



IDAHO WATER RESOURCE BOARD

AMENDED AGENDA MEETING NO. 1-11 OF THE IDAHO WATER RESOURCE BOARD

C.L. "Butch" Otter
Governor

Terry T. Uhling
Chairman
Boise
District 2

Gary M. Chamberlain
Vice-Chairman
Challis
At Large

Bob Graham
Secretary
Bonnars Ferry
At Large

Charles "Chuck" Cuddy
Orofino
District 1

Leonard Beck
Burley
District 3

Roger W. Chase
Pocatello
District 4

Vince Alberdi
Kimberly
At Large

Jerry R. Rigby
Rexburg
At Large

January 21, 2011, at approximately 8:30 a.m.,
immediately following the Executive Session to be held at 7:30 a.m.

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

EXECUTIVE SESSION – The Board will meet in Executive Session at 7:30 a.m. pursuant to Idaho Code Section 67-2345(1) (f) to communicate with legal counsel regarding pending litigation. **Executive Session is closed to the public.**

1. Roll Call
2. Agenda and Approval of [Minutes 10-10](#) and [11-10](#)
3. Public Comment – The Board will allocate a period of time (not to exceed 30 minutes) for the public to address the Board on subjects not specifically shown as an agenda item.
4. IWRB Hydropower [Status Report](#)
5. IWRB Financial Program
 - a. Annual Report – FY2010
 - b. [Status Report](#)
 - c. Loan Request – [Chaparral Water Association](#)
 - d. Water Transactions: [Canyon/Big Timber](#), [Lower Lemhi](#), [Little Springs](#)
 - e. [Bear River Pool Bond Status](#)
 - f. [IWRB Project Funding by Location](#)
6. Planning Activities
 - a. ESPA CAMP
 - (1) [AWEP Funding](#)
 - (2) [Status Update](#)
 - b. [Rathdrum Prairie CAMP](#)
 - c. [Treasure Valley CAMP](#)
 - d. [State Water Plan Update](#)
7. [Water Storage Studies](#)
8. Director's Report
9. Other Items Board Members May Wish to Present
10. Next Meeting and Adjourn

IDAHO WATER RESOURCE BOARD

In Preparation for Meeting No. 1-11

January 20, 2011 at 1:00 p.m.

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

1. Financial Action Items
 - a. Loan Request – Chaparral Water Association (See **Tab 5c in the Board Book**)
 - b. Water Transactions (See **Tab 5d in the Board Book**)
 - Canyon/Big Timber Beyeler
 - Lower Lemhi Annual 2011
 - Little Springs Snyder
2. Rathdrum Prairie CAMP Draft Report (See **Tab 6b in the Board Book**)
3. Treasure Valley CAMP Status Update (See **Tab 6c in the Board Book**)
4. ESPA CAMP Status Update(See **Tab 6a in the Board Book**)
5. **EXECUTIVE SESSION** – This item has been moved to 7:30 a.m. on January 21, 2011. **Executive Session is closed to the public.**

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 let Diana Ball, Administrative Assistant, know in advance so arrangements can be made. The phone number is (208) 287-4800 or email diana.ball@idwr.idaho.gov.



IDAHO WATER RESOURCE BOARD

MINUTES OF MEETING 10-10

C.L. "Butch" Otter
Governor

November 16, 2010
Boise, Idaho

Terry T. Uhling
Chairman
Boise
District 2

Chairman Uhling called the meeting to order at 8:30 a.m. and asked for roll call.

Agenda Item No. 1, Roll Call

Gary M. Chamberlain
Vice-Chairman
Challis
At Large

Board Members Present

Terry Uhling, Chairman
Gary Chamberlain
Chuck Cuddy
Jerry Rigby

Vince Alberdi
Roger Chase
Bob Graham
Leonard Beck

Bob Graham
Secretary
Bonners Ferry
At Large

Staff Members Present

Charles "Chuck" Cuddy
Orofino
District 1

Brian Patton, Bureau Chief
Jack Peterson, Federal Liaison
Dan Nelson, Hydrologist
Bill Quinn, Engineer
Neeley Miller, Senior Planner
Monica Van Bussum, Water Rights Agent
Will Whelan, Nature Conservancy

Helen Harrington, Section Manager
Rich Rigby, Fed Liaison
Morgan Case, Biologist
Cynthia Bridge Clark, Engineer
Sandra Thiel, Planner
Shelley Keen, Section Manager
Diana Ball, Administrative Assistant

Leonard Beck
Burley
District 3

Guests Present

Roger W. Chase
Pocatello
District 4

Peter Anderson, Trout Unlimited
Walt Poole, Idaho Dept. of Fish and Game
Norm Semanko, Idaho Water Users Association
Joe McMahon, Collaborative Processes
Daisy Patterson, University of Montana

Dylan Lawrence, Moffatt Thomas
Kent Lauer, Idaho Farm Bureau
Liz Paul, Idaho Rivers United
Shelley Davis, Barker Rosholt

Vince Alberdi
Kimberly
At Large

Jerry R. Rigby
Rexburg
At Large

Agenda Item No. 2, Agenda and Approval of Minutes 9-10

Chairman Uhling called for any changes to Agenda. Mr. Patton stated in the absence of Interim Director Spackman, staff members will provide updates on several topics. Per the Board's request, Deputy Attorney General, John Homan, will provide information on the Water Supply Bank rules.

Mr. Chamberlain moved to approve Meeting 9-10 Minutes as submitted. Motion was seconded. Minutes for Meeting 9-10 were approved as submitted.

Agenda Item No. 3, Public Comment

Chairman Uhling asked for public comment regarding any items not included on the agenda.

Mr. Peter Anderson, Trout Unlimited, expressed his thanks to the Board.

Ms. Liz Paul, Idaho Rivers United, expressed her thanks and appreciation for the Board members. Ms. Paul discussed critical habitat designation for bull trout. She stated that Arrowrock Reservoir, Anderson Ranch Reservoir, and Upper Boise River Watershed are critical habitat for bull trout in the Boise River basin. Lucky Peak is not designated critical habitat although there are bull trout present via Arrowrock Dam.

Ms. Paul provided information about an Idaho Rivers United event to be held December 15, 2010, at 6:00 p.m. at the Boise public library located at Ustick and Cole. It will be an evening program with US Fish and Wildlife Service to help educate public about critical habitat and the status of bull trout in the Boise basin.

Chairman Uhling suggested scheduling a presentation by Idaho Fish and Game on bull trout critical habitat for a future Board meeting.

Agenda Item 4, IWRB Hydropower Status Report

Mr. Dan Nelson, staff Hydrologist, presented the Hydropower Status Report. He stated that the fiscal reports reflect the current fiscal year period ending November 1, 2010. Actual FY2011 to date numbers show Dworshak produced approximately \$110,755 in revenues over expenses with \$36,926 going into the Repair and Replacement Fund. Total Reserve funds total \$1,226,664. The Board's portion of the Pristine Springs revenues is \$19,472 and that total amount was placed in the Pristine Springs Repair and Replacement Fund. Mr. Nelson noted a correction to the last line of the table footnote showing "To Date" funds in the account totaling \$726,761; the correct amount is \$787,176.

Chairman Uhling asked about creating a Reserve Fund as depicted for Dworshak for Pristine Springs. Mr. Patton responded that Pristine Springs has been treated differently because there are facilities at Pristine Springs other than the hydropower plant, and a Repair and Replacement Fund has not been created specifically for the hydropower plant. The fund is for the entire facility, including fish production, canals, and the pipelines. Mr. Patton stated that the answer to that question depends on what is ultimately decided for the future of the Pristine Spring's facility. There has been discussion about selling the facility and keeping the hydropower facilities under Board ownership or selling the entire facility, including the hydropower facilities, or retaining them in the long term, which will then impact how finances are handled.

Chairman Uhling asked that the Dworshak Reserve Funds visual presentation be added to Pristine Springs. Mr. Patton will have the spreadsheet modified to clarify the numbers.

Mr. Graham asked why the expenses for Dworshak show up as a variance in the budget. Mr. Patton clarified that \$6,000 less than budgeted was spent to this point in the fiscal year. Mr. Graham asked if the FERC fees are once a year. Mr. Patton stated that they are however invoices have not been received to date.

Agenda Item No. 5, IWRB Financial Program

a. Status Report

Mr. Brian Patton provided the Financial Program Status Report. As of November 1, 2010, approximately \$13.77 million is committed for various loans and projects but not disbursed. There is a total loan principal outstanding of approximately \$19.5 million. The current total uncommitted balance is approximately \$1.5 million.

The Status Report is divided into the various categories of committed funds. Mr. Patton informed the Board that they would be taking action on an application from the Woodland Heights Water Association.

Mr. Patton informed the Board that the North Snake and Magic Valley Ground Water Districts have made their scheduled loan payment for the Pristine Springs project. The first two annual payments totaling approximately \$2.4 million dollars have been received and have been committed to the Eastern Snake Plain Aquifer (ESPA) CAMP Projects.

Mr. Patton directed the Board's attention to a list of the Board's Conduit Debt through revenue bonds. He stated this will be an ongoing part of the status report. Mr. Patton also stated there are several projects that will be brought up at the next Board meeting.

Mr. Alberdi asked whether all bonds shown are nonrecourse. Mr. Patton responded that they are. He also stated there is one recourse bond, recourse to the project for the Dworshak bonds but not recourse to the Board's other funds. Pending revenue bond projects are expected to materialize and revenue bonds issued. He stated the Southwest Irrigation Co. pipeline revenue bond is back on schedule. He stated Bear River Bond Pool is under construction, which will be a take-out bond at end of construction in approximately March-April 2011.

Mr. Alberdi asked for an update on the Big Wood-American Falls siphon project. Mr. Patton responded that the project will likely be financed through private funding rather than through the Board. He stated that a similar project was taken up for Glenns Ferry siphon; the loan agreements have been completed, and the project is under construction. Chairman Uhling asked Mr. Patton to thank those entities who have made their payments on time in relation to the ground water loan.

b. Financial Items – Woodland Heights Loan

Mr. Dan Nelson presented a loan request for the Woodland Heights Subdivision #2 water system upgrade project loan in the amount of \$13,500. The improvement project would include replacing well piping and valves, abandoning the old pressure tank, installing a flow meter, and replacing the vault cap and well cap based on a recommendation made by IDEQ during a Sanitary Survey conducted October 2006. Work has been completed on the requirements of the IDEQ Sanitary Survey, and they have begun work set out in the Survey. An emergency well pump replacement depleted homeowners' reserve funds, which were to be used to perform the IDEQ recommendations. Staff recommends a loan in the amount of \$13,500 at 6.0% interest with the conditions as specified in the attached resolution. Due to the small amount of the loan, requiring a Local Improvement District (LID) is not warranted since it would cost more to form the LID than the loan itself.

Mr. Nelson provided additional research on the loan proposal per the Board's request. Mr. Rigby made a motion to accept the resolution as presented in the matter of Woodland Heights Subdivision No. 2 Water Association, Inc. The motion was seconded. Mr. Rigby clarified that the repayment term would be 5 years. Chairman called for a roll call vote.

Roll Call Vote: Mr. Cuddy: Aye; Mr. Alberdi: Aye; Mr. Chase: Nay; Mr. Beck: Aye; Mr. Chamberlain: Aye; Mr. Graham: Aye; Mr. Rigby: Aye; Chairman Uhling: Aye. Motion Passed: 7 Ayes; 1 Nay. Motion carried.

c. Eastern Snake Plain Aquifer (ESPA) Recharge Program Update

Mr. Bill Quinn, staff Engineer, presented an update on the ESPA Recharge Program. He stated the late season recharge program suffered a significant setback with American Falls Reservoir District #2 (AFRD2) opting out of recharge in order to conduct needed maintenance, however the Department recognizes that maintenance needs to be completed at regular intervals. Southwest Irrigation District and the Big Wood Canal Company are the only participants in the fall recharge program. Southwest Irrigation District recharged a total of 2,143 acre-feet through five injection wells supplied by the West Cassia Pipeline. Their recharge ended on October 28, 2010. Big

Wood Canal Company is currently recharging through one injection well with Little Wood River Water at approximately 1.4 cfs. He stated this is more of a test project than a complete recharge program, but it does have the potential to develop into a larger program. Staff welcomes BWCC willingness to experiment with injection wells. To date, Big Wood Canal Company has recharged approximately 100 acre-feet. The total fall recharge through today is a little over 2,200 acre-feet at a cost not expected to exceed \$7,000.

Total recharge to date is approximately 61,384 acre-feet at a cost of \$184,152. Approximately \$200,000 remains in the recharge account, and this amount is expected to be carried over for 2011 recharge. Staff is currently preparing contract amendments to extend the recharge conveyance contracts through 2011, and expects to renew contracts for 2011 with the same canal companies and irrigation districts as 2010.

There was discussion about the \$200,000 balance and what income source would be available when those funds are depleted. Mr. Patton stated that the Board will have to make a decision on whether more funds are made available for the recharge program. Mr. Patton stated there may be approximately \$350,000 that could be reallocated back into conveyance fees. This topic was suggested as a discussion item for the January Board meeting. Chairman Uhling stated that the Board's goal is to disburse funds across the state and fund numerous projects.

Mr. Chamberlain recommended a Board discussion to discuss policy for future recharge needs. There was a discussion regarding long-term funding for the ESPA CAMP. Time will be scheduled at the January work session for a recharge discussion, including the ESPA CAMP.

d. Bell Rapids Water Rights Acquisition Update

Mr. Patton provided the update and stated that the Bell Rapids Water Rights, which was a \$24,375,000 project, has been paid in full. He provided a brief history of the project. He stated all required payments to the Bell Rapids Mutual Irrigation Company and U.S. Bank have been paid in full, and 60,000 of the 74,000 acre-feet is under lease to the BOR through 2035 to satisfy one of the provisions of the Nez Perce water rights agreements. The remaining 14,000 acre-feet is currently unallocated but has been left in-stream to provide a buffer against the Swan Falls minimum flows. There is approximately \$177,000, generally associated with interest derived on funds in that subaccount, remaining in the Bell Rapids subaccount. Staff suggests leaving the funds in place for the next several months to take care of any residual bond trustee fees or other expenses. Once all fees are resolved, the Board can decide on appropriate use of those funds.

Chairman Uhling asked if there is a five-year rolling average by area in the state available for where Board funds have been committed. Mr. Patton responded that there is something in place, and it can be updated and presented to the Board at the next meeting.

There was a short break in the meeting.

Agenda Item No. 6, Planning Activities

a. State Water Plan Update

Ms. Helen Harrington, Section Manager, provided an update on the State Water Plan revision and stated that recent meetings focused on the Snake River Basin section of the plan. She stated that the process requires extra time at this point to consider public comments. The revision process is expected to be finished and brought to the Board in early 2011. There will be approximately five public hearings across the state.

Chairman Uhling asked when a schedule would be available for public hearings related to the SWP revision. Ms. Harrington stated the schedule may be complete by March 2011, and Mr. Patton stated that it should be available to present to the Board for the March Board meeting. Public hearings may be scheduled in conjunction with Board meetings in other areas of the state to coincide with public comment on the SWP revision.

Mr. Graham asked if these would be formal hearings or open house venues. Ms. Harrington confirmed that formal hearings are required by statute.

b. Rathdrum Prairie CAMP

Ms. Sandy Thiel, Planner, provided an update on the Rathdrum Prairie CAMP and stated the process was progressing successfully. The Advisory Committee is hosting an open house as part of their regular meeting in November to be held at the public library in Coeur d'Alene. Public comment on the Draft Plan will be solicited.

The Advisory Committee will reconvene at their regular meeting in December to review comments and continue refining the Draft Plan to submit to the Board in January 2011. The CAMP has stated a clear vision: To provide sustainable source of high quality ground water for current and future economic, social, and environmental benefits and preserve exceptional quality and reliability of the Rathdrum Prairie aquifer.

They have set three clear objectives: 1) meet future demand for water, 2) prevent and resolve water conflicts, and 3) protect the aquifer. Within each objective, action items are designed to ensure that as much as possible they are measurable and achievable rather than having a document that sets out policies that can't be measured.

There was discussion on expectations of funding for and implementation of the Rathdrum Prairie Plan. Suggestions were made for several changes to the Draft Plan. Ms. Harrington stated that the document is posted for public review and cannot be changed at this point. She stated that this is a Draft Plan that will be refined.

c. Treasure Valley CAMP

Ms. Helen Harrington, Section Manager, provided an update on the Treasure Valley CAMP. She stated that the Advisory Committee was appointed in April and there are currently 41 members. There is one resignation and a new appointment for the Board to take action on.

Ms. Harrington stated that the committee is highly motivated and very committed to moving forward on a timely basis. They are currently working towards having a Draft Plan for the Board by March 2011. A copy of the work plan was provided. One key study, *Future Water Study* (WRIME) provides an estimate over the next 50 years. The study indicates an additional demand of 83,000 acre-feet at the low end, which is in line with previous work done. There was an additional study completed on enhancing existing cloud seeding program. She stated the Boise Project Board of Control sponsors an existing program. Results of that study estimate an increase in average stream flow of 33,000 and 99,000 acre-feet.

Ms. Harrington stated that Mr. Rob Frazier, Idaho Wildlife Federation, has submitted his resignation from the TV CAMP on October 13, 2010. Mr. Frazier has not attended any committee meetings. Mr. Frazier recommended Mr. Kevin Decker, IWF, who has attended three of the committee meetings and has been very active in the process. Chairman Uhling asked about a recommendation. Ms. Harrington stated that Mr. Decker is highly motivated and committed to participating in the process and would likely be a productive member and represent an area that would be useful to the process.

Mr. Chamberlain moved to accept Mr. Kevin Decker as a member of the TV Advisory Committee as substitute for Mr. Rob Frazier who has formally resigned. Motion was seconded. Voice vote: 8 Ayes. Motion carried.

d. Eastern Snake Plain Aquifer CAMP

Mr. Rich Rigby, Bureau of Reclamation, provided an update on the ESPA CAMP. He submitted a proposed letter from the Board to be sent to the proposed Hydrology Committee. Chairman Uhling approved and

signed the letter. The last ESPA CAMP meeting was held on October 14, 2010. At that meeting the Funding Committee discussed the options for regional aquifer management districts. The three management options being considered are: 1) aquifer wide with one aquifer management district, 2) a subset that leaves out the two areas of the Committee of Nine who expressed serious oppositions, and 3) a regional approach. There is an Implementation Committee scheduled for Monday, November 22, 2010, in Burley, to discuss these options and make a decision. There was discussion about how the activities will be coordinated.

Agenda Item No. 7, Upper Salmon Water Transactions – Nature Conservancy Water Right Donation

Ms. Morgan Case, Staff Biologist, presented the Board with a new brochure about the Idaho Water Transaction Program recently published by the Board.

Ms. Case provided an update on the recent Nature Conservancy water right donation transaction. She stated that the Department has been working with The Nature Conservancy to permanently protect flows in the Lemhi River. The Nature Conservancy purchased a ranch with specific plans for retiring two water rights in the Upper Lemhi and has donated those water rights to the Board. The Department has completed the Board's ownership change on those water rights. Ms. Case stated that this transaction demonstrates that there is a way to permanently protect water and the partnership approach with The Nature Conservancy and water district is working well.

Mr. Will Whelan, The Nature Conservancy, thanked the Board for the opportunity to acknowledge progress and thank those who make it possible. He stated that the donated water rights total 1.23 cfs and will contribute to the Lemhi River flows. The Conservancy's role in these transactions is to facilitate and negotiate the agreements with ranchers, real estate transactions, and securing private match dollars. Mr. Whelan expressed praise for Ms. Case's role and her expertise in helping facilitate this transaction, and for Rick Sager, water master in the Lemhi area, and his hard work. Chairman Uhling expressed his appreciation for the role of the Nature Conservancy and stated that their partnership is valued by the Board.

There was discussion about water right applications on the upper Snake River. Ms. Case stated that members of the Northwest Power and Conservation Council will meet with Department staff to discuss that issue. She stated that Idaho Dept. of Fish and Game is asked to comment on the public interest aspect of new water rights in the Salmon basin. Department staff will continue to work on a process that will approve applications that are in the public interest as related to ESA issues. Mr. Chamberlain asked about permanent donations of U.S. Forest Service water rights in the Upper Salmon basin. Ms. Case commented that those water rights are currently leased to the Water Supply Bank indefinitely. Chairman Uhling thanked Ms. Case for her hard work on this project.

Agenda Item No. 8, Water Storage Studies

Ms. Helen Harrington presented the update on storage studies currently underway. She presented an update on the Lower Boise River Interim Feasibility Study. She stated the U.S. Corps of Engineers was authorized to conduct an investigation of the Lower Basin River. They entered into an agreement with the Board in May 2009 to initiate the Interim Phase of the two-phase feasibility study. The surface water storage component was included in the first phase to provide technical information for the Treasure Valley CAMP process. The second phase will focus on alternatives other than surface water storage.

The Interim Feasibility Study examined the Bureau of Reclamation's 12 locations as identified in their 2006 Boise Payette Water Storage Assessment study and evaluated them to establish a short list of storage options. Public comments were received as a result of the public hearings held in June and July 2010 and considered prior to finalizing the report. The top three ranked sites to be evaluated are: 1) Arrowrock, new dam slightly downstream of the existing dam with potential volume of 317,000 acre-feet; 2) Alexander Flats with potential volume of 68,000 acre-feet; and 3) Twin Springs with potential volume of 300,000 acre-feet.

The results of the screening analysis were presented at the last Board meeting. Based on the results of the analysis, the Board recommended the top three dams be evaluated for engineering design, cost estimate, and hydrologic analysis when additional federal funding is available. The project is currently on hold pending federal funds.

Ms. Harrington provided an update on the Henrys Fork special study. HJM8 (2008) directed the Board to investigate potential new surface water projects across the state, including the Teton Dam replacement. SB1511(2008) appropriated \$1.8 million to the Board for the Minidoka Dam enlargement study, which identified \$1.4 million, and the Henrys Fork Teton Dam replacement study for \$400,000.

The Board entered into an agreement with the Bureau of Reclamation in June 2009 to study options for replacing the benefits of the original Teton Dam storage with other areas in the basin. The study scope was expanded to identify development of water supplies – aboveground, on stream and off stream storage, in the Henrys Fork contributory basins. Study costs are projected to be approximately \$800,000, with Bureau of Reclamation and IDWR each contributing \$400,000. The agreement is currently being amended to reflect the modified scope. The study is expected to be completed around September 2012.

At the last Henrys Fork Watershed Council meeting on October 19, 2010, Bureau of Reclamation discussed the formation of a core stakeholder workgroup comprised of members from all key constituencies to ensure representatives from each group are aware of how all background decisions and recommendations are made. The Henrys Fork Watershed Council has taken the lead on this project.

Mr. Graham asked for clarification on the \$400,000 committed in 2008. Mr. Patton confirmed that it was.

Ms. Harrington provided a brief update on the Weiser Galloway project. A cost share agreement between the Board and the Corps of Engineers was executed on June 3, 2010, to initiate the Weiser Galloway Gap Analysis, Economic Evaluation, and Risk Based Cost Analysis project. The project will reexamine specific components of the previous identified Galloway Dam and Reservoir site based on current conditions and is intended to be used by decision makers to determine whether to move forward with a full feasibility study. Estimated costs are projected to be \$200,000 to be shared equally between the Board and the Corp. The Board has committed up to \$100,000 from the Revolving Development Account with an option to provide in-kind work to offset the Board's cash contribution. The study is expected to be completed by March 2011.

Chairman Uhling suggested the storage subcommittee meet around March 10 or 11 around the scheduled Board meeting, which would allow an opportunity for other members of the storage committee to tour the Weiser Galloway facility.

Agenda Item No. 9, Minimum Stream Flow Program – Northern Idaho Adjudication

Mr. Patton provided an update on the Board's filing fee claims for the minimum stream flow water rights in the Northern Idaho Adjudication. A budget request was made for the first phase of the claim fees, which is approximately \$464,000 (the Board's entire claim fees are estimated at \$1.7 million). Research for claim fees showed that the Governor of Idaho holds minimum lake level water rights for the three large lakes in north Idaho resulting from 1937 legislation and is faced with the same issue as the Board regarding claim fees in the adjudication. The Governor's claim fees total about \$581,000. There was discussion about how to cover the Board's claim fees and the Governor's claim fees. It was suggested that there may be a phased payout over a 5-year period and discussions are ongoing towards that direction. Chairman Uhling asked if the payout was expected through the budget process to cover the claim fees. Mr. Patton confirmed that it was and would be budgeted over a 4- to 5-year period.

Agenda Item No. 10, Director's Report

In Interim Director Gary Spackman's absence, staff provided presentations on several issues that the Director wanted to present.

Jennifer Cuhacian, Hydrologist, presented a water supply presentation on the 2011 water supply outlook. There was review and discussion on Ms. Cuhacian's slide presentation. She stated that above average weather conditions are expected based on a climate prediction for La Nina conditions. She stated that a favorable water supply is estimated going into 2011.

Mr. John Homan, Deputy Attorney General, presented information on the Priest Lake outlet structure. Bonner County's main interest is to ensure that the outlet structure be managed in the same manner that it has been historically. Statutory requirements mandate that it be operated at certain lake levels to maintain the lake during certain recreation periods. Avista's contract is set to terminate on March 1, 2011, and they have not communicated their intent to date.

Mr. Carl Duncan, the contract operator for Avista, has expressed interest in staying on after Avista's contract ends on March 1, 2011. Mr. Graham noted that there is a serious concern over the safety of the operator when he is performing maintenance. It was suggested that OSHA requirements be reviewed and a harness be designed or procured for the operator. Chairman Uhling confirmed that the operator's safety issues need to be addressed and recommended looking into fall protection.

Mr. Homan provided a brief update on the extra office space available after the Office of Energy Resources vacated the Water Center in June 2010. The Department may have a plan in place to lease out approximately 9,000 sq ft of the available 10,000 sq ft, which should bring some relief to the budget.

Mr. Homan provided a brief update on the Water Supply Bank rule and stacked water rights. Mr. Shelley Keen, Section Manager, presented a memo to the Board regarding this issue. The proposed \$250 per water right fee was originally based on total lease applications; each water right requires a separate application. Potentially reducing application fees for stacked water rights will bring in substantially less than the proposed application fees, which would affect operating the Water Supply Bank program at the level anticipated. There was discussion on how much time it takes to review multiple (stacked) water right applications.

Mr. Homan stated that the current deadline to make changes to the existing rule is Friday, November 19. Legal counsel recommended that the Water Supply Bank Subcommittee should meet separately and vote on the rule change and then bring their decision before the entire Board for consideration. The Water Supply Bank Subcommittee will hold a telephonic meeting prior to Friday, November 19, to discuss limiting the application fee on stacked, or multiple overlapping, water rights.

Mr. Rigby moved that the Water Supply Bank Subcommittee hold a special meeting to discuss reevaluating the existing rule on application fees and then submit it to the Board for final approval. Motion was seconded. Chairman called for a voice vote: 8 Ayes Motion carried.

Mr. Chris Bromley, Deputy Attorney General, provided an update on the current status of conjunctive administration delivery calls, including mitigation plans. The three active actions are: 1) Thousand Springs, 2) Surface Water Coalition, and 3) A&B Irrigation District.

The Thousand Springs 2005 delivery call filed by spring users is set for argument before the Idaho Supreme Court on December 3, 2010, in Jerome, Idaho. Mr. Bromley stated that he expects a decision by late spring.

A 2005 delivery call was initiated by a surface water coalition group of surface water providers. Director Dreher found material injury. There was a remand issue on Director Tuthill's decision not to issue what is now

referred to as the methodology for determining material injury. Interim Director Spackman in addition to other staff produced what is now known as the methodology order. The methodology order is now on a separate litigation track, as well as its offspring this irrigation season. The remand issued was finalized and is now an appealable decision. Notices of Appeal have been filed by IDWR, ground water users, City of Pocatello, and the Surface Water Coalition. Two main issues on appeal to the Supreme Court are: 1) what standard of evidentiary review does the Director apply to information presented to him on a delivery call, and 2) can the Director use a baseline irrigation volume for purpose of forecasting material injury. He stated that the fundamental issue is where does the Director start with a material injury investigation.

According to Mr. Bromley, logical outgrowth of these is that for junior ground water right users to continue to divert and pump water they need to have a mitigation plan in place. A hearing was held this spring on the mitigation plan submitted by ground water users. Ground water users would have to demonstrate proof that they had secured that volume of storage water in order to turn on for the season. That mitigation plan was approved by the Director and appealed by the Surface Water Coalition. It is scheduled for argument on December 13, 2010. A resolution is expected before the start of the irrigation season.

A&B Irrigation District, Unit B, is a ground water provider for a Bureau of Reclamation project. This was a 2007 delivery call. The Director held a hearing and found no material injury to A&B. Judicial review agreed with the Director's finding however the evidentiary method applied was never stated so it was remanded back to the Director and is in the appeal period.

Agenda Item No. 11, Other Items Board Members May Wish to Present

Each Board members offered expressions of thanks and gratitude for Mr. Rigby's service and commitment to the Board. Mr. Rigby shared his words of appreciation for the Board and the opportunity he had to help make a difference as a member of the Board for the past 16 years.

Mr. Garrick Baxter, Deputy Attorney General, and Mr. Homan addressed the Board regarding the statutes as to the Board's ability to make a final decision on a revision to the Water Supply Bank rule. They stated that a special meeting can be held with at least 24-hour notice.

Agenda Item No. 12, Next Meeting and Adjourn

Meeting was Adjourned at approximately 11:45 a.m. Next Board meeting is scheduled for January 20 and 21, 2011, in Boise, Idaho.

Respectfully submitted this ____ day of _____, 2010.

Bob Graham, Secretary

Diana Ball, Administrative Assistant II

Board Actions:

1. Mr. Chamberlain moved to approve the minutes. Motion was seconded. All were in favor and the Minutes for Meeting 9-10 were approved. The Chairman asked for a voice vote and all were in favor.
2. Mr. Rigby moved to approve the Woodland Heights Project Revolving Development Account Loan in the amount of \$13,500 at a rate of 5.0% with the conditions as specified in the attached resolution.

Roll Call Vote: Mr. Cuddy: Aye; Mr. Alberdi: Aye; Mr. Chase: Nay; Mr. Beck: Aye;
Mr. Chamberlain: Aye; Mr. Graham: Aye; Mr. Rigby: Aye; Chairman Uhling: Aye. Motion Passed:
7 Ayes; 1 Nay. Motion carried.

3. Mr. Chamberlain made a motion to move to accept Mr. Kevin Decker as a member of the Treasure Valley Advisory Committee as substitute for Mr. Rob Frazier who has formally resigned. Motion was seconded. The Chairman asked for a voice vote and all were in favor. Motion carried.
4. Mr. Rigby moved that the Water Supply Bank Subcommittee meet to discuss reevaluating the existing rule on application fees and then submit it to the Board for final approval. Motion was seconded. The Chairman asked for a voice vote and all were in favor. Motion carried.



IDAHO WATER RESOURCE BOARD

MINUTES OF TELEPHONIC MEETING 11-10

C.L. "Butch" Otter
Governor

November 19, 2010
Boise, Idaho

Terry T. Uhling
Chairman
Boise
District 2

Chairman Chamberlain called the meeting to order at 8:00 a.m.

Gary M. Chamberlain
Vice-Chairman
Challis
At Large

Agenda Item No. 1, Roll Call

Board Members Present

Gary Chamberlain, Chairman	Vince Alberdi
Terry Uhling	Roger Chase
Jerry Rigby	Leonard Beck
Chuck Cuddy, <i>absent</i>	Bob Graham, <i>absent</i>

Bob Graham
Secretary
Bonners Ferry
At Large

Staff Members Present

**Charles "Chuck"
Cuddy**
Orofino
District 1

Brian Patton, Bureau Chief	Shelley Keen, Section Manager
Monica Van Bussum, Water Rights Agent	John Homan, Deputy Attorney General
Diana Ball, Administrative Assistant	

Leonard Beck
Burley
District 3

Audio recording started shortly after roll call due to technical difficulty.

Agenda Item No. 2, Public Comment

Roger W. Chase
Pocatello
District 4

There was no public comment.

Vince Alberdi
Kimberly
At Large

Agenda Item 3, Water Supply Bank Committee Application Fee Rules Change

Mr. Beck provided brief overview of proposed change to water supply bank rule.

Jerry R. Rigby
Rexburg
At Large

Mr. Rigby (on phone) asked about forfeiture review in water supply bank application process. Mr. Chamberlain stated that the topic was discussed at the water supply bank subcommittee meeting, and it was determined that staff is not spending significant time on forfeiture during review process.

A motion was made to accept the amended water supply bank rules resolution. It was seconded. Chairman Chamberlain asked Mr. Patton to read the resolution for the benefit of all present. There was a brief discussion about the wording of the resolution. Mr. John Homan, Deputy Attorney General, stated that the wording was reviewed and considered to be acceptable. Chairman Chamberlain called for a roll call vote.

Roll Call Vote: Mr. Chamberlain: Aye; Mr. Chase: Aye; Mr. Beck: Aye; Mr. Alberdi: Aye; Mr. Uhling: Aye; Mr. Rigby: Aye. Motion Carried: 6 Ayes; 2 absent.

Agenda Item No. 4, Adjourn

Chairman Chamberlain asked for any other business. No other business. Meeting was adjourned at approximately 8:15 a.m. Next regular Board meeting is scheduled for January 21, 2011, in Boise, Idaho.

Respectfully submitted this ____ day of _____, 2011.

Bob Graham, Secretary

Diana Ball, Administrative Assistant II

Board Actions:

1. Mr. Beck moved that the water supply bank rules be amended to impose a lease application filing fee of \$250.00 per water right, however for lease applications involving stacked water rights on the same parcel the lease application filing fee shall be capped at \$500; and to keep the rental fee percentage retained by the Department at ten percent (10%) rather than increasing it to twenty-five percent (25%). Motion was seconded.

Roll Call Vote: Mr. Chamberlain: Aye; Mr. Chase: Aye; Mr. Beck: Aye; Mr. Alberdi: Aye; Mr. Uhling: Aye; Mr. Rigby: Aye. Motion Carried: 6 Ayes; 2 absent.



MEMO

To: Idaho Water Resource Board
From: Brian W. Patton
Subject: IWRB Hydropower Status Report
Date: January 6, 2011

This is a report of the current status of the IWRB's Hydropower Projects.

ENERGY PRODUCTION

The IWRB's energy production at its hydropower plants is as follows:

	Dworshak (kWh)	Pristine Springs No. 1 (kWh)	Pristine Springs No. 3 (kWh)	Total
Fiscal Year 2001	19,778,735			19,778,735
Fiscal Year 2002	20,862,419			20,862,419
Fiscal Year 2003	20,767,551			20,767,551
Fiscal Year 2004	20,776,847			20,776,847
Fiscal Year 2005	21,652,641			21,652,641
Fiscal Year 2006	19,431,403			19,431,403
Fiscal Year 2007	19,632,262			19,632,262
Fiscal Year 2008	17,168,693	225,615	324,600	17,718,908
Fiscal Year 2009	18,203,529	845,038	1,236,000	20,284,567
Fiscal Year 2010	19,250,808	875,171	1,302,000	21,427,979
Fiscal Year 2011				
July 2010	1,982,645	68,369	100,800	2,151,814
August 2010	1,456,559	64,307	116,400	1,637,352
September 2010	1,554,771	72,601	120,600	1,747,972
October 2010	1,576,098	65,615	61,200	1,702,913
November 2010	1,428,533	72,374	135,000	1,635,907
Total to date since construction or acquisition by IWRB	205,210,494	2,289,090	3,396,600	

Notes

- 1) The Dworshak plant was placed on line at the end of June 2000. The Pristine Springs plants were acquired by the IWRB at the beginning of April of 2008.
- 2) There is a 2-month lag time between energy production and payment from BPA for energy produced at Dworshak, and a 1-month lag time between energy production and payment from Idaho Power for energy produced at Pristine Springs.

The following attachments are included with this report:

- Fiscal Year 2011 Budget and Cash Flow Status for the Dworshak plant.
- Fiscal Year 2011 Cash Flow Status for the Pristine Springs plants.
- Graph of monthly energy generation.

Fiscal Year 2011 Budget and Cash Flow Status
January 1, 2011

	FY 2011 Budget	Budgeted FY11 to Date	Actual FY 2011 to Date	Variance from Budgeted to Date
REVENUES				
Power Sales	\$ 900,000	\$ 450,000	\$ 521,433	\$ 71,433
Interest	\$ 40,000	\$ 20,000	\$ 13,174	\$ (6,826)
TOTAL REVENUES	\$ 940,000	\$ 470,000	\$ 534,607	\$ 64,607
EXPENSES				
Debt Service	\$ 553,200	\$ 276,600	\$ 276,600	\$ -
Operations & Maintenance	\$ 111,000	\$ 55,500	\$ 63,461	\$ 7,961
Repairs	\$ 18,000	\$ 9,000	\$ -	\$ (9,000)
FERC Fees	\$ 22,000	\$ 22,000	\$ -	\$ (22,000)
Repair/Replacement Fund (1)	\$ 94,000	\$ 47,000	\$ 53,461	\$ 6,461
TOTAL EXPENSES	\$ 798,200	\$ 410,100	\$ 393,522	\$ (16,578)
REVENUES OVER EXPENSES	\$ 141,800	\$ 59,900	\$ 141,085	\$ 81,185

RESERVE FUNDS

FERC Fee Payment Fund	\$ 30,001
Repair/Replacement Fund (1)	\$ 1,213,195
TOTAL RESERVE FUNDS	\$ 1,243,196

(1) This repair/replacement fund is held by the IWRB in the Revolving Development Account.

2

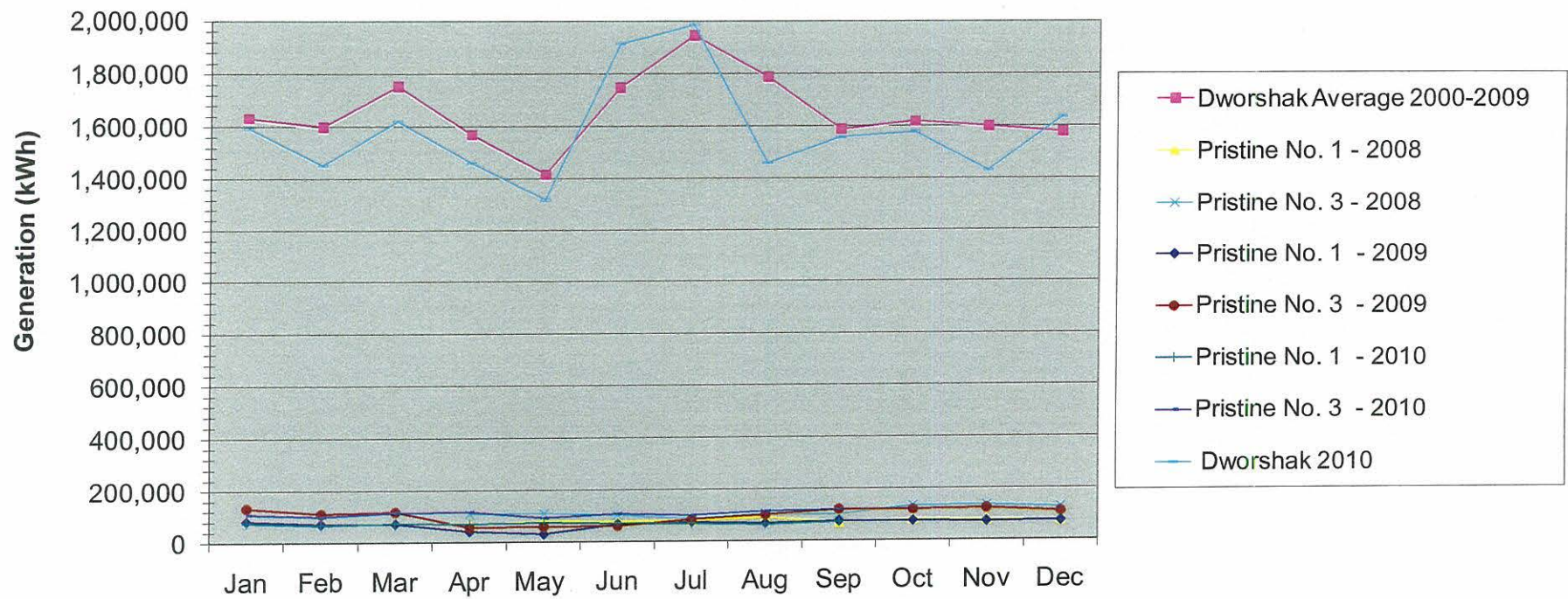
IDAHO WATER RESOURCE BOARD
Pristine Springs No. 1 and No. 3 Hydropower Plants
Fiscal Year 2011 Budget and Cash Flow Status
January 1, 2011

	FY 2010 Budget	Budgeted FY10 to Date	Actual FY 2010 to Date	Variance from Budgeted to Date
REVENUES				
Power Sales (net from IPCO)	\$ 114,200	\$ 57,100	\$ 56,391	\$ (709)
TOTAL REVENUES	\$ 114,200	\$ 57,100	\$ 56,391	\$ (709)
EXPENSES				
O&M and revenue sharing (Seapac)	\$ 57,100	\$ 19,031	\$ 28,196	\$ 9,165
Repairs	\$ 1,000	\$ 333	\$ -	\$ (333)
Repair/Replacement Fund (1)	\$ 56,100	\$ 37,736	\$ 28,196	\$ (9,541)
TOTAL EXPENSES	\$ 114,200	\$ 57,100	\$ 56,391	\$ (709)
REVENUES OVER EXPENSES	\$ -	\$ -	\$ -	\$ -

REPAIR/REPLACEMENT FUND (1) \$828,240

(1) The Pristine Springs Repair/Replacement Fund is for the entire facility, not just the hydropower plants. Interest earned on the repair/replacement fund, facility rental payments, and hydropower income contribute to the fund.

IWRB Hydropower Operations



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: Daniel Nelson, Staff Hydrologist
Date: December 20, 2010
Subject: Chaparral Water Association – Water System Upgrades

Action Item: \$68,000 loan request

1.0 INTRODUCTION

The Chaparral Water Association is requesting a loan of \$68,000 to upgrade the Association's irrigation well and add variable speed drives to both the irrigation and culinary wells. The Chaparral Subdivision is located approximately halfway between the City of Star and the City of Emmett in Ada County. The Chaparral Water Association supplies water to 25 water users who have 5 to 8 acre parcels. The water used for irrigation is used mainly for yards and small pastures. Even though the irrigation system and the culinary system are operated separately, the licensing exam states that the two wells are connected together for backup purposes. Chaparral Water Association has attained three loans for a total of \$90,151 from 1991 to 2000 for upgrades to their water system in the past. All payments have been made in a timely fashion. The three loans were combined together into a single payment, and the loans will be paid in full in approximately 2015.

2.0 BACKGROUND

The Chaparral Water Association has struggled with their irrigation system for several years. In 1991, they borrowed \$28,953 from the Board to replace their irrigation well. In 1997, they borrowed \$3,994 for a booster pump for their irrigation system. In 2000, they borrowed an additional \$57,204 to replace their irrigation delivery mainlines due to leaks. After the work performed in the 1990's, the system operated sufficiently until the last 2 years. The water level in the well has dropped to the point that the top few bowls on the pump are exposed. In order to resolve this issue, they are going to need to deepen the well and lower the bowls in the well.

3.0 PROPOSED PROJECT

The proposed project is to deepen the irrigation well, rebuild the irrigation pump, and add variable speed drives to the irrigation and culinary systems. They have received initial bids of just under \$68,000 without any contingency costs. When a minimal contingency of 7.3% is included, the estimated project costs are as follows:

Description	Project Cost
Well Deepening	\$41,190
Rebuild of Existing Well Pump and Variable Speed Drives	\$21,875
Contingency	\$4,935
TOTAL	\$68,000

4.0 BENEFITS

The current irrigation system is only delivering approximately 1/3 of the water that it was after the last pump work that was done. It is believed that deepening the well and lowering the pump intake will give enough well storage to maintain water coverage over the well's bowls. The Chaparral Water Association has been working to fix this problem since 1991, and this could be the final link to bring this irrigation system back to its original capacity. An added benefit to this repair is that the Chaparral Water Association has agreed to allow Department Staff to monitor the well drilling, and install tubing to allow year-round monitoring of the water levels in this well. The area that the subdivision is located in is part of the North Ada County Hydrogeologic Investigation (NACHI) that is associated with the Treasure Valley Comprehensive Aquifer Management Planning process. The monitoring of the well drilling and the monitoring of water levels on this well will give the NACHI and the Chaparral Water Association valuable data that currently doesn't exist.

5.0 FINANCIAL ANALYSIS

Chaparral Water Association is requesting funding in the amount of \$68,000. Table 1 below describes the estimated payment options for the \$68,000 loan at an interest rate of 5.5%:

Table 1. Estimated Payment Options

Term	Estimated Annual Payment - Revolving Account Loan	Before Cost Per Acre / Year	After Cost per Acre / Year
5 years	\$15,924	\$22.84	\$33.13
10 years	\$9,021	\$22.84	\$28.67
15 years	\$6,775	\$22.84	\$27.22
20 years	\$5,690	\$22.84	\$26.52

Note: The before costs per acre include the existing loan payments of \$6,900 per year. The existing loans will be paid in full in 2015. They have approximately 5 years left to pay on these loans.

Table 2. Financial Ratios

Indicator	Before Project	5 year term 5.5%	10 year term 5.5%	15 year term 5.5%	20 year term 5.5%
Revenues/Expenses Strong: greater than 1.20 Average: 1.0 – 1.2 Weak: less than 1.0	1.04 (Average)	1.09 (Average)	1.03 (Average)	1.03 (Average)	1.03 (Average)
Debt Service Coverage Ratio Strong: 1.20 or greater Average: 1.0 – 1.20 Weak: less than 1.0	N/A (Strong)	1.09 (Average)	1.15 (Average)	1.20 (Strong)	1.24 (Strong)
Cash Reserves/Annual Expenses Strong: greater than 1.0 Average: 0.5 – 1.0 Weak: less than 0.5	0.65 (Average)	0.44 (Weak)	0.51 (Average)	0.54 (Average)	0.56 (Average)
Cost per acre foot delivered. Strong: less than \$10.00 Average: \$10.00 - \$20.00 Weak: more than \$20.00	\$39.01 (Weak)	\$39.32 (Weak)	\$27.43 (Weak)	\$23.56 (Weak)	\$21.70 (Weak)
Overall Rating	Average	Average -	Average	Average	Average

NOTE: It should be noted that although this is an irrigation loan, all of the lands being irrigated are 4 to 6 acre pastures within a subdivision. The cost per acre foot estimates were made based on production farming properties and not hobby farm type properties. Therefore, there is no major concern that the cost per acre foot amount is so high.

6.0 WATER RIGHTS

Chaparral Water Association water rights are as follows:

Water Right	Water Right Type	Priority Date	Source	Amount
63-3576	Decree	1/16/1967	Ground Water	1.01 cfs/ 180 afa
63-7700	Decree	12/18/1972	Ground Water	1.07 cfs/ 403.8 afa

Please Note: When these two water rights are combined they are limited to 129 acres of irrigation, 1.07 cfs, and 403.8 afa.

7.0 SECURITY

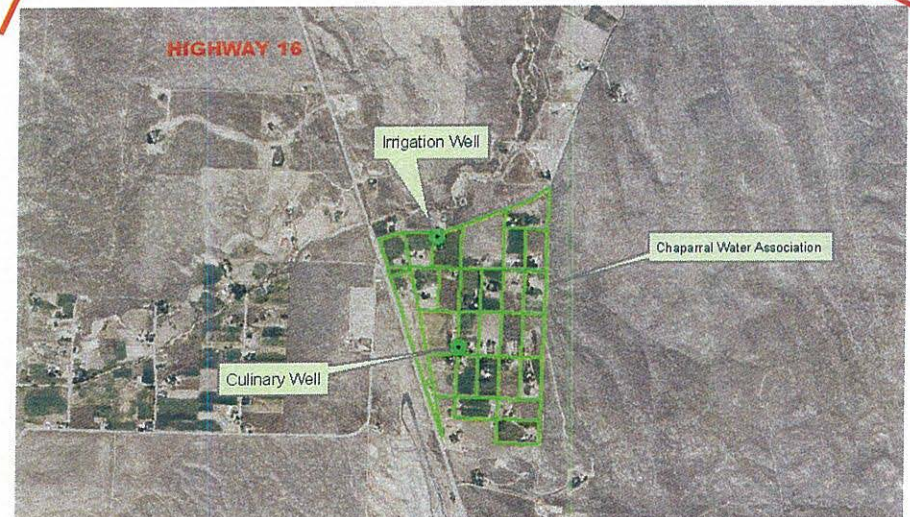
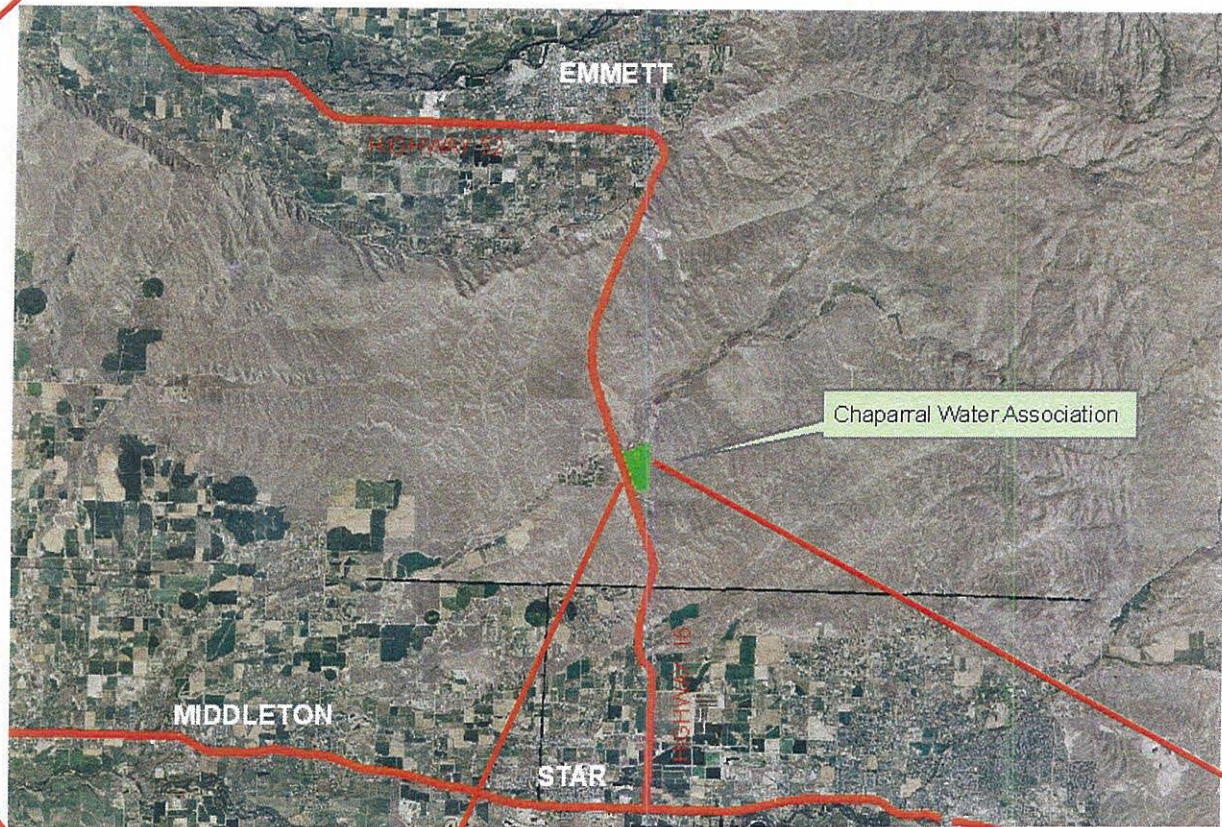
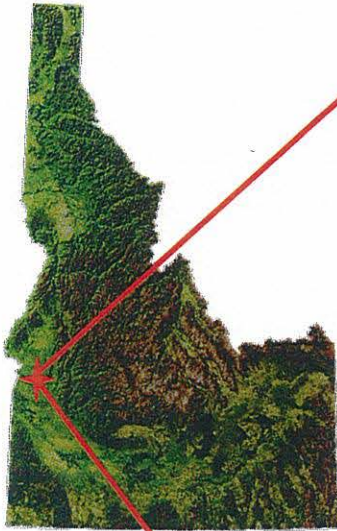
The IWRB will hold Chaparral Water Association water rights and associated delivery structures for this loan if approved.

8.0 CONCLUSION AND RECOMMENDATION

This loan will be used to deepen the irrigation well, rebuild the irrigation pump, and add variable speed drives to the irrigation and culinary systems. The system is currently not adequate to provide sufficient water to all of the property owners.

Staff recommends approval of the Chaparral Water Association's Revolving Development Account loan in the amount of \$68,000, with conditions as specified in the attached resolution.

Chaparral Water Association Project Area



BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE)
CHAPARRAL WATER ASSOCIATION)
_____)
A RESOLUTION TO MAKE
A FUNDING COMMITMENT

WHEREAS, the Chaparral Water Association (Association) has submitted an application to the Idaho Water Resource Board (IWRB) requesting a loan in the amount of \$68,000; and

WHEREAS, the Association currently provides irrigation water to 25 water users irrigating 129 acres between Emmett and Star, Idaho; and

WHEREAS, the Association is requesting funding to deepen their irrigation well, and upgrade their irrigation and culinary well pumps; and

WHEREAS, the proposed project will improve the irrigation well capacity to provide adequate water for irrigation; and

WHEREAS, the Association 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 is in compliance with the State Water Plan.

NOW THEREFORE BE IT RESOLVED that the IWRB approves a loan not to exceed \$68,000 from the Revolving Development Account at 5.5 % interest with a _____ year repayment term and provides authority to the Director of the Idaho Department of Water Resources, to enter into contracts with the District on behalf of the IWRB.

BE IT FURTHER RESOLVED that this resolution and the approval of the loan is subject to the following conditions:

- 1) The Association shall comply with all appropriate Federal, State, and Local rules and requirements including Association bylaws that may apply to the proposed project and the borrowing of funds.
- 2) The Association shall provide adequate security to the Board for this loan.
- 3) The Association shall establish a reserve account in the amount equal to one annual payment within one year of the completion of project construction.

DATED this 22nd day of January, 2011.

TERRY T. UHLING, Chairman
Idaho Water Resource Board

ATTEST _____
BOB GRAHAM, Secretary



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-DOMESTIC 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 Feasibility Study".

The Loan Feasibility Study 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: _____

Chaparral Water Association
Organization name

PO Box 414
PO Box/Street Address

Franklin ID 83616
City, County, State, Zip Code

Sandra Seward - Sec
Name and title of Contact Person

208-860-8830
Contact telephone number

Sandy12264@aol.com
e-mail address

Project location legal description T15N, R01W Sections 9+16

B. Is your organization registered with the Idaho Secretary of State's office? Yes ☒ No ☐

IWRB Non-drinking loan form 2/08

C. Purpose of this loan application.

- ☐ New Project
☒ Rehabilitation or replacement of existing facility
☐ DEQ requirement
☐ Other: _____

D. Briefly describe the project: *Variable Speed Drives added to both Domestic + irrigation pump, Additional footage to Irrigation well With repairs, Maintenance and upgrades to well + irrigation pump.*

III. WATER SYSTEM:

A. Source of water:

- ☐ Stream ☒ Groundwater
☐ Reservoir ☐ Other

B. Water Right Numbers:

Water Right	Stage	Priority Date	Source	Amount
<i>633576</i>	<i>Decree</i>	<i>1/16/1967</i>	<i>Ground Water</i>	<i>403.8 AF</i>
<i>637700</i>	<i>Decree</i>	<i>12/18/1972</i>	<i>Ground Water</i>	<i>403.8 AF</i>

Note: Stage refers to how the water right was issued. (License, Decree, or Permit)

C. If irrigation/lateral system:

Number of acres served: *129*
Number of shareholders served: *25 homes*
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: _____
Number of people within District or service area: _____

E. If an Association/Municipality the number of residences served by the system:

Number of residences served: *25*
Number of hookups possible: _____

IV. USER RATES:

A. How does your organization charge users rates?

- ☒ Per acre ☐ Per hook up
☐ Per share ☐ Tax assessment

Explain what a share is: _____

☐ Other, explain *However new charges can be per share and/or per acre depending on if Domestic or irrigation services were performed.*

B. Current rate? \$ 14.78 per acre
(Share, hook-up, month, year, etc.)

C. When was the last rate change? _____ (month/year)

D. Does your organization measure water use? Yes ☐ No ☒

If yes, explain how: _____

E. Does your organization have a regular assessment for a reserve fund? Yes ☒ No ☐

If yes, explain how it is assessed: _____

annually and/or as needed

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) monthly loan fee added to monthly water fee

Will an increase in assessment be required? Yes ☐ No ☐

When will new assessments start and how long will they last?

unknown based on loan proceedings and requirements.

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

Irrigation and domestic parcel

1600.00

all well and pump equipment

unknown

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) Savings \$ 21,928.00

C. Cash on hand Checking \$ 152.00

Append H
in Study

D. Outstanding indebtedness:

To Whom	Annual Payment	Amt. Outstanding	Years Left
Daf WR	\$6904.00	\$29,196.00	5

E. What other sources of funding have been explored to fund the project? (example: NRCS, USDA Rural Development, Banks, Local Government, etc.)

none

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.

Append. J in Study.

Amount of funds requested: \$68,000.00

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:

Sarah Goul 11/7/2010

Chaparral Water Association

Kelsie Atkinson
President
608-0412

Randy Wilder
Vice-President
286-7921

Sandy Seward
Secretary
286-9275

**Feasibility Study
Chaparral Water Association
Upgrades, Repairs and Maintenance**

Introduction

The Chaparral Water Association (CWA), located in Eagle Idaho, Ada County operates a ground water supply system for the CWA to supply domestic and irrigation to the residences in the subdivision. The current irrigation well and pump are unable to keep up with the seasonal peak demand for it's 25 residents. Some of the screens in the pump are not even in the water. There is a huge decrease in production, for example the gpm has gone from 580 gpm (7 years ago) to 230 gpm at the end of this past season. A couple of the residents at the end of one group has 9 pounds of pressure which isn't enough to even operate a sprinkler system. Several residents have lost 10 feet of pasture on all sides because the reach of the sprinklers isn't there.

Project Sponsor

The CWA is an entity that governs the CWA subdivision and is registered with the State of Idaho. There are currently 25 year round households. CWA is authorized to do projects and assess fees as voted on by its residents. CWA has the power to discontinue water delivery to the residences if they fail to pay their bill. A copy of the Articles of Incorporation and By-Laws are included in Appendix A.

Project Service Area and Facilities

The CWA provides domestic water to 25 homes and irrigation to approximately 129 acres. The CWA is in T05N, R01W, Sections 9 & 16 in Ada County. Detailed location map on following page.

Hydrology and Water Rights

The source of water that serves the residences is a groundwater well. The water right for the well(s) has a date(s) of January 1967 and December 1972. Detailed Water Right Summary included in Appendix B.



BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE)
LOWER LEMHI 2011 ANNUAL,)
BIG TIMBER/CANYON BEYELER,)
LITTLE SPRINGS SNYDER)
WATER TRANSACTIONS CONTRACTS))

A RESOLUTION TO MAKE
A FUNDING COMMITMENT

WHEREAS, Chinook salmon and steelhead habitat in the Lemhi River basin is limited by low flow in the lower Lemhi River and seasonally disconnected tributaries; and

WHEREAS, it is in the interest of the State of Idaho to improve lower river flows and reconnect Lemhi River tributaries to encourage recovery of ESA-listed Chinook salmon and steelhead fish; and

WHEREAS, staff has developed twenty-year agreements not to divert water from Big Timber Creek, Canyon Creek, and Little Springs Creek to reconnect stream flow for anadromous and resident fish; and

WHEREAS, staff has developed one-year agreements not to divert water from the lower Lemhi River to improve stream flow for anadromous and resident fish; and

WHEREAS, one million two hundred sixty-seven thousand four hundred fifty-four dollars and five cents (\$1,267,454.05) is available through the Idaho Fish Accord – Idaho Water Transactions Fund to fund the cost of said agreements; and

WHEREAS, staff anticipates the funds for the Big Timber/Canyon Beyeler and Little Springs Snyder transactions being placed into the Idaho Water Resource Board (IWRB) Revolving Development Account for annual payment to the water right owners; and

WHEREAS, the Lower Lemhi 2011 Annual, Big Timber/Canyon Beyeler, and Little Springs Snyder 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 eighty-two thousand three hundred forty-three dollars and sixty-five cents (\$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 not to divert, using an amount not to exceed six thousand dollars (\$6,000.00).

NOW THEREFORE BE IT RESOLVED that the IWRB authorizes the Chairman to enter into contracts with William and Karl Snyder or subsequent owners for an agreement not to divert out of Little Springs Creek in the amount of three hundred fifty-three thousand eight hundred five dollars and seventy-one cents (\$353,805.71).

NOW THEREFORE BE IT RESOLVED that the IWRB authorizes the Chairman to enter into contracts with Beyeler Ranches LLC or subsequent owners for an agreement not to divert out of Big Timber Creek and Canyon Creek in the amount of eight hundred twenty-five thousand three hundred four dollars and sixty-nine cents (\$825,304.69).

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 one million two hundred sixty-seven thousand four hundred fifty-four dollars and five cents (\$1,267,454.05).

DATED this 21st day of January, 2011.

_____, Chairman
Idaho Water Resource Board

ATTEST: _____
_____, Secretary
Idaho Water Resource Board

Memorandum

To: Idaho Water Resource Board
From: Morgan Case
Date: 9/24/2010
Re: 2011 Transactions in Development – Big Timber/Canyon Beyeler
Action Item – Resolution to approve funding

Action item: Attached is a resolution authorizing the Board to enter into a 20-year agreement not to divert out of Big Timber Creek and Canyon Creek with Beyeler family and authorizing the Board to expend \$825,304.69 from the Idaho Fish Accord Idaho Water Transactions Fund.

The two components of this water transaction were presented to the South/Central Minimum Stream Flow Subcommittee of the IWRB on September 10, 2009 and July 14, 2010.

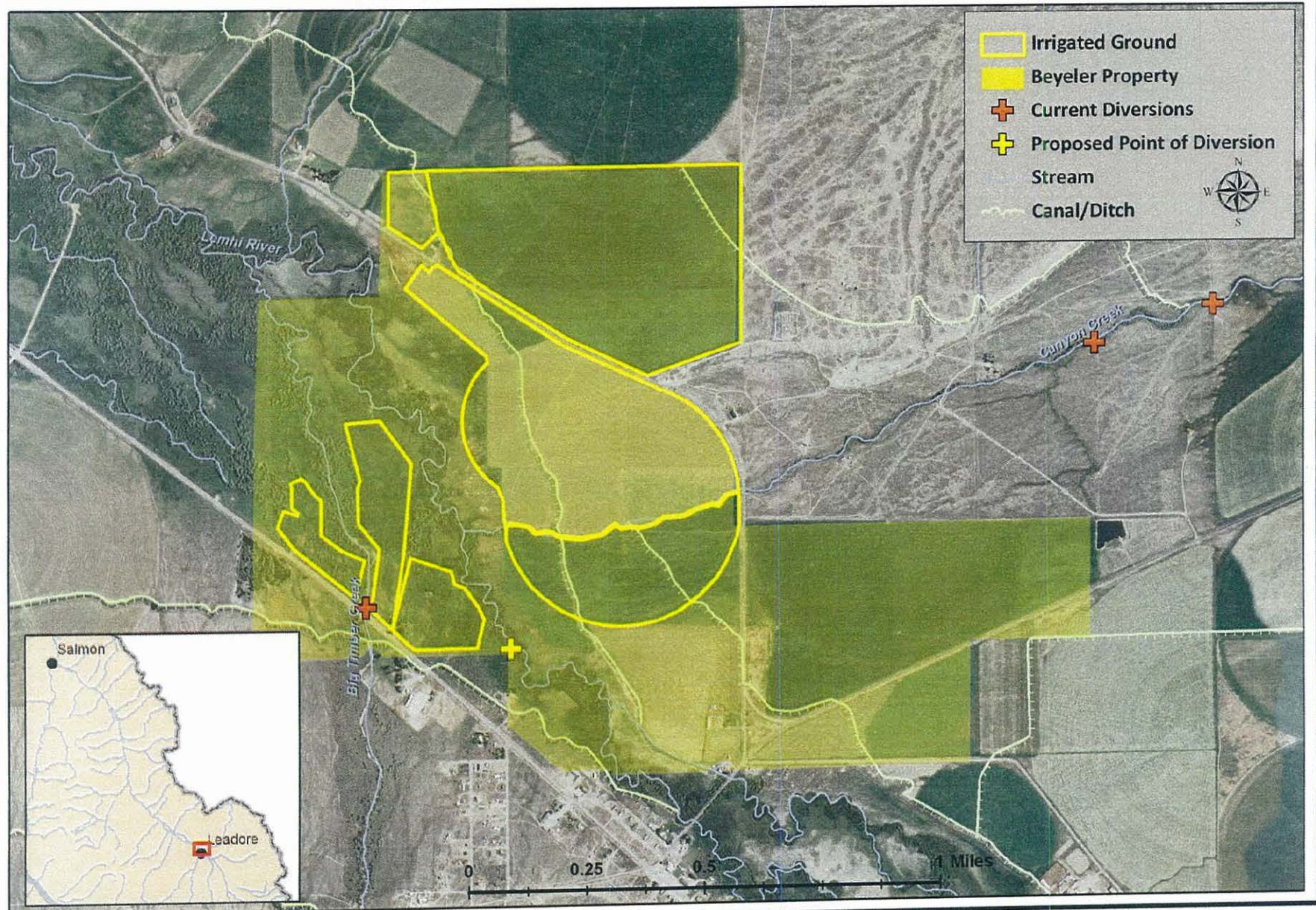
Endangered fish recovery efforts in the Lemhi River basin hinge upon reconnection of currently dewatered tributaries. The draft Lemhi Conservation Plan includes State commitment to reconnect 10 tributaries in the next 20-years. Big Timber Creek and Canyon Creek, upper basin tributaries, are both high priorities on the list of possible reconnections. Habitat upstream of the dewatered reaches in both creek is ideal for spawning and rearing Chinook salmon and steelhead.

Board staff and partner agencies have been working with Merrill Beyeler on two projects to reconnect Big Timber and Canyon Creeks. The Big Timber project involves transferring the senior-most water right (1.4 cfs) from Big Timber Creek to a pumping station on the Lemhi River. This would add to the 4.5 cfs being protected in Big Timber from the Board's water transaction with Leadore Land Partners. The Canyon Creek project involves transferring 4.0 cfs from the lower Canyon Creek diversions to another pumping station on the Lemhi River. The two projects were combined when Beyeler suggested one pumping station in the river is better than two. The new point of diversion will require a pumping station that will increase on-farm cost to the operators. Staff would like to develop a 20-year agreement not to divert with Merrill Beyeler to leave 1.4 cfs in Big Timber Creek and 4.0 cfs in Canyon Creek and pump out of the Lemhi River.

In order to make the project economically feasible for the Beyeler family, staff proposes entering into a 20-year agreement not to divert out of Big Timber Creek and Canyon Creek. Project costs are based upon pumping cost estimates, with an annual 5% increase to account for potential power rate increases. Funding is available through the Idaho Fish Accord Water Transaction Fund.

The transaction cost to the IWRB will be \$825,304.69 over the 20-year term. Funding for this project is available through the Idaho Fish Accords Water Transactions Fund. The funds would be placed into the IWRB's Revolving Development Account from which annual payments would be made.

Beyeler Big Timber/Canyon Creek Reconnect Project



Memorandum

To: Idaho Water Resource Board

From: Morgan Case

Date: 1/20/2011

Re: Water Transactions Program –2011 Lower Lemhi Annual Transaction

Action Item: Resolution authorizing expenditure for 2011 Lower Lemhi Annual Transaction

Action Item

Attached is an expenditure of funds resolution for the annual Lower Lemhi 2011 agreements not to divert in order to bridge the 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 **\$6,000.00**.

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.

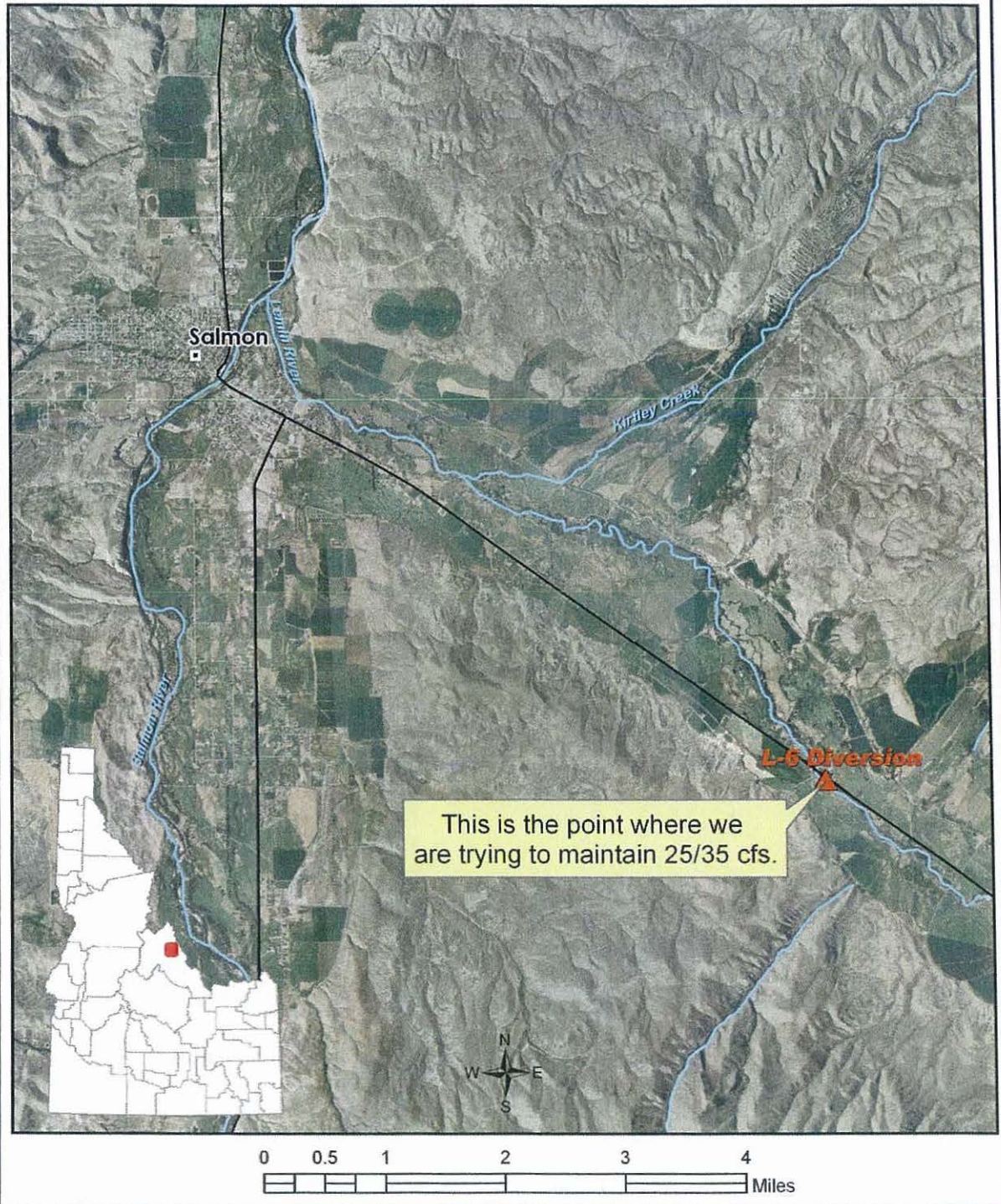
For the past several years, the Board has been worked to meet the 35 cfs target. Efforts have led to the following:

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.

Lower Lemhi River Reach of Concern - L-6 to Salmon River



Memorandum

To: Idaho Water Resource Board

From: Morgan Case

Date: 9/24/2010

Re: 2011 Transactions in Development - Little Springs Creek Snyder

Action Item

This water transaction was presented to the South/Central Minimum Stream Flow Subcommittee of the IWRB on July 14, 2010.

Little Springs Creek is a spring-fed tributary of the Upper Lemhi River. It provides rearing habitat for juvenile Chinook salmon, steelhead, and other native fish species. Irrigation on Little Springs is complex. There are five diversions with water rights out of Little Springs, and it serves as a conveyance for Lemhi River diversions L-52 and L-50. Little Springs Creek is currently dewatered during the majority of the irrigation season. Reconnection of the creek to the Lemhi River is a priority under the Lemhi Conservation Plan. Partner agencies are developing projects that move towards reconnection. With sufficient flow improvements there is the potential for steelhead and Chinook spawning in the creek. The Board previously approved the Little Springs Kauer transaction which will improve flows in Little Springs Creek. The Snyder transaction is intended to build upon the Kauer transaction.

The Snyder family has two water rights (74-1574 and 74-1576) that divert up to 5.69 cfs of water out of 5 irrigation diversions in lower Little Springs Creek. Those diversions can completely de-water Little Springs Creek during the irrigation season.

The proposed project would eliminate the lowest 3 diversions on Little Springs Creek (the other diversions have other users) and move the Snyder diversion to the L-48/49 ditch on the Lemhi River (See attached map). This would permanently connect Little Springs Creek to the Lemhi River, providing enhanced habitat for juvenile salmonids.

In order to make the project economically feasible for the Snyder family, staff proposes entering into a 20-year agreement not to divert out of Little Springs Creek. Project costs are based upon pumping cost estimates, with an annual 5% increase to account for potential power rate increases. Funding is available through the Columbia Basin Water Transactions Program or the Idaho Fish Accord Water Transaction Fund.

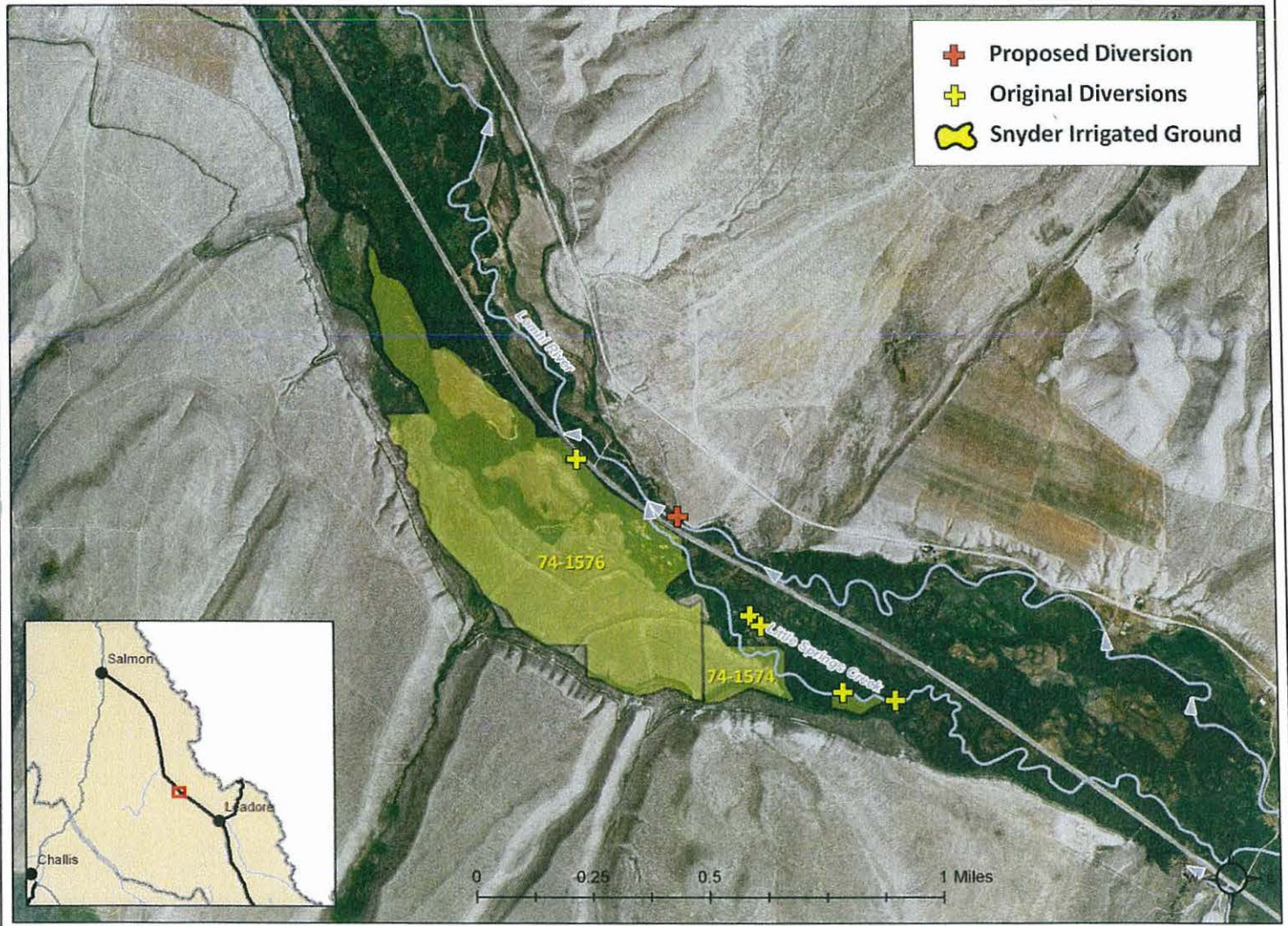
The transaction cost to the IWRB will be \$353,805.71 over the 20-year term.

Funding for this project is available through the Idaho Fish Accords Water Transactions Fund. The funds would be placed into the IWRB's Revolving Development Account from which annual payments would be made.

Action item:

Attached is a resolution authorizing the Board to enter into a 20-year agreement not to divert out of Little Springs Creek with the Snyder family and authorizing the Board to expend \$353,805.71 from Idaho Fish Accord Idaho Water Transactions Fund.

Little Springs Transaction - Snyder



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: Bear River Loan Applications File

From: Brian Patton
Dan Nelson

Date: December 29, 2010

Subject: Update on Bear River Area Bond Loan Applications

1.0 INTRODUCTION

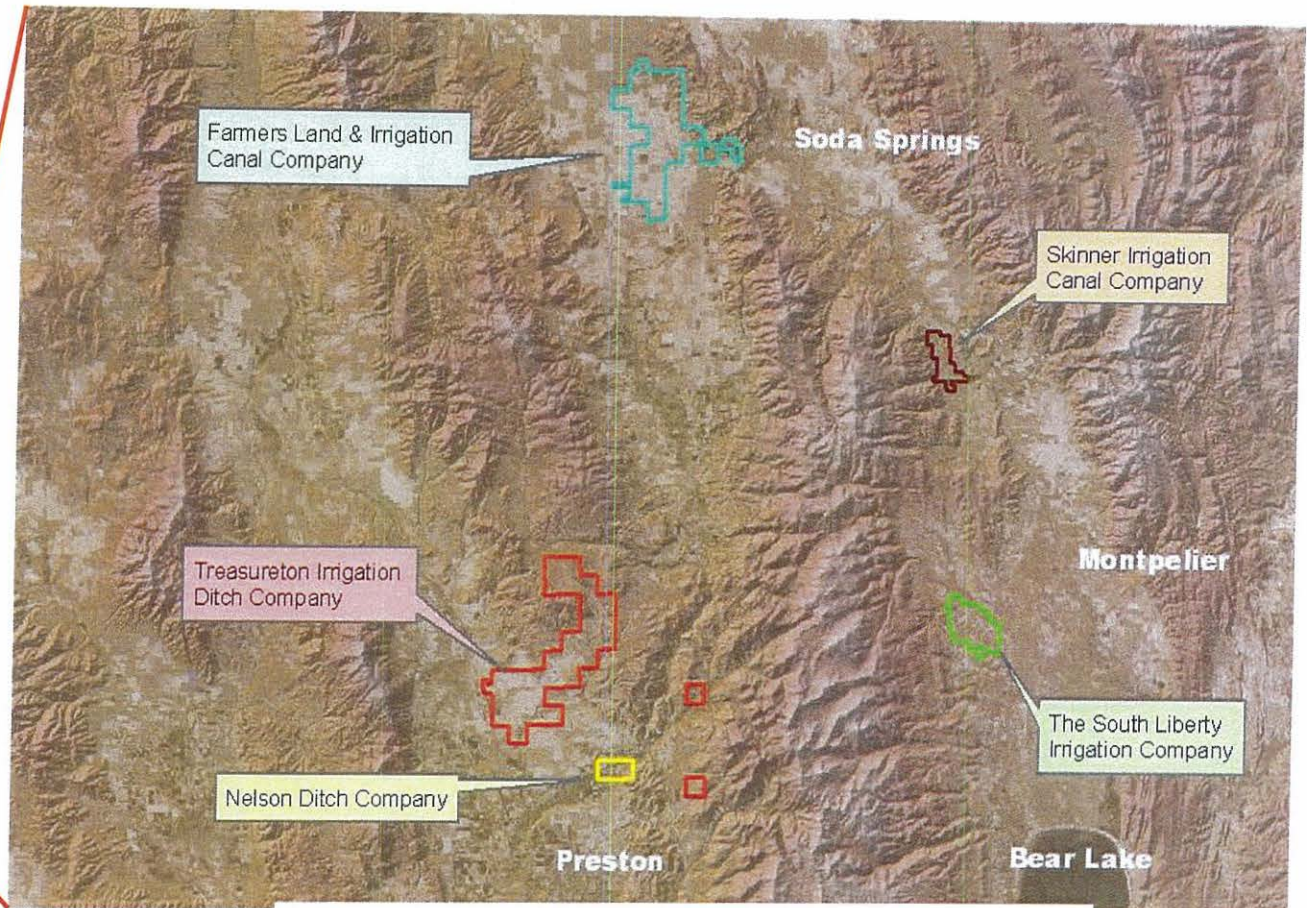
The Bureau of Reclamation issued a Stimulus Grant to Water District 11 in the Bear Lake area of southeastern Idaho. This grant allowed several canal and irrigation companies to construct individual projects with a 50% cost share. Five canal companies pursued a revolving bond loan through the Board which required them to apply to the county for a Local Improvement District. All of the five companies have successfully formed their Local Improvement Districts and have started or completed construction of the projects. The five companies are requesting \$2,220,000 in financing for their various projects. The \$2,220,000 will be matched with \$2,461,540 with stimulus grant funds from the Bureau of Reclamation, and \$228,516 from the companies. The estimated cost of all five projects is \$4,764,452.

2.0 CURRENT STATUS AN PROPOSED TIMELINE

It is believed that all of these companies will have completed the construction of their projects by the end of January. Testing of the systems may not be able to be accomplished until spring due to freezing temperatures. The irrigation companies may want to delay closing out the construction phase of these projects until they can test the pipeline for their projects to ensure that additional construction is not needed.

Once the construction for these projects has been closed out, the different Local Improvement Districts will need to have their engineer create an assessment roll, which in turn will need to be approved by the counties. The property owners in the Local Improvement District will then be given 30 days to pay their portion of the assessment in full.

Once the assessment rolls have been adopted, the Board will be asked to vote on the resolution to sell the bonds for these loans. We believe that the board could see the resolutions to issue the bonds for these loans either at the March or May meetings. However, it may take longer if the canal companies wait to test their systems prior to closing out construction. It appears as though the resolutions will be put before the Board within the next two to three meetings. Everything appears to be proceeding along as well as can be expected for these projects, and it appears as though they will be completed very soon.



Bear River Revolving Loan Project Areas

The five Canal Companies are:

Treasureton Irrigation Ditch Company – located 7 miles north of Preston, ID – irrigating 750 to 1,000 acres.

Nelson Ditch Company – located northeast of Riverdale, ID – irrigating 150 to 400 acres.

South Liberty Irrigation Company - located near the City of Ovid, ID – irrigating 1100 to 1800 acres.

Skinner Irrigation Canal Company – located 3.5 miles west of Georgetown, ID – irrigating 1800 acres.

Farmers Land & Irrigation Canal Company – located west of Soda Springs, ID – irrigating 4040 acres.

Please Note: South Liberty had early concerns that they would not have sufficient funding through the revolving bond loan. The applied for a Revolving Development Account loan in the amount \$200,00 to be used if the bond loan was not adequate. The loan was approved, but they have yet to draw any funds on this loan.

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: Daniel Nelson, Staff Hydrologist

Date: January 5, 2011

Subject: Idaho Water Resource Board Funding Review

1.0 INTRODUCTION

A request was made at the November 16, 2010 Idaho Water Resource Board (Board) meeting for staff to provide an overview of where Board funding has been distributed across the State. The graphs and spreadsheets attached to this memo provide the information requested.

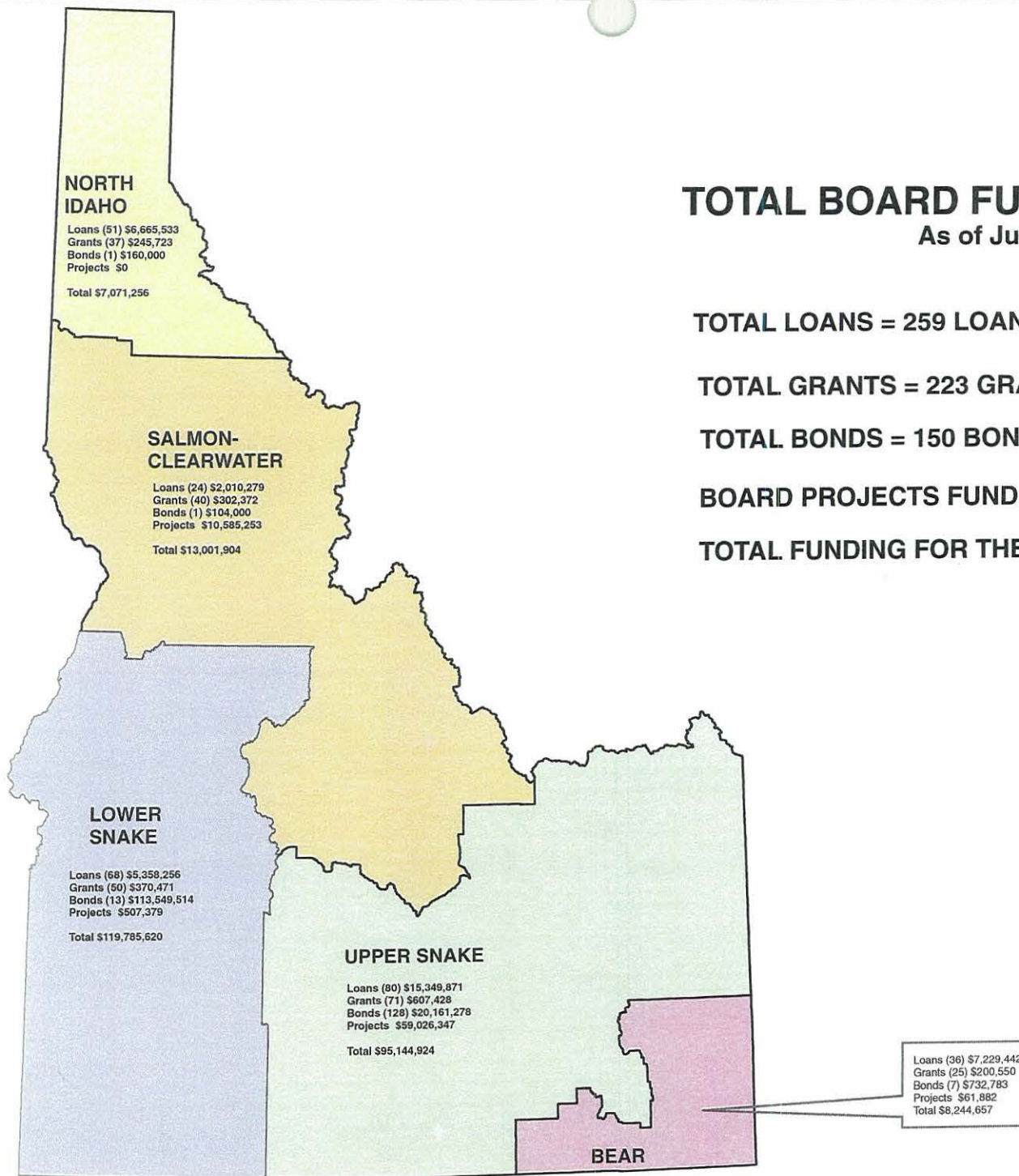
2.0 BACKGROUND

The information provided was compiled from past annual reports and meeting minutes. Staff has attempted to account for all loans, grants, bonds, and board projects up to June 30, 2010. All funding information after June 30, 2010 can be found in next year's Water Resource Funding Program Annual Report.

3.0 DATA DESCRIPTIONS

Six graphs and one spreadsheet have been submitted for this review.

- The first graph depicts the State of Idaho broken down into five regions which roughly represent the five hydrologic regions described in the State Water Plan. This graph shows the total loans, grants, bonds and projects funded for each region, and the total amount of funds distributed for the State of Idaho.
- The Regional Breakdown of Board Funding table also provides the number and total funds distributed by region and the total for the State of Idaho.
- The Percentage of Board Funding Per Region table shows the percent of each funding type that each region received.
- The last five graphs depict each region, and provide a breakdown by county of the funds distributed to each region.



TOTAL BOARD FUNDING STATEWIDE

As of June 30, 2010

TOTAL LOANS = 259 LOANS FOR \$36,613,381

TOTAL GRANTS = 223 GRANTS FOR \$1,726,544

TOTAL BONDS = 150 BONDS FOR \$134,707,575

BOARD PROJECTS FUNDING = \$70,180,861

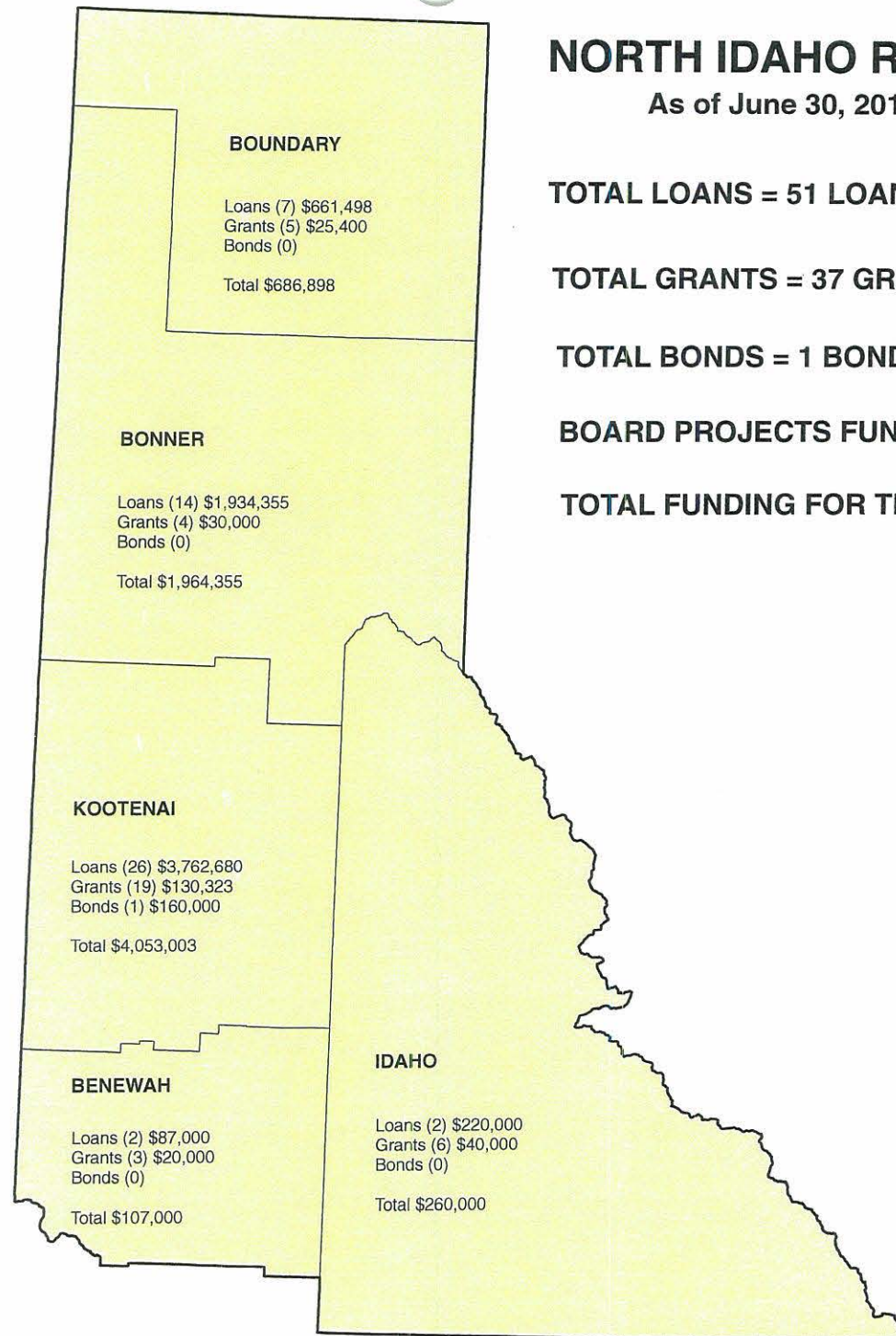
TOTAL FUNDING FOR THE STATE = \$243,228,361

Regional Breakdown of Board Funding

Region	Loan #	Loan Amount	Grant #	Grant Amount	Bond #	Bond Amount	Project Amount	Total Amounts
North Idaho	51	\$6,665,533	37	\$245,723	1	\$160,000	\$0	\$7,071,256
Salmon Clearwater	24	\$2,010,279	40	\$302,372	1	\$104,000	\$10,585,253	\$13,001,904
Lower Snake	68	\$5,358,256	50	\$370,471	13	\$113,549,514	\$507,379	\$119,785,620
Upper Snake	80	\$15,349,871	71	\$607,428	128	\$20,161,278	\$59,026,347	\$95,144,924
Bear	36	\$7,229,442	25	\$200,550	7	\$732,783	\$61,882	\$8,224,657
TOTALS	259	\$36,613,381	223	\$1,726,544	150	\$134,707,575	\$70,180,861	\$243,228,361

Percentage of Board Funding Per Region

Funding Type	North Idaho Region	Salmon/ Clearwater Region	Lower Snake Region	Upper Snake Region	Bear Region
Percent of Total Loan Dollars	18.2%	5.5%	14.6%	41.9%	19.7%
Percent of Total Grant Dollars	14.2%	17.5%	21.5%	35.2%	11.6%
Percent of Total Bond Dollars	0.1%	0.1%	84.3%	15.0%	0.5%
Percent of Total Project Dollars	0.0%	15.1%	0.7%	84.1%	0.1%
Percent of Total Dollars	2.9%	5.3%	49.2%	39.1%	3.4%



NORTH IDAHO REGION

As of June 30, 2010

TOTAL LOANS = 51 LOANS FOR \$6,665,533

TOTAL GRANTS = 37 GRANTS FOR \$245,723

TOTAL BONDS = 1 BOND FOR \$160,000

BOARD PROJECTS FUNDING = NONE

TOTAL FUNDING FOR THE REGION = \$7,071,256

SALMON CLEARWATER REGION

As of June 30, 2010

TOTAL LOANS = 24 LOANS FOR \$2,010,279

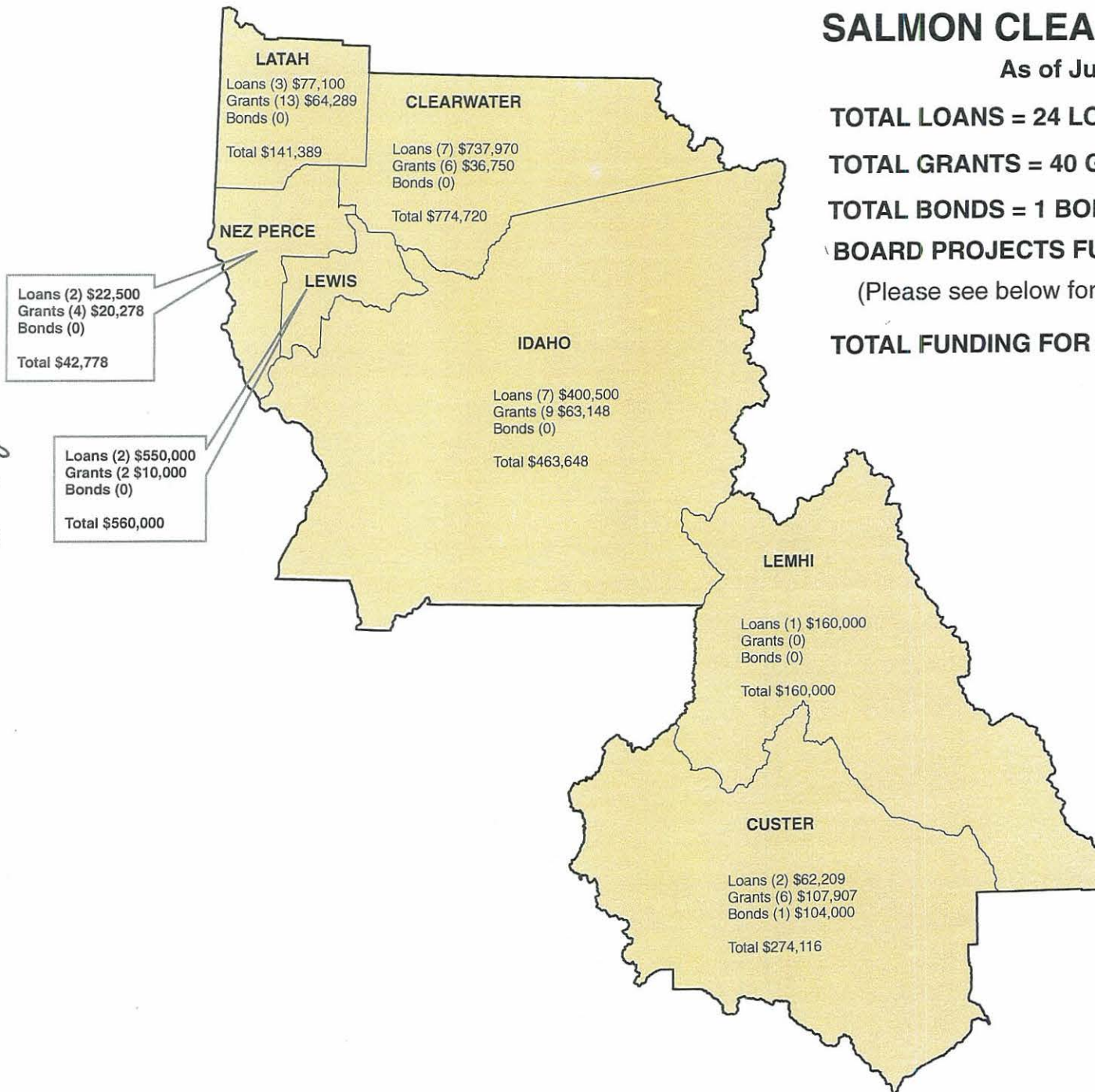
TOTAL GRANTS = 40 GRANTS FOR \$302,372

TOTAL BONDS = 1 BOND FOR \$104,000

BOARD PROJECTS FUNDING = 10,585,253

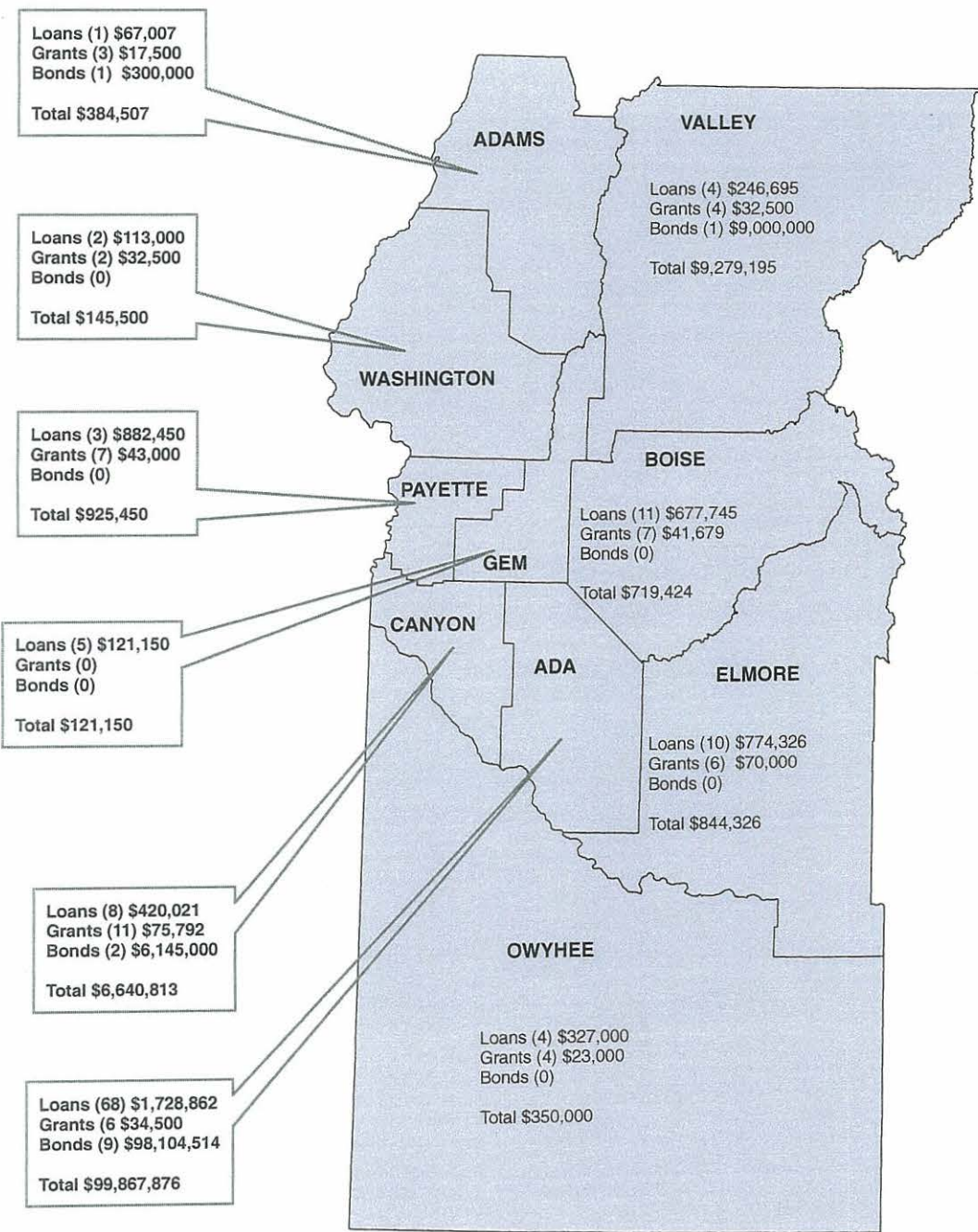
(Please see below for individual projects)

TOTAL FUNDING FOR THE REGION = \$13,001,904



BOARD PROJECTS	
Project	Amount
Dworshak Hydropower Project	\$5,760,000
2003 Water Transactions	\$8,875
2004 Water Transactions	\$32,566
2005 Water Transactions	\$330,926
Lemhi River Water Right Appraisals	\$31,000
2006 Water Transactions	\$248,751
2007 Water Transactions	\$621,671
2008 Water Transactions	\$1,564,813
2009 Water Transactions	\$1,266,778
2010 Water Transactions	\$719,873
TOTALS	\$10,585,253

Page 6



LOWER SNAKE RIVER REGION

As of June 30, 2010

TOTAL LOANS = 68 LOANS FOR \$5,358,256

TOTAL GRANTS = 50 GRANTS FOR \$370,471

TOTAL BONDS = 13 BOND FOR \$113,549,514

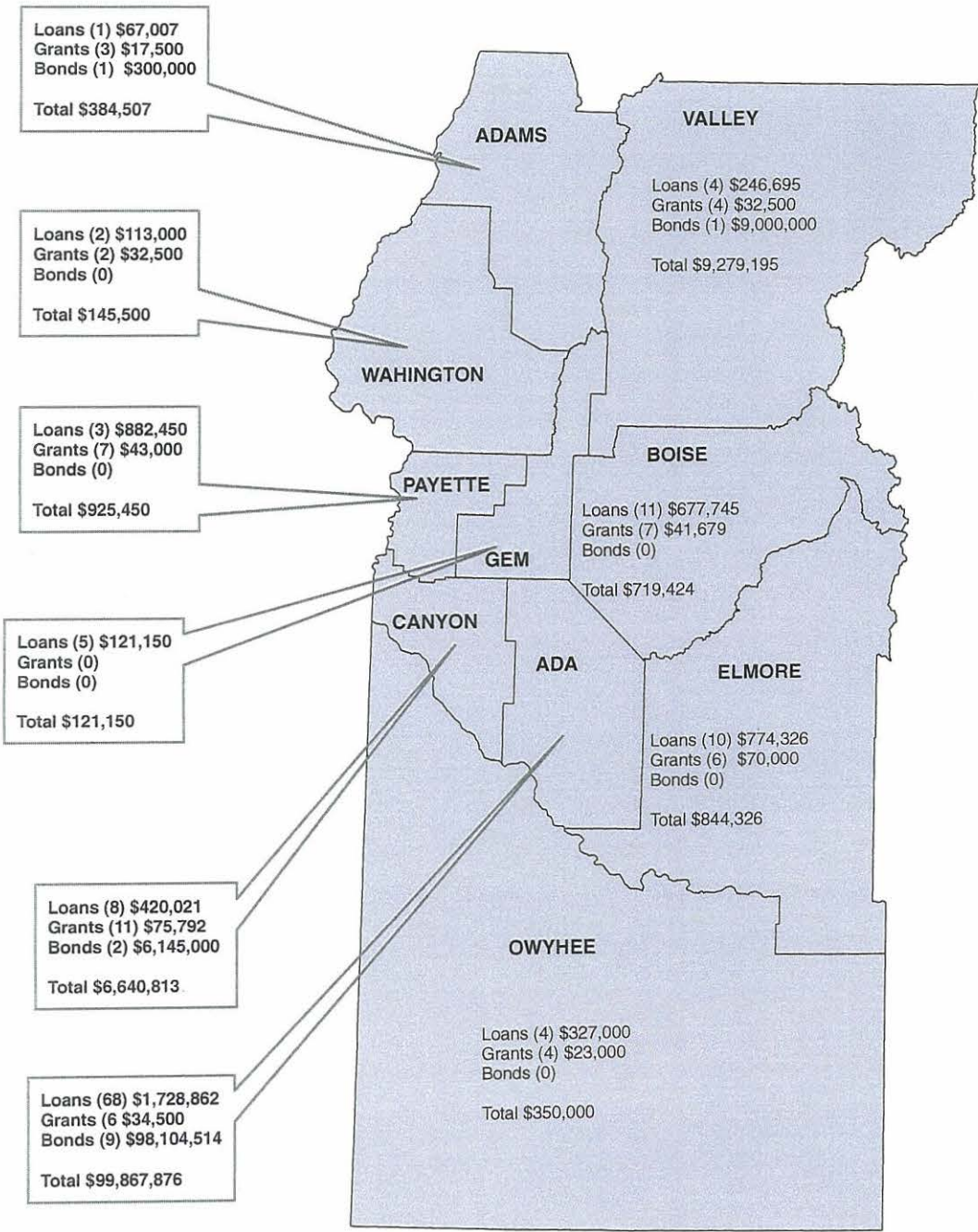
BOARD PROJECTS FUNDING = \$507,379

(Please see below for individual projects)

TOTAL FUNDING FOR THE REGION = \$119,785,620

Board Projects	
Project	Amount
1982 - Idaho Department of Water Resources Bond	\$13,517
Indian Hills Irrigation Project	\$4,917
1990 Galloway Dam Study	\$18,945
1989 Galloway Dam Study	\$20,000
2010 - Boise River Storage Study for possible storage sites on the Boise River	\$350,000
2010 - Weiser Galloway Water Resource Management and Water Storage Project	\$100,000
TOTALS	\$507,379

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LOWER SNAKE RIVER REGION

As of June 30, 2010

TOTAL LOANS = 68 LOANS FOR \$5,358,256

TOTAL GRANTS = 50 GRANTS FOR \$370,471

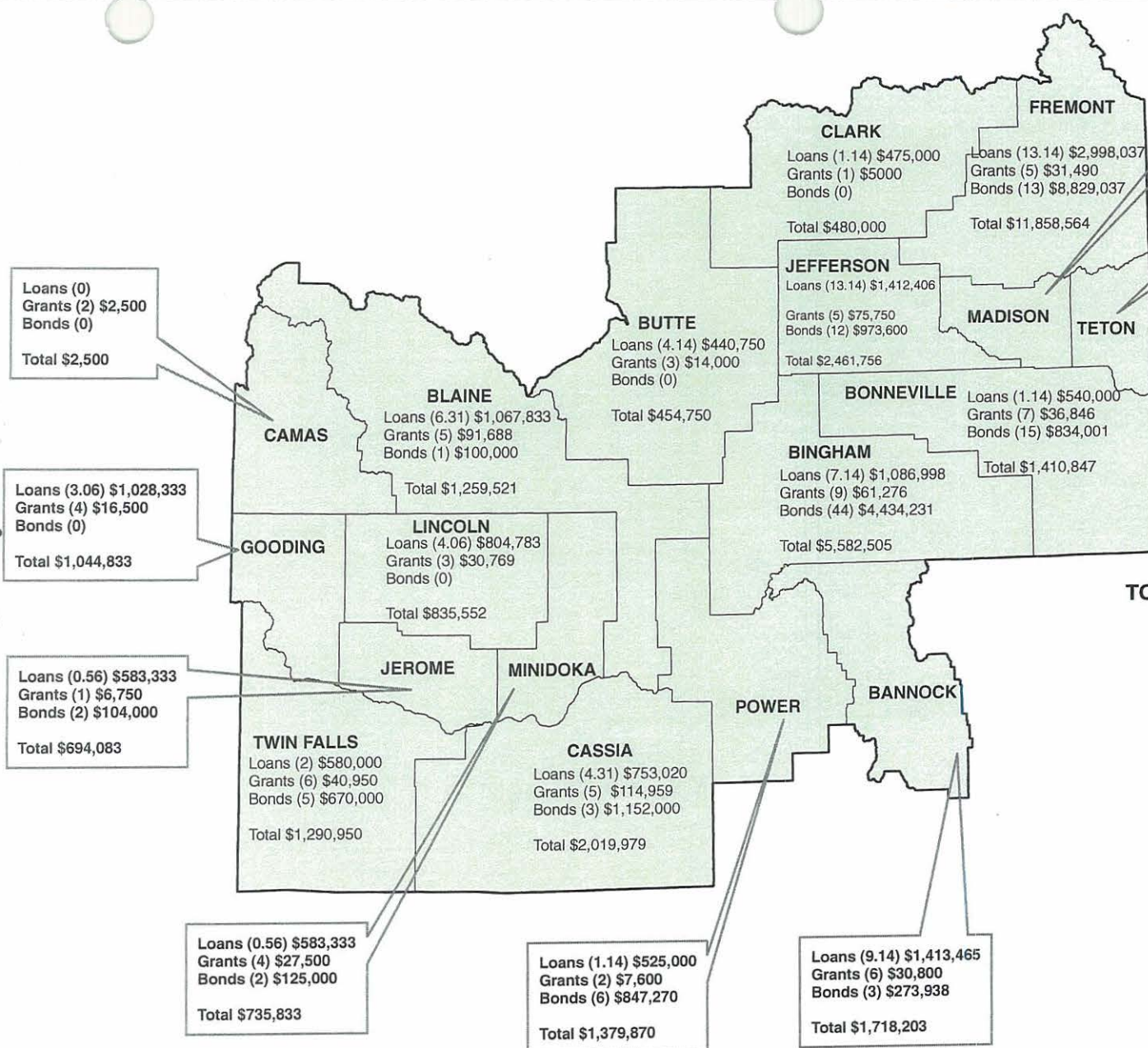
TOTAL BONDS = 13 BOND FOR \$113,549,514

BOARD PROJECTS FUNDING = \$507,379

(Please see below for individual projects)

TOTAL FUNDING FOR THE REGION = \$119,785,620

Board Projects	
Project	Amount
1982 - Idaho Department of Water Resources Bond	\$13,517
Indian Hills Irrigation Project	\$4,917
1990 Galloway Dam Study	\$18,945
1989 Galloway Dam Study	\$20,000
2010 - Boise River Storage Study for possible storage sites on the Boise River	\$350,000
2010 - Weiser Galloway Water Resource Management and Water Storage Project	\$100,000
TOTALS	\$507,379



UPPER SNAKE RIVER REGION As of June 30, 2010

TOTAL LOANS = 80 LOANS FOR \$15,349,871

(Please Note: Several of the counties were involved in loans that were spread across multiple counties. The loan number and loan amount was proportionately distributed between each of the counties involved in the loan.)

TOTAL GRANTS = 71 GRANTS FOR \$607,428

TOTAL BONDS = 128 BONDS FOR \$20,161,278

BOARD PROJECTS FUNDING = \$59,026,347

(Please see below for individual projects)

TOTAL FUNDING FOR THE REGION = \$95,144,924

BOARD PROJECTS	
Project	Amount
1992 Weather Modification Study Upper Snake	\$25,000
1994 - HB988, Pumping Alternatives	\$25,000
1994 - HB988, Lower Snake River Aquifer Recharge District	\$14,986
1995 - SB1260 Aquifer Recharge	\$945,000
1997 Aquifer Recharge	\$11,427
Sugar Loaf Aquifer Recharge Project Through Northside Canal Company	\$60,000
Eastern Snake Plain Aquifer Agreement for 2004 HB 843	\$820,000
Bell Rapids Water Rights Acquisition Per HB392 and Bureau of Reclamation Lease for Nez Perce Water Rights Agreement	\$24,375,000
W-Canal Aquifer Recharge Project	\$300,000
Eastern Snake Plain Aquifer Comprehensive Aquifer Management Plan Development Funding	\$1,549,934
ESPA CAMP - Aquifer Recharge Conveyance Costs	\$380,000
2008 Eastern Snake Plain Aquifer recharge	\$150,000
Exchange Between Black Canyon and Upper Snake River Water Users to allow Salmon Flushing Without Depleting Upper Reservoir Storage	\$1,670,000
Purchase of Storage Water In Palisades Reservoir	\$3,500,000
Purchase of Pristine Springs Through SB11511, HB870, and North Snake and Magic Valley Ground Water Districts Financing	\$21,000,000
Minidoka Dam Enlargement Study (SB1511)	\$1,400,000
Teton Basin Storage Replacement Study (SB1511)	\$400,000
ESPA CAMP FUNDING FROM PRISTINE SPRINGS LOAN REPAYMENT	\$2,400,000
TOTALS	\$59,026,347

BEAR REGION

As of June 30, 2010

TOTAL LOANS = 36 LOANS FOR \$7,229,442

TOTAL GRANTS = 25 GRANTS FOR \$200,550

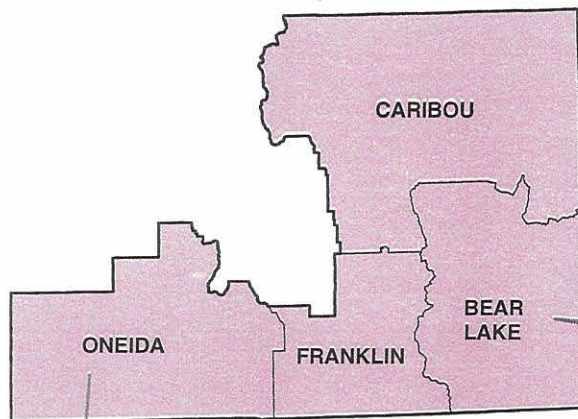
TOTAL BONDS = 7 BONDS FOR \$732,783

BOARD PROJECTS FUNDING = \$61,882

(Please see below for individual projects)

TOTAL FUNDING FOR THE REGION = \$8,224,657

Loans (5) \$787,192
Grants (4) \$34,087
Bonds (3) \$517,783
Total \$1,339,062



Board Projects	
Project	Amount
1995 - SB1260 Soda (Caribou) Dam Feasibility Study	\$53,000
1992 - Weather Modification Study Bear River Area	\$8,882
TOTALS	\$61,882

Loans (4) \$788,500
Grants (4) \$27,500
Bonds (0)
Total \$816,000

Loans (6) \$177,540
Grants (2) \$9,603
Bonds (0)
Total \$187,143

Loans (21) \$5,476,210
Grants (15) \$129,360
Bonds (4) \$215,000
Total \$5,820,570

MEMO



To: Idaho Water Resource Board
From: Neeley Miller *NM*
Subject: 2011 AWEP
Date: January 10, 2011

The Natural Resources Conservation Service (NRCS) has notified the Idaho Water Resource Board (IWRB) we will be receiving \$1,197,000 for AWEP in 2011 (see attached letter).

This will be the 3rd year of this five year program. The IWRB's AWEP program is intended to assist with implementing certain parts of the ESPA CAMP.

The funds provided through AWEP in the two previous years are as follows:

Type	2009			2010		
	Projects	Acres	Federal Portion of Estimated Project Cost (75% of total)	Projects	Acres	Federal Portion of Estimated Project Cost (75% of total)
Thousand Springs Irrigation Improvements	18	1550	\$1,211,634	1	125	\$145,958
Ground Water to Surface Water Conversions	15	4883	\$1,398,663	9	2836	\$675,820
Total	33	6433	\$2,610,297	10	2961	\$821,778

Assuming all of the \$1,197,000 (Fiscal Year 2011) is obligated; the IWRB's AWEP program will have provided \$4,629,075 for ESPA CAMP Implementation projects by the end of 2011.

United States Department of Agriculture



Natural Resources Conservation Service
9173 W. Barnes Dr., Suite C
Boise, Idaho 83709
Phone: (208) 378-5700
Fax: (208) 378-5735

December 28, 2010

Terry Uhling
Idaho Water Resources Board
322 East Front
Boise, Idaho 83720

Mr. Uhling:

The Natural Resources Conservation Service (NRCS) only received approximately forty percent of the requested Fiscal Year (FY) 2011 Agricultural Water Enhancement Program (AWEP) allocation. In an effort to treat our sponsoring entities fairly, each of the approved project areas will receive an initial allocation of approximately forty percent of their requested allocation. The Idaho Water Resources Board AWEP agreement number 65-0211-09-020 will be funded for Fiscal Year 2011 in the amount of \$1,197,000.

If funding requests for eligible applications exceed the initial allocation, the NRCS will seek additional AWEP funding for the project. However, there is no guarantee that additional funding will become available during FY 2011. We look forward to another productive year of cooperative conservation.

Sincerely,

/s/ Clinton J. Evans, Acting

JEFF BURWELL
State Conservationist

cc: Dave Schmidt, ASTC, NRCS, 1551 Baldy Avenue, Suite 2, Pocatello, ID 83201
Rob Sampson, SCE, NRCS, 9173 West Barnes Drive, Suite C, Boise, ID 83709
Neeley Miller, WRP, IDWR, 322 East Front Street, PO Box 83720, Boise, ID 83720

Helping People Help the Land

An Equal Opportunity Provider and Employer

Eastern Snake Plain Aquifer
Comprehensive Aquifer Management Plan

Implementation Committee Meeting
Draft Meeting Notes – November 22, 2010
Burley, Idaho
9:30 am – 1:00 pm

Introductory Remarks:

Rich Rigby discussed his experience in the Nez Perce water rights settlement negotiations and his observations of Francis McGovern, a mediator of national renown who successfully mediated a settlement. Rich reflected that Mr. McGovern would label certain positions by one party or another as a *religious issue*. This was his way of identifying very strongly held positions. Mr. McGovern did not attempt to analyze the *religious issues* of the parties and decide which position was right nor did he try to dissuade the parties from their positions, but he worked on settlement provisions that did not violate the *religious issues* of any party. Rich said that the drafting committee had attempted to define a solution that did not violate the CAMP participants' *religious issues*. He identified two religious issues that exist in the ESPA CAMP process—the Great Feeder's position with respect to incidental recharge and the position of some surface water entities that ground water users can't receive any mitigation credit from CAMP projects. Rich challenged the meeting participants to think like a mediator and seek common ground on a possible solution.

Clive Strong said that the State representatives have attempted to provide draft legislation that captures the committee desires. The draft legislation recently provided to the implementation committee was drafted with the assistance of Senator Steve Bair and Representative Scott Bedke. The drafts address three scenarios:

1. Global (ESPA-wide) proposal
2. ESPA-wide except for the participants who have expressed opposition to their participation
3. Regional approach

Representative Scott Bedke observed that at the 10,000 ft level, there is general agreement that the resource is worth protecting, but the objective becomes more complicated once the details begin to be discussed.

The three draft bills provided to the committee members were reviewed in turn. The three draft bills were labeled option 1, option 1a, which was a variation of option 1, and option 2.

Option 1:

Rich said that the purpose of option one was to comply with the recommendation of the CAMP advisory committee as closely as possible. It complies with this recommendation in two specific ways:

- It includes all property within the ESPA. This means that municipalities and domestic users would participate along with agriculture and aquaculture.

- It assumes a tax, as opposed to a fee. This ensures that all parties within the ESPA would participate. The tax would be a component of property taxes and would be assessed against all property within the basin. This would ensure the widest possible participation and probably the largest possible funding stream. As part of property taxes, the CAMP funds would be assessed and collected by the counties. Collection should be relatively automatic through the counties.

The CAMP advisory committee recommendations contemplated the availability of \$3,000,000 per year from the state general funds. It is obvious that new state funds won't be made available this year, and maybe not for some time to come. The rationale for a state contribution was based on two assumptions:

1. The State played a role in creating the problems on the aquifer by granting water rights.
2. State general fund contribution can be considered in lieu of assessing domestics users.

Representative Bedke said that the Legislature's attitude is strongly biased against raising new taxes. The full legislature would be keenly interested in the issue and it would be difficult to overstate the challenges associated with getting legislative approval of a new tax.

In response to statements that there is no available state funding for CAMP projects, Rich said that while general fund money is not available, the Pristine Springs repayment of \$1.2 million per year (\$2.4 million to date) is targeted for return to the Water Resources Board's account and should be available for CAMP. It is important to note that if no projects can be identified for that money, it could be pulled away from the Board to solve the State's budget problems.

Representative Bedke does not think he can get it a global/tax solution through resource committee this year. There are too many challenges associated with the economic situation and there are many new legislators who would need to be won over to a principle that they campaigned against.

Steve Howser asked, if we push a more pragmatic option this year, can we keep the options open to push the global approach at a later date? Rich said yes—we have the option of endorsing now the option most likely to move forward, but to continue to support a global approach for future consideration.

There was a discussion of the issue of incidental recharge and the position of the Great Feeder and south fork canals (Main River above Lorenzo). Stan Hawkins expressed the view that the CAMP conclusions are based on a flawed premise (everybody pays). He favors reconsidering the premise before approaching the legislature. His group would have CAMP start over by identifying issues and problems and examining how to resolve the issues. The Great Feeder and associated canals did not contribute to the problem, but are contributing recharge water incidentally. In response to Rich's comment that they want to be paid for incidental recharge, Stan said they don't want to be paid anything but simply want to be left out of the process. Lloyd Hicks agreed with Stan's suggestion to start over rather than push something that isn't well supported. He later suggested there are good technical reasons to justify leaving his group out of the process and it may be better to start over rather than support proposals that are not likely to pass.

Randy Bingham said that if we agree a tax will not work then we should eliminate option 1 and move on.

Dan Temple said his board (A&B Irrigation District) agrees there are inequities in the plan and fee structure. His board gave him direction that they will support the position that everyone must participate. They would also like to revisit the fee structure to reflect priority dates—more senior rights pay less.

Steve Howser said his board (Aberdeen Springfield Canal Company) also in favors a global approach where everyone participates, with a tiered fee system.

Rich attempted to articulate the group's position on option 1 and observed that no one appeared to support Option 1 as written. It was presented to the group because in the last implementation committee meeting people did not want to abandon the global concept. No one disagreed with Rich's assertion that the group did not favor option 1 as written. It is important to note that option 1 may well be an ideal approach to managing the aquifer, but it isn't achievable due to the lack of willingness of all parties to participate and due to the poor chance of implementing a new tax in the current economic climate.

Option 1A

Rich explained that this option omits the participation of the Great Feeder Canals and the Main River above Lorenzo because the representatives of these areas on the Committee of Nine have expressed opposition to CAMP. The option contains a fee, which is consistent with the recommendation of the CAMP advisory committee. Largely because it is fee based, there is no provision for payments by municipalities or domestic users. Clive observed that municipalities could still participate in projects under joint powers agreements.

Rich asked the question: If the Great Feeder and associated canals are left out of CAMP, will others request to be removed? By a raise of hands, several groups indicated they would request removal. It was obvious at this stage that this option did not have sufficient support of the implementation committee to move forward.

Tom Arkoosh suggested that even if CAMP does not survive, tools to improve the status of the aquifer should be maintained. John Simpson has recommended establishment of a ground water management area on all or part of the ESPA. If the tools recommended in the options being considered here aren't currently available for a ground water management area, they should be added. He also stated that it isn't appropriate for surface water users to pay for their own mitigation.

Representative Bedke noted that a shortfall in the general fund due to curtailment would raise the attention of key legislators because of its impact on other state programs (education, etc.). He supports efforts to improve the aquifer. The fact that a perfect storm could arise in a multi year drought is a very serious matter.

Steve Howser expressed his Board's ardent desire to avoid another situation like 1995 when their water supply was exhausted before the end of the season and canals were dry.

Representative Stevenson observed that part of the discussion in 2002 at the legislature included the viewpoint that shutting down one part of the economy when another part was in trouble may not provide the desired relief but would result in a problem with two parts of the economy instead of one.

Randy MacMillan asked about language in the draft legislation that says part of the reason for the legislation is to avoid curtailment. Clive emphasized that the group should not word smith the draft language at this point.

Rich observed that several participants did not favor this option and recommended that the group move on to discuss option 2.

Option 2

This option involves regional aquifer management districts comprised of surface water users and spring users. It is fee based.

Clive said this option is an attempt to address the questions of how can we allow projects to be developed that help one area without injuring another area, and how can we get projects on the ground without requiring payment by everyone? It is also an attempt to provide surface water user entities a structure comparable to ground water users (a structure that allows surface water users to assess themselves and enter into joint powers agreements). Regional districts could come to the IWRB with projects for state support. In response to Randy MacMillan's question whether the proposed legislation would preclude formation of a basin-wide district. Clive said it would not.

Dan Temple asked how A&B Irrigation District would be affected since it diverts both surface and ground water. Rich and Clive responded that all things are not presently fully defined, but existing ground water districts will not be changed. Dan said A&B does not belong to a ground water district. Would it be forced to join one? Rich the draft legislation doesn't require it.

The water needs of municipalities were addressed. Rebecca Casper expressed concerns about the ability of cities to develop new supplies of water. Cities require growth in order to develop a tax base. The moratorium on new water rights limits growth so the cities are limited to filing transfers. This is a complex and expensive process that is hard for city leaders to understand. Municipalities need to be involved in aquifer management and get something from the process because they have a keen interest in reducing confusion and constraints associated with transfers. Cities need to pay into the CAMP in order to have a stake and a voice. It will not work if they only have ex officio status. Ex officio status doesn't have any influence in decision making. In response, Clive said that cities and counties can enter into joint powers agreements with districts. Rebecca suggested it would be better to insure cities' participation and role in the legislation. Representative Bedke said doing so would complicate the bill and probably make it harder to pass. If a city has a specific problem, this structure allows the city approach an entity that has the resource to develop a project. Dean Stevenson observed that transfers have to be addressed by all groups involved in water management or who need a new water supply.

Kent Fletcher representing Minidoka Irrigation District said that the CAMP proposal was addressed in legislation and was understood by the surface water community as involving the following key principles: (1) everybody pays; (2) One dollar per acre from surface users would be matched by \$3 million from the state (other users would also participate in funding); (3) if no state money were to be provided, no fees would be required from other groups; and (4) CAMP would not provide mitigation for ground water pumping but would benefit the aquifer as a whole. None of the current alternatives involve state funding as contemplated under CAMP. The current outcome is not what the surface water community was told would happen. It is not necessary to create new entities because ground water districts can come together as surface water users do in Water District One.

Stan Hawkins asked the status of the cities' commitment. Roger Chase made promise to contribute, but is not now representing the cities. Rebecca is the only representation. If cities are required to contribute, it should be memorialized in the legislation. Rich observed that cities are included in option 1 because it is tax based, but that we must accept the reality that cities can't just write a check to CAMP without being able to articulate specific benefits that they receive.

Stan Hawkins said he has understood that option 2 would be voluntary, but he observes there are a lot of requirements—"shall" is used a number of times in the draft legislation. This is a problem. Clive responded that the voluntary part about the draft is that each regional district can choose whether to impose a fee. Each "shall" covers requirements necessary to formalize and maintain the organization. Each district has considerable discretion in deciding how to accomplish the specific requirements.

Randy Bingham observed that the Burley and Minidoka Irrigation Districts can participate today because they are already districts. The only ones who need a new entity are the canal companies. Also, Burley has implemented projects that are functioning today that probably wouldn't get done if Burley is required to coordinate with another entity and are assessed. Clive responded that the intent of the draft legislation is to provide a mechanism to collect a fee—not to impose new restrictions. All actions don't need to be undertaken by regional entities. Existing districts and canal companies could still develop projects independently of other members of their regional aquifer management district.

Kent Fletcher observed that surface users worked collectively to address numerous water problems over the years and asked why can't ground water users also band together to solve their problems? Steve Howser said that surface water users are at the table because they are a large part of the solution. Clive said that the problem is not with the legal structure or authorities of ground water districts. They have the authority to develop projects and issue bonds among other things, but not all surface water entities have that authority. Specifically, canal companies do not have authority to issue bonds.

Randy MacMillan said that the problem with the aquifer exists not just because of ground water users. Option 3 (do nothing/status quo) is not an option for spring users because status quo means springs will continue to drop.

Brian Olmstead said Option 2 doesn't do anything for them that they can't do right now. They already have authority to vote to implement projects and collect funds.

Representative Bedke asked what in the status quo keeps each group from implementing projects, and could a project be implemented against another entity's will? Clive said that some entities don't presently have the ability to participate on projects under the joint powers provisions of law. Only legal subdivisions of the State can do so, and canal companies aren't subdivisions of the state. Also, if an entity doesn't have bonding authority (canal companies don't), then it can only assess year to year and a commitment is only good as long as the board doesn't change its mind. This amounts to a voluntary opt-out. Government organizations can't agree to share funding with a private entity without special legislation, so the new district structure was created to address this problem. Tom Arkoosh suggested that the reason more projects aren't being implemented is because there is a lack of motivation, not because the legal tools aren't in place.

Kent Fletcher observed that the CAMP requirement that the state participate in funding is not addressed in these drafts. Clive said funding from the State is not addressed in the legislation because it

complicates the issue when the economy is in bad shape. The ESPA is far from the State's only problem and there is significant pressure on the legislature to fund other worthy activities that are State-wide in nature. Many legislators can be expected to support other programs during these times. We could approach project funding similar to the way American Falls Dam was developed, where the groups who would ultimately realize the benefits led the effort and borrowed money for construction.

Linda Lemmon said it is difficult for small groups like spring users to have significant influence. They realize they would have to work hard to get other groups to work with them to develop relevant projects under option 2, but they are also concerned at the global option will limit the amount of influence a small group has in a basin-wide group such as that proposed in option 1.

Clive said that ground water districts might have a hard time finding partners to fund large project if surface water users don't have the ability to enter into joint powers agreements. In addition, he observed that if none of the proposed options can be supported there is nothing to do but continue current activities and see what happens. Clive said he senses some support for regional approach, but that many in the group want to avoid forming additional government structure they consider to be unnecessary. It might be possible to come up with an alternative version or have a pilot project to identify how to formulate the structure. Rich agreed with Clive's observation and suggested that perhaps a modified option 2 could generate support.

Steve Howser said that if the goal for aquifer management under CAMP is for mitigation, the surface water users will not participate. The surface water entities support aquifer management if it is good for the aquifer as a whole. They want to be part of an aquifer management plan rather than participants in just individual projects. Individual projects take "comprehensive" out of the equation. Mitigation is administration not management—doesn't want to support private projects for mitigation. Steve observed that the CAMP proposal recommended by the advisory committee was comprehensive in nature, but it did contemplate recharging 50% above American Falls and 50% below—this split was a compromise to spread the benefits of CAMP, and not so much to assure a comprehensive plan. Representative Bedke suggested that a comprehensive plan would simply be the summation of all individual projects.

Dean Stevenson, Albert Lockwood, and Randy MacMillan expressed the desire to see something move forward.

Darrell Kerr expressed the Great Feeders' and South Fork Canals' frustration at not being heard in the process.

Walt Mullins asked what happens if we don't come to consensus?

Clive observed that the condition of the aquifer is a classic example of the so-called tragedy of commons. Everyone is here in good faith, but at the end of the day we are all motivated by self interest. We need to and will continue to seek a solution and in the meantime litigation and regulation will continue.

Representative Bedke said that if the water user community cannot come to consensus, the legislature will have to let the chips fall where they may and take action as needed to the best of their ability.

Responding to comments that CAMP should start over from scratch, Randy Bingham said he thinks our basic plan is based on reasonable science so don't need to start from scratch, but there is a clear need to continue to address the question of funding.

Representative Bedke suggested the group is not ready to walk-away from the CAMP effort. If the group ceases its work, when crisis occurs, the legislature will have no choice but to address the problem as best it can, and perhaps in a haphazard way (i.e. not comprehensively).

Kent Fletcher observed that the ESPA CAMP is part of the state water plan.

Clive suggested that in the group should honestly recognize that this CAMP isn't stalemated because of the lack of state funding. It is stalemated because we (the state) can't agree on how to assess ourselves. This condition exists not because of anyone's lack of good faith and commitment. The fact remains that in order to move forward meaningfully, we must form consensus.

Steve Howser expressed frustration that the group worked very hard for four years to come up with solutions—the proposal brought forward by the advisory committee was a good one, and now we are faced with lack of state funding. Rich suggested that the desire for a comprehensive aquifer management plan is a *religious issue*—it isn't the exclusive way to improve the aquifer, and it isn't obvious that each and every aspect of the advisory committee's plan can be considered to be "comprehensive."

Rich attempted to articulate the general position of the group on option 2, and stated that while some people believe it is viable, others have strong reservations and do not support it. That statement was not challenged.

Next-steps

Rich suggested it would not be good to declare failure, and suggested a message is needed that can be presented to the Idaho Water Resources Board and Legislature. After some discussion there was general acceptance that the following message is appropriate:

1. We will continue the ongoing efforts in CAMP to identify opportunities to improve the aquifer.
2. The group will not oppose if local people come together on a specific regional project or projects.

MEMO



To: Idaho Water Resource Board
From: Helen Harrington
Subject: Rathdrum Prairie Comprehensive Aquifer Management Plan Status Report
Date: January 11, 2011

The Rathdrum Prairie Comprehensive Aquifer Management Plan (CAMP) Advisory Committee has completed their initial charge of developing a recommended Rathdrum Prairie CAMP. The committee is formally transmitting their recommended plan to the IWRB on January 21, 2011. A copy is attached. Daisy Patterson, a member of the Facilitation Team, will review with the IWRB the recommended plan at the IWRB Work Session on January 20.

Following the IWRB's review and discussion of the previous draft document on November 15, the RP CAMP Advisory Committee held a public open house to obtain public comment from the larger community. The open house was held on November 18 in Coeur d'Alene. The Committee has since reviewed the IWRB comments and suggestions, along with public comments resulting from the open house and made final changes to the attached RP CAMP. The RP CAMP Advisory Committee recognizes that the IWRB will consider the recommended plan and the final plan may be revised following the public hearings and comment period.

The Committee is highly motivated to move forward with implementation in a timely manner to maintain the momentum that has developed during the RP CAMP development process. The Committee has suggested continuing to hold meetings prior to finalization of the plan in order to make progress on some of the suggestions contained in the recommended CAMP.

The May 2011 IWRB meeting has been tentatively scheduled to be held in Coeur d'Alene to coordinate a public hearing associated with the RP CAMP adoption process. Following the IWRB hearing and required 60-day comment period which is anticipated to occur in spring 2011, the Board will consider final action on the Rathdrum Prairie Comprehensive Aquifer Management Plan. After IWRB adoption of the Plan, it will be submitted to the Idaho Legislature for final adoption, anticipated during the 2013 legislative session.

Memorandum

To: Idaho Water Resource Board

From: The Rathdrum Prairie Comprehensive Aquifer Management Plan (CAMP)
Advisory Committee

Date: January 10, 2011

Subject: Transmittal of Recommended CAMP

The Rathdrum Prairie CAMP Advisory Committee is pleased to recommend the attached CAMP for the Idaho Water Resource Board's consideration.

At your request, our eighteen-member Advisory Committee deliberated on water supply and demand issues looking out 50 years into the future. This Committee represented a variety of water interests, including local business leaders, elected officials, environmental representatives, government representatives, and local water providers. The Rathdrum Prairie Aquifer's abundant high quality is the lifeblood of our communities and we believe that this CAMP addresses our mutual goals to:

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

Before submitting this final, recommended plan to you, we collected feedback and advice from the public through several mechanisms: (1) an open house on November 18, 5 p.m.- 9 p.m., at the Coeur d'Alene public library, (2) an online survey, and (3) various written and emailed comments submitted to the Idaho Department of Water Resources.

This Committee has appreciated participating in the development of the Rathdrum Prairie CAMP. Engagement of the larger community will be essential in the implementation of the Rathdrum Prairie CAMP. We suggest that you continue to support this Advisory Committee as you move forward with implementation. We look forward to continuing this important work with you into the future.

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DRAFT

Rathdrum Prairie Aquifer

Comprehensive Aquifer Management Plan

Vision: Provide a sustainable source of high-quality groundwater for current and future economic, social, and environmental benefits, and preserve the exceptional quality and reliability of the Rathdrum Prairie Aquifer.



Recommended plan from the Rathdrum Prairie CAMP Advisory Committee

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1. Executive Summary

The Rathdrum Prairie Aquifer in Northern Idaho is a valuable and significant resource to the region and the state of Idaho. Lying under parts of Kootenai and Bonner counties, the aquifer is a key part of the regional water resources which make the area a magnet for economic growth and an attractive place to live and work. The region produces approximately 8 percent of goods and services in the state of Idaho resulting in an estimated value of \$4 billion. Beyond the economic value to the state, the region provides cultural and social benefits throughout the bi-state Spokane Valley-Rathdrum Prairie in Washington and Idaho.

The Rathdrum Prairie Comprehensive Aquifer Management Plan (Plan) provides a framework for long-range management of the aquifer. The Plan describes the overarching goals and recommended actions which can be implemented to successfully accomplish the stated goals for local residents, the state of Idaho, and to promote productive regional cooperation to benefit the area over the next 50 years.

This document presents a Comprehensive Aquifer Management Plan (CAMP) for the Rathdrum Prairie Aquifer. At the direction of the Idaho Water Resource Board (IWRB) and Idaho Legislature, the Plan was developed collaboratively by the Rathdrum Prairie CAMP Advisory Committee. The committee submitted a recommended Plan to the Board for their consideration and adoption. Once adopted by the Board, the Plan will be submitted to the Idaho Legislature for final action.

The IWRB developed the following goals for the statewide Comprehensive Aquifer Planning and Management Program are:

- Provide reliable sources of water, projecting 50 years into the future

- Develop strategies to avoid conflicts over water resources
- Prioritize future state investments in water
- Bridge the gaps between future water needs and supply

Based on the four goals, the Rathdrum Prairie Comprehensive Aquifer Management Plan Advisory Committee (AC) developed the following vision for the Plan:

“Provide a sustainable source of high-quality groundwater for current and future economic, social, and environmental benefits, and preserve the exceptional quality and reliability of the Rathdrum Prairie Aquifer.”

The Committee developed the action items in Figure 1 to accomplish their vision.

Meet Future Demand for Water

Projecting future water demand is an integral part of the Rathdrum Prairie CAMP process. The sufficiency of existing water resources cannot be determined without understanding the potential magnitude of future water demand.

The Rathdrum Prairie Aquifer Water Demand Projections report provides projections of Rathdrum Prairie water demand over the next 50 years. The water demand study was conducted for (and funded by) the IWRB as part of the Rathdrum Prairie CAMP process. The study was conducted by SPF Water Engineering, LLC (SPF), AMEC Earth and Environmental (AMEC), Idaho Economics (John Church), and Taunton Consulting (Taunton), with guidance from the IWRB, IDWR, and the Rathdrum Prairie CAMP Advisory Committee. The following conclusions were drawn from that report.

Annual water demand by the year 2060 could rise from estimated current withdrawals of approximately 74,000 acre-feet to between 77,000 acre-feet (based on a low population-

SUMMARY OF KEY ACTION ITEMS

(not ranked or placed in order of priority):

Objective #1: Meet Future Demand for Water

Enact water conservation measures that promote water efficiency and reduced use.

Establish municipal water rights to ensure that they are available for future needs.

Identify local water use improvement strategies and develop partnerships to implement them.

Hydrologic and social impacts of exportation of water from the basin must be considered carefully.

Update the Rathdrum Prairie Future Water Demand Study.

Objective #2: Prevent and Resolve Water Conflicts

Develop a framework for regional discussion and cooperation for SVRPA water issues.

IDWR should develop criteria for artificial recharge projects in Idaho.

Identify local water use improvement strategies and develop partnerships to implement them.

Redefine the IDWR GWMA boundaries so they are consistent with the bi-state USGS hydrologic boundaries.

Objective #3: Protect the Aquifer

Assess all CAMP activities to ensure projects implemented through CAMP protect aquifer water quality.

Support and encourage the Aquifer Protection District to work with Panhandle Health District, Idaho Department of Environmental Quality, and others to address overlapping jurisdictions with the goal of improving efficiency.

The most likely 2060 water demand projection ranges from approximately 101,000 to 163,000 acre-feet, depending on the level of water conservation. This projection is based on a moderate level of population growth (averaging approximately 2.3% per year) over the next 50 years.

The Rathdrum Prairie Aquifer is a highly prolific aquifer which fully satisfies the existing water needs and it is anticipated to meet future needs. However, to ensure that the water resources are put to optimum use to benefit the state of Idaho, this plan identifies actions which will protect the resource for future generations.

Prevent and Resolve Water Conflicts

The Plan addresses the long-term planning and management objectives and actions for the Rathdrum Prairie Aquifer located in Idaho. The Rathdrum Prairie Aquifer is a part of the larger regional aquifer which is shared with the state of Washington. Additionally, the regional hydrological system is a dynamic interrelationship between the aquifer and the Spokane and Little Spokane Rivers in Washington.

Although state authorities and

planning programs do not cross the state and tribal boundaries, the larger regional interests and needs should be considered. The benefits of cooperation and coordination among the sovereigns in the region far outweigh the potential costs of conflict.

Figure 1. Summary of Key Action Items

growth rate of 1.6% per year and aggressive water conservation) and 223,000 acre-feet (based on a higher population growth rate of approximately 3% per year and no water conservation). The area over the Rathdrum Prairie Aquifer has experienced both of these population-growth rates over multi-year periods in past decades.

Protect the Aquifer

The Rathdrum Prairie Aquifer is a part of the larger Spokane Valley-Rathdrum Prairie Aquifer (SVRPA). The SVRPA is the sole source of drinking water for the residents living over the aquifer, and many who do not live over the aquifer also receive benefits. The aquifer is vulnerable to water quality degradation which could influence the availability for local communities and residents. The protection of the aquifer from contamination is undertaken through a number of programs and authorities of local, regional and state entities.

The implementation of the Plan and all actions associated with the Plan will be assessed to ensure that water quality is maintained and aquifer protection efforts are coordinated with other responsible agencies and programs.

Plan Implementation

To ensure that the valuable input of stakeholders continues during the implementation of these actions, this Plan should be implemented by IWRB staff with guidance and advice from the Advisory Committee. The Committee will assist IWRB staff by providing recommendations and feedback.

Summary

Although the Plan is built upon a substantial base of technical information and stakeholder guidance, it is recognized that present-day solutions may be refined and improved as new information, regional activities, and technologies are developed. Accordingly, the Plan includes an adaptive management component which requires ongoing coordination between the IWRB staff and Advisory Committee. The Plan provides for continued effort to identify and address all water use needs affected by this Plan, including environmental considerations.

The Plan also recognizes that successful implementation requires sufficient funding. The Committee expects that the preliminary funding recommendations and structure may be refined or modified as further information is developed about funding needs.

2. Glossary

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
afa	Acre-foot per annum. Rate of water flow equivalent to 1 acre-foot of water flowing in a 1 year period.
aquifer	A water-bearing layer of rock that will yield water in a usable quantity to a well or spring
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.
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.
GWMA	Ground Water Management Area
M&E	Monitoring and Evaluation
mgd	Million gallons per day
the Plan	Rathdrum Prairie Comprehensive Aquifer Management Plan
RPA	Rathdrum Prairie Aquifer, Idaho
RP CAMP	Rathdrum Prairie Comprehensive Aquifer Management Plan
Sensitive Resource Aquifer	A sensitive resource aquifer is considered to have good water quality, is highly vulnerable to contamination and an irreplaceable source. Activities that could degrade the aquifer shall be managed in a manner which maintains or improves existing water quality through the use of best management practices and best available methods. The Rathdrum Prairie Aquifer is Idaho's only sensitive resource aquifer. Sensitive Resource aquifers require the strongest level of protection.
SVRPA	Spokane Valley Rathdrum Prairie Aquifer, Idaho and Washington

Key Agencies

APD	Rathdrum Prairie Aquifer Protection District (jurisdiction by Kootenai County); see Chapter 5 of Title 39 Idaho Code.
IDEQ	Idaho Department of Environmental Quality
WDOE	Washington Department of Ecology
EPA	Environmental Protection Agency
IDWR	Idaho Department of Water Resources (also abbreviated as "Department")
PHD	Panhandle Health District
IWRB	Idaho Water Resource Board (also abbreviated as "Board")
USGS	United States Geological Survey

Conversion table for units of water

1 acre-foot	43,560 cubic feet	325,851 gallons
1 cubic foot per second	7.48 gallons per second	448.8 gallons per minute (gpm)
1 cfs for 1 year	235,889,280 gallons per year	728 acre-feet per year
1 million gallons	133,689 cubic feet	3.07 acre-feet
1 million gallons per day (mgd)	3.07 acre-feet per day	1,120 acre-feet per year
1,000 gallons per minute	2.2 cfs	4.4 acre-feet per day

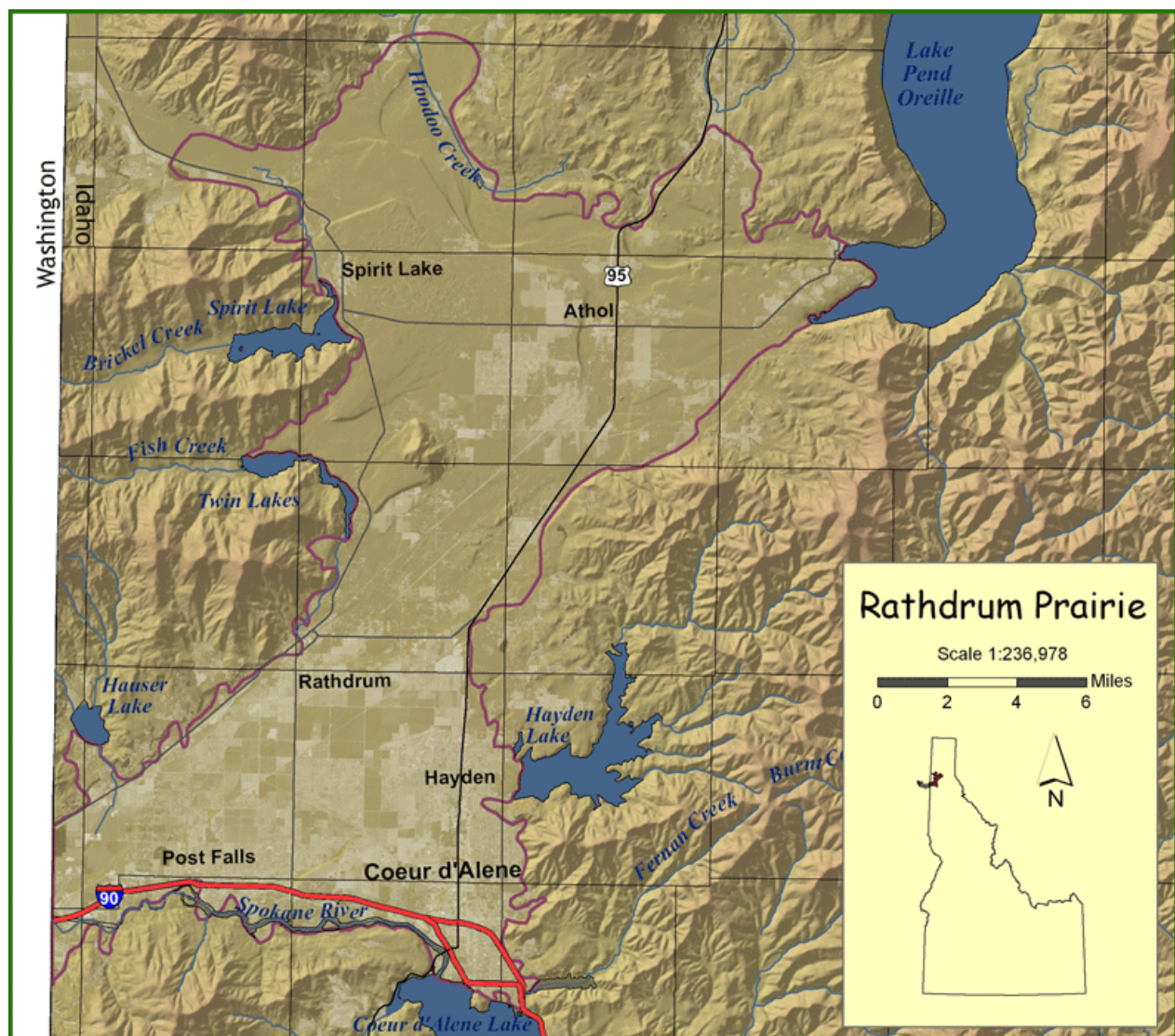


Figure 2. Rathdrum Prairie Aquifer Map

3. 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 Rathdrum Prairie to establish a framework and path forward which will lead to sustainable water supplies, optimum use of the aquifer and develop strategies to avoid 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 CAMP program, and this specific CAMP, are to:

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

The IWRB recognizes that the long-term management of the water resources of the Rathdrum Prairie 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 Idaho Water Resource Board appointed an Advisory Committee to consider these interests and develop recommendations for this plan. For a list of Advisory Committee members, see Appendix 1.

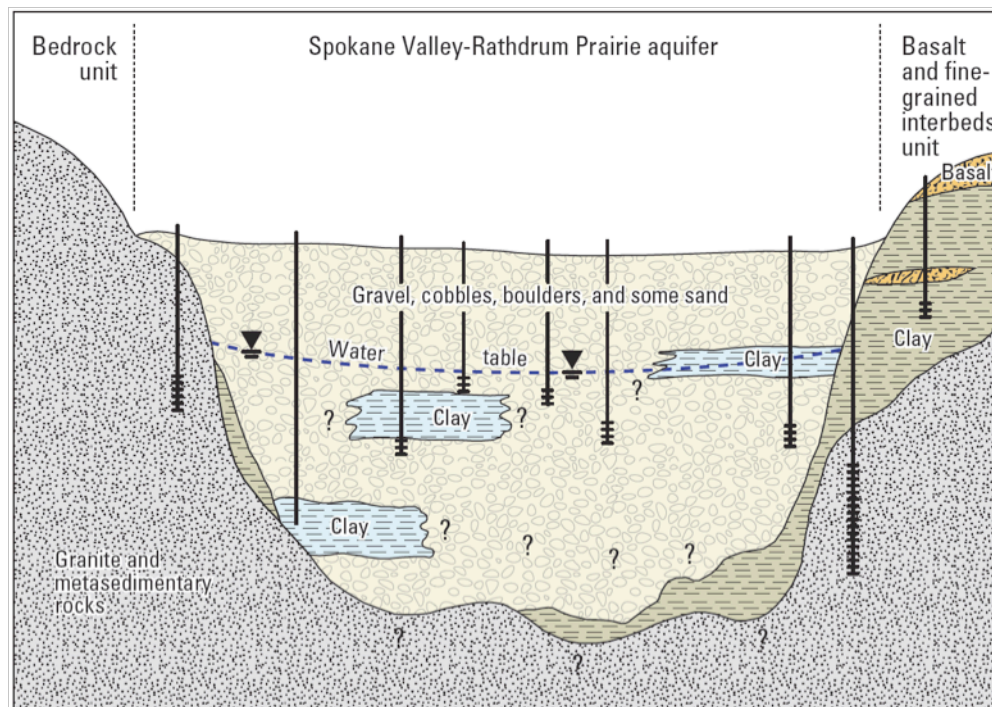


Figure 3. Simplified conceptual model of hydrologic conditions in the Spokane Valley-Rathdrum Prairie aquifer and surrounding hydrogeologic units.

Source: Hydrogeologic Framework and Ground-Water Budget of the Spokane Valley-Rathdrum Prairie Aquifer, Spokane County, Washington, and Bonner and Kootenai Counties, Idaho. Scientific Investigations Report 2007-5041.

4. Background

Regional Setting and Hydrological System

The Rathdrum Prairie Aquifer (RPA) is the Idaho portion of the regional Spokane Valley-Rathdrum Prairie Aquifer (SVRPA) in Northern Idaho and Eastern Washington (Figure 1). The RPA underlies approximately 250 square miles in Kootenai and Bonner Counties. Approximately two-thirds of the entire aquifer lies under Idaho. A population of over 500,000 live above the SVRPA, with the Idaho population accounting for approximately 128,000 or about 25%. Approximately 8% of Idaho's economy is generated within the Rathdrum Prairie area.

The RPA consists primarily of thick layers of coarse-grained sediments deposited during a series of massive floods from ancient Glacial Lake Missoula. These floods deposited sands, gravels, cobbles, and boulders across the landscape. The nature of the Rathdrum Prairie Aquifer has created one of the most productive and transmissive aquifers in the world. See Figure 3 for a simplified conceptual model of hydrologic conditions found throughout the SVRPA.

Studies

This plan references several studies and reports on the RPA, and various planning processes which precede the work conducted for this CAMP. Please see Appendix 2 for a Chronology of Studies and Events relevant to the Rathdrum Prairie Aquifer.

Rathdrum Prairie Aquifer – By the Numbers

The Spokane Valley-Rathdrum Prairie Hydrologic Project completed in 2007 developed a region-wide water budget for the hydrologic system. The average annual inflow to the aquifer is approximately 1,470 cubic feet per second (cfs), of which approximately

900 cfs flows from Idaho, based on the 10-year average (1995-2005).

In recent years, approximately 99 cfs of water was annually withdrawn from the Rathdrum Prairie Aquifer. Community water systems used 47 cfs (47.7%); agricultural irrigation accounted for 34 cfs (34.3%); individual domestic wells used 12 cfs (12.2%); and commercial/industrial (self-supplied) totaled 6 cfs (5.8%). The estimated aggregate consumptive use (water lost from the local hydrologic system) was approximately 53 cfs.

Ground-water surface water interaction

There is a strong relationship between the Spokane River and the SVRPA. From the outlet of Coeur d'Alene Lake to its confluence with the Little Spokane River, the Spokane River alternatively transitions between reaches that lose to the SVRPA and reaches that gain from the SVRPA. The Spokane River is perched above the aquifer through its entire reach in Idaho from the outlet of Coeur d'Alene Lake to beyond the border between Idaho and Washington. In Idaho, there is no direct connection between groundwater pumping in Idaho and the Spokane River flows due to the perched condition of the river over the aquifer. In Washington, however, there is a direct connection with several gaining and losing reaches of the river which result in water seeping from the river into the aquifer (losing reaches) or water discharging from the SVRPA into the river.

Water Quality

The overall quality of the RPA is very good. The highly permeable soils and gravels over the RPA make it susceptible to contamination. In 1978, the RPA was designated by the Environmental Protection Agency as a Sole Source Aquifer under the Safe Drinking Water Act. This designation subjects all federally funded projects that have the potential to contaminate the aquifer to EPA review. In

1997, the RPA received additional protection from the state of Idaho and is now designated a Sensitive Resource Aquifer.

Due to the vulnerability of the aquifer to contamination, ongoing protection programs have been implemented by local and state agencies. These programs have resulted in protecting or improving the groundwater quality despite a significant increase in population over the RPA.

Future demand for water

Critical to the development of the RP CAMP is estimation of future water demands. Water demand overlying the Rathdrum Prairie Aquifer was projected for a 50-year time horizon (2060). This study included consideration of the potential impacts of climate variability during this time frame on water supply and demand in the area. A qualitative estimate of conservation and water demand was also included in the study. A basic assumption in the calculation is that the service area remains centered over the aquifer without additional exportation of water to outlying areas. See Appendix 3 for the executive summary of this study.

The primary conclusions from this analysis include the following:

The Rathdrum Prairie Aquifer area population is projected to grow from approximately 128,000 people to approximately 400,000 people by the year 2060, reflecting an average growth rate of approximately 2.3% per year. If population growth for the next 50 years is at the same 1.6% annual rate experienced between 1980 and 1990, the 2060 population overlying the aquifer will be approximately 286,000 people. If the population grows at a rate of 3% per year (which is less than the 3.7% annual growth between 1970 and 2007), the 2060 population overlying the Rathdrum Prairie Aquifer will be approximately 581,000

people.

Water demand by the year 2060 could rise from estimated current withdrawals of approximately 74,000 acre-feet to between 77,000 acre-feet (based on a low population-growth rate of 1.6% per year and aggressive water conservation) and 223,000 acre-feet (based on a higher population growth rate of approximately 3% per year and no water conservation). The Rathdrum Prairie Aquifer area has experienced both of these population-growth rates over multi-year periods in past decades.

The most likely 2060 water demand projection ranges from approximately 101,000 and 163,000 acre-feet, depending on the level of water conservation. This projection is based on a moderate level of population growth (averaging approximately 2.3% per year) over the next 50 years (see Figure 4).

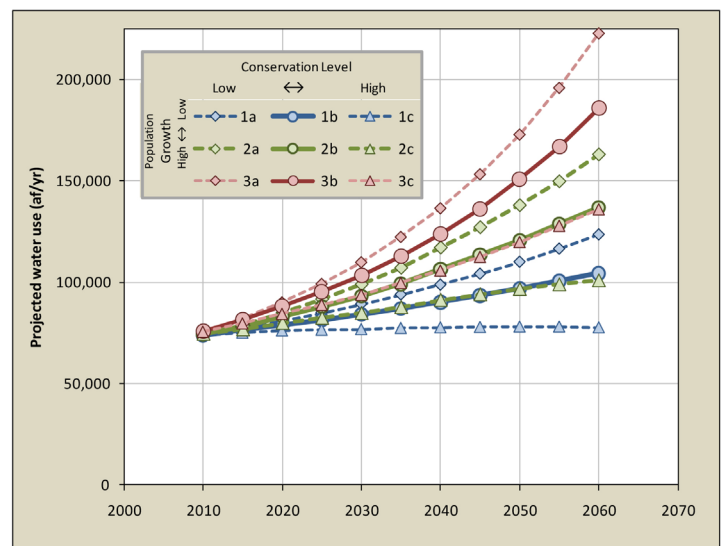


Figure 4. Future demand projections

The consumptive use is water that is actually consumed and not returned to the immediate water environment (i.e., aquifer and Spokane River) occurs mostly through evapotranspiration. The consumptive use is projected to increase from approximately

40,000 acre-feet in 2010 to between 59,000 and 76,000 acre-feet in the year 2060 under moderate population- and employment-growth rates (See Figure 5). This range reflects the effects of different water conservation levels.

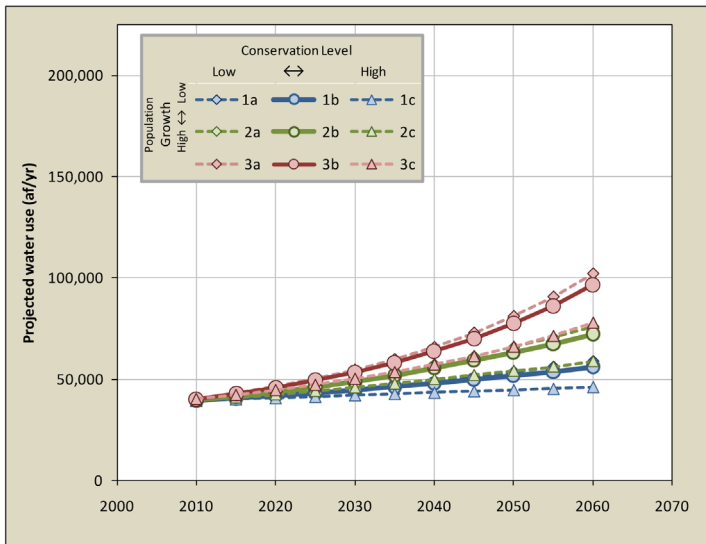


Figure 5. Consumptive use projections

The water use for agricultural irrigation will likely decrease in time as irrigated agricultural land is replaced by more urban and suburban land uses. However, development of new residential and municipal irrigation on land (i.e. lawns) that is currently non-irrigated will likely lead to an overall increase in total irrigation demand. The full report from the Future Water Demand study can be found at http://www.idwr.idaho.gov/waterboard/WaterPlanning/CAMP/RP_CAMP/RathdrumCAMP.htm.

The IDWR conducted a modeling exercise to assess the potential impact on the Spokane River of additional water use in Idaho. Using the medium growth prediction from the Future Water Demand study, the model estimated a maximum flow reduction of 31 cfs in late summer and early fall. Additionally, the model showed an impact on Lake Coeur d'Alene, which would result in an indirect impact on the Spokane River. A summary memo is attached in Appendix 4.

Climate Variability

The Board contracted with Boise State University to evaluate potential changes to water supply and demand which might result from climate variability on a watershed scale. The executive summary of this report is in Appendix 5. Additionally, SPF Water Engineering, LLC (SPF) includes a discussion of regional impacts from climate variability in their Future Water Demand study. These two studies, which were both seriously considered by the Advisory Committee, suggest the following observations.

Climate variability adds another element of uncertainty to planning for future water needs. Studies based on climate models and emission scenarios indicate that the overall temperature in the Rathdrum Prairie Aquifer region may increase over the next 50 years. The precipitation forecast is less certain. The northwest United States is expected to see some increase in annual precipitation; the expected change over the Rathdrum Prairie is inconclusive. Increased temperatures may mean that more winter precipitation may fall as rain instead of snow.

Temperature increases may also alter the timing of snowmelt, potentially shifting peak runoff from May to April. Any additional precipitation is expected to occur during the fall, winter and spring, rather than the summer months. Increases in temperature would lead to increased evapotranspiration. This could translate into increased irrigation demands during the summer months when there may also be less precipitation. Earlier runoff, combined with decreased precipitation during the summer, may also result in decreased flows in the Spokane River. Another likely impact of climate change is an increase in extreme events such as droughts and floods.

Water Conservation Potential

The Future Water Demand study evaluated the potential of water conservation to reduce future demand. Based on a review of literature and other information, the study reflected three future conservation scenarios:

- No conservation – no new measures or programs would be implemented during the 50-year period, though ongoing adoption of newer appliances is assumed
- Intermediate conservation – voluntary water conservation measures would be implemented throughout the period
- Aggressive conservation – government-mandated measures require conservation measures above and beyond current codes

These scenarios covered indoor and outdoor residential use, commercial use, and agricultural use. They were applied to the three primary water demand projection scenarios to

estimate the potential impact of conservation over the study period. Figure 6 demonstrates the impacts conservation scenarios are projected to have on water demand and consumptive use, respectively.

The Future Water Demand study found that water conservation can help mitigate projected future water use. The study described a range of conservation measures and projected assumed conservation outcomes that could be achieved by a combination of various potential water conservation measures and programs.

Water conservation will be an important part of managing future demand and ensuring the viability of the aquifer. While all conservation measures are important, reduced outdoor irrigation, both residential and agricultural, presents the largest conservation opportunity. Water reuse has the potential to reduce groundwater pumping and meet other goals, but does not bear directly on future aquifer demands.

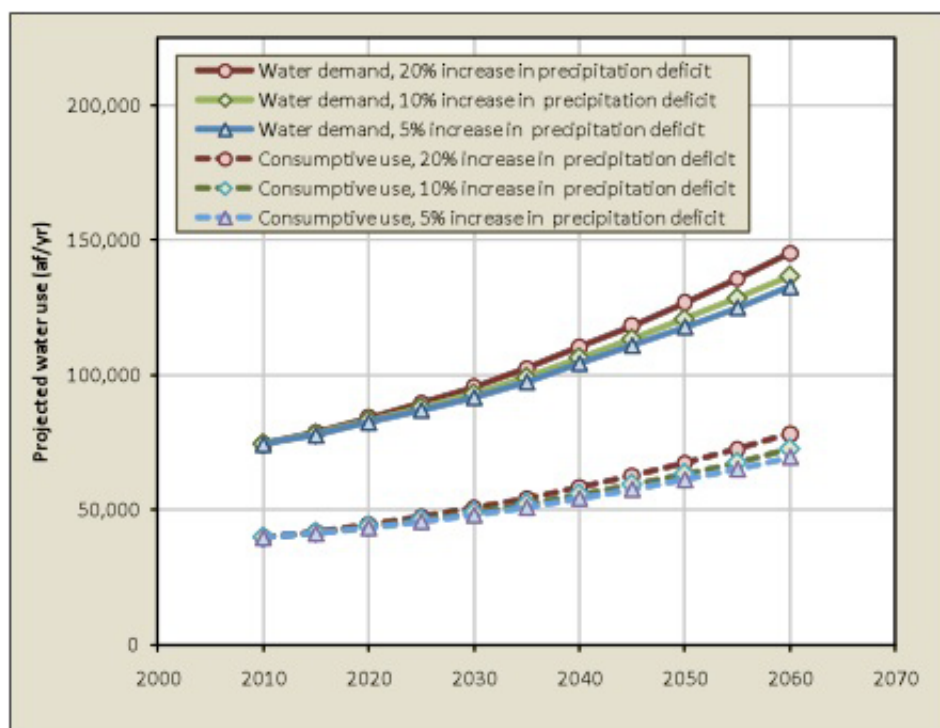


Figure 6. Future demand and consumptive use comparison chart

5. Recommendations

The specific goals of the statewide CAMP program, and this specific CAMP, are to:

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

Based on the four CAMP goals adopted by the IWRB, the Advisory Committee developed the following vision for the RP CAMP:

“Provide a sustainable source of high-quality groundwater for current and future economic, social, and environmental benefit, and preserve the exceptional quality and reliability of the Rathdrum Prairie Aquifer.”



Figure 7. Moving from CAMP goals to adaptive management

Using the four CAMP goals and this vision, the Advisory Committee developed three main objectives and several recommendations for achieving the goals and vision. Figure 7 illustrates how the Committee moved from CAMP goals to Vision to Objectives to Recommendations.

The following recommendations are not ranked or placed in order of priority.

Objective # 1: Meet Future Demand for Water

The Future Water Demand study completed in 2010 shows that projected growth over the RPA is not expected to exceed the aquifer’s annual recharge rate. However, as the aquifer supplies communities in Idaho and Washington, meeting this objective should reflect regional implications.

In the face of all of the uncertainties relative to future water demand – for example, growth and climate change, the Board recognizes that water conservation is one approach that the region can control. Conservation is an important strategy to make more efficient use of groundwater and reduce the need for future water supplies. The CAMP includes a broad-based, voluntary, incentive-based approach to enacting a water conservation program designed to meet a part of the projected future water needs.

The CAMP also includes a strategy of moving ahead with Reasonably Anticipated Future Needs (RAFN) water right applications for municipal water providers.

The Board adopts the water demand projections of moderate population growth and moderate level of conservation (scenario 2b) as the target on which to evaluate CAMP performance and to meet the goal established by the Board of having a sustainable aquifer. At least once every five years, annual

consumptive use will be calculated, water demand projections updated, and progress evaluated against this target. The level of effort in each of the action items should be reviewed and modified as necessary to meet the overall objective of a sustainable aquifer. The Board believes that if Idaho demand meets the established target, the jurisdictional conflicts with Washington will be minimized.

The Board recognizes the variability in growth and future water needs predictions and recommends periodic reviews and updates to the Rathdrum Prairie Aquifer Future Water Demand study.

Action Item #1: Enact water conservation measures that promote water efficiency and reduced use.

Conservation should be an ongoing goal to improve wise use of water. IWRB should encourage water conservation through incentive programs to achieve conservation today and in the future. Voluntary programs and actions can be implemented which focus on reducing current water consumption by use of best practices. Programs should also be developed which target new and changing uses. For example, the following steps could be taken, cooperatively with funding partners:

- Develop partnerships to establish demonstration conservation projects.
- Establish incentive programs directed at targeted water use categories (residential, commercial, agricultural, etc.).
- Enhance water conservation education programs through partnerships with governmental and private interests.

In compliance with Idaho water law, water conservation should be a consideration in the IDWR review processes for new and transferred water appropriations. In the event additional measures are found necessary to

maintain a sustainable aquifer; the Board recommends consideration of regulatory measures through support of legislation that addresses conservation.

Action Item #2: Establish municipal water rights to ensure that they are available for future needs.

In partnership with the municipal water providers in the Rathdrum Prairie area, studies necessary to support Reasonably Anticipated Future Needs (RAFN) water right applications should be undertaken.

This action item applies to the first goal of providing a reliable source of water in the future as well as preventing conflict over water resources.

Action Item #3: Identify local water use improvement strategies and develop partnerships to implement them.

To accomplish Action Item #3:

Assess local ordinances and land–use plans that may have an effect on water resources. Examples of strategies are:

- Use the city and county comprehensive land use plans, GWMA, conservation plans, agency education and aquifer studies as tools to encourage growth in areas to minimize impacts.
- Encourage all land use policies to retain topsoil where possible over the RPA. This will enhance the conservation of water use, as well as provide additional buffer for contaminant travel.

Action Item #4: Carefully consider hydrologic and social impacts of exportation of water from the basin.

Exporting water from the Rathdrum Prairie Aquifer to areas outside the basin can potentially impact the hydrologic system, local economies and local public interest. Idaho

Code (42-203A(5)) describes the conditions and considerations when proposals for appropriations for water when the place of use is outside of the watershed or local area where the source water originates. Extending water service to new areas outside the watershed should be carefully evaluated.

The Director will consider if proposed uses are in conflict with local public interest, contrary to conservation of water resources within the state of Idaho, or will adversely affect the local economy of the watershed or local area.

Action Item #5: Assess the Rathdrum Prairie Future Water Demand study on a regular basis.

The Board recognizes the uncertainty in predicting future growth and water needs and recommends periodic reviews and updates to the Rathdrum Prairie Aquifer Future Water Demand study.

Action Item #6: Fully fund implementation of the Groundwater Management Plan.

In 2005, the IDWR Director adopted the Rathdrum Prairie Ground Water Management Plan. This plan was developed by a collaborative advisory group and reflects locally supported actions. The plan sets forth goals and actions which guide the water resource management “to balance the protection of existing ground water uses and water quality with the opportunity for future development while encouraging water conservation.” The plan has not been fully implemented. The following actions must be implemented to complement the implementation of the RP CAMP:

- Implement monitoring protocols for all water users
- Collect and analyze data to refine knowledge of water supply and water use
- Establish a water district upon completion

of the Northern Idaho Adjudication

- Finalize Water Conservation Measures and Guidelines document

A summary of the status of the Groundwater Management Plan is attached in Appendix 6.

Objective # 2: Prevent and Resolve Water Conflicts

The Rathdrum Prairie Aquifer is part of the Spokane Valley Rathdrum Prairie Aquifer, a regional water resource shared with the state of Washington. While studies show there is adequate water for Idaho needs for the duration of the current planning horizon, Idaho recognizes that cooperation by stakeholders and governments from both states and tribes on water issues is necessary to avoid future conflict that may compromise or complicate water management.

A hydrologic analysis by IDWR determined that the most likely Idaho future water need projection could potentially reduce flow in the Spokane River at the Spokane gage by approximately 31 cfs by 2060 due to reduction of aquifer discharge to the river. This could result in additional attention and scrutiny from downstream interests. See Allan Wylie’s hydrologic analysis in Appendix 4.

One of the prominent features of the SVRPA is the connectivity to surface water. The interaction between the ground and surface water dictate that long-term management and planning must integrate both sources of water. Any surface water conflict issues that arise in the future will also relate to groundwater. As communities over the SVRPA grow, so will the potential for these conflicts. Figure 8 shows a map of the SVRPA.

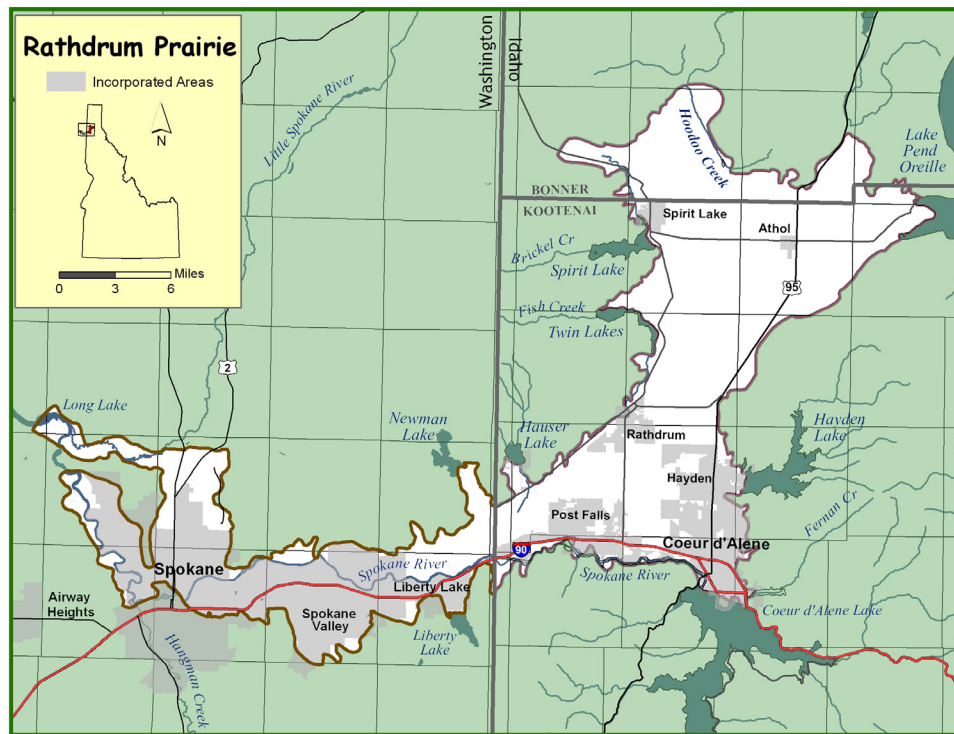


Figure 8. SVRP Aquifer Map

Action Item #1: Develop a framework for regional discussion and cooperation for SVRPA water issues.

Building on the history of bi-state relationships, studies, and efforts to work together, the IWRB, in cooperation with the State of Washington and tribal governments, should convene an official bi-state Advisory Committee to develop a bi-state regional cooperative forum for the SVRPA.

The framework should respect the sovereignty of Idaho, Washington, and the Coeur d'Alene and Spokane Tribes.

The Idaho contingent of the Bi-State Advisory Committee should include local interests along with tribal, local, state government and others. It should report periodically to the appropriate state agencies and implement the framework within two years of the adoption of this CAMP.

The particular type of legal or institutional instrument to initiate the Advisory Committee, and to implement the framework itself,

should be determined through a collaboration among the states and the tribal governments.

For more details on how this framework might be developed, please see Appendix 7.

Action Item #2: IDWR should develop criteria to evaluate artificial recharge projects in Idaho.

Idaho should anticipate future requests or applications for artificial recharge projects and determine what values need to be considered in the application review process. Criteria or guidelines for future projects will protect Idaho's interests and may provide a more predictable process for those wishing to implement artificial recharge projects.

Action Item #3: Encourage mechanisms that resolve local issues before they become conflicts. For example, by assembling local water purveyors, tribes, municipalities, and state agencies on a regular basis.

Support a venue for local jurisdictions to

discuss and coordinate local water needs, as well as articulate local needs to IDWR and other relevant agencies.

This group should:

1. Provide a forum to consider whether local jurisdictions should coordinate and apply for a Reasonably Anticipated Future Needs water right.
2. Assess the effectiveness of recharge options to increase aquifer beneficial use to support aquifer sustainability while meeting non-degradation standards
3. Maintain communication with IDWR so that all entities stay current on issues at the local and state level.

Action Item #4: Redefine the IDWR GWMA boundaries so they are consistent with the bi-state USGS hydrologic boundaries.

The director of IDWR should redefine the RPA boundaries in the GWMA so that they are consistent with the bi-state USGS hydrologic boundaries in Idaho. This will promote cohesive management, which should reduce future conflict over water resources.

Objective # 3: Protect the Aquifer Quality

The Rathdrum Prairie Aquifer can be characterized as having sufficient quantity for Idaho's needs and good quality. However, the aquifer is vulnerable to contamination and the region must be vigilant in protecting this valuable resource. There are many threats to the water quality of the aquifer, and a number of agencies and authorities exist to protect and improve the water quality.

The aquifer provides high quality water to all of its users. The health of the aquifer is of paramount importance to the region.

Working within existing authorities and

programs to protect and enhance the water quality of the RPA is the appropriate and cost-effective way to protect the water resources to meet future water needs.

Action Item #1: The Board should assess all CAMP activities to ensure projects implemented through CAMP protect aquifer water quality.

Action Item #2: The Board should support and encourage the Aquifer Protection District to work with Panhandle Health District, Idaho Department of Environmental Quality, tribal governments and others to address overlapping jurisdictions with the goal of improving efficiency.

The Aquifer Protection District may consider funding the following strategies to address current water quality protection:

1. Mitigate the impacts of stormwater runoff.
2. Promote practices that prevent accidental or incidental releases of contaminants over the RPA.
3. Encourage accounting of wellheads over RPA and proper abandonment of unused wellheads.
4. Support continued monitoring and management of potential water quality issues contained in RPA source lakes and rivers.
5. Encourage wastewater disposal methods that benefit the RPA.
6. Prepare for emerging or unknown threats.

For a full description of the suggested funding agenda for the Aquifer Protection District, please see Appendix 8.

Figure 9 is a summary of the key action items.

SUMMARY OF KEY ACTION ITEMS

(not ranked or placed in order of priority):

Objective #1: Meet Future Demand for Water

Enact water conservation measures that promote water efficiency and reduced use.

Establish municipal water rights to ensure that they are available for future needs.

Identify local water use improvement strategies and develop partnerships to implement them.

Hydrologic and social impacts of exportation of water from the basin must be considered carefully.

Update the Rathdrum Prairie Future Water Demand Study.

Objective #2: Prevent and Resolve Conflicts

Develop a framework for regional discussion and cooperation for SVRPA water issues.

IDWR should develop criteria for artificial recharge projects in Idaho.

Identify local water use improvement strategies and develop partnerships to implement them.

Redefine the IDWR GWMA boundaries so they are consistent with the bi-state USGS hydrologic boundaries.

Objective #3: Protect the Aquifer

Assess all CAMP activities to ensure projects implemented through CAMP protect aquifer water quality.

Support and encourage the Aquifer Protection District to work with Panhandle Health District, Idaho Department of Environmental Quality, and others to address overlapping jurisdictions with the goal of improving efficiency.

Figure 9. Summary of Key Action Items

6. Additional Plan Components

In addition to the objectives and action items listed in the Plan, additional actions are included to enhance coordination, decision-making, and aquifer management.

Plan Implementation

Management of the Rathdrum Prairie Aquifer affects numerous stakeholders, tribal nations, and the States of Idaho and Washington. Effective implementation of the Plan will require the participation and cooperation of stakeholders and governmental entities with jurisdictional authorities and responsibilities.

Board staff will provide leadership and coordinate activities for the implementation of this plan.

The Board will continue to convene the Advisory Committee to guide and make recommendations concerning the implementation of management strategies and review of goals and objectives. The Advisory 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.

The Advisory Committee will continue to include interest groups currently represented, and may expand to include other interested people, per the Board's direction. In addition, the Board will appoint at least one of its members to serve as a liaison between the Committee and the Board. The Advisory Committee will serve at the pleasure of the Board and provide a forum for public participation. Board's staff will facilitate the work of the Advisory Committee and provide the technical information needed for its deliberations. The Board 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 which are not currently available. Additional analysis will likely be required to assist the Board and the Advisory Committee.

Outreach and Education

During implementation of RP CAMP, the Advisory Committee will help develop and recommend funding mechanisms for a broad water education and outreach effort, building on existing outreach efforts and programs. Emphasis will be placed on education efforts that promote conservation and a reduction in consumptive use.

Implementation Plan and Funding

Implementation of new CAMP actions will be a partnership among the state, local and federal governments, tribes, stakeholders, water users and non-governmental organizations. The costs of implementation are anticipated to be shared among 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 protecting the Rathdrum Prairie Aquifer reflect the value and importance the aquifer and water resources have to the region. These existing activities are undertaken by a myriad of governments, agencies, and others. These activities are funded through various sources and through various programs. The Board supports existing programs which 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.

7. Adaptive Management

This section sets forth an adaptive management strategy for implementation of the Plan. 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 approaches 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 Rathdrum Prairie 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 Board to:

- Develop protocols for revising management actions and/or quantitative targets as necessary.
- Compare costs and impacts of different actions in the Rathdrum Prairie Aquifer.
- Adjust funding allocation between projects to get the most “bang for the buck.”
- Concentrate funding on management

actions that show 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 & Implementation

Management of the RPA affects numerous stakeholders within Idaho and requires coordination with other interests including the state of Washington and tribes. The Advisory Committee will be charged with providing guidance and recommendations concerning the implementation of management strategies and review of objectives. The Advisory 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

With data gathered through the monitoring process, the Advisory Committee and the Board’s staff will be able to assess the impacts of each management activity. 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.

Legislative Reporting and Plan Revision

The Board will provide periodic reports to the legislature documenting the progress made on the implementation of the Plan. The Board will evaluate the Plan after five years of implementation, and make planning recommendations to the legislature and Governor's office. The 50-year horizon will be considered at each revision so that the Plan will remain a relevant planning document without expiration.

Appendices

Appendix 1: Advisory Committee members

Chris Beck, AllWest Testing and Engineering

Phil Cernera, Coeur D’Alene Tribe

Mike Clary, Hecla Mining

Bruce Cyr, Jacklin Land Company

Andy Dunau, Spokane River Forum

Mike Galante, North Kootenai Water District

Bruce Howard, Avista Utilities

Allen Isaacson, Sierra Club

Hal Kever, Stimson Lumber Co.

Kermit Kiebert, North Idaho Chamber of Commerce

Paul Klatt, JUB Engineers

Kevin Lewis, Idaho Rivers United (resigned)

Jim Markley, City of Coeur d’Alene

Alan Miller, Hayden Lake Irrigation District

Jonathan Mueller, Landmark/Architects West

Michael Neher, City of Post Falls

Todd Tondée, Kootenai County

Ron Wilson, East Greenacres Irrigation District

Ken Windram, Hayden Area Regional Sewer Board

Appendix 2: Chronology of Studies & Events relevant to the Rathdrum Prairie Aquifer

1908 City of Spokane switches water source from the Spokane River to the Aquifer due to typhoid concern from sewage in river and private wells near cesspools

1900's There were few water wells on the Rathdrum Prairie until drilling and pumping technology improved in the 1930's. A history of Prairie water use can be found at: http://www.deq.idaho.gov/water/prog_issues/ground_water/rathdrum_prairie_aquifer/index.cfm#history

1976 Washington Department of Ecology adopts instream flows standards for the Little Spokane River

1976 The Federal Clean Water Act §208 spawned completion of local studies to identify sources of pollution for the Rathdrum Prairie region

1977 Panhandle Health District adopts enhanced septic system regulations for the Rathdrum Prairie Aquifer, creating the “5-acre rule” limiting development to one residential septic system per five acres without connection to a public sewer system. This rule led directly to Sewage Management Agreements with surrounding communities and the sewerage of Coeur d’Alene, Fernan, Hayden, Hayden Lake, Post Falls, and Rathdrum.

1978 EPA sole source aquifer designation SVRP Aquifer was the first aquifer in Idaho and the second in the nation to receive this designation. <http://yosemite.epa.gov/r10/water.NSF/Sole+Source+Aquifers/SSA>

1978 USGS publishes Spokane Valley-Rathdrum Prairie Aquifer, Washington and Idaho by Drost and Seitz

1978 IDEQ adopts Water Quality

Management Plan for Rathdrum Prairie. This plan was developed under CWA §208.

1979 Spokane County and the City of Spokane adopt Water Quality Management Plan consistent with Section 208, Clean Water Act and begin septic tank elimination program

1980 IDEQ “special resource water” designation

1980 Spokane County and Panhandle Health District initiate a groundwater monitoring program

1986-1988 PHD’s Sewer Management Agreements result in sewerage of the Cities of Hayden, Hayden Lake, Post Falls and Rathdrum with the construction of the regional treatment plants in Post Falls and HARSB.

1988 IDEQ publishes Rathdrum Prairie Aquifer Technical Report

http://www.deq.state.id.us/water/data_reports/ground_water/rathdrum_prairie_aquifer_beg_thru_chap2.pdf

1997 Sensitive Resource Aquifer designation for the Rathdrum Prairie Aquifer in Idaho creates non-degradation standard

2000 Original Spokane Valley-Rathdrum Prairie (SVRP) Atlas published as an educational and outreach tool.

2001 Newport Generation, Cogentrix Energy, and Avista Utilities apply for water rights to drill wells to extract about 18 million gallons per day of cooling water for natural gas turbine power plants

2001 CDA Basin Environmental Improvement Project Commission was created by Idaho Legislature under the Basin Environmental Improvement Act of 2001 (Idaho Code Title 39, Chapter 81 to provide a system for environmental remediation, natural resource restoration and related measures to address heavy metal contamination in the

Coeur d'Alene Basin.

2002 Idaho Department of Water Resources denies moratorium on permits from the aquifer and designates the Rathdrum Prairie Groundwater Management Area.

2003 Spokane Valley-Rathdrum Prairie Aquifer Study began. The major product of the study is a numerical groundwater model that Washington and Idaho can use to cooperatively manage the SVRP aquifer and adjacent rivers and lakes. Information gathered by partner agency scientists and contractors has expanded and refined our understanding of the aquifer and its interaction with local lakes and the Spokane and Little Spokane rivers, and water use region wide.

The three main agencies involved in this project/study has references listed here along with the way that each agency refers to the project:

IDWR – Spokane-Valley Hydrological Project
<http://www.idwr.idaho.gov/WaterInformation/projects/svrp/>

DOE – Spokane Valley-Rathdrum Prairie Aquifer Study http://www.ecy.wa.gov/programs/wr/ero/svrp_summit.html

USGS – Spokane Valley-Rathdrum Prairie Aquifer Study <http://wa.water.usgs.gov/projects/svrp/>

2004 SVRP Aquifer Atlas updated
<http://www.spokaneaquifer.org/aq.htm#atlas>

2005 IDWR adopts Groundwater Management Plan – 2005
http://www.idwr.idaho.gov/WaterInformation/GroundWaterManagement/RathdrumPrairie/rp_gwma.htm

2005 Avista files application to FERC to relicense their Spokane River hydroelectric projects, including Post Falls Dam.

2006 Aquifer Protection District legislation approved in Idaho and Kootenai County voters overwhelmingly approve its formation to fund aquifer protection efforts overseen by the Kootenai County Commission <http://www.phd1.idaho.gov/environmental/rathdrum/protectionprogram.cfm>

2007 USGS publishes “Hydrogeologic Framework and Water Budget of the SVRP Aquifer” and “Groundwater flow model for SPVRP Aquifer” – 2007

2007 Spokane River Forum is a non-profit organization created with WDOE seed funding to facilitate informed and non-partisan dialogue on important water issues in the region. <http://www.spokaneriver.net/>

2007 Idaho Department of Water Resources and Washington Department of Ecology sign a Memorandum of Agreement to preserve and maintain the SVRP Aquifer and Groundwater Flow Model created by the US Geological Survey.

2008 Legislature approves House Bill 428 and 644

This legislation establishes CAMP program and funding for aquifer management plan development by the IWRB. The legislation authorizes and funds characterization and planning efforts for priority aquifers, including the Rathdrum Prairie and the Treasure Valley Aquifers. <http://www.idwr.idaho.gov/waterboard/WaterPlanning/CAMP/CAMP.htm>

2008 Rathdrum Prairie Wastewater Master Plan (JUB Engineers)
http://www.postfallsidaho.org/pzdept/RathPrairieMasterPln/RPWWMP08/TM3_Final_Draft.pdf

2008 North Idaho Adjudication begins. The purpose of the general adjudication of water

rights is to make a complete and accurate determination of all existing water rights.

<http://www.idwr.idaho.gov/WaterManagement/NorthIdAdju/>

2009 Idaho Water Resources Board starts the process to development the RP CAMP

2009 Based on settlement agreements with Coeur d'Alene Tribe and State of Idaho, among others, FERC issues new 50-year license for Avista's Spokane River hydro project, including the Post Falls dam.

2009 Coeur d'Alene Lake Management Plan. The Coeur d'Alene Tribe and the Idaho Department of Environmental Quality collaboratively developed the 2009 Lake Management Plan to protect and improve lake water quality by limiting basin-wide nutrient inputs that impair lake water quality conditions, which in turn influence the solubility of mining-related metals contamination contained in lake sediments.
http://www.deq.state.id.us/WATER/data_reports/surface_water/water_bodies/cda_lake_mgmt_plan.cfm

2010 Spokane River and Lake Spokane Dissolved Oxygen Total Maximum Daily Load Water Quality Improvement Report approved by WDOE and EPA but disputed by Idaho communities.

http://www.ecy.wa.gov/programs/wq/tmdl/spokaneriver/dissolved_oxygen/status.html.

2009 Kootenai County Comprehensive Land Use Plan - Prior update was in 1994. 'The final plan was adopted by the County Commissioners in December of 2010. It was signed on 12-30-10

Appendix 3: Executive Summary of Future Water Demand study

Citation: Rathdrum Prairie Aquifer Water Demand Projections, SPF Water Engineering, LLC, July 2010.

Water demand overlying the Rathdrum Prairie Aquifer (the Idaho portion of the Spokane Valley-Rathdrum Prairie Aquifer) was projected for 5-year increments between 2010 and 2060. The projections were made for the Idaho Water Resource Board (IWRB) and the Idaho Department of Water Resources (IDWR) as part of the Idaho Statewide Comprehensive Aquifer Planning and Management Program (CAMP).

Approach

The approach for projecting future water demand consisted of

1. Reviewing historic population growth trends and growth rates;
2. Estimating existing water demand based on community water system data, water right information, USDA crop data, and other information;
3. Reviewing climate projections from the University of Washington Climate Impacts Group relative to the northern Idaho area;
4. Quantifying water conservation potential;
5. Evaluating selected potential water demand constraints;
6. Projecting future population and employment growth;
7. Projecting future water demand for indoor domestic, municipal, commercial, industrial, and irrigation uses; and
8. Developing “water demand scenarios” to evaluate possible future water demand outcomes that take into account various population growth rates, levels of water

conservation, and the potential impact of climate variability.

There are two general categories of factors that will shape future water demand: (1) exogenous factors over which local policies have limited influence and (2) local factors over which public policy and private incentives can have substantial influence. Exogenous factors include the strength of the national or global economy and national demographic trends that strongly influence regional population and job growth. Although local governmental policy can have some influence over these factors, the local economy is largely driven by national or global factors. One needs to look only at the recent economic recession to see that some of these national or global factors are difficult to control at the local level. Exogenous factors also include potential effects of climate variability, over which local policy-making will have very little direct influence.

In contrast, regional land-use policies, building codes, governmental policies, water delivery pricing, and other local measures can have substantial influence on future water demand. Local and state government, local water purveyors, and area residents have substantial influence over these factors.

Thus, future water demand scenarios were constructed to reflect the effect of both exogenous (external realm) and local influences (policy realm) on future water use. First, three primary scenarios were developed to reflect three different population growth scenarios: low population growth, medium-level (“baseline”) population growth, and high population growth. Then, three sub-scenarios were constructed within each of the population-growth scenarios to reflect various water conservation levels. The three primary population-growth scenarios, each with three water conservation sub-scenarios, result in nine different projections of potential future water

demand. Finally, the effects of potential climate variability were illustrated with a scenario representing baseline population growth and moderate water-conservation.

Conclusions

The primary conclusions from this analysis include the following:

1. Water demand by the year 2060 could rise from estimated current withdrawals of approximately 74,000 acre-feet to between 77,000 acre-feet (based on a low population-growth rate of 1.6% per year and aggressive water conservation) and 223,000 acre-feet (based on a higher population growth rate of approximately 3% per year and no water conservation). The Rathdrum Prairie Aquifer area has experienced both of these population-growth rates over multi-year periods in past decades.
2. The most likely 2060 water demand projection ranges from approximately 101,000 to 163,000 acre-feet, depending on the level of water conservation. This projection is based on a moderate level of population growth (averaging approximately 2.3% per year) over the next 50 years.
3. The consumptive use is water lost from the local hydrologic system (i.e., aquifer and Spokane River), mostly through evapotranspiration. The consumptive use is projected to increase from approximately 40,000 acre-feet in 2010 to between 59,000 and 76,000 acre-feet in the year 2060 under moderate population- and employment-growth rates. This range reflects the effects of different water conservation levels.
4. The water use for agricultural irrigation will likely decrease in time as irrigated agricultural land is replaced by more urban and suburban land uses. However, development of new residential and municipal irrigation on land that is currently non-irrigated will likely lead to an

overall increase in total irrigation demand.

Population and Employment Projections

5. The Kootenai County population grew from approximately 22,300 people in 1940 to 134,400 people in 2007. Bonner County grew from 15,700 people in 1940 to approximately 41,000 people in 2007.

6. Annual population growth rates in Kootenai County (most of which overlies the Rathdrum Prairie Aquifer) have ranged from 1.6% (between 1980 and 1990) to 5.4% (between 1970 and 1980). The average annual growth rate between 1970 and 2007 was 3.7%.

7. The Rathdrum Prairie Aquifer area population growth is projected to grow from approximately 128,000 people to approximately 400,000 people by the year 2060, reflecting an average growth rate of approximately 2.3% per year. If population growth for the next 50 years is at the same 1.6% annual rate experienced between 1980 and 1990, the 2060 population overlying the aquifer will be approximately 286,000 people. If the population grows at a rate of 3% per year (which is less than the 3.7% annual growth between 1970 and 2007), the 2060 population overlying the Rathdrum Prairie Aquifer will be approximately 581,000 people.

8. Employment over the aquifer area is projected to increase from approximately 53,000 employees in the year 2010 to 183,000 employees in the year 2060. The largest employment sector will likely continue to be wholesale and retail trade.

Existing Water Use

9. Existing water use was estimated with data from 20 community water systems ranging in size from approximately 39 to 46,000 people; these 20 community water systems serve approximately 72% of the total Rathdrum Prairie population. Data from the 20 community water systems

were used to extrapolate water use to 70 additional community water systems that serve approximately 19% of the study area population. Estimates of self-supplied domestic water use for the remaining 9% of the population were made based on household domestic use rates estimated from community water system data. Self-supplied industrial water use estimates were based on IDWR water right information. Agricultural water use rates were estimated based on irrigated acreage, USDA crop information, and precipitation-deficit data.

10. Approximately 72,000 acre feet of water were withdrawn annually from the Rathdrum Prairie Aquifer in recent years. Of this, an estimated 34,400 acre-feet were withdrawn by community water systems, 8,800 acre-feet were withdrawn by individual domestic wells, 4,200 acre-feet were withdrawn for self-supplied commercial and industrial uses, and 24,700 acre-feet were used for agricultural irrigation. The estimated aggregate consumptive use (water that is lost from the local hydrologic system) was approximately 38,400 AFA.

11. Approximately 67% of the projected 2010 groundwater withdrawals are used for the irrigation of residential, commercial, institutional, and agricultural lands. Other residential uses (14%), commercial, industrial, and institutional uses (14%), and unaccounted water (5%) constitute the balance.

Water Supply Characteristics

12. The Rathdrum Prairie Aquifer, part of the larger Spokane Valley-Rathdrum Prairie Aquifer, consists of unconsolidated sediments that are primarily coarse-grained sand, gravel, cobbles, and boulders deposited by immense floods.

13. The highly transmissive nature of the Rathdrum Prairie Aquifer means that the impact of water use in one portion of the

aquifer will rapidly propagate throughout the entire aquifer.

14. Recharge to the entire Spokane Valley-Rathdrum Prairie Aquifer is approximately 1,000,000 acre feet per year.

15. The existing Rathdrum Prairie Aquifer consumptive water use (consumptive use is a measure of aquifer impact) is approximately 38,000 AFA, or approximately 3.8% of the 1,000,000 acre feet of aggregate Spokane Valley-Rathdrum Prairie Aquifer recharge.

16. It is unlikely that groundwater availability in most portions of the Rathdrum Prairie Aquifer will limit future water demand over the next 50 years. A projected consumptive use of approximately 71,000 AFA in the year 2060 (based on medium population and employment growth and medium levels of water conservation) represents only about 7% of the Spokane Valley-Rathdrum Prairie Aquifer recharge (although, recharge rates are not equivalent to water available for use). Given the transmissive nature of the Rathdrum Prairie Aquifer sediments, it is likely that this amount of water could be withdrawn from the aquifer (except for, perhaps, along the basin margins where the aquifer is less thick than in central portions of the Rathdrum Prairie).

Potential Environmental Constraints

17. Aquifer water quality is good in most areas and does not presently pose a constraint on future groundwater demand.

18. Future water demand may, however, be limited by the ability to discharge treated municipal effluent.

19. A portion of the Rathdrum Prairie agricultural land will almost certainly be maintained for the land application of treated municipal effluent. Residential or municipal irrigation, to the extent that it occurs on currently non-irrigated land, will contribute to a likely increase in overall irrigation demand.

Climate Variability

20. Annual average temperatures are projected to increase by approximately 3.2°F by 2040 and about 5.3°F by 2080.

21. Evapotranspiration may increase by approximately 6% per degree centigrade over 2010 values. This could lead to potential evapotranspiration increases of between 12% and 19% by the years 2040 and 2080, respectively. Another study suggests possible potential evapotranspiration increases of 5% to 9% by the year's 2040 and 2080, respectively. Based on these predictions, irrigation demand could increase by 5% to 20% in the next 50 years.

22. For most of the projections in this study, we assumed a 10% increase in future irrigation demand as a result of increased evapotranspiration. However, the effects of a 5% increase and a 20% increase in future irrigation demand were also evaluated for a moderate population-growth and conservation-level, scenario. A 5% increase in irrigation demand would result in an overall water demand that is approximately 3% less than the demand projected based on a 10% increase in irrigation demand. A 20% increase in future irrigation demand would result in an overall aquifer demand that is approximately 6% greater than the demand projected based on a 10% increase in irrigation demand.

23. Annual precipitation may increase by approximately 2.3% by the year 2040, and by approximately 3.8% by the year 2080. The Rathdrum Prairie Aquifer area is expected to become wetter in the fall and winter and dryer in the spring and summer. Additional precipitation, to the extent it occurs in the fall, winter, and spring, will not reduce irrigation demand during summer months.

24. Extreme temperature and precipitation events will likely increase in frequency. Extreme and/or extended drought periods will increase annual irrigation demands.

Water Conservation Potential

25. Aggressive water conservation can help mitigate some of the projected future water use. Aggressive conservation can result in aggregate water demand that is approximately 60% of the non-conservation demand for a given population growth outcome in 2060.

26. Aggressive water conservation could lead to a 52% reduction in per-household domestic water demand by the year 2060 (from 2010 levels).

27. Per-household outdoor residential irrigation use could be reduced by up to approximately 33% from 2010 levels.

28. Commercial and industrial use could likely be reduced by up to approximately 40% over the next 50 years compared to 2010 per-employee use rates.

29. Specific water conservation measures are outlined in the report.

30. Water reuse is a potential method to extend water supply, but does not bear directly on future Rathdrum Prairie water demands or aquifer withdrawals.

Appendix 4: Impact of Projected 2060 Demand on Spokane River

MEMO

State of Idaho

Department of Water Resources

322 E Front Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 287-4800 Fax: (208) 287-6700

Date: 27 May 2010
To: Helen Harrington and Sandra Thiel
From: Allan Wylie
cc: Rick Raymondi and Sean Vincent
Subject: Impact of projected 2060 demand on Spokane River

Helen and Sandra:

The Rathdrum Prairie CAMP Committee asked me to conduct a transient analysis of the impact of the SPF 2b population growth and consumptive use prediction (medium growth with moderate conservation efforts) on the Spokane River and present my findings at the June 4 meeting. I am preparing this memo because I will probably be either involved in a hearing regarding an Eastern Snake Plain Aquifer water call, or ensnared in the aftermath of the hearing and unable to attend the June 4 meeting.

Method

The SPF scenarios provide average projected consumptive use for 2060, not monthly projections, so I needed to shape the steady state scenario I presented at the April 16 meeting into a monthly transient file for use in the Spokane Valley Rathdrum Prairie (SVRP) Model. To accomplish this, I apportioned the 2060 steady state file to match the Idaho portion of the 2005 consumptive use for the SVRP Model. Table 1 shows the Idaho portion of the 2005 consumptive use from the SVRP aquifer model along with the shaped SPF 2060 consumptive use estimate and the difference between the two files.

Table 1. 2005 water budget for SVRP model and the 2060 monthly water budget.

Month	2005 (ac-f)	Projected 2060 (ac-f)	Difference (ac-f)
January	1,161	1,638	476
February	975	1,337	363
March	1,180	1,641	461
April	4,318	6,762	2,445
May	4,189	6,518	2,328
June	7,119	11,365	4,246
July	11,829	18,985	7,156
August	7,658	12,222	4,564
September	3,316	5,216	1,900
October	1,512	2,228	716

November	981	1,370	389
December	943	1,284	341
SUM	45,181	70,566	25,385

The impacts of the projected growth on the Spokane River can be simulated either by running the model with the 2005 consumptive use and again with the 2060 consumptive use and then differencing the outputs, or by running the model with the difference between the 2005 and 2060 consumptive use. I chose to work with the difference.

Results

Figure 1 shows the direct impact on the river. The direct impact is a result of the change between the 2005 aquifer model consumptive use and the SPF estimate for year 2060. The additional water use lowers the water table causing either increased seepage from or decreased gains to the Spokane River. The maximum change in impact is about 31 cfs in late summer and early fall. Late summer or early fall is when the seven day low flow typically occurs in the Spokane River.

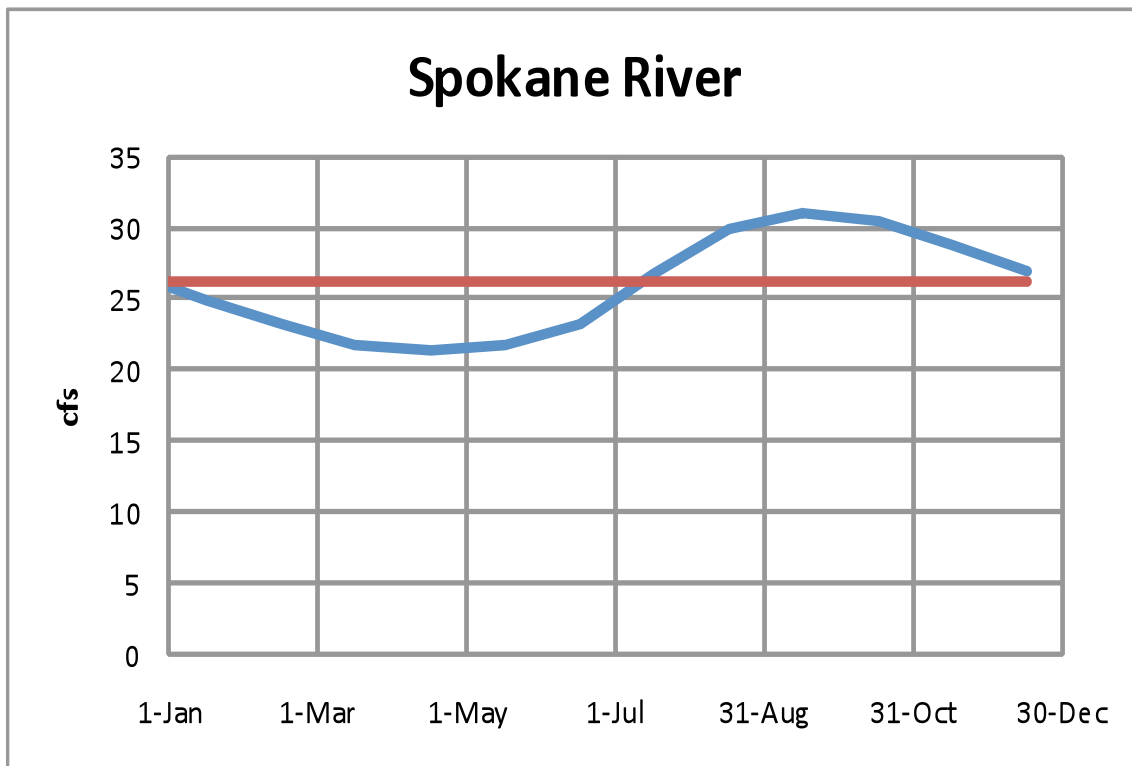


Figure 1. Direct impact on the Spokane River; red=steady state, blue=transient.

Figure 2 presents an impact on Lake Coeur D' Alene that results in an indirect impact on the Spokane River. This is where increased water use in Idaho lowers the water table resulting in increased seepage from Lake Coeur D' Alene. This water leaks from the lake into the aquifer to replace water that has been consumptively used, the water that leaked out of the lake can't be discharged through Post Falls Dam into the Spokane River. Because discharge from the lake is controlled at Post Falls Dam, the timing of this impact

does not appear to be critical. Although the magnitude of the impact is small and would be difficult to quantify, it does represent a decrease in the supply of water that can be released to mitigate downstream impacts.

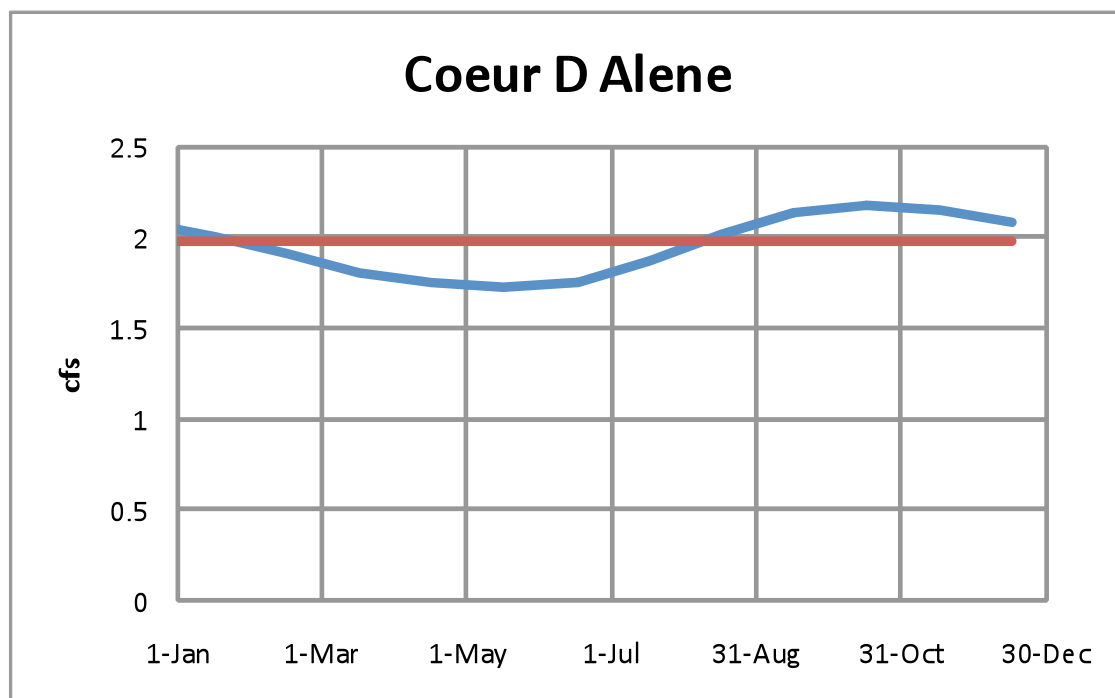


Figure 2. Impact on Lake Coeur D' Alene that results in an indirect impact on the Spokane River; red=steady state, blue=transient.

Conclusion

The transient impacts of SPF scenario 2b were estimated by shaping the 2060 annual consumptive use similar to the consumptive use for 2005 used in the SVRP aquifer model. The difference between the 2005 consumptive use in the SVRP aquifer model and shaped scenario 2b was input into the ground water model. The resulting simulation indicates that the maximum direct impact on the Spokane River would be about 31 cfs and should occur during late August and early September.

The model indicates that Lake Coeur D' Alene will also be impacted by growth in Idaho. Although the impact is small and on a large lake, it does represent a decrease in water than can be released to mitigate downstream impacts.

Allan Wylie

Appendix 5 Executive Summary of Climate Variability Study completed for the IWRB

Citation: Climate Variability Impact Studies in the Rathdrum Prairie and Treasure Valley Regions, Venkat Sridhar and Zin Jin, October 2010.

(This executive summary contains information on the Rathdrum Prairie and Treasure Valley Basins.)

This project covered many tasks including the evaluation of climate models, climate model output downscaling, SWAT model calibration and validation, simulation of climate change in the basin's hydrology and assessment.

We identified five climate models that are relevant to capturing the future trends in precipitation and temperature. The models include CCSM3 (warmer and dry summer through 2020), HADCM3 (warmer and dry summer through 2040), IPSL CM4 (wetter winter), MIROC 3.2 (warmer and wetter winter) and PCM (cooler and dry summer). They represented a wide range of conditions and also change by time.

After identifying the models, we downloaded the spatially downscaled climate model data from CMIP3 source developed by Bureau of Reclamation and other collaborators and subsequently temporally disaggregated them from monthly to daily to run the hydrology model.

The precipitation forecast is less certain. In other words, some models predicted a slightly increased precipitation between 2010 and 2060 while other models predicted a decrease in precipitation. However, the temperature increase is found to be consistent.

For the Treasure Valley region, changes in precipitation ranged between -3.8 % and 36%. Changes in temperature are expected to be

between 0.02 and 3.9 °C. In the Rathdrum Prairie region, changes in precipitation are expected to be between -6.7% and 17.9 %.

Changes in temperature will likely be ranging between 0.1 and 3.5 °C. Overall, the chosen climate models showed a rise in temperature (0.31 °C to 0.42 °C/decade for Rathdrum Prairie and 0.34 °C to 0.46 °C/decade) and an increase in annual precipitation (4.7% to 5.8% for Rathdrum Prairie and 5.3% to 8.5% for Treasure Valley) over a period of next five decades between 2010-2060.

In order to study the response of the hydrology model due to changes in precipitation, we implemented the Soil Water Assessment Tool (SWAT) hydrology model to simulate the basin scale hydrologic response to changing climate. However, it is critical to calibrate the model based on the observed flow for multiple sub-basins in each basin. Therefore, we first calibrated the SWAT model for the Spokane River basin using the flows from Post Falls and Spokane. Similarly, we calibrated the model for the Boise River basin using the flows from Parma, Lucky Peak, Arrowrock, Twin Springs and Anderson Ranch. This calibration exercise resulted in 16 parameters adjusted for various processes within the basin including snowmelt, vegetation, groundwater and surface runoff. In both basins the model performance was evaluated using the R² values and we obtained a value of 0.6 or higher and that is considered to be good in the modeling environment for extending the simulation framework with selected parameters to another period.

The SWAT hydrology model was implemented under future climate conditions using the newly calibrated parameters. Considering a wide range of precipitation and temperature outlook, we expected that predictions on the basin hydrology to express a broad range in streamflows, evapotranspiration and recharge during the simulation period of the entire 50

year period between 2010 and 2050. This was observed for the three emission scenarios (A1B, A2 and B1).

We calculated the increase or decrease in flows from historic average flow. Therefore, when we state a decrease or an increase by certain flow rate, it is the difference in flows when compared with historic flows. Based on the average of eight sites (Twin Springs, Anderson Ranch, Arrowrock, Lucky Peak, Glenwood, Middleton, Caldwell and Parma) in the Boise River basin, the peak flows (March through June) appear to increase by 4117 cfs (A2), 3285 cfs (A1B) and 3917 cfs (B1). An eight site average of decrease in peak flows for the Boise River basin revealed the flows as 1223 cfs (A2), 1693 cfs (A1B) and 1366 cfs (B1) due to some scenarios where precipitation is predicted to be decreasing. Overall, the peak flow averages expected to increase by 621 cfs (A2), 300 cfs (A1B) and 436 cfs (B1). Thus, the high flows in the future will probably be higher than historic high flows.

We averaged the two site predictions (Post Falls and Spokane) in the Rathdrum Prairie basin to understand the peak flow trends. It was found that increases are expected to be about 2525 cfs (A2), 610 cfs (A1B) and 1899 cfs (B1) based on the two site average flows predicted by the model. The decreases in peakflows were higher than the flows predicted in the Boise River Basin. For example, a decrease in peak flows by 7303 cfs (A2), 7590 cfs (A1B) and 6029 cfs (B1) are also simulated by some scenarios that predict a decrease in precipitation. Again, the high flows in the future will probably be higher than historic high flows.

The low flows (July-Oct) predicted by the model have projected an average increase in the summertime flows by 195 cfs (A2), 77 cfs (A1B) and 336 cfs (B1) scenarios. Minimum low flows predicted by the model have

projected decreasing flows by 622 cfs (A2), 662 cfs (A1B) and 607 cfs (B1). Overall, the low flow averages declined in the future by 281 cfs (A2), 303 cfs (A1B) and 328 cfs (B1). In the Rathdrum Prairie basin, for instance, a decrease in flow by 1037 cfs (A2), 903 cfs (A1B) and 6029 cfs (B1) is predicted. The maximum low flows are increasing by 1848 cfs (A2), 954 cfs (A1B) and 1635 cfs (B1). A minimal increase in the average low flows, rather than a decrease as in the Treasure Valley region, by 98 cfs (A2), 56 cfs (A1B) and 95cfs (B2) is simulated by these models. For both basins, the low flows are lower than (Treasure Valley) or about the same as that of the historic low flows.

We computed the volume of flow changes in the Boise River basin at Lucky Peak by integrating the area under the hydrograph. The expected increase in flow volumes are 201896 ac-ft (A2), 120547 ac-ft (A1B) and 265384 ac-ft (B1). The overall average when combining all of these flow volumes results in the flow volume increase by 195942 ac-ft.

We also anticipate a shift in the timing of snowmelt and this shift is advancing from the current peak melt period of May to April, by about 3-4 weeks. This has been consistent for both the basins. This is pretty typical of many regions in the Western U.S. which is expected to cause some management problems related to the water resources in the region. An earlier melt, if not stored, might cause some shortages in the system thereby possibly impacting various sectors including irrigated agriculture, hydro power and domestic as well as municipal water supply.

In the Boise River basin, depending on the climate scenario, a range in precipitation between 23 and 35 inches is probable and it has the cascading effect on the hydrological water balance components. This precipitation is subsequently partitioned into different water

balance components, such as streamflow, evapotranspiration, soil moisture and recharge. For instance, streamflows predicted by the model were between 10 and 19 inches and recharge from 4 to 8 inches. The other two components, evapotranspiration and soil water storage although are expected to change, under natural condition (without any human influence) as predicted by these models have shown lesser variability.

In the Rathdrum Prairie basin, precipitation is expected to range between 32 and 40 inches over the next decades, which in turn appeared to cause a range in streamflow (14-20 inches) and recharge (2-4 inches) estimates. Evapotranspiration varied between 15 and 19 inches under natural vegetation conditions. Soil water projections are between 6-8 inches.

It is also important to recognize that there are some uncertainties in our estimates and that can be attributed to GCM-produced precipitation and temperature, model parameters and structure (for instance reach gain or loss, residence time of aquifer recharge) and measured regulated flow, computed natural flow and its year-to-year variability.

Appendix 6: Summary of Groundwater Management Plan Status

On September 15, 2005, the Director of the Idaho Department of Water Resources adopted the Rathdrum Prairie Groundwater Management Plan. The plan was based on a recommended plan developed by the Rathdrum Prairie Groundwater Management Advisory Group. The plan set forth goals and actions which were intended to guide water resource management “to balance the protection of existing groundwater uses and water quality with the opportunity for future development, while encouraging water conservation.” (A copy of the full plan is available at: <http://www.idwr.idaho.gov/WaterInformation/GroundWaterManagement/RathdrumPrairie/PDFs/Final%20Order%20Rathdrum%20GWMA.pdf>.)

Since the plan was adopted, some actions have been accomplished, others await implementation. As a part of the RP CAMP, the management plan provides a framework for management actions which would benefit the RP CAMP implementation. The following review of the goals and actions set out in the plan is intended to guide the recommendations for implementing CAMP.

Goal 1: Technical Data and quantification of water availability.

Actions to meet this goal included participation in the SVRP Hydrologic Project; continuing data acquisition; and adaptation of permitting conditions as new data was analyzed. Additionally, IDWR was directed to obtain hydrogeologic data as new wells are completed. All actions have either been accomplished or are in place.

Goal 2: Technical Data and quantification of water use.

Two actions defined under this goal were the

establishment of a water measurement district and investigation of starting an adjudication. Since the Northern Idaho Adjudication was initiated successfully, IDWR determined that the establishment of a water measurement district, as an interim measure prior to the adjudication, was not practical. Upon completion of the adjudication, establishment of a permanent area-wide water district will be established.

Goal 3: Manage groundwater resources efficiently and fairly for all users.

Two actions identified included the establishment of a water district and evaluation of transfer applications to ensure consistency with local public interest and conservation of the resource. Both these actions are or will be implemented. As stated above, a permanent area-wide water district will be established once the adjudication is completed.

Goal 4: Encourage water purveyors, regulatory agencies and local and regional governments to plan and incorporate planning principles.

This goal did not lay out actions which IDWR could implement but to show support and encouragement. Elements within this goal included encouragement for municipal water providers to undertake long term plan under the Growing Communities Doctrine statute. Local jurisdictions were encouraged to require community water systems over individual wells.

Goal 5: Encourage water conservation efforts by all users of the resource.

Two action items were identified: conservation plans required for municipal purveyors and support for establishment of an aquifer-wide water conservation advisory committee. An additional list of measures was compiled for IDWR encouragement and assistance. This list included economic support for developing

conservation plans; water conservation demonstration projects and educational activities; support for price structures to encourage water conservation; and, investigating strategies for using reclaimed wastewater. IDWR has implemented the requirement for conservation plan submission, but a final guidance document has not been completed. Draft Water Conservation Measures and Guidelines for Preparing Water Conservation Plans has been prepared and is available on the IDWR web pages, but has never been finalized. No actions have been taken to implement the other actions or suggestions.

Additional Actions

Seven additional actions were identified:

1. New domestic wells required to be authorized through permit (no Start Card). Implemented.
2. Protection against loss or forfeiture if non-use is due to conservation plan. Implemented, but unused.
3. Proper abandonment of wells, with consideration of use as monitoring well. Implemented.
4. Monitoring required for new wells, if deemed appropriate. Implemented.
5. Investigation of managed recharge. Not implemented.
6. Continued advisory committee activity. Regular meetings not held.
7. Annual review of plan and 5-year report to IDWR Director. Not implemented.

Appendix 7: Full description of ideas for the Framework for Regional Discussion

Develop a plan for regional engagement to promote collaborative bi-state SVRP aquifer management. While the specific elements of such a framework would be determined by Idaho and Washington, the study effort has helped highlight some principles that may be useful. Several are noted below, along with specific considerations for the Board.

- The initial effort should be to assemble a manageable-sized regional framework planning group from both states to develop the fuller framework itself (this could include ground rules, process definition, goals, etc.).
- The USGS aquifer study effort provides a possible template, along with strong working relationships, for future collaboration, as well as funding sources.
- A regional framework should be equitable for each state, and be inclusive of tribal governments as well as stakeholders across the region.
- A regional framework should acknowledge the range of economic, environmental and other interests related to the SVRPA and seek to find ways to support that range of interests.
- The focus of a regional framework should begin with issues and efforts that are currently possible with existing governance: working toward common definitions, measurement standards, water use data, mutual conservation and efficiency goals, and further refinement, where needed, of the aquifer as well as groundwater and surface water interactions.
- A regional framework may or may not need to result in formal governance mechanisms;

it should be flexible in considering different approaches for collaborative water management. The Moscow-Pullman aquifer effort may provide useful examples in this regard.

- A regional framework should look for ways to constructively integrate with other local and regional efforts, such as water system planning, watershed planning, ongoing adjudication, and similar efforts.

Appendix 8: Full description of strategies that should be addressed by the Aquifer Protection District.

Strategy # 1: Encourage the support and development of existing and future applicable programs to monitor, enhance, and model water quality concerns.

- Emphasize continuance and expansion of existing programs and plans, which have been successful in protecting and enhancing the quality of the aquifer. In some cases, we need either to bolster or enforce plans that have not been implemented to their full potential; or develop new plans to fill voids or identify areas that need to be addressed.
- Continue funding for long term monitoring to provide for trend analysis of RPA health.
- Encourage development of fate and transport models to enhance response to contamination events and long term planning to avoid contamination.
- Explore whether there are opportunities to adapt existing models, or develop new models, to determine when and where quality problems will occur. This may require modifying the models so they can be applied at a micro level.
- Develop and expand existing aquifer programs to include basin-wide consideration, such as threats to water quality on a watershed basis.
- Ensure programs relating to water quality and aquifer protection should not be subject to short-term changes in departmental or administrative leadership. Create programs that support long-term vision.

Strategy # 2: Mitigate the impacts of stormwater run off. Stormwater runoff from developed lands can contain a variety of pollutants that can adversely affect water quality. As land development increases,

the Advisory Committee recognizes that mitigating the impacts of stormwater run off is essential to protecting the quality of water in the aquifer.

- Promote pretreatment methods for stormwater.
- Encourage permitting agencies to review and improve stormwater permits at regular intervals. Review operations and maintenance overview of systems, and ensure they are maintained as intended.
- Promote the use of best management practices in development design. Although this is not a comprehensive treatment mechanism, the Advisory Committee believes this alternative is more desirable than mere collection in urban areas, which is difficult to deal with.
- Monitor for an increase of chloride or other contaminants in runoff. Develop strategies to address the timing issue of chloride increases following a freeze and use of road salts.
- Consider how to assess and approach the effects of nutrient pollution from both developed and agricultural lands.
- Develop incentives to retrofit non-conforming systems.
- Identify pollutions that create serious problems and identify programs that help reduce and eliminate those pollutants.
- The Advisory Committee encourages utilization of future technologies that enhance the stormwater treatment strategies for the RPA.

Strategy # 3: Promote practices that prevent accidental or incidental releases of contaminants over the RPA.

- Support and expand regular monitoring programs with vigilance to the risk of

incidental releases of industrial pollution. Encourage coordination and communication between those regulatory groups to enhance the protection of the aquifer.

- Where applicable, require increased monitoring and reporting of petroleum pipelines by owner and operation entities.

Strategy # 4: Develop a program to account for wellheads over RPA and proper abandonment of unused wellheads. Wellhead contamination is possible if well head construction lacks a seal and allows for contamination.

- Include consideration of wellhead contamination in continued or enhanced regulations and in periodic water quality threat assessments.
- Support proper decommissioning of private wells that should no longer be in use. Support creation of incentives for decommissioning.
- Evaluate unused wells to see if they can and/or should be used for other purposes before sealing against potential contamination (instead of decommissioning).
- Create an educational program to support public awareness of the issue through a coordinated effort with local jurisdictions as a health and safety issue.

Strategy # 5: Support continued monitoring and management of potential water quality issues contained in RPA watershed.

- Determine whether monitoring of lake metals is being completed at the appropriate scale and time intervals (both length and frequency of testing).
- Encourage support or increased resources for monitoring of lake metals.
- Ensure that the prospect of catastrophic

events involving the Lake are considered, such as a sudden shift from aerobic to anaerobic conditions.

- Ensure that potential contamination due to dredging is considered in light of potential problems with heavy metal migration.
- Apply for grants to study the potential for mobilization of contaminants in CDA lake.
- Encourage support or increased resources for monitoring of lake contamination.

Strategy # 6: Encourage wastewater disposal methods that benefit the RPA.

- Develop strategies to maintain standards of nondegradation that can include wastewater reuse such as purple pipe.
- Conduct study to determine cumulative effects of wastewater disposal methods, including septic systems.
- Determine the permissible land use and density that would not degrade the RPA greater than existing regulations. Account for the aggregate impact of contamination.
- Avoid damaging the water quality with wastewater disposal systems.
- Develop better monitoring or consider study on impacts from septic systems.

Strategy # 7: Prepare for emerging or unknown threats. Traces of personal care products and pharmaceuticals in our water systems are a growing concern, and issues may emerge in the edges of the aquifer where there is less dilution due to the slow movement of water. The Advisory Committee is also concerned about activities beyond the regulatory boundary of the aquifer that may threaten water quality in the future. To address this issue, the Advisory Committee proposes the following:

- Expand regulations beyond aquifer boundaries to maintain water quality at a

watershed scale.

- Develop strategy to address overarching federal regulations that may conflict with regional or local needs. (i.e. Pipeline Safety Act)
- Encourage testing for and regulating new compounds that may be proven or suspected of causing potential harm.
- Continue or enhance existing water quality monitoring programs.
- Encourage modification of existing, or development of new models to assist in determining or predicting water quality impacts on the RPA. Continue funding for long-term monitoring to provide trend analysis of RPA health and for the development of fate and transport models to enhance the response to contamination events.





MEMO



To: Idaho Water Resource Board
From: Neeley Miller *NM*
Subject: Treasure Valley CAMP
Date: January 10, 2011

ACTION TO BE CONSIDERED:

Temporary appointment of Vern Case, in place of Gayle Batt, to the Treasure Valley Comprehensive Aquifer Management Plan Advisory Committee (TV CAMP AC) until the adjournment of the Legislative session.

Status Report and Background

The Treasure Valley Comprehensive Aquifer Management Plan Advisory Committee (AC) has met nine times since April 2010. A copy of the current advisory committee membership is attached. The Committee has been meeting monthly and developing a common body of knowledge of the basin physical setting, hydrologic characteristics and social setting. At the October TV CAMP AC meeting, small work groups were established. These groups have been developing selected recommendations based on the goals and objectives for the TV CAMP.

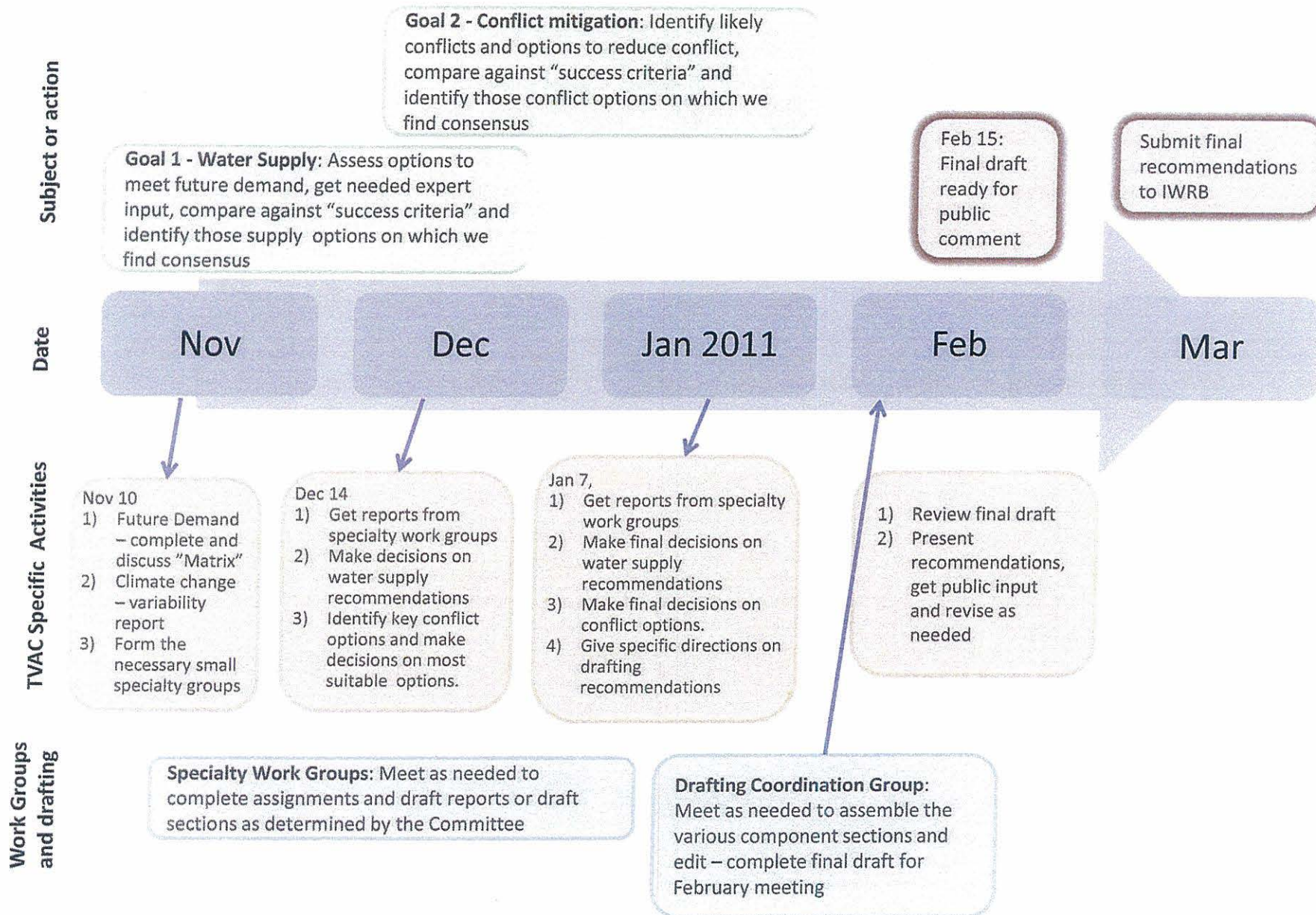
The Advisory Committee is optimistic that they are on-track to complete their recommended plan by March 2011. A copy of the work plan reflecting this target completion date is attached. In an attempt to meet this deadline the TV CAMP AC has decided to hold two day meetings for the next two months.

Advisory Committee Composition and Action Needed

An appointed member of the TV CAMP advisory committee has requested a temporary replacement. Gayle Batt with Wilder Irrigation District requested on January 4th the temporary appointment of a replacement to the TV CAMP AC due to a unique set of circumstances. Ms. Batt has been appointed to the Idaho Legislature to sit in for Representative Pat Takasugi (see attached letter). Appointment to the Idaho Legislature will make it impossible for Ms. Batt to attend TV CAMP AC meetings during the Legislative session, leaving the Wilder Irrigation District without representation. Wilder Irrigation District has endorsed Vern Case, Wilder Irrigation District Board member and Water District 63 Chairman, to temporarily replace Ms. Batt until the adjournment of the Idaho Legislative session. Mr. Case attended the January 7th TV CAMP AC meeting and participated in work group discussions.

TV CAMP ADVISORY COMMITTEE (as of 12/02/2010)	
<u>MEMBER</u>	<u>AFFILIATION</u>
Abramovich, Ron	NRCS
Adamson, Brent	Boise County Assessor
Amick, Doug	City of Greenleaf Public Works Director
Anderson Jamie	Boise County Commissioner
Atkinson, Michelle	Micron Technology, Inc.
Barrie , Rex	Boise River Watermaster WD #63
Batt, Gayle	Wilder Irrigation District
Berggren, Ellen	Army Corps of Engineers
Bowling, Jon	Idaho Power Company
Burnell, Barry	Idaho Dept of Environmental Quality
Dane, Russ	Keller Williams Realty
Decker, Kevin	Idaho Wildlife Federation, Treasurer
Deveau, Paul	Boise Project Board of Control
Dixon, Dave	Owner, Greenleaf Farms Inc.
Duspiva, Gary	Canyon County P&Z Commission
Echeita, Mike	City of Eagle Public Works Director
Funkhouser, Allen	Drainage District # 2
Fuss, Michael	Nampa Public Works Director
Goodson, Stephen	Governor's Office
Howard, Matt	Bureau of Reclamation
Jones, Chris	VP Ted Trueblood Chapter, Trout Unlimited
Larson, Bill	Treasure Valley Partnership
Leatherman, Megan	Ada County
McKee, Lynn	Vice Chair, Ada Cty. SWCD
Nelson, Greg	Farm Bureau member, former mayor of Kuna
Patton , Brian	Idaho Department of Water Resources
Peter, Kathy	Unaffiliated, former Dir. Of USGS Idaho Water Science Program
Pline, Clinton	Board, Nampa-Meridian Irrigation District
Prigge, John	Sorrento Lactalis, Wastewater Treatment Manager
Rhead, Scott	Director Engineering for United Water
Ronk, Jayson	VP of Idaho Assn of Commerce & Industry
Schmillen, Bob	City of Middleton Public Works Director
Shoemaker, Gary	City of Caldwell Water Dept.
Stewart, Lon	Sierra Club
Stewart, Warren	Engineering Manager, City of Meridian Public Works Dept
Telford, Craig	Mayor of Parma
Thornton, John	N. Ada Cty. GW users; N. Ada Co Foothills Assoc; Member of N. Ada Cty. Tech. Working Group
Ward, Rick	Idaho Dept of Fish and Game
Woods, Paul	Boise City Public Works Dept.
Yerton, Janice	Water System Operator, Kuna
Zirschky, Mark	Pioneer Irrigation District

Treasure Valley CAMP Work Plan - Nov 2010 to March 2011 Ver11, 02 Nov 10



January 4, 2011

Chairman Terry Uhling
Idaho Water Resource Board
c/o Helen Harrington
P.O. Box 83720
Boise, ID 83720-0098

Chairman Uhling and Water Board Members:

Thank you for appointing me to the Treasure Valley CAMP committee. I have been fully engaged in the process representing the Wilder Irrigation District. I have attended all but the first meeting and have actively participated in the dialogue by explaining management and water policy of the District.

A unique set of circumstances has led to my appointment to the Idaho Legislature sitting in for Representative Pat Takasugi. I will not be able to attend TV CAMP meetings for the duration of the Legislative Session, leaving the Wilder Irrigation District without representation. It is necessary that continuity be maintained regarding knowledge of water policy as it pertains to irrigated agriculture and the Wilder Irrigation District. Please allow for a temporary appointment of Vern Case until the adjournment of the Legislature.

You are welcome to contact me with any questions by calling (208) 863-0633. Thank you for your consideration.

Respectfully,

Gayle L. Batt
Wilder Irrigation District



MEMO

To: Idaho Water Resource Board
From: Helen Harrington
Subject: State Water Plan Revision Status
Date: January 11, 2011

The IWRB State Water Plan Subcommittee held a meeting on December 6, 2010. This is the 30th meeting of the subcommittee since 2007.

Dr. Christian Petrich made a presentation on the issues related to the IWRB's minimum stream flow water right at Lime Point on the Snake River. This presentation was made to add to the issues being considered during the revision process for the Snake River Basin section of the Idaho State Water Plan.

Staff and subcommittee members are continuing to consider revisions based on the comments received during the initial revision phase of the Snake River Basin policies. The revision process has been complicated due to the amount of changes which have occurred since the adoption of the current State Water Plan in 1996.

The subcommittee and staff are working toward a target of completing the revisions during spring 2011.

MEMO



To: Idaho Water Resource Board
From: Cynthia Bridge Clark, P.E. *ABC*
Subject: Storage Water Study Status & Background
Date: January 10, 2011


Status of Ongoing Storage Water Studies:

Lower Boise River Interim Feasibility Study

- Results of the *Water Storage Screening Analysis* were presented at the IWRB work session on September 23, 2010. The top three ranked sites included a new dam below the existing Arrowrock Dam, Alexander Flats, and Twin Springs (see table under the study background).
- The Interim Feasibility Study agreement calls for more in-depth analysis of a short list of sites, however, Federal match funding has not been secured to continue the study. The IWRB recommended the top three ranked sites be evaluated further once Federal funding becomes available.
- Staff from the Corps and IDWR continue to provide information about the screening analysis to the public and to groups such as the Treasure Valley CAMP advisory committee. However, ongoing study activities are suspended while the Corps seeks additional funding.
- No action is required by the IWRB at this time.

Henrys Fork Special Study

- Stakeholder meetings continue in conjunction with the Henry's Fork Watershed Council (Council) monthly meetings in Rexburg, Idaho. Given the complexity of the study, a core stakeholder group is being formed to ensure representatives from all key constituencies are actively involved and informed about issues identified and decisions made throughout the process.
- The next meeting is scheduled for January 11, 2011 and will focus specifically on potential surface water storage sites.
- Subsequent meetings will provide basin and statewide information about managed recharge and aquifer storage, water marketing, system automation and conservation alternatives.
- A meeting to review available hydrologic models on was held on January 10, 2011. Attendees included technical staff from Reclamation, IDWR, Water District 1, contractors for Reclamation, representatives of couple of irrigation districts in the Henrys Fork watershed, and representatives from Senator Crapo's Office. Dr. Rob Van



Kirk of Humboldt State University gave a comprehensive presentation on a surface and ground water model of the Henrys Fork system being developed under a grant from the U.S. Department of Agriculture. This model will be considered along with other existing models of the Snake River system and Eastern Snake Plain Aquifer in evaluating potential water storage and management alternatives.


- No action is required by the IWRB at this time.

Weiser-Galloway Project

- In mid-December, the study technical team made up of staff from the Corps, IDWR and Senior Advisor to IDWR, Jack Peterson, met to review the draft gap analyses prepared by each of the team members.
- The study is expected to be completed by March 1, 2011 as scheduled and results presented to the IWRB at the March work session.
- No action is required by the IWRB at this time.


Background of Ongoing Storage Water Studies:

Lower Boise River Interim Feasibility Study



The US Army Corps of Engineers (Corps) is authorized to conduct a General Investigation of the Lower Boise River to review various water resource issues including flood risk, water supply, and ecosystem restoration. In May 2009, the Corps and the Idaho Water Resource Board (IWRB) entered into an agreement to initiate the first, or interim, phase of a two-phased feasibility study.

The Interim Feasibility Study is focusing on water storage as one potential measure for addressing water supply demand and flood risk reduction planning objectives. The larger feasibility study requires evaluation of structural and nonstructural alternatives to address identified water resource problems. The surface water storage component was included in the first phase of the feasibility study in order to provide technical information for the IWRB's Treasure Valley Comprehensive Aquifer Management Plan (CAMP) process in the evaluation of future water supply and demand issues for the lower Boise River Basin. The second phase of the feasibility study will focus on alternatives other than surface water storage and evaluate whether a combination of strategies is appropriate to resolve water resource problems in the Boise River drainage.



The Corps initially examined the U.S. Bureau of Reclamation's *2006 Boise/Payette Water Storage Assessment* and ranked the 12 sites recommended in the assessment for further study based on flood risk reduction benefits and refill potential. A second-level screening analysis was performed on the top six to compare sites based on a wider range of criteria including future water demand, flood risk reduction, hydropower potential, a relative cost index, social effects, and environmental effects. The Corps completed a report summarizing the screening analysis and the process used to evaluate and compare each site (*Water Storage Screening Analysis*, August 2010). Public comments received as a result of public meetings held in June

and July, 2010 were considered prior to finalizing the report. The three highest scoring sites are identified in the table below:

Dam Site	Project Concept		
	Height (ft)	Structure Type	Potential Volume (af)
1. Arrowrock-new dam (new dam immediately downstream of existing Arrowrock Dam)	368	Roller compacted concrete dam	317 kaf
2. Alexander Flats	271	Rockfill dam	68 kaf
3. Twin Springs	371	Roller compacted concrete dam	300 kaf

Henrys Fork Special Study

House Joint Memorial No. 8 (2008) directed the IWRB to investigate potential new surface water projects across the state including the Teton Dam replacement. Senate Bill 1511 (2008) appropriated and assigned \$1.8 million to the IWRB for the Minidoka Dam enlargement study (\$1.4 million) and the Henrys Fork/Teton Dam replacement study (\$400,000). In response to the legislation, the IWRB entered into an agreement with the U.S. Bureau of Reclamation in June of 2009 to undertake a study of options for replacing the benefits the original Teton Dam storage would have provided. As a result of stakeholder interest, the study scope was expanded to identify opportunities for development of water supplies (e.g. above-ground on-stream and off-stream storage) in the Henrys Fork and tributary basins, as well as opportunities to improve water management and optimize resources such as conservation measures, system optimization and automation while sustaining environmental quality.

Study costs are projected to be approximately \$800,000 with Reclamation and the IWRB each committing up to \$400,000 toward the cost. Reclamation was awarded \$400,000 through the Secure Water Act-Water SMART Basin Study Program to support the expanded scope of study. The agreement between the IWRB and Reclamation is currently being amended to reflect the modified scope. The study is expected to be completed within two years of initiation, around September 2012.

Weiser-Galloway Project

A cost-share agreement between the IWRB and the U.S. Army Corps of Engineers (Corps) was executed on June 3, 2010 to initiate the *Weiser-Galloway Gap Analysis, Economic Evaluation and Risk-Based Cost Analysis Project* (Weiser-Galloway Project). The project will reexamine specific components of the previously identified Galloway Dam and Reservoir site based on current conditions, and is intended to be used by decision makers in determining whether to move forward with a full feasibility level study.

Total costs associated with the Weiser-Galloway project are estimated to be \$200,000 to be shared equally by the Corps and the IWRB. Up to \$100,000 of federal funding is committed through the Corps Planning Assistance to States (PAS) program, and the IWRB committed up to \$100,000 from the revolving development account with an option to perform in-kind work to offset the IWRB's cash contribution. The study is expected to be completed by March 1, 2011.