

They are the Milner Zero Minimum Flow Principle, the Bureau of Reclamations unsubordinated hydropower rights for 2,700 cfs at the Minidoka Dam, and the Board's policy of optimizing the capture of excess flows in existing surface water reservoirs.

The Milner Zero Minimum Flow Principle divides the Snake River into two separate rivers, and precludes water users in the lower Snake River (below Milner Dam) from calling on or influencing water use above Milner Dam. The Milner Principle is premised upon the optimum use of the flows of the Snake River above Milner Dam to meet the water supply needs of the Snake River Basin above the dam. A natural corollary of the Milner Principle is that when flow past Milner is greater than zero, such flows should be captured in surface reservoir systems or diverted for aquifer recharge to the maximum extent feasible to avoid waste of this water.

Application of the Milner Principle to aquifer recharge in the Snake River Basin above Milner Dam leads to the following conclusions.

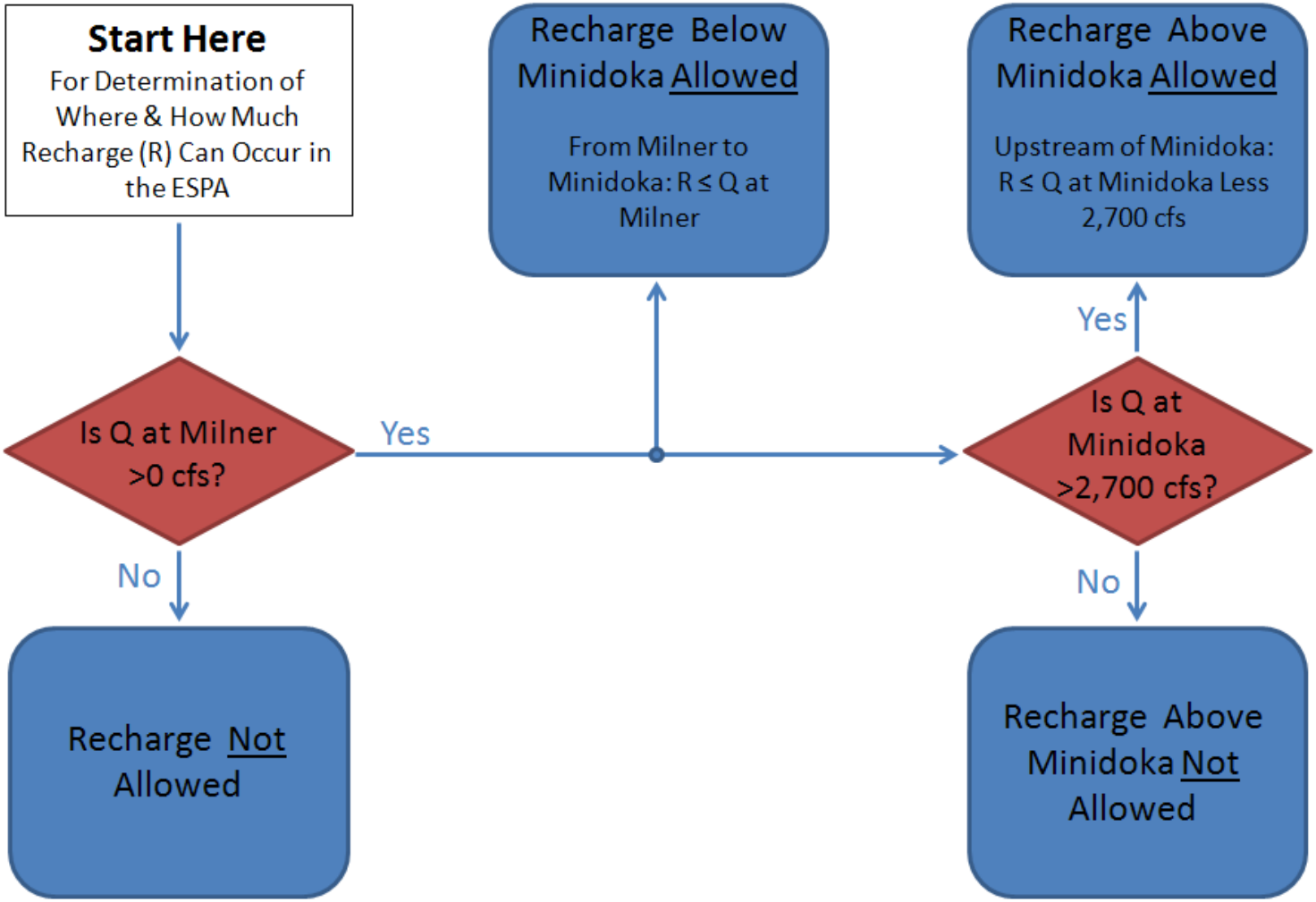
First, water releases from Minidoka Dam in excess of demand under Snake River main stem natural flow rights diverting from the Minidoka to Milner Dam reach of the Snake River will flow past Milner Dam unless diverted. Diversion of flows that would otherwise flow past Milner Dam for aquifer recharge is consistent with the Milner Principle and will preclude the loss of water.

Second, the Bureau of Reclamation's unsubordinated hydro power water rights at the Minidoka Dam constrain where and how much water can be recharged above Minidoka Dam. The Board has adhered to a policy that recharge should not interfere with or prevent the capture of water in the federal reservoir system. The Bureau's unsubordinated Minidoka hydropower water rights serve as visible and transparent indicators of whether recharge water can be captured in the reservoir system. When flows at Minidoka exceed 2,700 cfs, the Bureau is signaling that it is confident reservoir system will fill, and therefore, diversion of water for recharge will not be taking water that could otherwise be captured in the reservoir system. When flows at Minidoka are less than 2,700 cfs, this is an indication that the Bureau is still filling the reservoir system; thus, recharge of water upstream of the Minidoka Dam would have the potential of taking water that would otherwise be captured in the reservoir system.

The following flow chart incorporates these fundamental considerations into a decision tree. This tool allows for the determination at a regional scale, at any instance in time, if and where recharge is feasible. The other considerations listed above will influence the details and specifics of local recharge efforts, but their influences are less certain and less easily definable. For this reason they are not included in the ESPA Recharge Flow Chart.

In closing I recommend the considerations and decision tree outlined in this memo be used by the Board to pursue managed aquifer recharge in the ESPA. I believe this memo is consistent with prior Board decisions and discussions with the Board. In particular, the ESPA CAMP calls for a net ESPA water budget change, which is best affected by increasing water storage in the aquifer. This was articulated by Mike McVay in his presentation to the Board.

ESPA Recharge Flow Chart



Mile Post 31 Recharge Site Turnout Structure Construction

W40 Recharge Site

Memorandum

To: Idaho Water Resource Board

From: Cynthia Bridge Clark

Date: November 13, 2012

Re: Status of Ongoing Storage Water Studies

Weiser-Galloway Project

BACKGROUND: Two studies are underway to investigate the viability of a dam at the previously proposed Galloway Dam site on the Weiser River: 1) The *Weiser River Geologic Investigation and Analysis Project* (Geologic Investigation) is intended to determine the safety, suitability and integrity of geologic structures at the potential dam and reservoir site; and 2) the *Snake River Operational Analysis Project* (Operational Analysis) will evaluate whether benefits would be realized from the Weiser-Galloway project by analyzing a series of operating scenarios (potential benefits include flood control, hydropower, water storage, pump back, irrigation, recreation and flow augmentation requirements for anadromous fish recovery). Both studies are being completed through a cost-sharing partnership with the U.S. Army Corps of Engineers (Corps) and are intended to help decision makers determine whether to move forward with comprehensive new feasibility, environmental and engineering studies of the Weiser-Galloway project.

PROGRESS SINCE LAST UPDATE:

Geologic Investigation:

- The U.S. Bureau of Reclamation (BOR) completed drilling and is in the process of demobilizing and clearing equipment from the site. Six holes and 1537.8 feet of core were drilled between July 9, 2012 and November 9, 2012. The contract with the BOR provides for reclamation and reseeding of access roads and drill pads upon completion of the field work. At this time, the access roads will be left in place and the cores will be stored at a BOR facility until the next steps in the project are identified.
- Strength and materials testing is being performed by the BOR on selected core samples and the Corps plans to test potential embankment materials identified near the project area. The Corps is also performing a geologic survey of the reservoir and project area to identify old and potential new landslide areas.
- A final report on the geologic analysis is expected in the spring 2013 and will include basic project design and adjusted costs. Results will be presented to the IWRB.

Operational Analysis:

- The Operational Analysis is underway. The Corps is currently developing initial diversion hydrographs, and performing reservoir yield and probable maximum flood analyses.
- The Corps is also coordinating with Idaho Power Company (IPCO) and the BOR to identify study priorities, get consensus on baseline conditions, and coordinate data sets and modeling assumptions. Both entities have agreed to provide technical assistance and peer review.
- Estimated timeline: Completion scheduled for spring 2014.

REQUIRED ACTIONS: No action is required by the IWRB at this time.

Lower Boise River Feasibility Study

BACKGROUND: The IWRB and the U.S. Army Corps of Engineers (Corps) began a feasibility study on the Boise River in 2009. The initial agreement did not include all of the tasks necessary to complete a feasibility study, but focused on evaluating whether new surface water storage could help address water supply and flood risk reduction needs on the Boise River. The *Water Storage Screening Analysis*, completed in August 2010, identifies a raise or new

dam at the existing Arrowrock Dam site as the top ranked potential project. The Corps later published the *Lower Boise River Interim Feasibility Study, Preliminary Evaluation of Arrowrock Site, October 2011* which documents results of additional engineering analysis of potential fatal flaws at the Arrowrock Dam site. The analysis did not identify any geologic or engineering constraints that would make a raise of the existing dam or construction of a new dam at the site unfeasible, and recommended further study of a dam raise if only one concept is pursued. The report also identifies additional issues that should be evaluated in order to better understand the viability of Arrowrock site.

In response to a recent effort by the Corps to modernize and streamline the feasibility process (Planning Modernization initiative, 3x3x3 Framework) the Corps has advised the IWRB that federal support of the study may be contingent on a revision of the agreement to include completion of a full feasibility study. In May 2012, the IWRB directed IDWR staff to coordinate with the Corps to develop a project management plan (PMP) to complete the feasibility study. The PMP will describe study scope, costs, and schedule and will be presented to the IWRB for consideration.

PROGRESS SINCE LAST UPDATE:

- In accordance with the Corps 3x3x3 Framework, a planning charette is required to revise the study scope and to update the feasibility study agreement between the IWRB and the Corps. The charette is scheduled for December 3-7, 2012 at the Corps Walla Walla District office and will include a technical team from the Corps and IDWR to detail the alternatives to be studied. A project management plan will be developed following the charette to finalize the study scope and costs.
- IDWR staff is coordinating with the Corps to prepare for the planning effort and will present results and recommendations to the IWRB at a later date.

REQUIRED ACTIONS: No action is required by the IWRB at this time.

Henrys Fork Basin Study

BACKGROUND: The IWRB and the Bureau of Reclamation (Reclamation) are conducting a study of water resources in the Henrys Fork River basin to develop alternatives to improve water supply conditions in the Eastern Snake Plain aquifer and Upper Snake River basin. The study is intended to identify opportunities for development of water supplies and improvement of water management while sustaining environmental quality.

Reclamation performed a technical analysis on alternatives identified for study and integrated comments from the public and stakeholders participating through the Henrys Fork Watershed Council. Reclamation is in the process of moving forward with more detailed study of a short-list of alternatives.

PROGRESS SINCE LAST UPDATE:

- Reclamation staff presented results of the technical analyses to the IWRB Storage Committee on August 20, 2012. The alternatives recommended for further study ("appraisal level") include surface water storage projects, agricultural conservation and management (canal automation, pipeline in North Fremont area), and market based alternatives in conjunction with conservation and storage alternatives.
- Reclamation is finalizing an interim report which documents the process of identifying and screening water management alternatives. The report also includes the technical review of each alternative and other supplemental analyses such as a water supply and a water needs assessment.
- IDWR and Reclamation provided an progress report to the Natural Resources Interim Legislative Committee in September.
- Reclamation will report back to the IWRB as the Appraisal analysis progresses.
- Estimated timeline: Completion scheduled for October 2013.

REQUIRED ACTIONS: No action is required by the IWRB at this time.