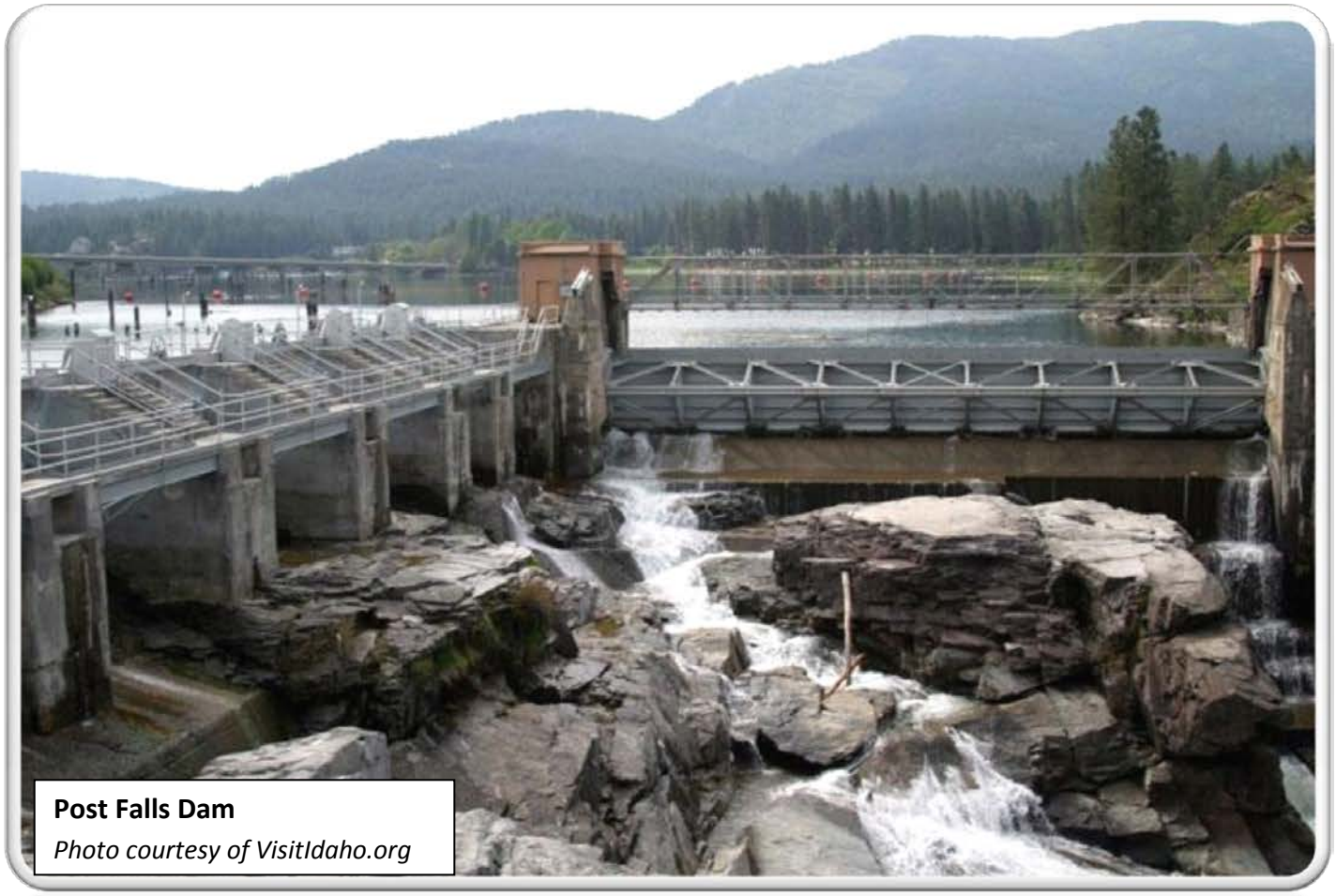
IDAHO WATER RESOURCE BOARD

MEETING NO. 6-15

July 14, 2015

Post Falls



Post Falls Dam
Photo courtesy of VisitIdaho.org

MEDIA

WORK SESSION IN PREPARATION FOR IWRB MEETING NO. 5-15

July 13, 2015 at 8:00 am

Red Lion Templin's
Chief Seltice/Margaret Post Conference Room
414 East First Avenue, Post Falls ID 83854

WORK SESSION AGENDA

1. Priest Lake Cold Water Siphon Concept- *Presentation by Chip Corsi, IDFG*
2. Recharge Update
3. Update from Bonneville Power Administration- *John Williams*
4. Albeni Falls Dam Operations- *Presentation by Joel Fenolio, US Army Corps of Engineers*
5. Water Transactions Update Report
6. Loan Requests
    a. Last Chance Canal Company
    b. St. John's Irrigating Company
7. Rathdrum Monitoring Network Update

---The Board will break for lunch in the Frederick Post conference room at approximately 12:00pm.---

1:00 pm: IWRB Field Trip – Water Resource issues associated with the Spokane Valley- Rathdrum Prairie Aquifer and the Spokane River.

7:00 pm: No-host dinner in appreciation of Bob Graham (Mallard's Restaurant)

Americans with Disabilities

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

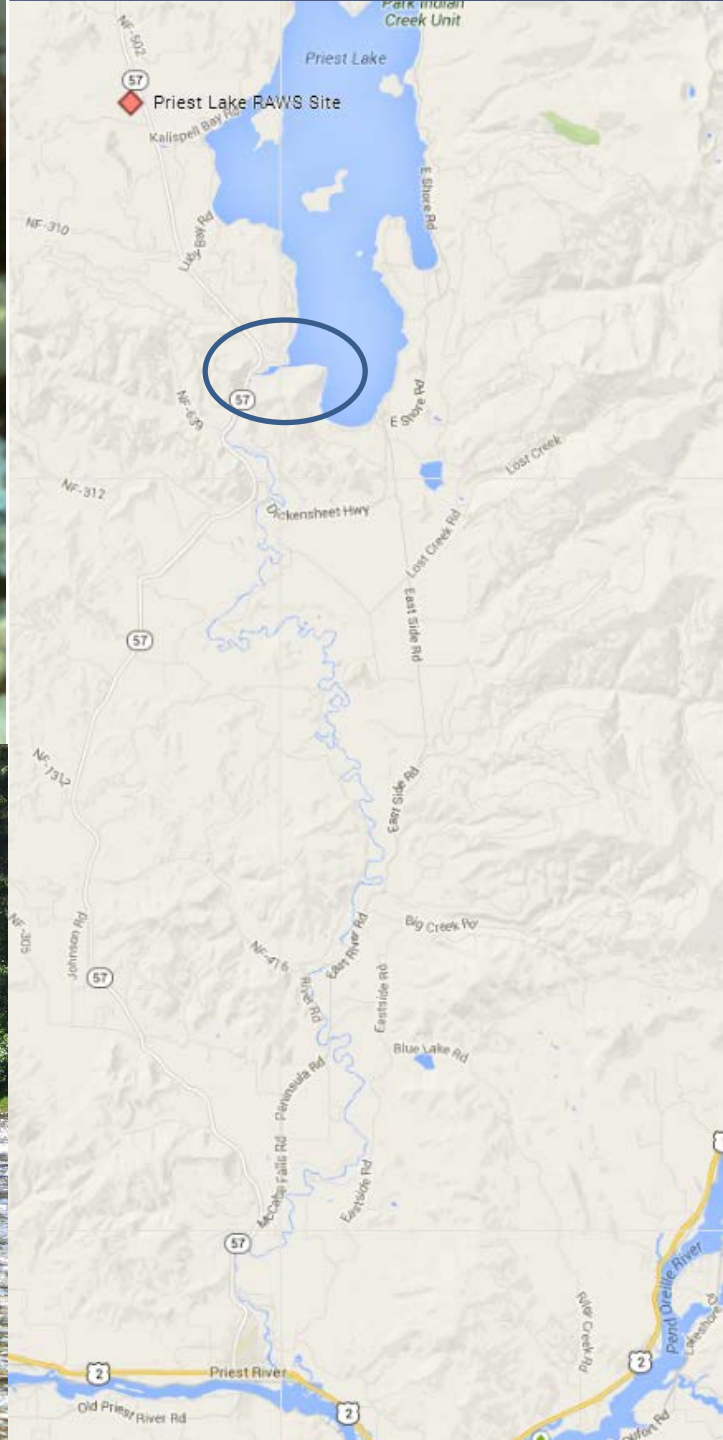

THE PRIEST LAKE COLD WATER SIPHON CONCEPT
Worth Further Consideration?

Why consider a cold water siphon in the first place?

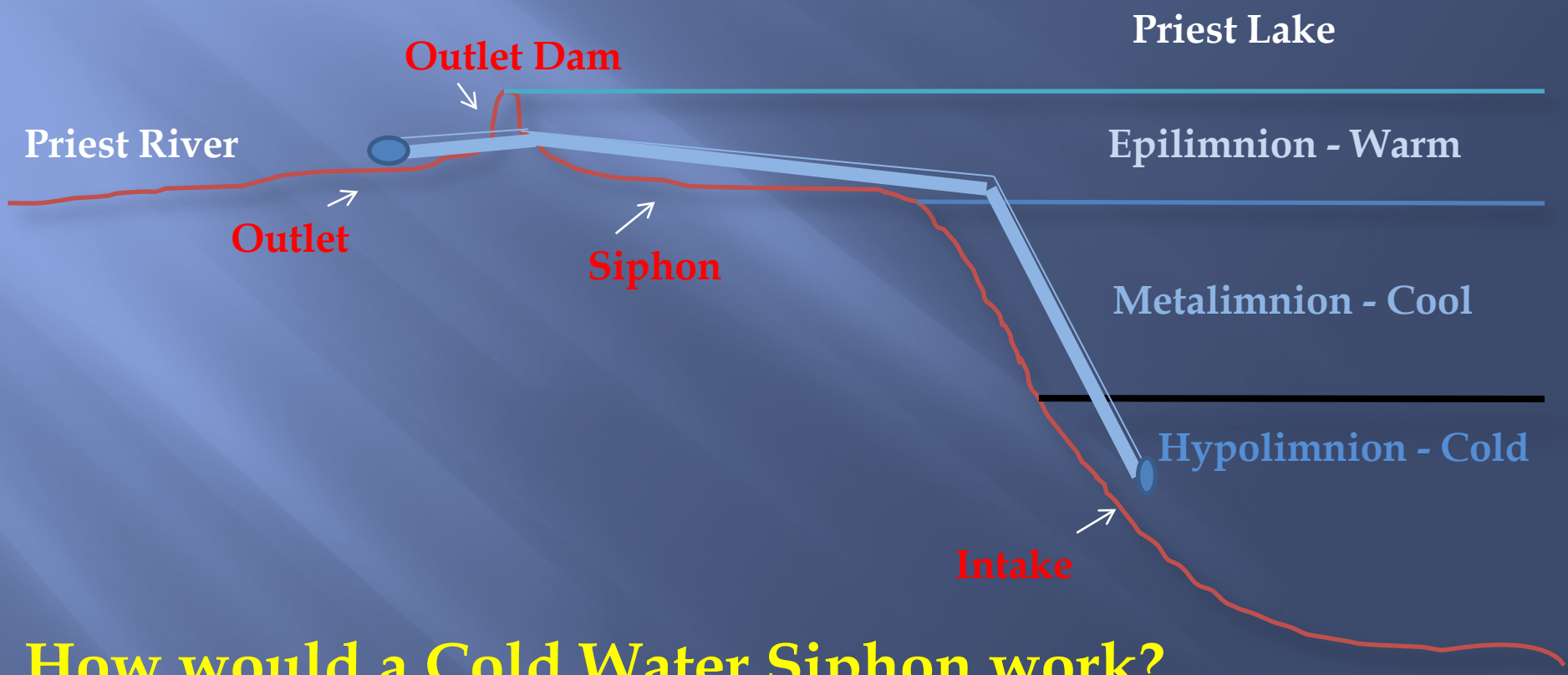
Native Fish Conservation

Lower Priest River designated “Impaired” for cold water biota

Improved Sport Fishing Opportunity



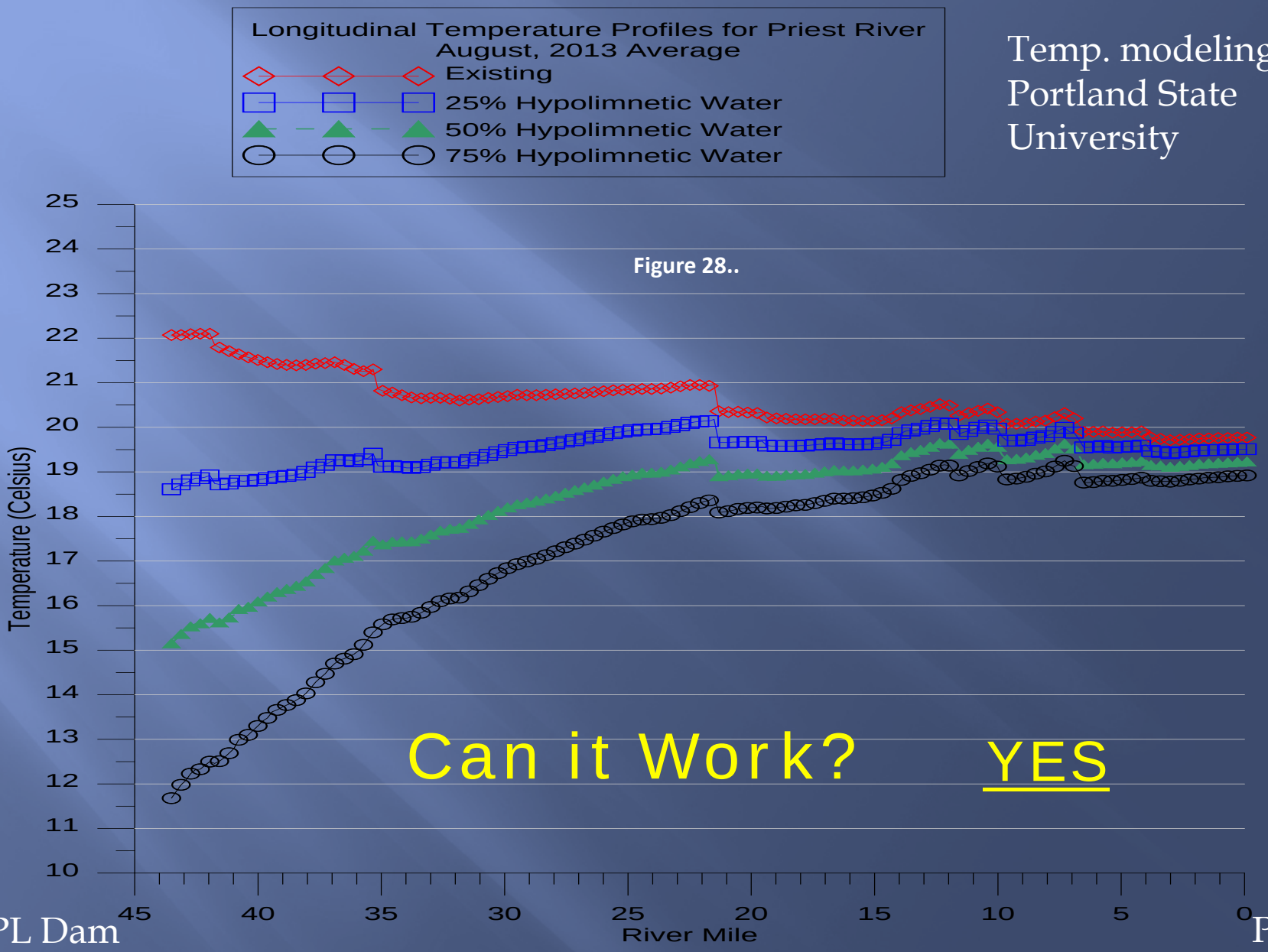
Cold Water Siphon - Schematic



How would a Cold Water Siphon work?

By replacing a portion of the warm water outflow from the surface of the lake with cold water from the hypolimnion

Longitudinal profiles of August, 2013 average temperatures for Priest River using 8° Celsius hypolimnetic temperatures



Temp. modeling by Portland State University

Figure 28..

Can it Work? YES

WOULD THIS AFFECT LAKE LEVEL?

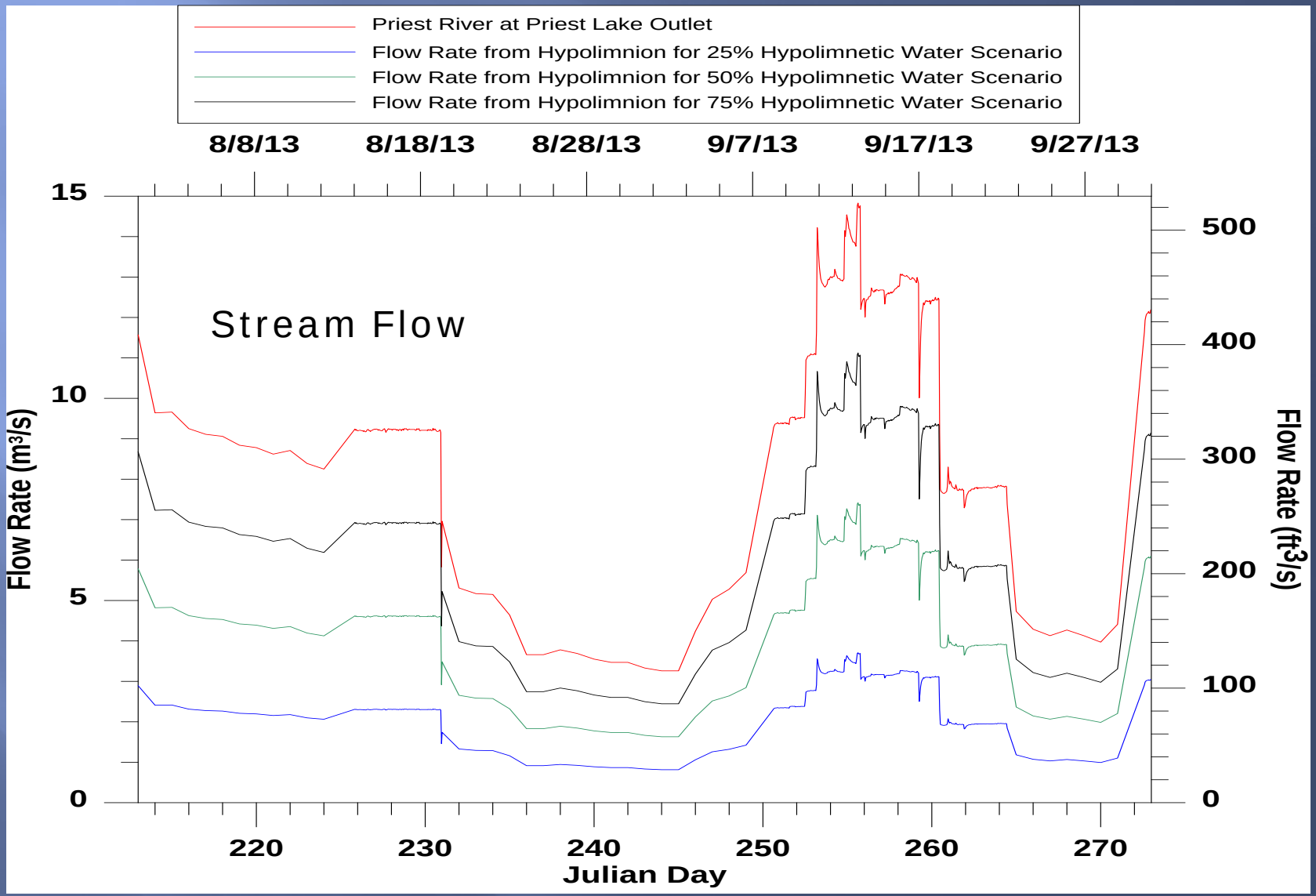
NO…

Outflow volume would be unchanged, and Priest Lake would remain at the same level it is currently maintained, as per Idaho's Water Plan

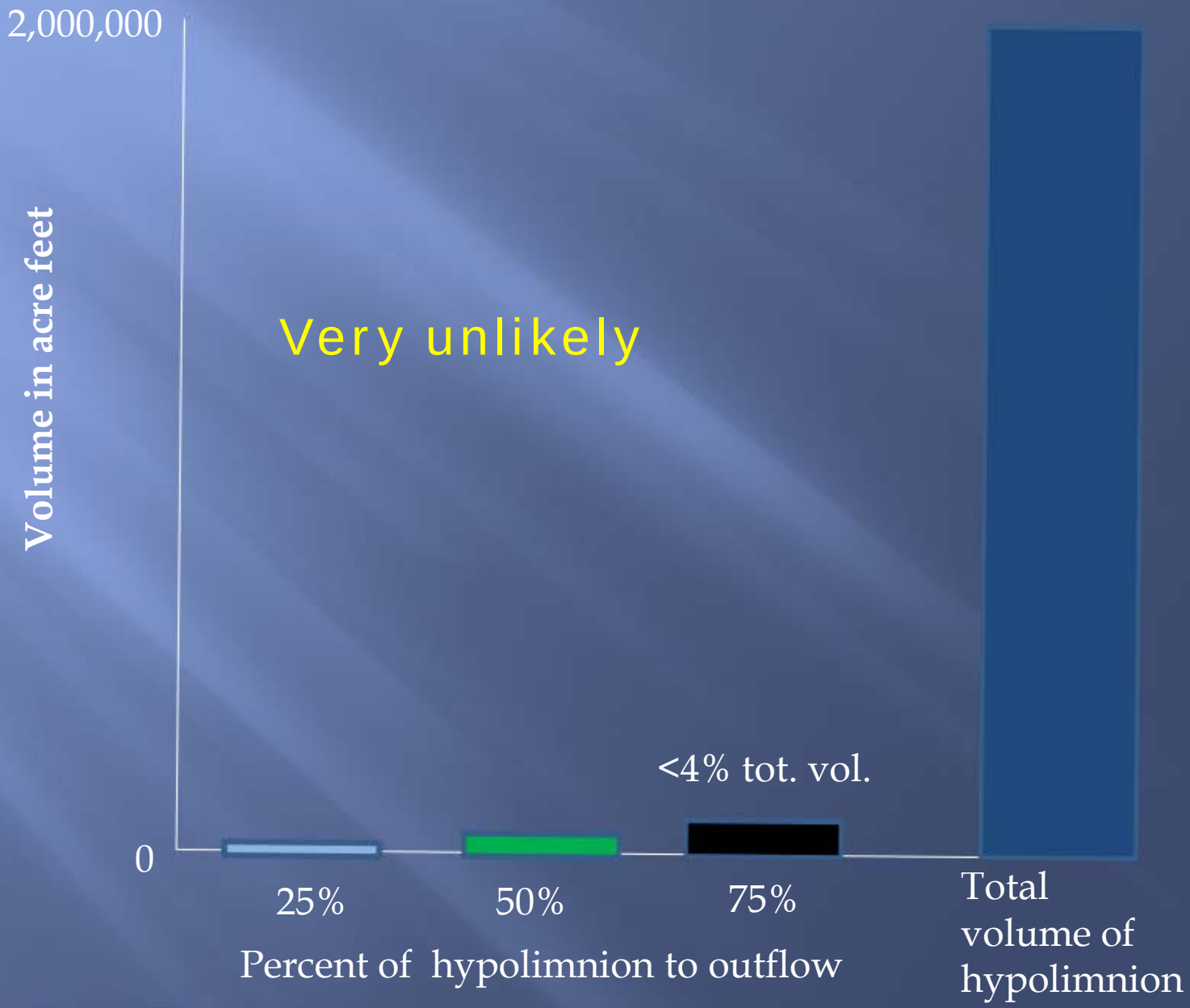
Would the siphon affect Stream Flow?

NO ... only the temperature of the water would change

Figure 34. Flow rate from the hypolimnion for the scenarios. The flow rate of the Priest River at the Priest Lake Outlet is also shown for comparison.



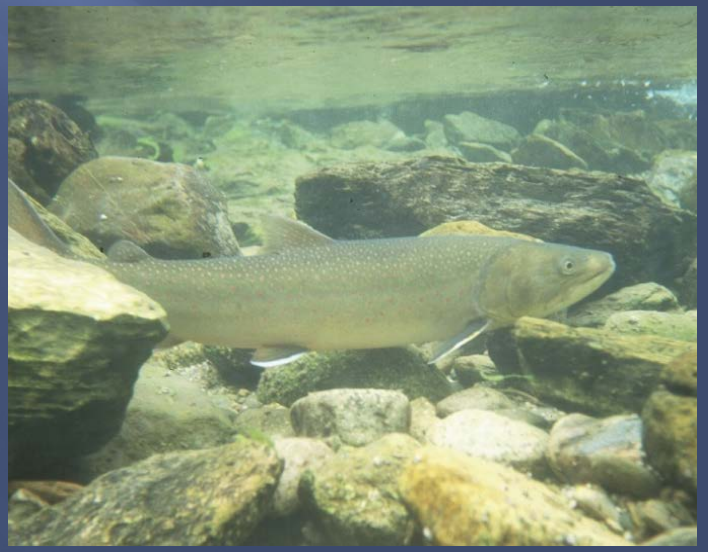
Would the Limnology of the Lake be Affected?



Would Fish Populations Benefit?

	All CT (trout/acre)	CT > 12 inches (trout/acre)
Coeur d'Alene River	81.95	12.18
St. Maries River	3.97	1.25
Priest River	0.73	0.04

YES



Will Sport Fisheries and Associated Economic Activity Benefit?

YES

Economic Values of Sport Fishing in Selected Idaho Rivers - 2003

Henry's Fork
- $27 million
- 74,000 trips

Big Wood
- $8.9 million
- 29,000 trips

SF Payette
- $1.2 million
- 7,700 trips

SF Boise
- $5.3 million
- 32,300 trips

Lochsa
- $3 million
- 11,100 trips

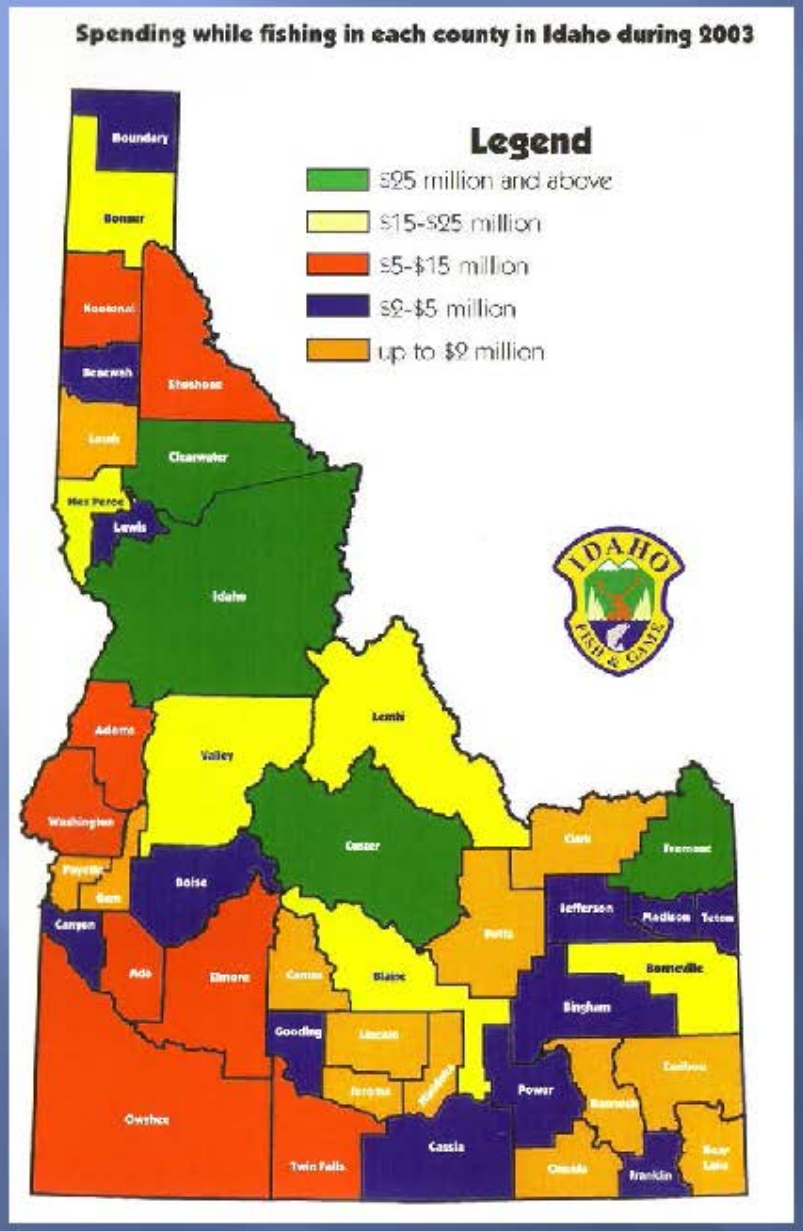
St. Joe
- $4.1 million
- 25,400 trips

Coeur d'Alene
- $3.1 million ($6.7 million in 2011)
- 35,600 trips (50,000 trips in 2011)

Moyie
- $230k
- 3,100 trips

Priest Lake
- $3.5 million
- 20,000 trips

County by County $$ Analysis



2003

County	Rank	Total Trip	Estimated Total Expenses
FREMONT	1	165,136	$62,033,662
IDAHO	2	114,526	$39,582,807
CUSTER	3	98,816	$37,769,865
VALLEY	4	153,265	$35,511,753
CLEARWATER	5	110,411	$31,014,573
LEMHI	6	72,630	$26,266,400
BONNEVILLE	7	114,757	$24,765,434
BONNER	8	138,882	$24,381,884
BLAINE	9	98,527	$22,932,095
KOOTENAI	10	223,344	$20,912,781
TWIN FALLS	11	83,738	$18,277,246
UNKNOWN	12	38,200	$18,114,759
NEZ PERCE	13	89,152	$17,696,661
OWYHEE	14	143,468	$16,839,543
WASHINGTON	15	66,007	$16,093,070
ELMORE	16	88,200	$13,953,916
MADISON	17	21,741	$11,033,361
ADAMS	18	43,791	$9,497,600
BENEWAH	19	33,886	$9,483,479
JEFFERSON	20	30,031	$9,433,197
SHOSHONE	21	61,960	$9,014,166
ADA	22	150,418	$8,526,424
CARIBOU	23	60,252	$7,967,060
BOISE	24	57,513	$5,718,031
POWER	25	51,793	$5,356,525
FRANKLIN	26	36,305	$4,570,128
CASSIA	27	39,506	$4,409,185
BUTTE	28	4,489	$4,387,056
CANYON	29	76,696	$3,799,506
GOODING	30	48,257	$3,451,839
ONEIDA	31	36,082	$3,067,453
BINGHAM	32	34,538	$2,973,699
CLARK	33	12,424	$2,450,979
BOUNDARY	34	27,811	$2,414,315
LEWIS	35	18,445	$2,207,681
GEM	36	25,759	$1,752,735
TETON	37	7,086	$1,701,554
BANNOCK	38	17,195	$1,687,838
BEAR LAKE	39	13,137	$1,543,916
LATAH	40	19,388	$1,356,664
PAYETTE	41	17,655	$1,312,786
MINIDOKA	42	17,605	$1,164,540
CAMAS	43	4,502	$999,350
JEROME	44	3,358	$871,208
LINCOLN	45	1,916	$82,342

2011

Additional Information Needs

- Limnological Effects?
- Engineering
  - Cost estimate
  - Construction methods, design and location P/F
- Aesthetics
- Cost:Benefit Analysis
- Funding
  - Possibly from Avista and/or BPA mitigation funds; other funding sources possible

Priest Lake Cold Water Siphon Concept Summary

- Would not affect lake levels (ISWP)
- Would not affect stream flow
- Would improve Water Quality for over 40 miles of Priest River
- Would create over 40 miles of quality trout habitat
- Would benefit native fish conservation efforts
- Would generate sport fishing opportunities and benefit local rural economies
- Additional work needed to address outstanding questions


THE PRIEST LAKE COLD WATER SIPHON CONCEPT
Worth Further Consideration?
YES

Memorandum

To: Idaho Water Resource Board

From: Wesley Hipke, Brian Patton, Cynthia Bridge Clark , Neal Farmer

Date: June 23rd, 2015

Re: ESPA Managed Recharge Program Status Report

Progress/Status of ESPA Managed Recharge Program

Contents

I. ESPA Managed Recharge Summary (2014-2015 Season) 2

II. Program Description 3

III. Budget Summary 4

IV. Recharge Delivery Operations Summary 6

V. Monitoring and Measurement Program 7

VI. ESPA Recharge Program Projects 7

I. ESPA Managed Recharge Summary (2014-2015 Season)

Managed recharge was conducted in the ESPA under the Idaho Water Resources Board's (IWRB) recharge water right during the 2014-2015 recharge season from October 27th, 2014 to March 23rd, 2015. Table 1 identifies the canal systems used to deliver the recharge water and associated recharge data, including the finalized total volume and conveyance costs. The total volumes and relative locations of the recharge are depicted on Figure 1.

Table 1. ESPA Recharge from October 27th, 2014 to March 23rd, 2015

ESPA Area	Canal System	5-Year Retention Time[1] (%)	Median Recharge Rate (cfs)	Days Recharged	Volume Recharged (Acre-feet)	Conveyance Costs ($)
Upper Valley	Aberdeen-Springfield Canal Company	~26	169	10	3,322	$23,254
	Great Feeder Canal Company	~18	170	17	5,453	$43,628
	Fremont Madison Irrigation District	~44	170	17	5,390	$43,120
				Upper Valley Total	**14,166**	**$110,002**
Lower Valley	American Falls Reservoir District No. 2 (Milner-Gooding Canal)	~40	152	118	37,924	$228,455
	North Side Canal Company	~55	130	35	8,735	$32,454
	Southwest Irrigation District	~50	25	47	1,898	$7,505
	Twin Falls Canal Company	~50	39	149	12,752	$100,920
				Lower Valley Total	**61,309**	**$369,335**
				TOTAL	**75,475**	**$479,337**

[1] 5-year retention rate determined by the ESPAM2.1 groundwater model.

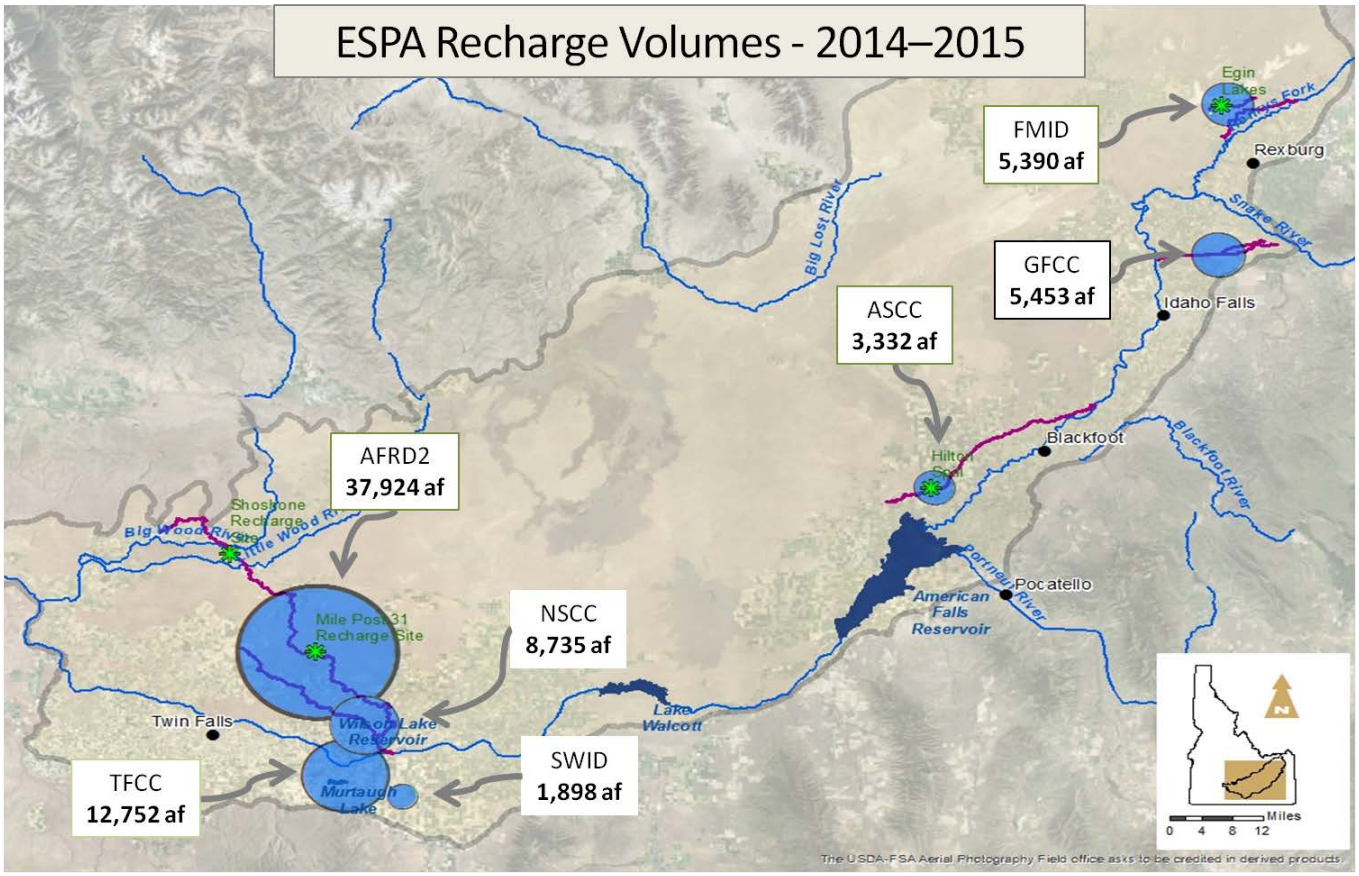


Figure 1. Locations and volumes of recharge from October 27th, 2014 to March 23rd, 2015.

II. Program Description

Goal: Develop a managed recharge program in the Eastern Snake Plain Aquifer (ESPA) capable of recharging 250,000 acre-feet per year to stabilize the Eastern Snake Plain Aquifer. The metric of success is sustaining aquifer volume and spring discharges in the ESPA.

Problem: The Eastern Snake Plain Aquifer has been losing approximately 200,000 acre-feet annually from aquifer storage since the 1950s resulting in declining ground water levels and declining spring flows from the aquifer. The State of Idaho relies on spring discharge from the ESPA through the Thousand Springs to help meet minimum streamflow water rights at the Murphy Gage that were established under the Swan Falls Agreement. Stabilizing the ESPA will help maintain the minimum flows at the Murphy Gage and reduce water user conflicts between groundwater and surface water users.

Water Availability (natural flow) for Recharge: The available water supply for recharge occurs as winter-time flows (November-March) and as spring run-off flows (April-May) in the Snake River. The Snake River winter-time flows are usually a minimum of 500 cfs and are available for diversion from the Milner Pool. During the 2014-2015 recharge season from October 24th thru March 23rd approximately 300,000 af flowed past Milner. Above American Falls Reservoir, opportunities for recharge are limited to specific conditions when the IWRB's recharge water

right is in priority. This is generally limited to spring run-off flows that occur approximately 50% of the years, with a highly variable volume and duration. Winter-time flow may also be available for recharge in the Little Wood River.

Strategy:

1. Maximize diversion of flows spilling past Milner during non-irrigation season, including winter and spring-time diversions, which are available for recharge under the IWRB's current recharge water right and will provide a "base-load" for recharge. The IWRB is pursuing various strategies to maximize non-irrigation season recharge:
    a. Non-irrigation season delivery agreements with canals that divert from the Milner Pool were developed to include the winter period.
    b. Infrastructure modifications are required to facilitate winter recharge delivery and increase recharge capacity. Various studies to assess necessary modifications are in progress or complete. Some modifications have been completed this year with more scheduled to be completed between the fall of 2015 and the spring of 2016.
    c. Evaluation of development potential of dedicated, winter-operational recharge facilities that divert from the Milner Pool independent of canal companies (direct pump-to-injection wells) is ongoing.
2. Maximize opportunities to divert spring-time releases for the delivery of recharge above American Falls Reservoir as long as this recharge does not interfere with filling the reservoir system. Natural flow for recharge in the upper valley will likely only be available during some spring run-off periods. The options being pursued include:
    a. Execution of agreements for the delivery of water for recharge when the IWRB's recharge water right is in priority. (Several agreements were executed this past recharge season.)
    b. Investigation of infrastructure modifications to improve late-winter/spring-time recharge capabilities and develop off canal recharge sites for flood control release after the irrigation season has begun.
3. Continue current opportunistic recharge efforts throughout the basin and manage adaptively to address changing circumstances.

III. Budget Summary

Table 2 provides a summary of the Fiscal Year 2016 ESPA Managed Recharge budget approved by the IWRB (July 2015 through June 2016). Budget line items were based on the best available information and may be adjusted with IWRB approval. A more detailed summary of the infrastructure projects is provided under the ESPA Recharge Program Projects section *(Section V).*

Table 2. IWRB ESPA Managed Recharge Budget			
Categories		**Sub-Category**	**Budget**
Operations		Conveyance Cost	$700,000
		Equipment	$81,000
		Site Monitoring	$219,000
		Regional Monitoring	$200,000
		TOTAL	**$1,200,000**
Managed Recharge Infrastructure Projects	**Budgeted Projects**	Milner-Gooding Flume	$700,000
		Milner-Gooding Dietrich Drop Hydro Plant	$50,000
		Twin Falls Canal Recharge Improvements	$500,000
		North Side Canal Improvements/Hydro Plant Bypasses	$2,000,000
		Great Feeder Canal Recharge Improvements	$500,000
		Egin Lakes Recharge Enlargement	$500,000
		Sub-Total	**$4,250,000**
	Other Projects	Milner-Gooding Expansion of MP31 Recharge Site	$200,000
		Milner-Gooding Canal Road Improvements MP31 to Shoshone Recharge Site	$150,000
		Other Projects	$1,650,000
		Sub-Total	**$2,000,000**
		TOTAL	**$6,250,000**
Managed Recharge Investigations & Engineering Studies		**TOTAL**	**$300,000**
		ESPA Managed Recharge TOTAL	**$7,750,000**

IV. Recharge Delivery Operations Summary

Upper Valley ESPA Recharge

The contracts to deliver the IWRB's recharge water expire at the end of June 2015. The payment structure to convey the IWRB's recharge water in the Upper Valley will be evaluated for the 2015-2016 recharge season. The spring 2015 payment schedule is outlined below:

1) **Base Rate** – determined by 5-year aquifer retention zone in which the contracted canal companies or irrigation district is located using ESPAM2.1:
   - Greater than 40% retained in aquifer at 5 years $5.00/AF delivered
   - 20% to 40% retained in aquifer at 5 years $4.00/AF delivered
   - 15% to Less than 20% retained in aquifer at 5 years $3.00/AF delivered
2) **Added Incentive for Delivery** - percentage of days a canal delivers for recharge during the period when recharge right is "on" and IWRB issues a Notice to Proceed:
   - Greater than 75% $3.00/AF delivered
   - 50% to less than 75% $2.00/AF delivered
   - 25% less than 50% $1.00/AF delivered

Lower Valley ESPA Recharge

The following entities executed 5-year conveyance contracts in 2014:

- Twin Falls Canal Company (TFCC)
- American Falls Reservoir District 2 (ARFD2)
- Southwest Irrigation District (SWID)
- North Side Canal Company (NSCC)
- Big Wood Canal Company (BWCC)

The payment structure for conveying the IWRB's recharge water stipulated in the contract is outlined in Table 3.

Table 3. Lower Valley ESPA Payment Structure

Number of Days Recharge Water Delivered*	Payment Rate per AF Delivered	
1-to-25 days	$3/AF	New incentivized payment structure was adopted to encourage canals to divert recharge water as long as possible during the non-irrigation season.
26-to-50 days	$5/AF	* Number of days between when recharge permit turns on in fall and when it turns off following spring.
51-to-80 days	$7/AF	
81-to-120 days	$10/AF	
More than 120 days	$14/AF	

V. Monitoring and Measurement Program

Development of a monitoring and measurement program is underway to assess results and impacts of recharge activities and address regulatory requirements. The program consists of regional and site-specific monitoring including measurement of ground water levels, surface water flows, recharge diversions, water quality, and data collection quality control. Current activities include:

- Water Quality Program
    - Groundwater Quality Monitoring Program for MP31 and Shoshone Recharge Sites approved by IDEQ. The monitoring program includes a monitoring schedule, sample points, and a full suite of chemical, biological and physical elements that are analyzed to determine the source water and groundwater quality. Results will be reported at a later date.
    - Idaho Bureau of Labs is currently under a 5-year contract (started in 12/2014) to conduct the water quality sampling at the MP31 and Shoshone Recharge Sites on an as needed basis.
    - Additional monitoring wells are being developed for the MP31 and Shoshone recharge sites.
- Water Level Monitoring:
    - Currently evaluating data from previous recharge season. Results will be reported at a later date.
- Flow measurements:
    - Quality assurance and control of recharge flow measurements were conducted with assistance by TFCC, AFRD2, NSCC, Idaho Power Co., Water District 01, and IDWR staff during the recharge season.
- Regional Monitoring Program:
    - Developing options for contracting the necessary work to expedite gathering and reporting groundwater and surface water data.

VI. ESPA Recharge Program Projects

The following project status summarizes the projects under development that are intended to increase reliability and capacity for recharge during the non-irrigation season and to increase capacity during spring run-off. See Table 5 for a summary list of projects.

1. <u>American Falls Reservoir District 2 (AFRD2)/Milner-Gooding Canal:</u>
    a. **Concrete Flume Improvements** - The Shoshone site has potential to receive 200 cfs and requires conveyance through the Milner-Gooding concrete flumes near Shoshone. The ability to provide recharge flows to the site is limited due to the age and deterioration of the concrete. An AFRD2/IWRB cost share study

identified the need to repair canal walls with extensive leaning, to fill voids under the flume, and to seal cracks. AFRD2 has independently repaired the canal walls and filled the voids under the flumes with in-house staff. Crack sealing rehabilitation was solicited for bid, and awarded to the lowest bidder in the amount of $1,372,000. AFRD2 is seeking a 50% cost share totaling $686,000 on the labor and materials. A resolution will be introduced to the IWRB in July to authorize up to $700,000. The project is scheduled to be complete before the commencement of the irrigation season in 2016.

b. Expansion of the MP31 Recharge Site – Capacity of the MP31 Recharge Site is currently limited by the maximum flow that can be diverted into the site. By installing a larger turnout structure, it is estimated the capacity of the site could be increased from 150 cfs to 250 cfs. Estimated cost of the project is $200,000. A resolution will be introduced to the IWRB in July to authorize expenditure of funds to design and construct the project. Estimated completion of this project is fall/winter 2015.

c. Road Improvement MP31 to Shoshone Recharge Site – Improvements to the access road along the Milner-Gooding Canal are necessary to allow AFRD2 personnel and IDWR staff adequate/safe roads to monitor canal operations and the recharge site during the winter months. Estimated cost for resurfacing portions of the canal road is $150,000. A resolution will be introduced to the IWRB in July to authorize expenditure of funds to complete this project. Estimated completion is the spring of 2016.

d. **MP28 Hydropower Plant** – The plant experienced complications from winter recharge flows. A bypass wall is scheduled for construction in the fall of 2015, after the irrigation season, that will route flows under 400 cfs around the plant.

e. Dietrich Drop Hydropower Plant - The Dietrich Drop hydro plant is on the Milner-Gooding Canal between the MP31 and the Shoshone Recharge Site. Staff is coordinating with the owner of the hydro plant and AFRD2 to conduct a study to determine the potential issues that would need to be addressed for winter-time deliveries of water to the Shoshone Recharge Site. Completion of the study is estimated to be in the fall of 2015. Depending on the results of the study, any improvements will be scheduled for completion by the spring of 2016, if possible.

2. <u>North Side Canal Company (NSCC):</u>

a. **Winter-time infrastructure improvements –** NSCC is completing an assessment of the potential capacity of recharge at Wilson Lake and infrastructure improvements required for winter-time delivery of recharge water to Wilson Lake. Preliminary results suggest a recharge capacity of approximately 150 cfs including canal leakage and leakage at Wilson Lake Likely infrastructure improvements to accommodate winter recharge delivery include protection for the canal and four hydro plants. The study is scheduled to be completed in September 2015. Staff will work with NSCC to determine the cost and scheduling of potential improvements.

3. Twin Falls Canal Company (TFCC):
    a. **Winter-time infrastructure improvements -** TFCC delivered recharge water during the non-irrigation season in accordance with a 5-year delivery agreement with the IWRB under the incentivized payment plan. JUB Engineers completed an engineering study to evaluate infrastructure modifications required to facilitate diversion of recharge water over the winter. The TFCC is planning to implement the study recommendations for the canal from the Milner Pool to Murtaugh Lake this fall so they can continue to deliver recharge water this winter. Estimated cost for this work is $20,000 with the work to be completed the fall of 2015. Work at the Point Spill structure below Murtaugh Lake will likely proceed at a later time.

4. Southwest Irrigation District (SWID):
    a. **Test Injection Well –** A test injection well is scheduled to be drilled in the fall of 2015 in the vicinity of SWID's current pumping plant. This well will assist in determining the viability of an injection well recharge site in this vicinity. Estimated cost of drilling the well and testing is $30,000.
    b. **Cassia Pipeline Winter Recharge –** An engineering study has been proposed to SWID to determine what would be required to make the pipeline capable of delivering recharge water during the winter months. The estimated cost of the study is $50,000, initiation of the study is dependent on SWID's schedule.

5. Great Feeder Canal Company (GFCC):
    a. **Recharge Conveyance Improvements -** GFCC is proposing to rebuild the out-dated headworks to the Great Feeder Canal. The headworks are an integral part of the Great Feeder Canal's ability to deliver the IWRB's recharge water to canals and potential off-canal sites. A contract between the IWRB and the GFCC will be developed once current preliminary design plans and cost are submitted. This is a cost share project, IWRB has budgeted $500,000 for this project. Estimated completion of this project is spring 2016.

6. Fremont-Madison Irrigation District (FMID):
    a. **Expansion of the Egin Lakes Recharge Area** – FMID is proposing to improve the infrastructure to maximize the recharge potential at the Egin Lakes Recharge Area. A study will be conducted to determine the maximum capacity of the area and the required infrastructure to deliver the maximum volume of water. The estimated completion of the study is the fall of 2015. Construction of any potential improvements is projected to occur by spring 2016. IWRB budgeted $500,000 for required engineering and construction.

7. Other Projects:
    a. **Injection Well and Test** – Staff is evaluating numerous potential injection well recharge sites. For the current phase of testing $70,000 has been budgeted. Estimated completion of this phase of work is the fall of 2015. The areas being studied and current status include:
        i. **A&B Pump Plant –** Conducted a dye test in the fall of 2014 to determine potential flow from injection well. Ongoing sampling for dye in monitor wells.
        ii. **NSCC Pump Plant (Nightingale)** - Drilling completed on adjacent private land (Nightingale) to expedite the project. Report concluded that the results from the testing showed that potential for using injection wells to recharge the aquifer at this location was low.
        iii. **USBOR Site (Upstream of A&B Pumping Plant)** - The drilling permit was received by BOR on March 4th, 2015. IDWR is processing an injection well test permit. However, nearby results from an injection well test in the fall of 2014 suggest this site would have low hydraulic conductivities that would not be conducive to an injection well site. This site is a low priority at this time.
        iv. **Milner Dam Area** – Injection test well completed June 6th, 2015 to a depth of 500 ft. Observations during drilling suggest very good conductivity for injection. An application has been submitted for an injection test, potentially in the fall of 2015.
        v. **A&B at the Milner Pumping Plant** - A&B will evaluate test injection data from the BOR well to determine where to drill a test well at their Milner pumping plant. Initial analysis suggests this would not be an area conducive for an injection well site due to low hydraulic conductivities.
        vi. **Little Wood Recharge Site** (State Land South of Richfield) - A permit to drill a test injection well on state land south of the city of Richfield is complete. LSRARD is assisting with the permit and drilling process. This project is on hold until the engineering report is received concerning the 'Bifurcation' modification to divert Little Wood River water for recharge.

    b. **ESPA Managed Recharge Program Review** – IWRB contracted with CH2MHill to provide an independent review of the ESPA Managed Recharge Program for $91,850. This project is scheduled to be complete November 2015.

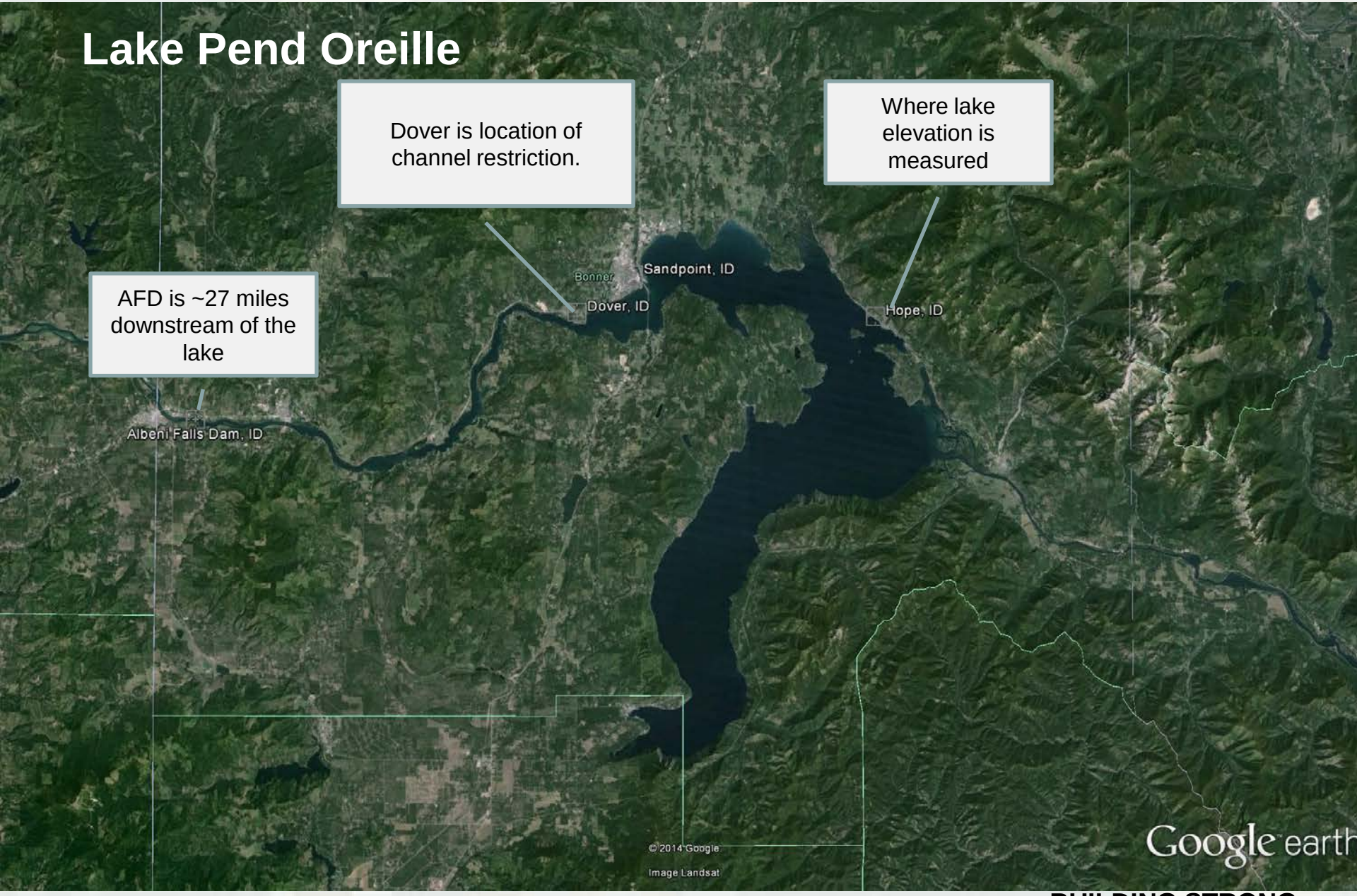
Table 4.ESPA Recharge Program Projects					
Project Type	**Canal/Project**	**Project Type**	**Status**	**Cost Estimate**	**Completion Date**
ESPA Infrastructure	Milner-Gooding Canal				
	Mile Post 28 Hydro Plant	CNST	Contracted	$35,000*	Fall 2015
	Concrete Flume Improvement	CNST	Before IWRB July	$700,000	April 2016
	Road Improvement MP31 to Shoshone Recharge Site	CNST	Before IWRB July	$150,000	Spring 2016
	Dietrich Drop Hydro Plant	Study	Under Development	$50,000	Fall 2015
	MP31 Expansion	Study/CNST	Before IWRB July	$200,000	Winter 2015
	North Side Canal				
	Wilson Lake/Canal Winter Recharge	Study	In-Progress	$122,000*	Fall 2015
	Hydro Plants (4) Improvements	CNST	Proposed	$2,000,000	TBD
	Twin Falls Canal				
	Canal Improvements	CNST	Under Development	$20,000	Fall 2015
	Point Spill Check Dam	CNST	Proposed	$500,000	TBD
	Southwest I.D.				
	Injection Well & Test	CNST	In-Progress	$30,000*	Fall 2015
	Pipeline Modification	Study	Proposed	$50,000*	TBD
	Great Feeder Canal				
	Canal Improvements	CNST	Under Development	$500,000	Spring 2016
	Fremont-Madison I.D.				
	Expansion of Egin Lakes Recharge	Study/CNST	Under Development	$500,000	Spring 2016
	Injection Well &Test				
	Milner Dam Area	CNST	In-Progress	$70,000*	Fall 2015
ESPA Program	ESPA Program Review	Study	In-Progress	$91,850*	Fall 2015

CNST = Construction
* Money appropriated in FY15

Albeni Falls Operations IWRB
July 13, 2015

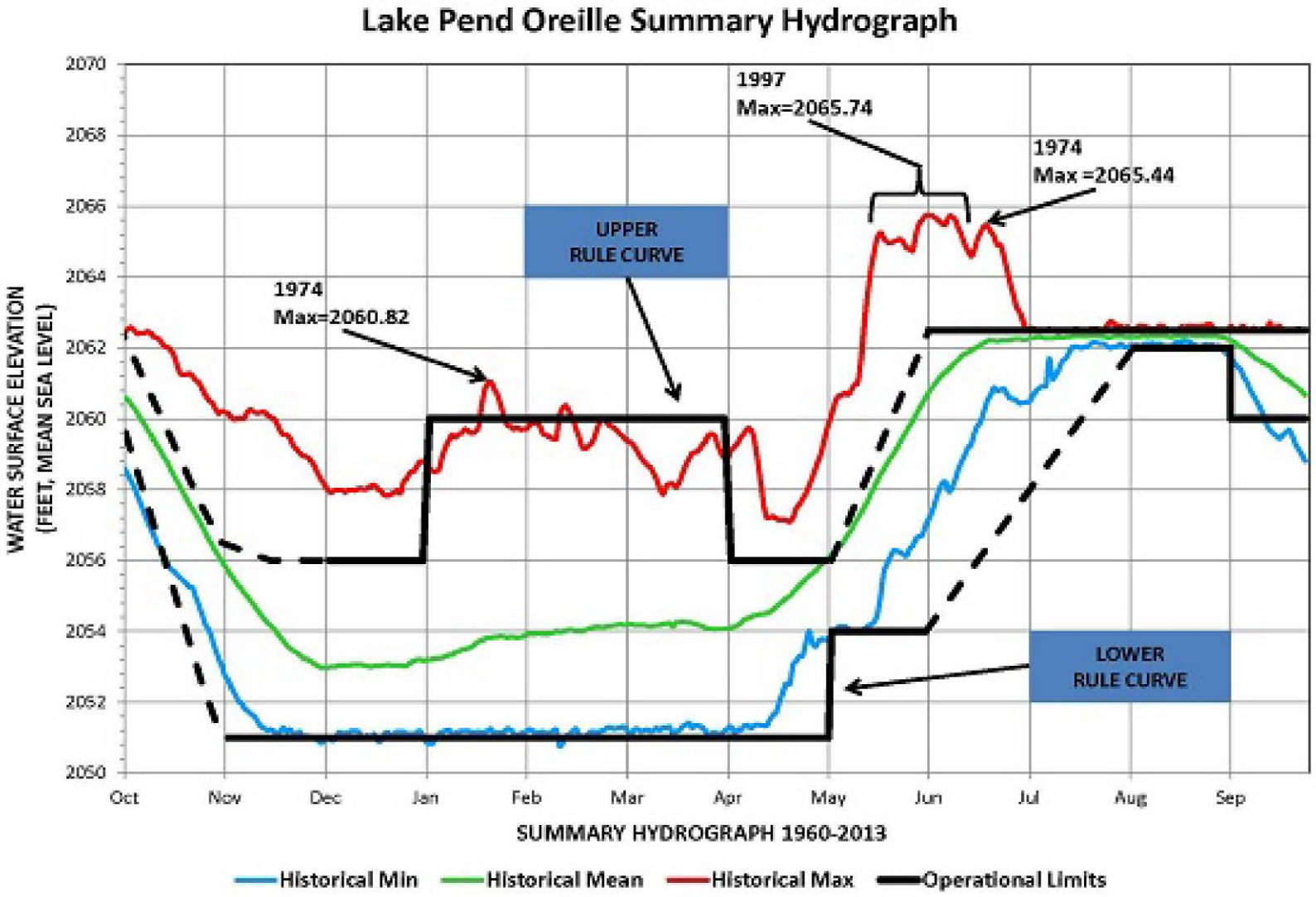
Joel Fenolio – Corps of Engineers

Lake Pend Oreille



Albeni Falls Dam/Lake Pend Oreille Basics

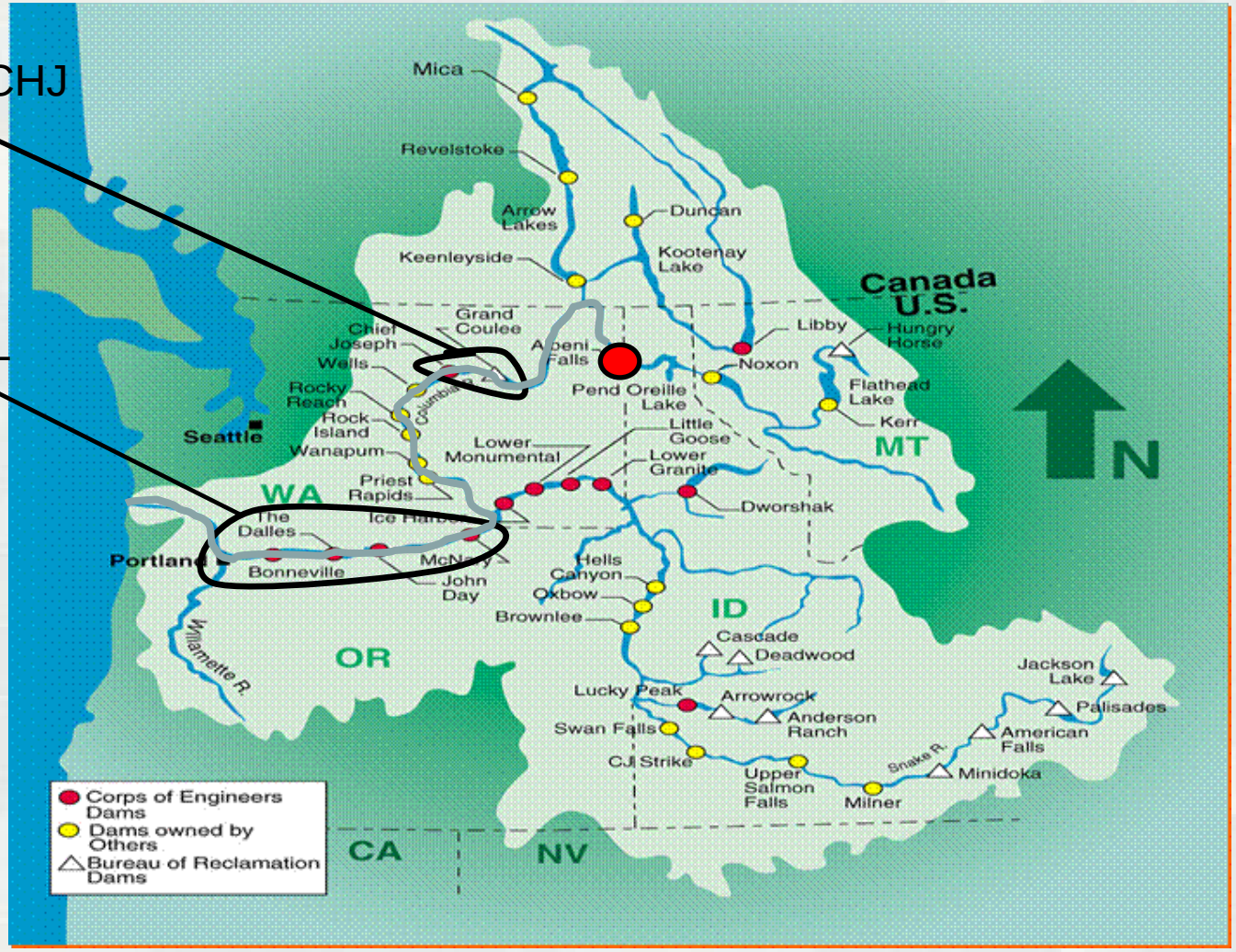
- Corps Operates 11.5 feet of the Lake between elevation 2051 and 2062.5 feet
- Summer Operating Range 2062 to 2062.5 feet
- Winter Operating Range
  - 2051 to 2056 feet for power
  - Up to 2060 feet of Flood Risk Management
- Freeflow when the gates are pulled and the channel restriction controls flow and lake


Lake Pend Oreille Summary Hydrograph
1997
Max=2065.74
1974
Max =2065.44
UPPER
RULE CURVE
1974
Max=2060.82
LOWER
RULE CURVE
WATER SURFACE ELEVATION
(FEET, MEAN SEA LEVEL)
2070
2068
2066
2064
2062
2060
2058
2056
2054
2052
2050
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
SUMMARY HYDROGRAPH 1960-2013
Historical Min
Historical Mean
Historical Max
Operational Limits

FCRPS Projects

GCL/CHJ

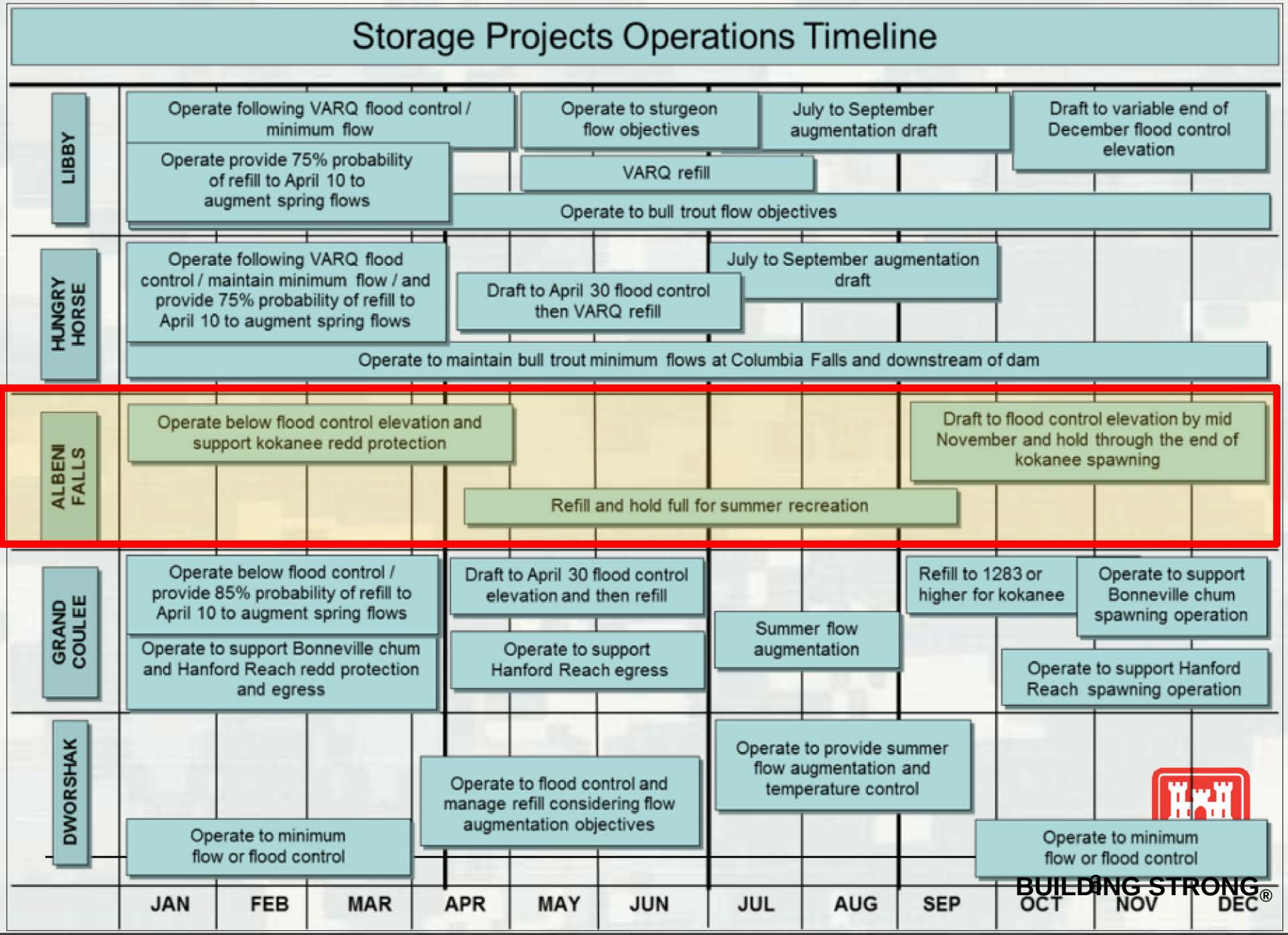
LCOL



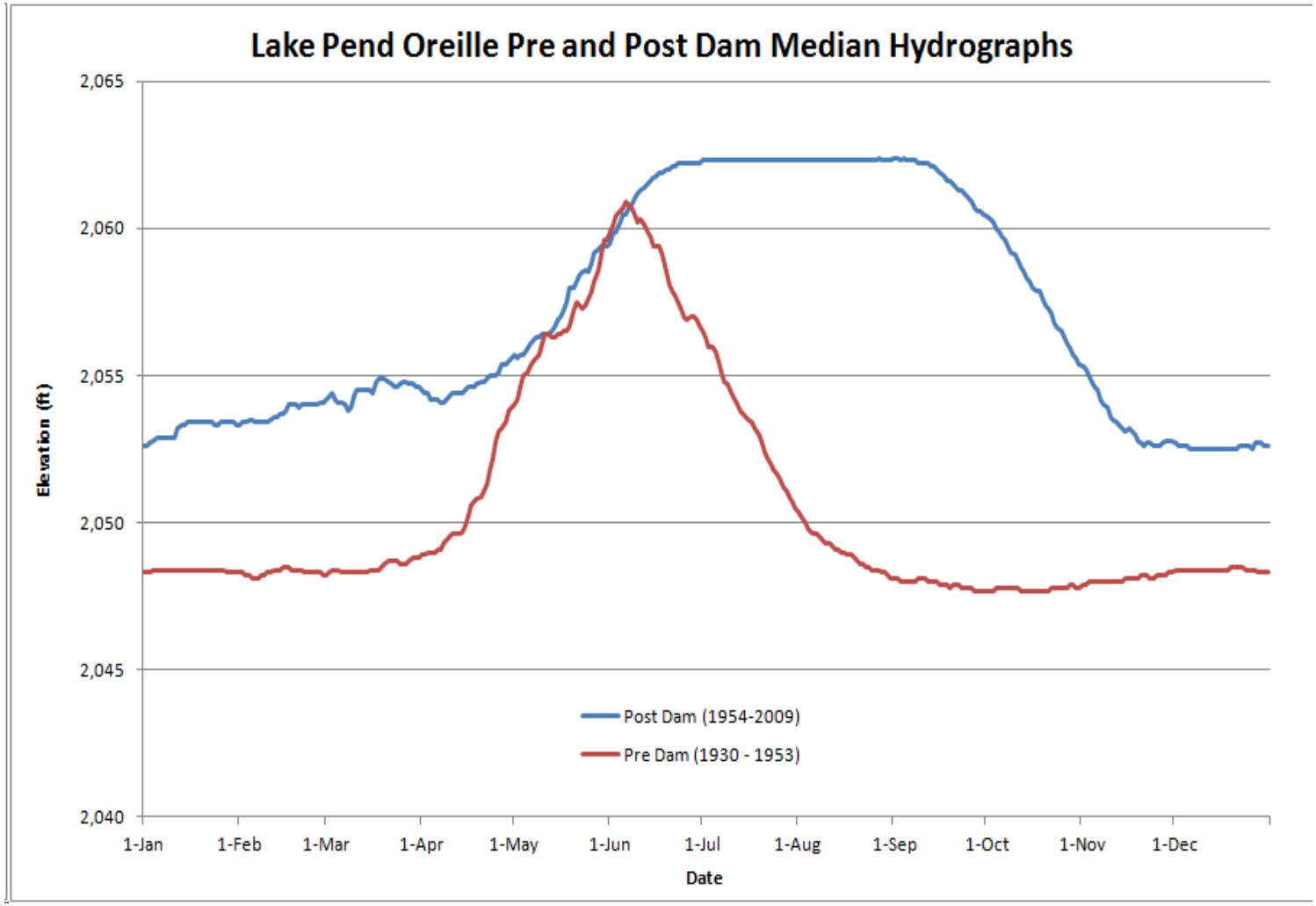
Albeni Falls Dam

- 20-25% of GCL average inflow
- 1’ of forebay = 1’ of forebay at GCL
- 1 unit of water produces 2 MW at site
- 1 unit of water produces up to 60 MW for D/S Fed projects

Storage Projects Operations Timeline



Lake Pend Oreille Pre and Post Dam



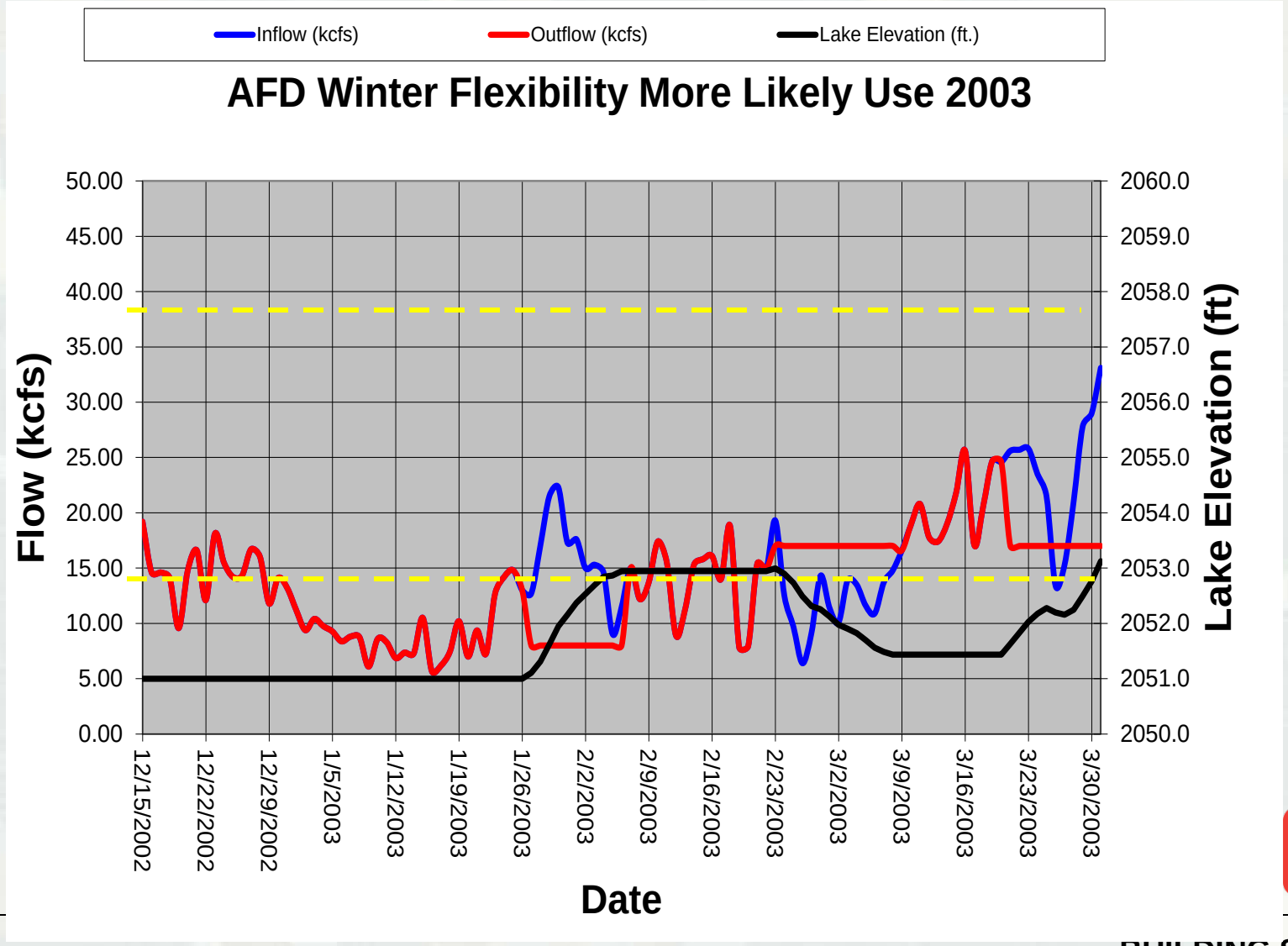
Concerns from the POBC

- Kalispell MOA – Considered temperature operations to draw the lake down earlier after pre and post Labor Day for Bull trout
- Kokanee Spawning experiment ended.
  - ► Made 2051 feet the default winter elevation.
    - Benefits power and flood risk in the winter.
  - ► With experiment lower 2051 feet years had lower end of Sept levels then 2055 feet years

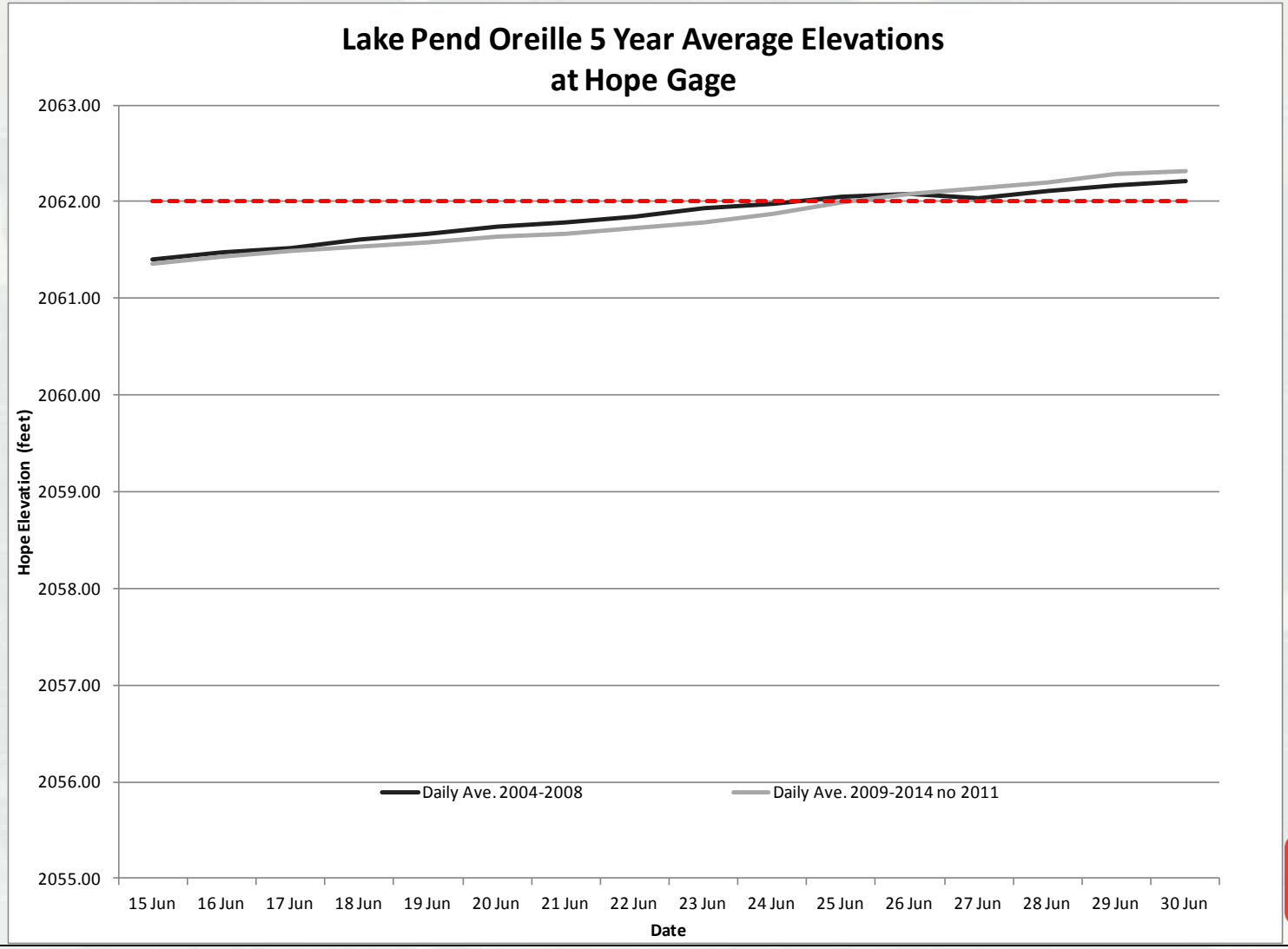
Four Areas of Concern

- Flexible Winter Power Operations – Erosion in the winter due to fluxuating lake levels
- Refill Period – Land owners on the River reach of the reservoirs have seen lower levels due to high water years
- Recreation season – Lake at full pool through end of Sept
- Higher lake levels in the winter – better access for boaters and fishermen

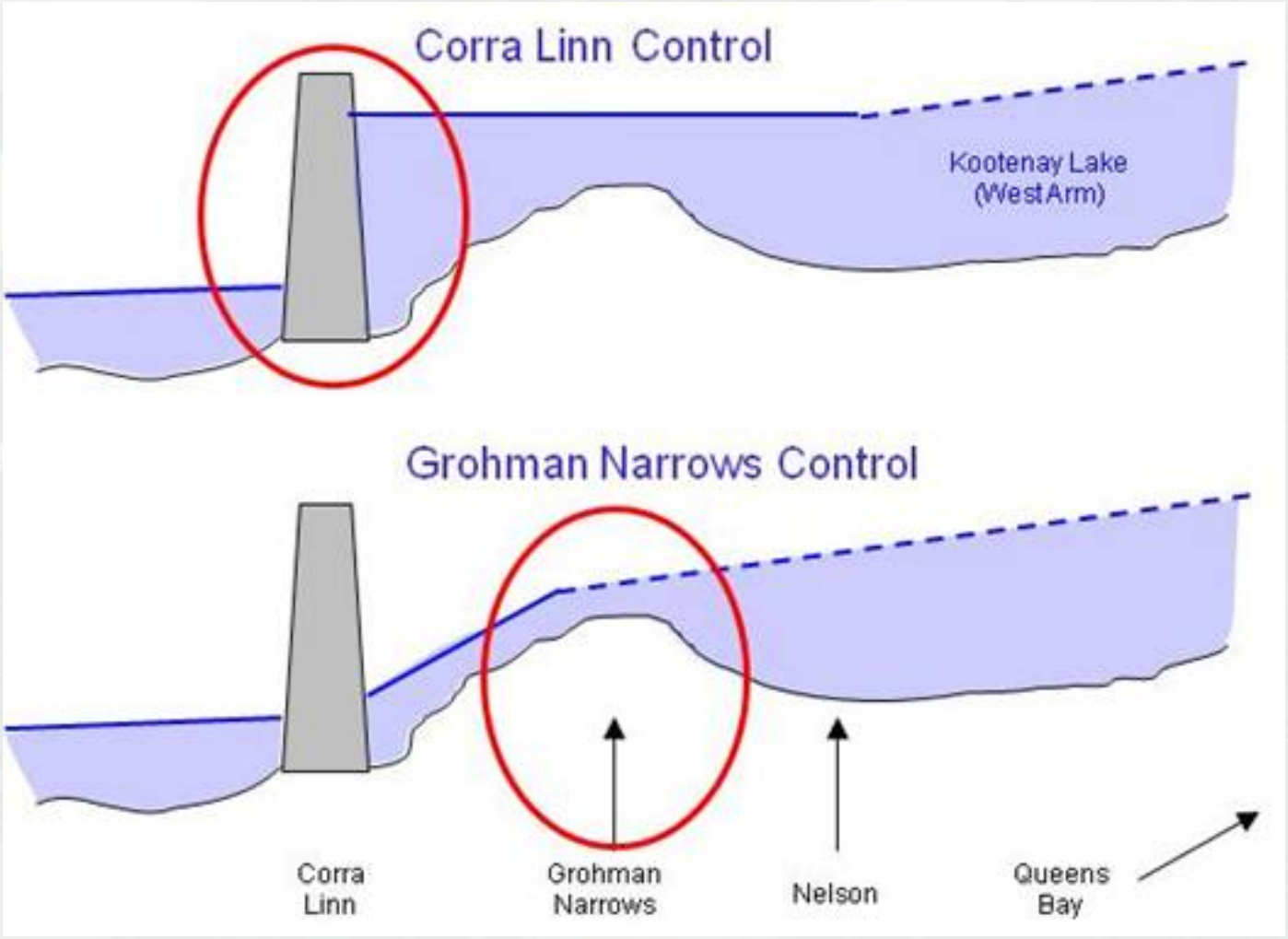
Clarified FWPO Operation



Refill at the Hope Gage



Example of a Lake on Freeflow



Coordination and Clarified Operations

- Eliminated pre- or post-Labor Day temperature operations that could have draft the Lake earlier than in the past.
- Worked with ID Governors Office and Pend Oreille Basin Commission
- Defines operations and coordination post kokanee experiment
- Gives additional certainty to Sept/Oct drawdown
- Continue to hold 2 public meetings in April and August

Coordination and Clarified Operations September Drawdown

- Hold the summer pool (2062 to 2062.5 feet) through the third Sunday of Sept or Sept 18th, whichever is later.
- Make effort to be above 2061 feet the fourth weekend of Sept or Sept 25th, whichever is later.
- No lower than 2060 feet on Sept 30th.
- There maybe times when elevations are lower than those specified above.

Sept Targets 2015

- Between 2062 to 2062.5 feet through Sept 20th.
- Rowing Regatta at Priest River:
  - Above 2061 feet through Sept 27th.
  - Rowing Regatta 25 to 27 Sept hold flows around 12 to 14 kcfs steady.

Coordination and Clarified Operations Oct/Nov Drawdown

- Winter minimum elevation will be 2051 feet.
- October through 1st week of November, target being at 2051 feet no later than Nov 15th.
- In November the lake will be drafted no lower than 2051 feet or elevation at the time of kokanee spawning.
- Targeting 2051 feet gives greater flexibility to:
  - ► Flood risk management in the winter and spring.
  - ► Power operations in the winter both at Albeni Falls Dam and in the Columbia River.

Questions

IDAHO
Water Resource Board

Idaho Water Transactions Program
2015 Progress Report

Idaho Water Transactions Program Overview

In coordination with committed partners in the Upper Salmon River Basin and Teton River Basin, the Idaho Water Resource Board (IWRB) implements the Idaho Water Transactions Program. The purpose of the program is to restore water to Idaho streams and rivers: revitalizing the habitats that imperiled salmon, steelhead, and native trout need for survival and recovery; building resilience in tributaries facing a changing climate; and protecting the local agricultural community. Water transactions provide an effective and appropriate response to address inadequate stream flows, often cited as a key factor limiting the productivity of both anadromous and resident fish species.

Funding for water transactions comes from the Bonneville Power Administration (BPA) through participation in the Columbia Basin Water Transactions Program (CBWTP) and through the Idaho Governor's Office of Species Conservation (OSC) as part of the Idaho Fish Accords. Projects are prioritized based on objectives set forth in several key agreements and documents: 1) State flow restoration objectives in the 2004 Snake River Water Rights Settlement; 2) habitat restoration objectives in the Idaho Fish Accords; and 3) projects that occur in with high priority in the Screening and Habitat Improvement Prioritization for the Upper Salmon Subbasin (SHIPUSS) document prepared by the Upper Salmon Basin Watershed Program (USBWP) technical team.

Transactional Activity

The IWRB currently implements projects in the Upper Salmon River Basin (Administrative Basins 71-75) and the Teton River Basin (Figure 1). Since 2003, the IWRB has completed **88** transactions and has secured the protection of over **650,000 AF** of water in key tributaries (Figure 2). In 2015, the Board will have **139.26 cfs** protected instream for the benefit of Endangered Species Act- listed fish.

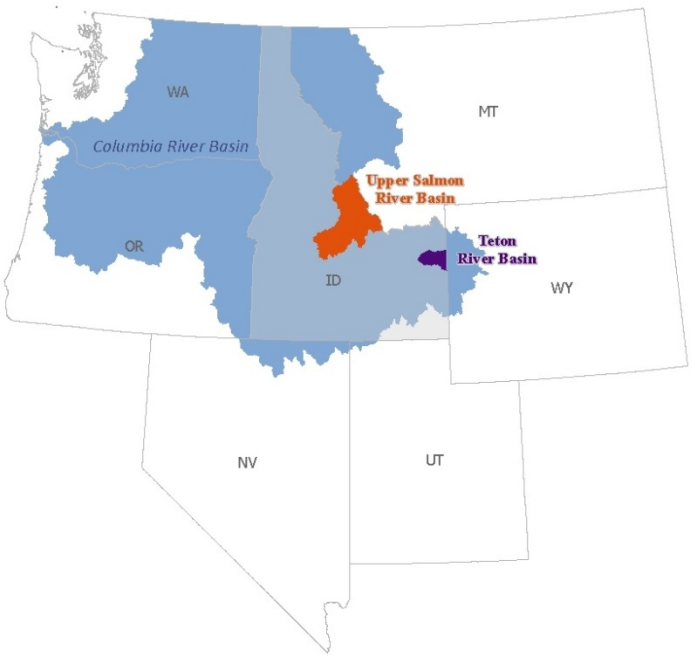


Figure 1. Geographic location of Idaho Water Transaction Program activity in relation to Columbia River Basin.

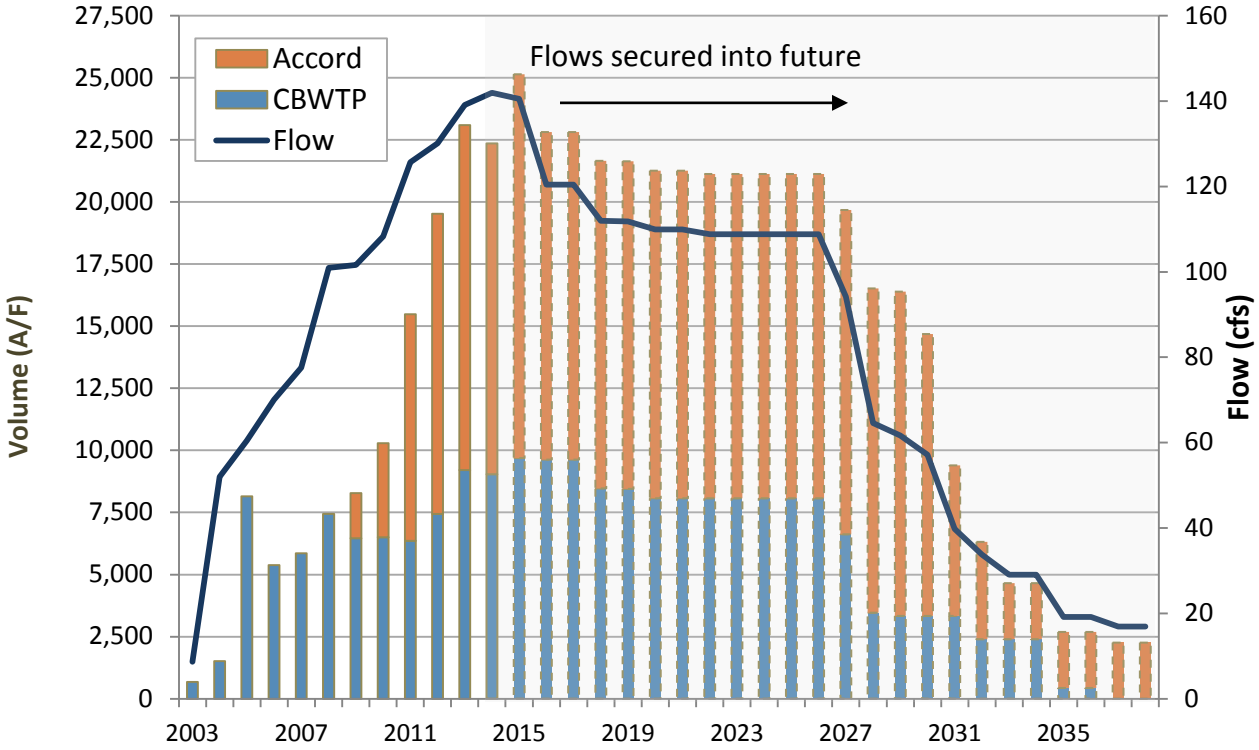


Figure 2. Flow (cfs) and volume (AF) protected instream through the Idaho Water Transactions Program since 2003.

Objective Accountability

The recently prepared Idaho Water Transactions Program Strategic Plan for the Upper Salmon River Basin defines criteria to measure IWRB performance in meeting the objectives of the State. These include the following:

1) Lower Lemhi River Flows and Lemhi River tributary reconnects
2) 2004 Snake River Water Rights Agreement B-List Streams
3) Volume and flow restored
4) Stream flow miles affected by flow restoration
5) Improvement in habitat resulting from increased stream flow
6) Documented changes in fish distribution, productivity, and survival
7) Water user and local public interactions

The following summarizes the information available for each criterion.

1) Lower Lemhi River Flows

The State objective is to permanently protect 35 cfs throughout the irrigation season in the Lemhi River below the L-6 diversion. To date **18.28 cfs** is permanently protected, with short-term agreements protecting the remaining 16.72 cfs in the interim (Figure 3).

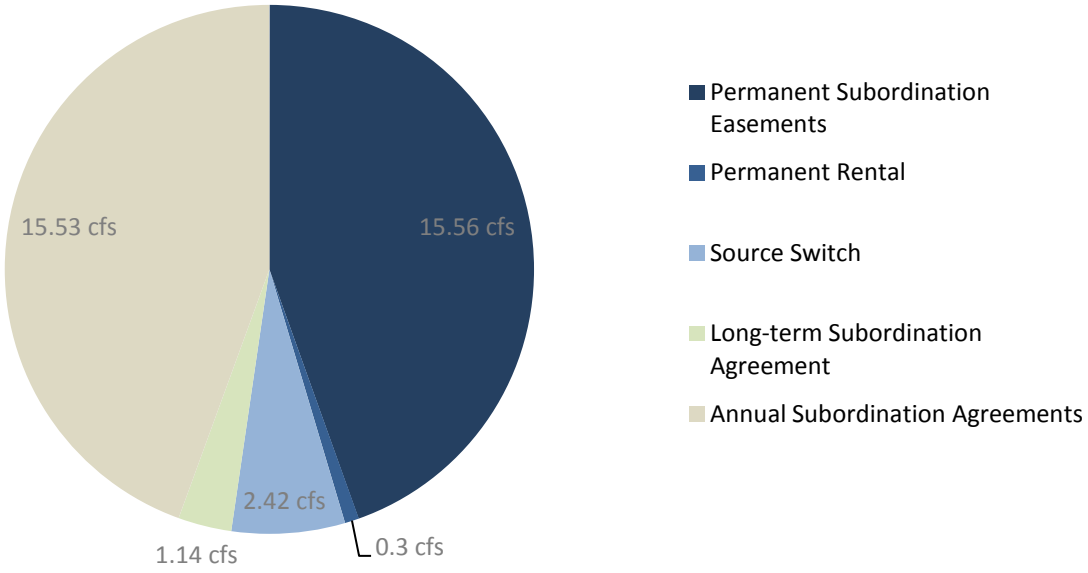


Figure 3. Progress made towards permanent protection of 35 cfs in Lower Lemhi below L-6 diversion.

2) Lemhi River Tributary Reconnects

The State objective is to have 10 high priority tributaries functionally reconnected to the Lemhi River. To date water transactions have contributed to the functional reconnection of **4** high priority tributaries – Big Timber Creek, Canyon Creek, Kenney Creek, and Little Springs Creek. Elimination of a passage barrier is still needed on Big Timber Creek to provide full access past the Big Timber 2 diversion.

3) 2004 Snake River Water Rights Agreement B-List Streams

The State objective is to maintain enough flow in the B-List streams (Goat Creek, Iron Creek, Meadow Creek, Elk Creek in Valley Creek drainage) to meet the flows enumerated in the IWRB minimum stream flow water rights. To date the IWRB has not worked with water users who divert from the B-List streams. Efforts have been focused where there is less complexity (fewer water users) and the expected benefit to fish is greater.

4) Volume and flow restored –see Figure 2

5) Stream Miles affected by flow restoration

- Stream reaches with improved flow in the Upper Salmon River Basin - **287.1 miles**
- Stream reaches with improved flow in the Teton River Basin – **28.9 miles**

6) Improvement in habitat resulting from increased stream flow

Quantitative habitat assessment is being conducted by project partners, most intensively in the Lemhi River Basin. The data and analysis related to habitat changes resulting from increased flow is not

currently available. More qualitative examples are obvious improvement in habitat as seen in before and after pictures (Figures 4 and 5).

Figure 4. Bohannon Creek at BHC3 diversion in 2013 (left) and below the diversion in 2014 with a 2 cfs minimum flow (right).

Figure 5. Fourth of July Creek in 2001 prior to water transaction (left) and August 1, 2012 after 9 years of a 2.9 cfs rental (right).

7) Documented changes in fish distribution, productivity, and survival

Project partners are also collecting biological data in some of the streams with water transactions. The IWRB does not have the capacity to analyze the data in a scientifically rigorous manner, but the following examples show documented changes in streams that have active water transactions.

Figure 6. A fluvial Yellowstone cutthroat trout captured in the upper perennial section of South Leigh Creek, tributary to the Teton River on August 7, 2014 by Mike Lien.

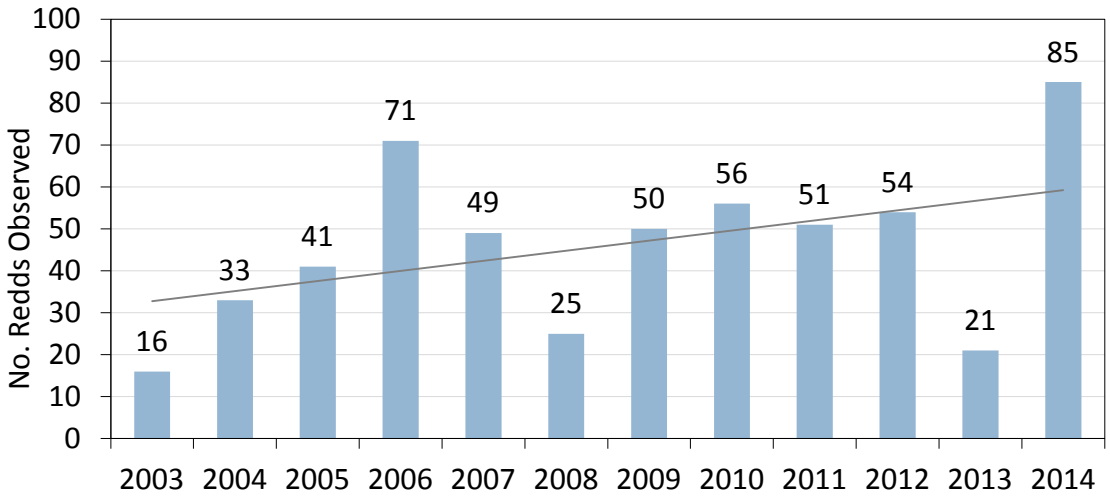


Figure 7. Fluvial bull trout redds (nests) observed in Fourth of July Creek by Idaho Department of Fish and Game.

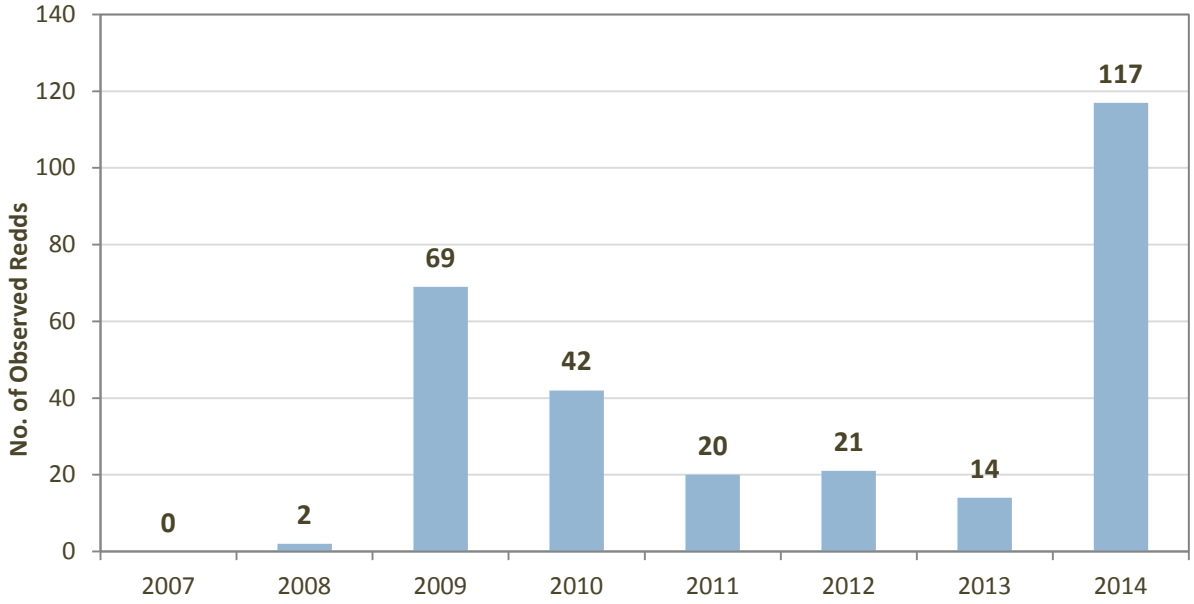


Figure 8. Spring Chinook redds (nests) observed in Patterson Big Springs Creek by Idaho Department of Fish and Game.

8) Water user and local public interactions

IWRB staff will track the number of water user and public interactions to document the effort expended to work closely with the local communities. This metric has not been collected to date, so numbers are not available.

Transactions in Development

The IWRB has made considerable progress towards the objectives of the State, but flow is still the main factor limiting fish distribution, productivity, and survival in many Upper Salmon and Teton River streams. Board staff will continue to work closely with project partners to develop, implement, and monitor water transactions in prioritized streams.

Current transactions in development include the following:

- Bohannon Creek 3 Diversion Source Switch to Lemhi River
- Fourth of July Creek 3 reduction or elimination of diversion
- Cow Creek Source Switch with potential solar power
- Lower Lemhi Permanent Subordination Easement for 4.32 cfs
- Pole Creek Source Switch and Elimination of Hydropower for 12-18 cfs **(Notable water user benefit – the Sawtooth National Recreation Area issued a special use permit authorizing the diversion of water from Pole Creek.)**
- Friends of the Teton River Badger Creek Purchase of 0.24 cfs
- Pahsimeroi River and Big Creek lease of ~200 acres

- Bayhorse Creek Split Season Lease
- Pratt Creek Source Switch
- Big Hat Creek and Hat Creek Purchase of 2.13 cfs
- Carmen Creek Barsalou Ditch Source Switch

Idaho Water Transactions Program
Strategic Plan – Upper Salmon River Basin

1. Basin Characteristics and Limiting Factors

The Upper Salmon River Basin (USRB) extends from the confluence of the Salmon River and the North Fork Salmon River to the headwaters in the Sawtooth Valley near Stanley, Idaho. The basin is home to spring/summer Chinook salmon, steelhead trout, bull trout, and sockeye salmon – all listed as threatened or Endangered under the Endangered Species Act (ESA). The basin also provides habitat for numerous resident fishes like westslope cutthroat trout and redband rainbow trout, two Idaho species of concern.

The following factors limit productivity and distribution of ESA-listed fish species in the USRB:

- Water Quantity (altered hydrograph)
- Anthropogenic Passage Barriers (including entrainment into diversions)
- Riparian Vegetation
- Water Quality - Temperature
- Water Quality – Sediment
- Competition – Non-native Species
- Habitat Complexity

Irrigation withdrawal is the primary cause of the altered hydrographs in almost every stream in the USRB. Limited flow at the mouth of tributaries can block migration into and out of high quality habitat, increase stream temperature, reduce available habitat, and affect migration cues. The Idaho Water Resource Board (IWRB) has implemented the Idaho Water Transactions Program (IWTP), with funding from Bonneville Power Administration (BPA) through the Columbia Basin Water Transactions Program (CBWTP) and the Idaho Fish Accords, to improve flow where it is limiting ESA-listed fish distribution and productivity.

As a result of the 2004 Snake River Water Rights Agreement, the IWRB holds minimum stream flow water rights on 205 streams that provide significant protection for steelhead, salmon, and bull trout. Most of the streams (A-List streams) flow through federal public lands and have minimal use. The minimum stream flows and future non-DCMI ("domestic, commercial, municipal and industrial") levels assigned for those streams were based on categories of ownership. Twenty-four streams, however, are

in basins with substantial private ownership and significant private water use (B-List streams). The flows for those streams were established after consultation with parties to the agreement and local communities.

Where the minimum stream flow water rights are higher than existing flows and in reaches where it is known that flow is a limiting factor, the IWRB works with water users on a voluntary basis to rent or otherwise acquire water to return to streams, in accordance with state law. This can be accomplished by leasing irrigation water rights into the state water supply bank and then renting them out for delivery to an established minimum stream flow, changing the source of the water right to a non-flow limited reach, and contracting with water users to restrict diversions during periods of low flow.

2. Purpose

The purpose of the IWTP in the USRB is to accomplish the flow restoration objectives set out in the Snake River Water Rights Agreement of 2004 (April 20, 2004 Final Mediator's Term Sheet and implementing documents) and the Idaho Fish Accords. These objectives are:

1. Snake River Water Rights Agreement of 2004
    - Conserve and enhance fish habitat (flow included)
    - Assure the delivery of 25 cfs to the minimum stream flow water right on the Lemhi River. Provide the remaining 35 cfs through voluntary water market (Lemhi Framework). The IWRB has established the objective of assuring the delivery of 35 cfs through permanent transactions.
    - Reconnect 4 Lemhi River tributaries by 2010 (Lemhi Framework)
    - Reconnect 10 Lemhi River tributaries by 2024 (Lemhi Framework)
2. Idaho Fish Accords – restore instream flow in the Lemhi and Pahsimeroi basins (Biological Opinion)

In sum, the IWRB operates the BPA-funded program to advance the recovery of ESA-listed fish species through the voluntary implementation of flow-related conservation measures that improve instream flow conditions.

3. Guiding Principles

The IWTP is guided by five simple principles that also guide the efforts of the CBWTP:

- Improve fish and wildlife habitat
- Respect private property rights
- Respect the values of irrigated agriculture
- Work locally using market-based strategies
- Take a balanced approach

4. Approach

The IWTP is a component of the larger state effort to improve conditions for anadromous and other ESA-listed fish species. The IWTP complements and leverages the conservation and enhancement measures implemented by many partner agencies and organizations. A fundamental component of the program is comprehensive outreach including public meetings as well as one-on-one interaction with water users.

Transactions are reviewed and authorized by the IWRB, the CBWTP Technical Advisory Committee (TAC), and the Northwest Power and Conservation Council. Transactions using Idaho Fish Accord Funding are reviewed and approved by the Idaho Salmon Recovery Team. In addition, the Upper Salmon Basin Watershed Program (USBWP) Advisory Board, which comprises local ranchers; business interests; federal, state, and county agencies; and non-profits, provides oversight, guidance and direction to restoration efforts in the basin.

A. Collaboration

The primary collaborative activities are guided by the USBWP Technical Team (Tech Team). The Tech Team is composed of federal and state agency resource managers and representatives from conservation organizations. The Tech Team evaluates and proposes projects, provides guidance to staff regarding funding and implementation, and develops plans for future conservation actions. The Tech Team also ranks projects as to how they accomplish goals set out by the funding agencies. The Tech Team is composed of representatives from the following organizations:

- Bonneville Power Administration Fish & Wildlife Program

- Columbia Basin Water Transactions Program
- Custer Soil and Water Conservation District
- Idaho Department of Environmental Quality
- Idaho Department of Fish and Game
- Idaho Department of Water Resources
- Idaho Governor's Office of Species Conservation
- Idaho State Soil and Water Conservation Commission
- Idaho Water Resource Board
- Lemhi Regional Land Trust
- Lemhi Soil and Water Conservation District
- National Marine Fisheries Service
- Natural Resource Conservation Service
- Northwest Power and Conservation Council
- Salmon Valley Stewardship
- Shoshone-Bannock Tribes
- The Nature Conservancy
- Trout Unlimited
- U.S. Army Corps of Engineers
- U.S. Bureau of Land Management
- U.S. Bureau of Reclamation
- U.S. Fish and Wildlife Service
- U.S. Forest Service

B. Prioritization

Prioritization of flow restoration activities will be guided by the following:

Snake River Water Rights Agreement of 2004 (Nez Perce Agreement)

Assuring the delivery of 35 cfs to meet the minimum stream flow water right on the Lemhi River held by the IWRB. Assuring the delivery of 35 cfs provides passage for adult and juvenile salmonids to and from the Salmon River and is the highest priority of the IWRB.

A second objective is the reconnection of at least ten tributaries to the Lemhi River. Priority tributaries for reconnection include the following:

- Kenney Creek
- Pattee Creek
- Wimpy Creek
- Bohannon Creek

- Geertson Creek
- Agency Creek
- Big Timber Creek
- Big Eightmile Creek
- Little Eightmile Creek
- Texas Creek
- Hawley Creek
- Eighteenmile Creek
- Canyon Creek
- Mill Creek
- Lemhi Little Springs Creek
- Lee Creek

Pursuant to the B-List water rights set out in the 2004 Agreement, the IWRB holds minimum stream flow water rights on the following Valley Creek tributaries:

- Goat Creek
- Iron Creek
- Meadow Creek
- Elk Creek

These minimum stream flow water rights were conditioned to allow flow restoration through water transactions. The target flows for these tributaries are the decreed minimum stream flow water right quantities.

Screening and Habitat Improvement Prioritization for the Upper Salmon Subbasin

For other areas in the USRB, the IWRB will utilize the Screening and Habitat Improvement Prioritization for the Upper Salmon Subbasin (SHIPUSS) to determine flow restoration priorities. SHIPUSS is a prioritized list of streams within watersheds to guide screening and habitat improvement projects on privately owned lands in the USRB.

The original SHIPUSS was developed from 2002-2005 and documented fish species presence and distribution, habitat conditions and habitat restoration priorities in the USRB (USBWP 2005). Since 2005, completed and ongoing habitat restoration activities, as well as additional information obtained on fish species and habitat conditions, warranted a re-evaluation and re-prioritization of watersheds in the USRB .

In 2012, a subcommittee within the USBWP Tech Team was formed to incorporate new information into the original SHIPUSs species and habitat tables, add tributaries that were previously excluded due to a lack of habitat, fishery, and flow data, and revise rankings based on the new information. SHIPUSS

provides the primary prioritization tool for the IWTP as well as for the basin-wide projects undertaken by the Tech Team members. The SHIPUSS document is attached as Appendix A.

The SHIPUSS document uses both biological and non-biological criteria to rank tributaries and main-stem reaches in the USRB. They include the following:

Biological

Stream Connectivity and Size

- Stream connectivity to mainstem (current)
- Stream connectivity to mainstem (potential)
- Size of tributary stream

Habitat

- Habitat quality (existing)
- Habitat quality (potential)
- Lack of other barriers besides diversions

Fisheries

- Naturalized anadromous fish life history expression (current)
- Naturalized anadromous fish life history expression (potential)
- Bull trout life history expression (current)
- Bull trout life history expression (potential)
- Resident life history expression (current)
- Resident life history expression (potential)

Non-biological

- Expected cost:benefit
- Potential to increase flows via leases or acquisitions
- Potential to increase flows through irrigation or management improvements
- Simplicity of resolving diversion issues
- Potential for diversion consolidation
- Simplicity of resolving screening issues

Scoring criteria are explained on Page 18 of the SHIPUSS document; the total SHIPUSS score is used to place the tributary or stream reach in one of three tiers – High (70-100% of possible points), Medium (50-69% of possible points), and Low (less than 50% of possible points). SHIPUSS scores are subject to change based on improved understanding/data, restoration work completed, changing land ownership, and other factors.

Where available, instream flow studies like **Physical Habitat Simulation (PHABSIM)** will be used to determine the appropriate flow for the target fish species and lifestage**.** When instream flow data is not

available, the professional opinion of fisheries biologist from the Idaho Department of Fish and Game, coupled with monitoring and adaptive management, will be used to determine the appropriate flow target for flow restoration.

C. Opportunism

Because a significant portion of habitat important to ESA-listed species is located on private lands, local support is key to implementing conservation measures that advance species recovery. The IWTP focuses on conservation strategies that restore and improve instream flow habitat for fish species and benefit local communities. Voluntary participation by water users is crucial to the program's success.

5. Policies

The IWRB is responsible for adopting policies which guide the development, management and use of the state's water and related resources. The **Idaho Comprehensive State Water Plan (Plan)** contains policies which seek to ensure that through cooperation, conservation, and good management, water conflicts will be minimized and the water resources will be put to optimum use for the benefit of the citizens of Idaho.

The Plan contains two policies specific to the Salmon/Clearwater River Basins which directly relate to the IWTP. These policies are attached at Appendix B.

6. Outcomes/Accountability

The efforts of the IWRB to address flow limitations in the Upper Salmon River Basin will be assessed based on the following criteria:

- Progress made toward obtaining permanent water supplies to meet the 35 cfs target flow on the Lemhi River
- Progress made toward the reconnection of 10 high priority tributaries in the Lemhi River Basin
- Progress made toward meeting the B-List minimum stream flow water rights in the Snake River Water Rights Agreement of 2004
- The flow and volume restored to Upper Salmon River Basin tributaries
- The number of stream miles affected by flow restoration (directly and indirectly through increased passage)
- Improvement in habitat resulting from increased stream flow

- As information becomes available, documented changes in fish distribution, productivity, and survival that benefit ESA-listed fish species
- The number of water user and local public interactions

APPENDIX B

Extracted from the Idaho State Water Plan (adopted 2012)

6. SALMON/CLEARWATER RIVER BASINS

6A - CONSERVATION PLANS IN THE SALMON/CLEARWATER RIVER BASINS

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

Discussion:

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

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

- **2004 Snake River Water Rights Agreement**

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

The state and local water users are working with the federal agencies, tribes, and other stakeholders to advance the recovery of listed species through the development of conservation agreements under

Section 6 of the ESA. In coordination with the OSC, the state has begun early implementation of voluntary conservation measures that provide immediate benefits to ESA-listed fish and provide the foundation for implementation of long-range plans.

As a result of the 2004 Snake River Water Rights Agreement, the Idaho Water Resource Board holds minimum stream flow water rights on 205 streams that provide significant protection for steelhead, salmon, and bull trout. Most of the streams flow through federal public lands and have minimal use. Twenty-four streams, however, are in basins with substantial private ownership and significant private water use. The flows for those streams were established after consultation with local communities. Where the minimum stream flow water rights are higher than existing flows, the Idaho Water Resource Board works with water users on a voluntary basis to rent or otherwise acquire water to return to streams, in accordance with state law.

- **Wild and Scenic Rivers Agreement**

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

Implementation Strategies

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

Milestones

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

6B - INSTREAM FLOW PROGRAM IN THE SALMON/CLEARWATER RIVER BASINS

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

Discussion:

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

- **Columbia Basin Water Transaction Program**

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

- **Section 6 Conservation Fund**

Section 6 of the ESA directs "that Federal agencies shall cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species." 16 U.S.C.A. § 1531(C)(2). Pursuant to the 2004 Snake River Water Rights Agreement of 2004, in addition to the establishment of minimum stream flow water rights, the state agreed to work with local stakeholders and communities to develop work plans for addressing limiting factors for fish on streams with degraded habitat. The state also agreed to develop cooperative agreements under Section 6 of the ESA with the assistance of local land owners, federal agencies, and tribes to establish long-term conservation goals and conservation measures that will contribute to the recovery of anadromous and resident fish in the Upper Salmon River Basin. The Board's instream flow programs are central to the development and implementation of Section 6 Conservation Plans.

- **Pacific Coast Salmon Restoration Fund**

The Pacific Coast Salmon Restoration Fund provides grants to state agencies and treaty Indian tribes for salmon recovery efforts. The Idaho Water Resource Board works with agencies, tribes, and stakeholders

to use Pacific Coast Salmon Restoration Fund monies for early implementation of conservation measures in the basins.

- **2008 Columbia Basin Fish Accords**

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

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

Implementation Strategies:

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

Milestones:

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

MEMO

To: Idaho Water Resource Board

From: Rick Collingwood

Date: June 26, 2015

Subject: Last Chance Canal Company – Diversion Dam and Canal Inlet Structure

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Action Item: $2,500,000 loan

1.0 INTRODUCTION

The Last Chance Canal Company (LCCC) is requesting a $2,500,000 loan at 3.5% interest with a 20-year term for the replacement of an existing 100-year old timber crib diversion dam and concrete canal inlet structure (project).

2.0 BACKGROUND

The LCCC is located in Caribou County near Grace, Idaho (see Project Area map). LCCC delivers irrigation water to 147 shareholders to irrigate 29,000 acres of agricultural land. Irrigation water is diverted from the Bear River and conveyed to farms by gravity operated canals and flumes.

The LCCC owns, operates and maintains a timber crib diversion dam located approximately 2-miles northeast of Grace on the Bear River. The purpose of the diversion dam project is to divert water from the Bear River into a concrete canal inlet and return channel for delivery to the LCCC shareholders. The Last Chance Hydroelectric Project (LCHP), owned by PacificCorp, is located on the return channel less than one half mile below the dam. The dam was completed in 1908, nearly 75 years before the construction of the LCHP.

The timber crib structure is severely deteriorated and the structural integrity of the dam is in question. LCCC is interested in rehabilitating the dam to maintain delivery of irrigation water. In addition, LCCC and PacificCorp are currently negotiating a settlement agreement that will include the transfer of ownership of the LCHP to LCCC.

3.0 PROPOSED PROJECT

The project includes removal of the existing timber crib diversion dam and canal inlet structure (see photographs included in the loan application), construction of a new concrete diversion dam and concrete canal inlet structure, and replacement of two canal gates and one channel return gate.

Franson Civil Engineers Inc., American Fork, Utah, is providing the engineering and design services for the project. The project cost estimate is $2,750,000. Franson Civil Engineers project schedule is 50% design completion by the middle of July, 100% design completion in

late August, and bid solicitation in September. Construction is scheduled to begin in October after the completion of the irrigation season.

4.0 BENEFITS

This project will address badly needed infrastructure improvements, significantly reduce the operations and maintenance costs, and provide a reliable diversion dam and canal inlet structure for the LCCC and its shareholders.

5.0 FINANCIAL ANALYSIS

LCCC is requesting a loan of $2,500,000 at 3.5% interest for a 20-year term. As noted above, LCCC and PacificCorp are currently negotiating a settlement agreement regarding the transfer of the LCHP. As indicated in the "Engineers Estimate of Probable Project Costs", PacificCorp will contribute $250,000 to the project as part of the settlement agreement. While the final contribution amount will not be finalized until negotiations are complete, LCCC has requested a loan for a portion of the project costs.

The following payment analysis reflects the Board's current interest rate of 3.5%.

Payment Analysis

Term (years)	Estimated Annual Payment– Revolving Account Loan	Current Assessment Cost/Share/Yr	After Assessment Cost/Share/Yr	Current Assessment Cost/Acre/Yr	After Assessment Cost/Acre/Yr
10	$300,603.42	$4.00	$10.03	$6.88	$17.25
15	$217,062.67	$4.00	$8.35	$6.88	$14.36
20	$175,902.69	$4.00	$7.53	$6.88	$12.95
25	$151,685.09	$4.00	$7.04	$6.88	$12.11

Note: The "after assessment cost" per share is calculated based on the estimated annual loan payment divided by a total of 49,871.5 shares plus the current assessment of $4 per share. The 'after assessment cost" per acre is calculated based on the estimated annual loan payment divided by the total number of acres (29,000), plus the current assessment of $6.88 per acre.

Loan History:

Current

Last Chance Canal Company received a loan from the Board to replace a flume within the LCCC system (see Project Area Map) for $500,000 in 2003. The loan is scheduled to be paid off in April, 2016.

6.0 WATER RIGHTS

LCCC water rights are as follows:

WATER RIGHT	SOURCE	FLOW	WATER USE	BASIS	PRIORITY
1-95		225 cfs	Irrigation	Decreed	2/9/1897
11-262	Bear River	54 cfs	Irrigation	Decreed	7/29/1910
13-955	Bear River	138.16 cfs	Irrigation	Decreed	8/9/1909
13-956	Bear River	25.6 cfs	Irrigation	Decreed	12/31/1909
13-991C	Bear River	200 cfs	Irrigation	Decreed	3/1/1897
13-992C	Bear River	240 cfs	Irrigation	Decreed	5/14/1901
13-4076	Bear River		Irrigation, Irrigation Storage	Statutory Claim	4/1/1919
13-7288	Bear River	440 cfs	Power	License	5/30/1980
13-7297	Bear River	220 cfs	Power	License	2/11/1981

7.0 SECURITY

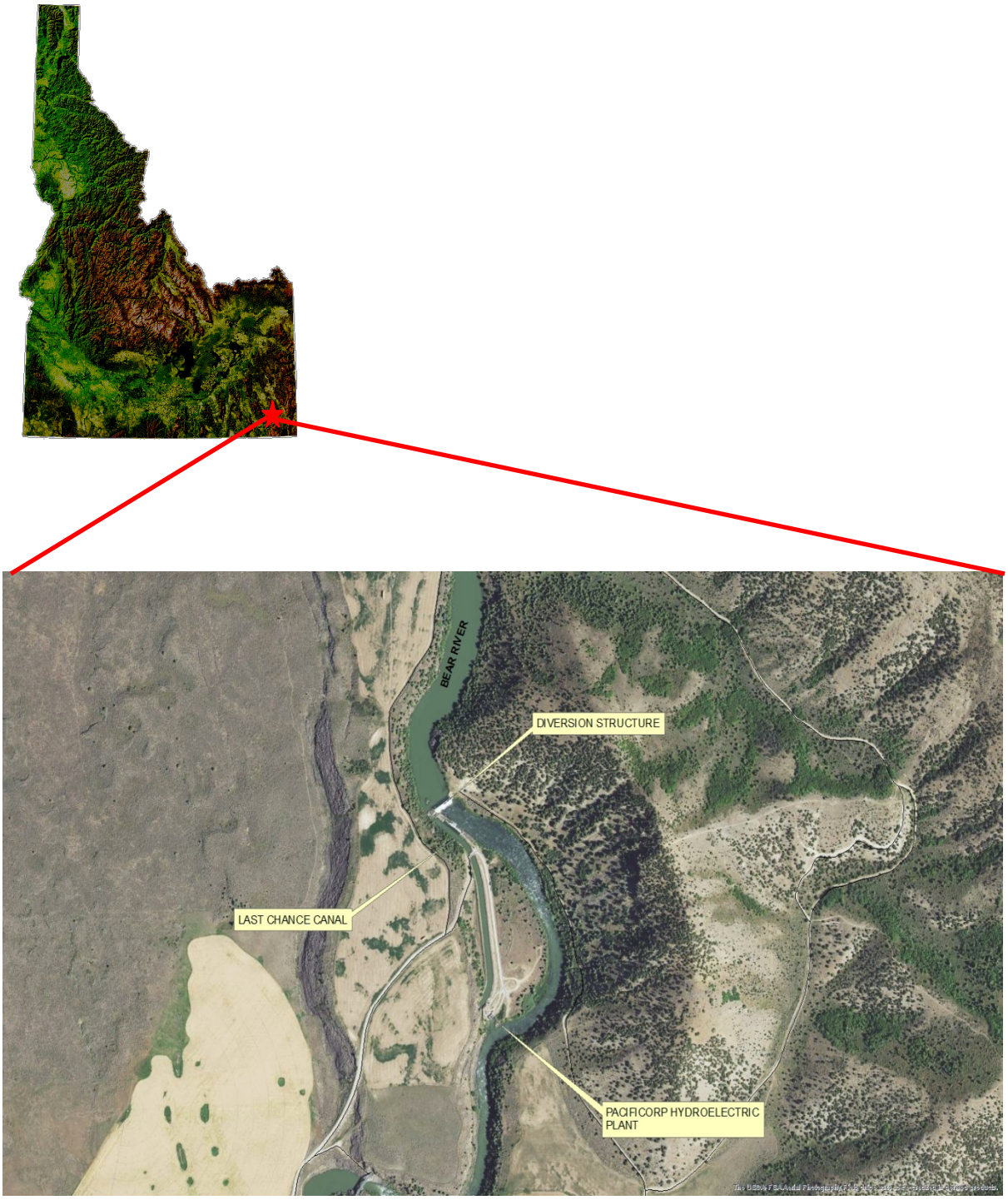
LCCC is offering its natural flow and storage water rights, as well as irrigation facilities, and all materials associated with this project as collateral should this loan be approved.

8.0 CONCLUSION AND RECOMMENDATION

This loan will be used to remove a deteriorating timber crib diversion dam and concrete canal inlet structure, and construct a new concrete diversion dam and concrete canal inlet structure.

The project will benefit the irrigation company and its water users. Staff recommends approval of the requested loan.

Map of Project Area



(See additional photos of the project facilities included with attached application.)

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE	)	A RESOLUTION TO MAKE
LAST CHANCE CANAL COMPANY	)	A FUNDING COMMITMENT
_____	)	

WHEREAS, the Last Chance Canal Company (LCCC) submitted a loan application to the Idaho Water Resource Board (IWRB) in the amount of $2,500,000; and

WHEREAS, LCCC currently provides irrigation water to 29,000 acres in Caribou County from the Bear River, and conveyed through a series of canals, tunnels, and flumes; and

WHEREAS, LCCC proposes to construct a new concrete diversion dam and concrete inlet structure to replace the deteriorated existing 100-year old timber crib diversion dam and concrete canal inlet structure; and

WHEREAS, LCCC 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 $2,500,000 from the Revolving Development Account at 3.5% interest with a 20 year repayment term and provides authority to the Chairman of the Idaho Water Resource Board, or his designee, to enter into contracts with the LCCC 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 LCCC shall comply with all applicable rules and regulations that apply to the proposed project.

2) The LCCC shall provide acceptable security for the loan to the IWRB including but not limited to the Company's water right, and irrigation facilities, and its interest in the hydroelectric facility.

3) The LCCC shall establish a reserve account in an amount equal to one annual loan payment for the duration of the loan.

DATED this 14th day of July, 2015.

_____
ROGER W. CHASE, Chairman
Idaho Water Resource Board

ATTEST _____
VINCE ALBERDI, Secretary

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE	)	A RESOLUTION TO MAKE
ST. JOHN'S IRRIGATING COMPANY	)	A FUNDING COMMITMENT
_____	)	

WHEREAS, the St. John's Irrigating Company (Company) submitted a loan application to the Idaho Water Resource Board (IWRB) in the amount of $1,429,775; and

WHEREAS, the Company currently provides irrigation water to 3,500 acres in Oneida County with storage in Daniels Reservoir, and conveyance through the Little Malad River and a series of canals; and

WHEREAS, due to the high water loss and soil erosion, the Company proposes to install a pipeline to eliminate approximately seven (7) miles of canal; and

WHEREAS, the Company will use the funds as a match for an approved U.S. Bureau of Reclamation WaterSMART Water and Energy Efficiency Grant (Grant) of $1,000,000; and

WHEREAS, the disbursement plan for Grant funding anticipates awarding Federal funds in the amount of $400,000 in federal fiscal year (FY) 2015, $300,000 in FY 2016 and $300,000 in FY 2017; and

WHEREAS, the Company 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 $1,429,775 from the Revolving Development Account at 3.5% interest with a 20-year repayment term and provides authority to the Chairman of the Idaho Water Resource Board, or his designee, to enter into contracts with the Company 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 Company shall comply with all applicable rules and regulations that apply to the proposed project.

2) The Company shall provide acceptable security for the loan to the IWRB including but not limited to the Company's water rights and facilities.

3) The disbursement of funds under this loan is contingent upon execution of the Grant financial assistance agreement with the Company.

4) Percentages of disbursement of IWRB loan funds shall coincide with the schedule of the three-year Grant disbursement plan: 40% percent of the total loan federal fiscal year (FY) 2015, 30% in FY 2016 and 30% in FY 2017. The Company may request the first disbursement the IWRB loan funds no sooner than July 1, 2016. All other disbursements shall be issued after payout of WaterSMART Grant payments.

5) The Company shall establish a reserve account in an amount equal to one annual loan payment for the duration of the loan.

DATED this 14th day of July, 2015.

_____
ROGER W. CHASE, Chairman
Idaho Water Resource Board

ATTEST _____
VINCE ALBERDI, Secretary

MEMO

To: Idaho Water Resource Board

From: Rick Collingwood

Date: June 26, 2015

Subject: St. John's Irrigating Company – Pipeline

Action Item: $1,429,775 loan

1.0 INTRODUCTION

The St. John's Irrigating Company (SJIC) is requesting a $1,429,775 loan at 3.5% interest with a 20-year term to replace portions of an existing canal system with a 7-mile long gravity pressurized conveyance pipeline. The loan will provide matching cost-share funds for a $1,000,000 US Bureau of Reclamation's WaterSmart Water and Efficiency Grant awarded to SJIC. The total estimated cost of the pipeline project is $2,429,775.

2.0 BACKGROUND

The SJIC is located in Oneida County, near Malad City, Idaho. SJIC owns several water surface irrigation water rights from the Little Malad River and tributary creeks as well as storage water in the Daniels Reservoir on the Little Malad River. Approximately 15 miles of delivery canals and laterals convey water for irrigation of approximately 3,500 acres of agricultural land served by the SJIC (see Overall System Map, Franson Civil Engineers, pg 5).

The proposed pipeline is expected to reduce high rates of seepage loss and soil erosion. The Little Malad River and the delivery canals in this area have an estimated seepage loss of 50%. The pipeline would eliminate approximately 1,400 acre-feet (AF) of the estimated 4,400 AF of water lost due to infiltration. The project is also expected to reduce operation and maintenance demands resulting from soil erosion and sediment build up and provide enough pressure-head to eliminate pumping needs for pivots/sprinklers within the service area.

The Idaho Department of Water Resources (IDWR) currently monitors the water levels in seven wells in the Malad Basin located west and south of Malad City. The wells are used to monitor groundwater level declines in the Malad Valley Aquifer, which indicate downward trends over the last 20-years. IDWR is considering establishing a Groundwater Management Area for the Malad Valley Aquifer which could limit development of ground water use.

The total estimated average annual discharge from the ground water aquifers of the Malad Valley is 63,000 acre-feet (U.S.G.S. Initial Assessment 'Availability of Ground Water for

Large Scale Use in the Malad Valley-Bear River Areas of Southeastern Idaho). The reduction of incidental recharge due to installation of the proposed pipeline, approximately 1,400 AF annually, is 2.0% of the annual aquifer discharge. This represents a small amount of the recharge to the aquifer.

3.0 PROPOSED PROJECT

The project would convert 7 miles of winding canal and laterals to a low pressure pipeline. It will include piping of 6 miles of the main canal, and a 1 mile section of laterals. Flow meters will be installed at the lateral turnouts on the main pipeline. The proposed pipeline will be comprised of 30-inch and 24-inch pipe.

Franson Civil Engineers, Inc., American Fork, Utah, will be providing the engineering and design services for the project. The project cost estimate is $2,429,775. Franson Civil Engineers project schedule is to complete the WaterSMART Grant's environmental compliance requirements by January/February 2016, complete final design by July, 2016, and begin construction in October, 2016. Construction is scheduled to be completed prior to the 2017 irrigation season.

SJIC proposes to finance the project using funds from the WaterSmart grant and Board loan. On June 29, 2015, a meeting was held for shareholders to approve an assessment increase for loan repayment. There was overwhelming support to accept the grant and pursue a loan from the Board in order to develop the project. The results of the vote were 225.79 shares in favor of the project and 6.15 shares against the project. Currently, shareholders are assessed $85 per share. The shareholders approved an additional $336 per share assessment for the 20-year term of the loan to complete the project.

4.0 BENEFITS

There are a number of anticipated benefits from the project for SJIC. This project will reduce water loss in the main canal and laterals resulting in a water savings for the company that is critical during dry years. It will reduce operation and maintenance requirements caused by significant soil erosion and sedimentation problems throughout the system. The project will also provide pressure-head to reduce pumping needs for pivots/sprinklers. Finally the proposed pipeline project will rehabilitate a portion of the irrigation delivery system to provide reliable service into the future.

5.0 FINANCIAL ANALYSIS

SJIC is requesting a loan of $1,429,775 at 3.5% interest for a 20-year term. The following analysis reflects the Board's current interest rate of 3.5% for this type of project.

Payment Analysis

Term (Years)	Estimated Annual Payment-Revolving Account Loan	Current Assessment Cost/Share/Year	After Assessment Cost/Share/Year	Current Assessment Cost/Acre/Year	After Assessment Cost/Acre/Year
10	$171,918.10	$85.00	$659.98	$7.26	$56.38
15	$124,140.31	$85.00	$500.18	$7.26	$42.73
20	$100,600.51	$85.00	$421.46	$7.26	$36.00
25	$86,750.22	$85.00	$375.13	$7.26	$32.05

Note: The "after assessment cost" per share is calculated based on the estimated annual payment divided by a total of 299 shares plus the current assessment of $85.00 per share. The "after assessment cost" per acre is calculated based on the estimated annual payment divided by the total number of acres (3,500) plus the current assessment of $7.26 per acre. Based on a total of 299 shares, there are 0.085 shares/acre.

6.0 WATER RIGHTS

SJIC water rights are as follows:

WATER RIGHT	SOURCE	FLOW	VOLUME	TYPE	PRIORITY
15-42	Little Dip Vat Channel	0.47 cfs		Decreed	7/1/1877
15-44	Little Malad River	Not Listed	Not Listed	Decreed	5/22/1878
15-58	Little Malad River	Not Listed	Not Listed	Decreed	3/20/1922
15-59	Reservoir Creek	Not Listed	Not Listed	Decreed	3/20/1922
15-71	Meadow Creek	Not Listed	Not Listed	Decreed	11/13/1888
15-2078	Little Malad River (Daniels Reservoir)		625 AFA	License	4/29/1950
15-2080	Little Malad River (Daniels Reservoir)		8,075 AFA	License	1/9/1962

7.0 SECURITY

SJIC is offering its natural flow and storage water rights, and all materials associated with this project as collateral should this loan be approved.

8.0 CONCLUSION AND RECOMMENDATION

This loan will be used to convert 7-miles of unlined canal to a low pressure pipeline, and installation of flow meters at each lateral turnout on the main pipeline.

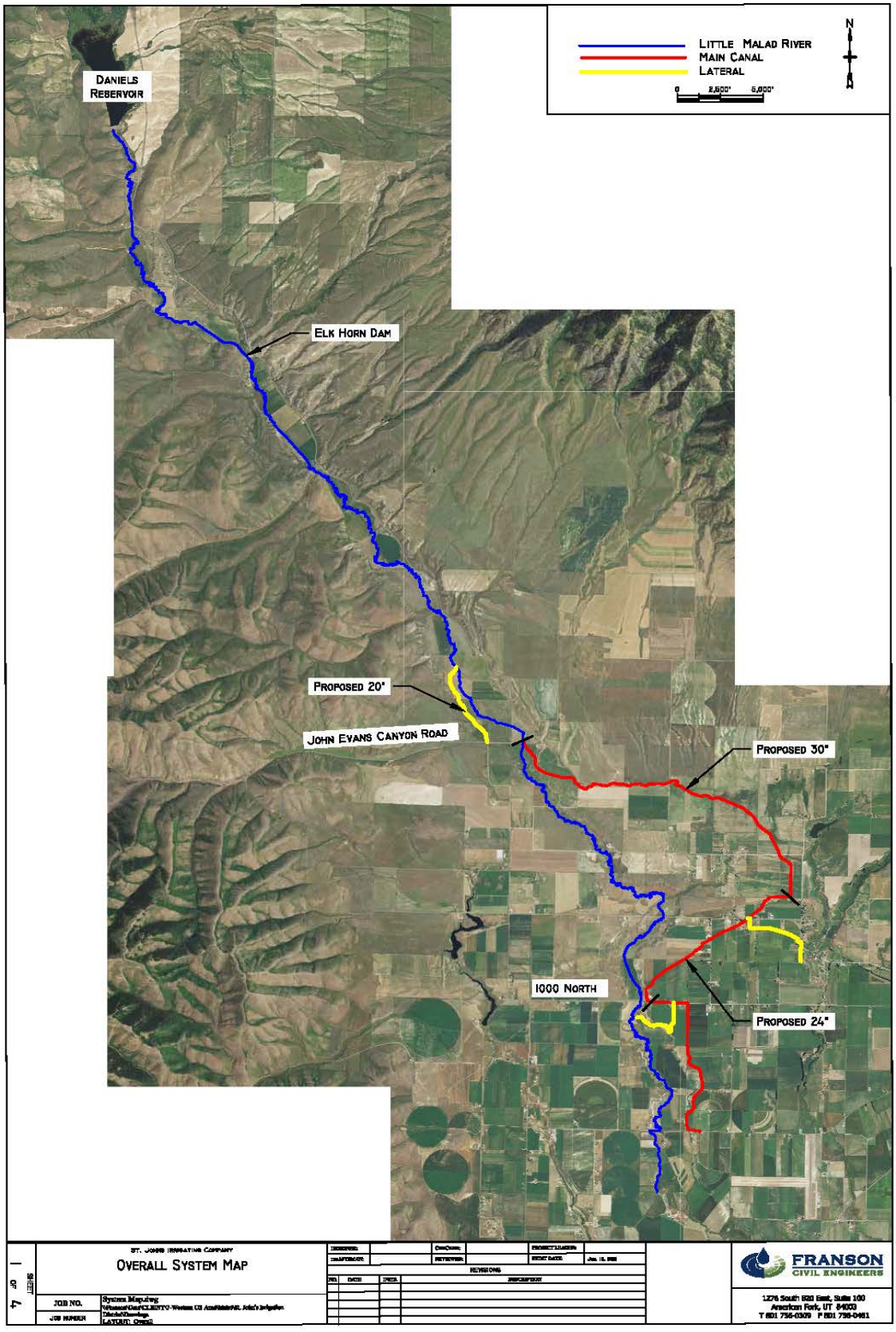
Disbursement of Board funds will correspond with disbursement of funds from the WaterSmart Grant. Due to the time estimated to complete environmental compliance requirements for the WaterSMART Grant (January/February, 2016), and the commencement of the engineering and design, Board funds will not be disbursed prior to July 1, 2016. In addition, WaterSmart Grant funds will be allocated over a three year period: FY 2015 ($400,000), FY 2016 ($300,000), and FY 2017 ($300,000). Disbursement of the Board funds will match the 3-year WaterSmart disbursement schedule and percent distribution.

There are a number of potential benefits of the project to the SJIC and local water users including water savings for the company, reduced operation and maintenance, and reduced pumping costs, all of which may result in significant positive cash flows. While the project will reduce incidental recharge to the Malad Valley Aquifer, the relative impact of the project to the aquifer recharge appears to be minimal. In addition, a decision has not been made by IDWR regarding potential an administrative designation or action in the Malad Valley Aquifer. SJIC has the ability to pursue improvements to the irrigation system in the interest of its water users.

Given the anticipated benefits of the project, staff recommends approval of the requested loan.

9.0 ATTACHMENTS

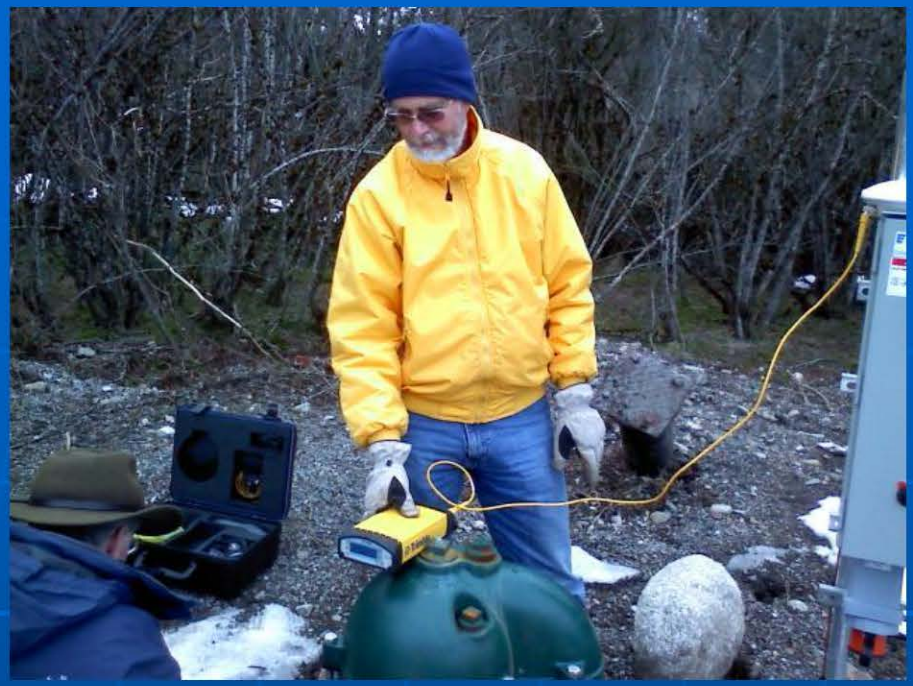
- Loan application with Project Description
- Engineering Drawings (submitted by applicant)
- Statement of Shareholder Approval

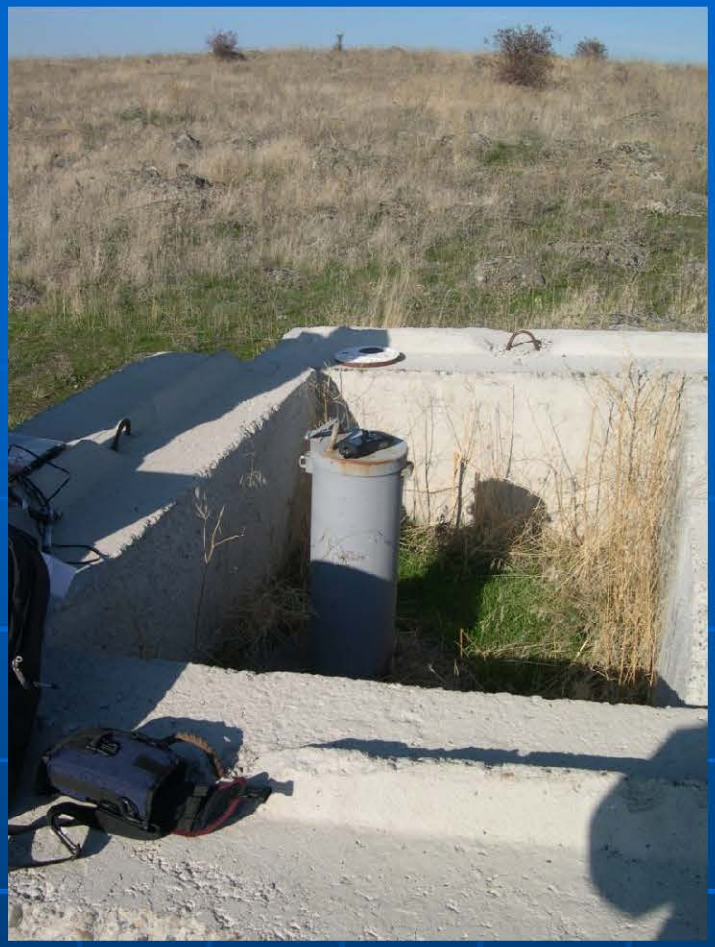

LITTLE MALAD RIVER
MAIN CANAL
LATERAL
N
DANIELS RESERVOIR
ELK HORN DAM
PROPOSED 20"
JOHN EVANS CANYON ROAD
PROPOSED 30"
1000 NORTH
PROPOSED 24"
ST. JOHNS IRRIGATING COMPANY
OVERALL SYSTEM MAP
FRANSON CIVIL ENGINEERS

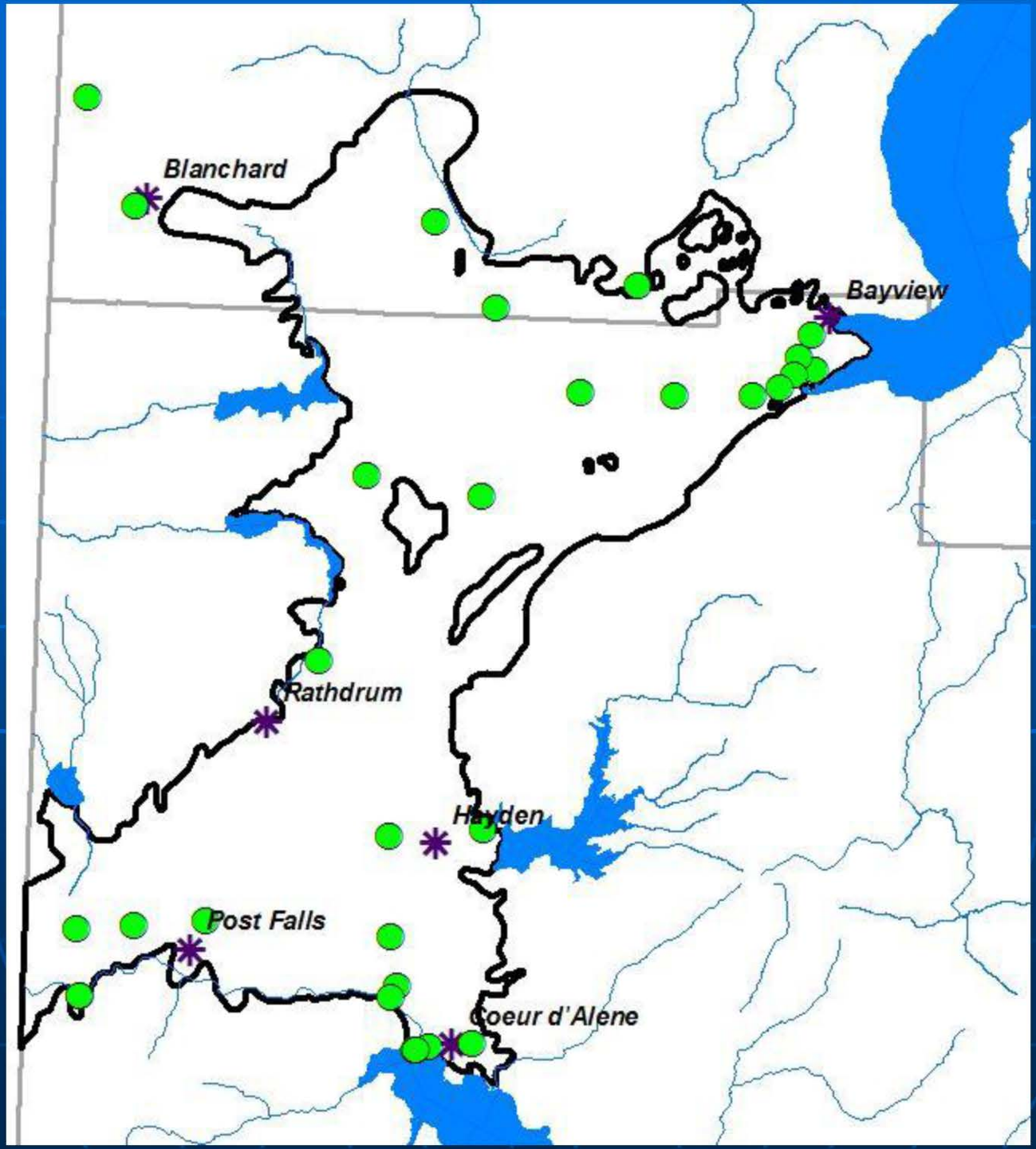
Monitoring Update for the Rathdrum Prairie

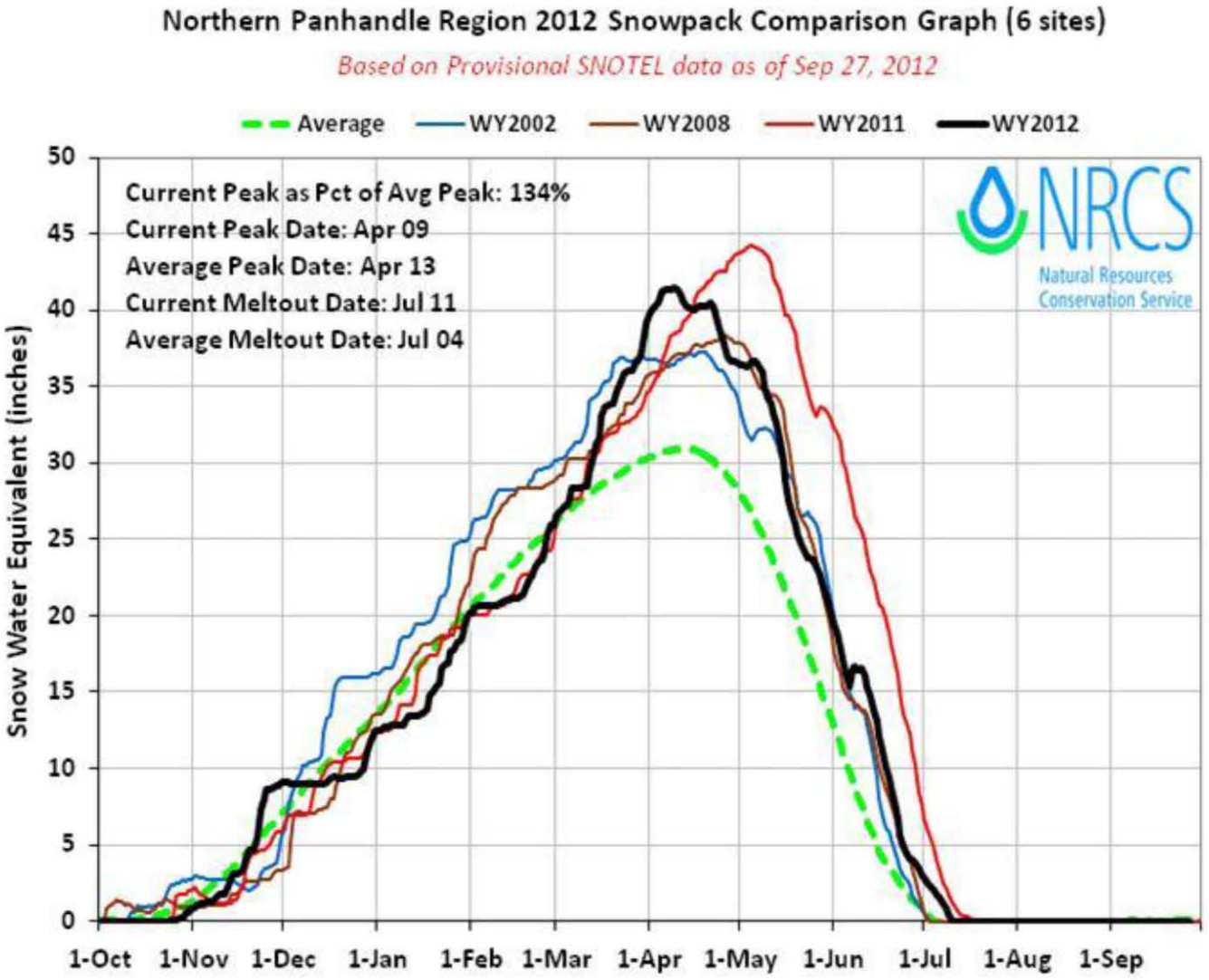
Kenneth W. Neely, Technical Hydrogeologist

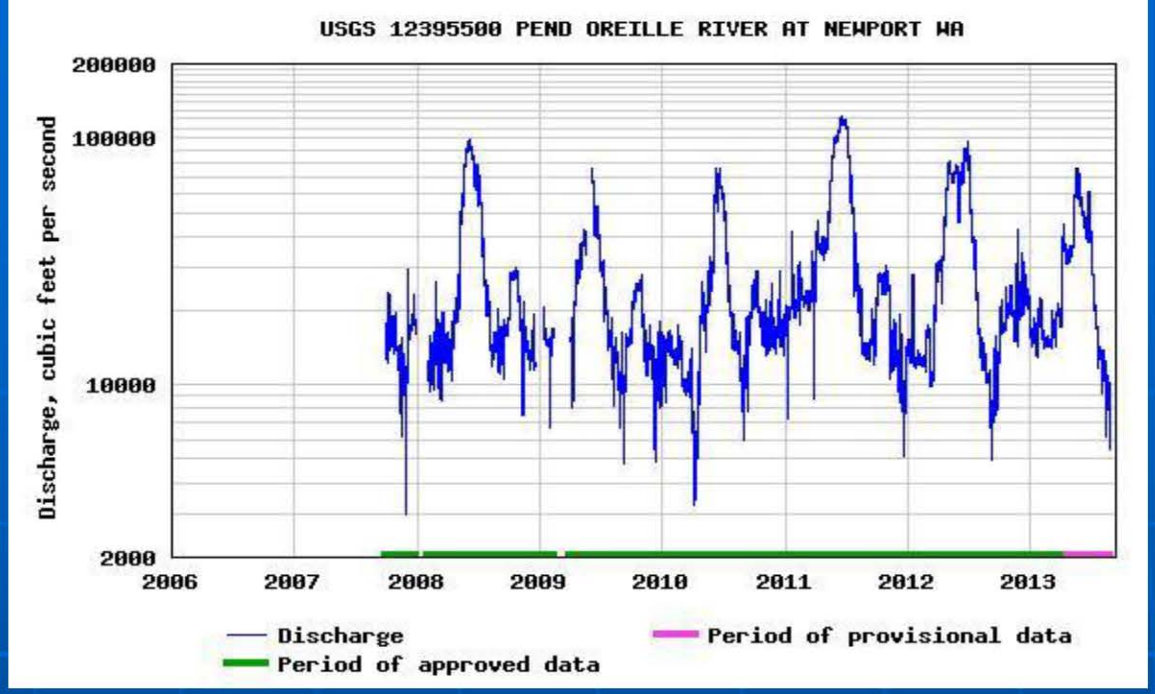
Feb 25, 2015

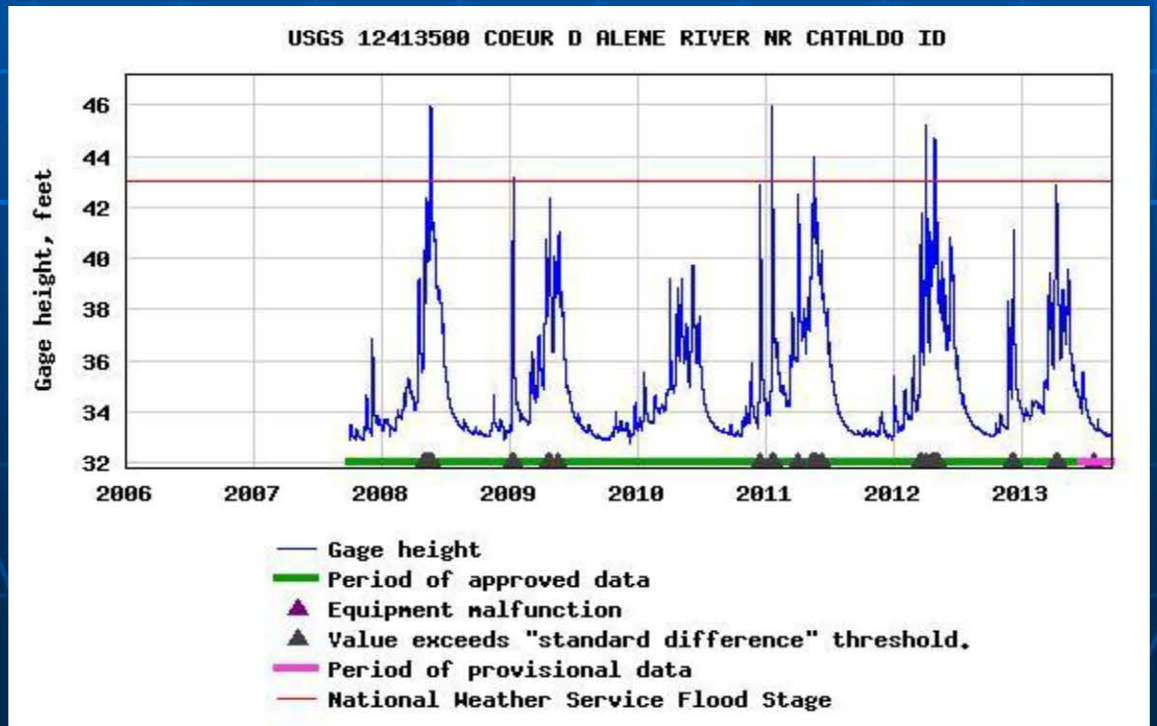


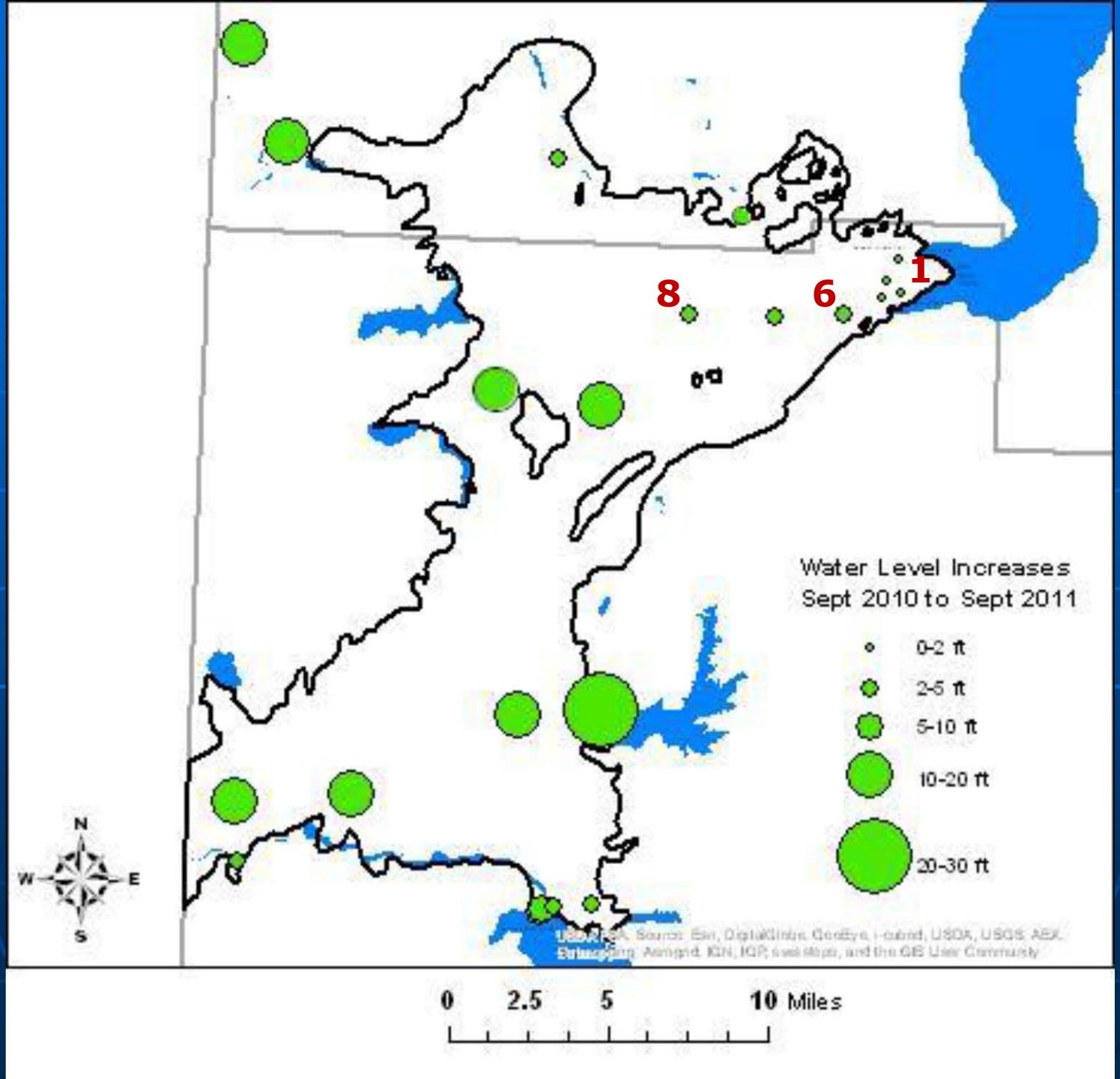


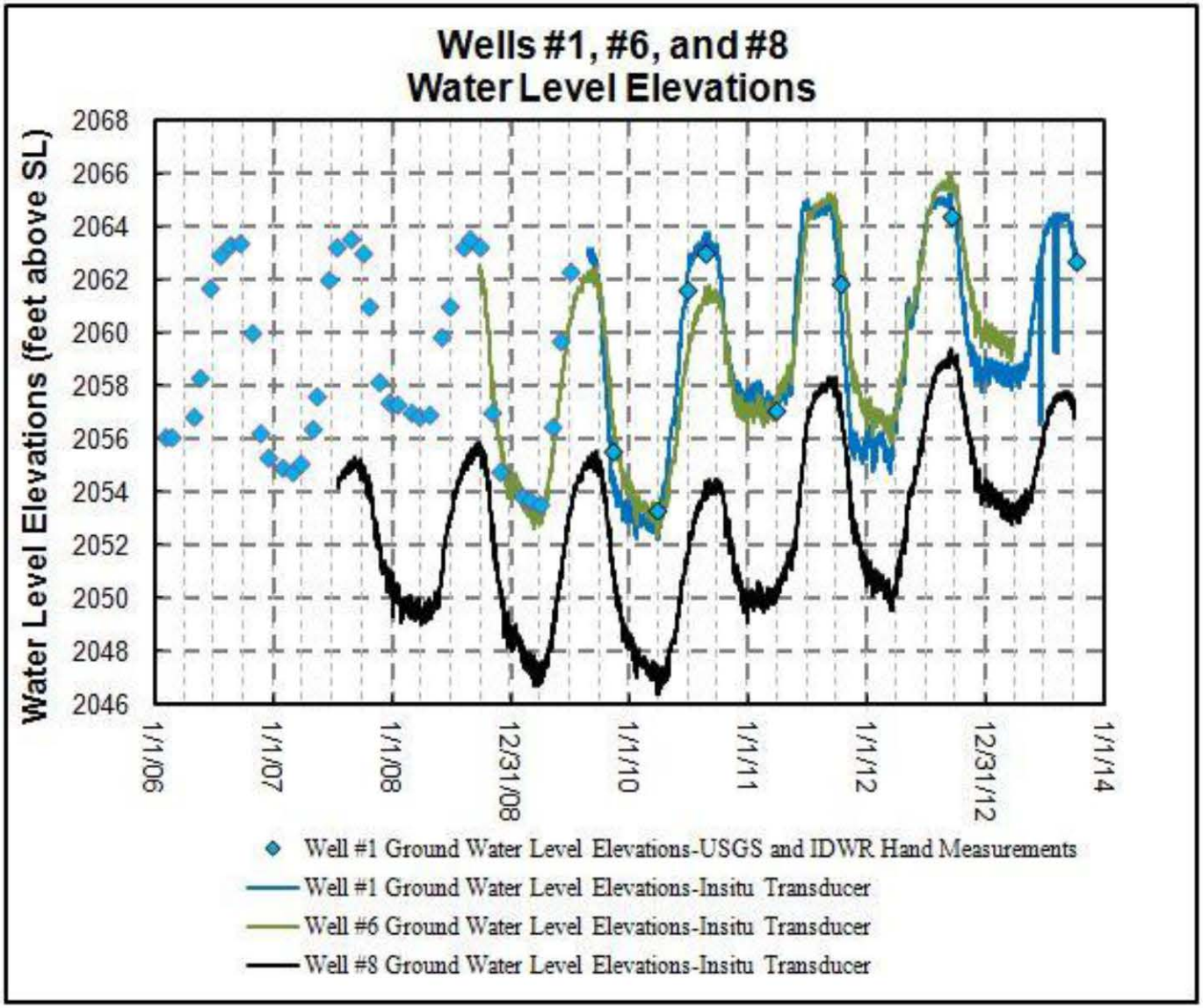

Blanchard
Bayview
Rathdrum
Hayden
Post Falls
Coeur d'Alene

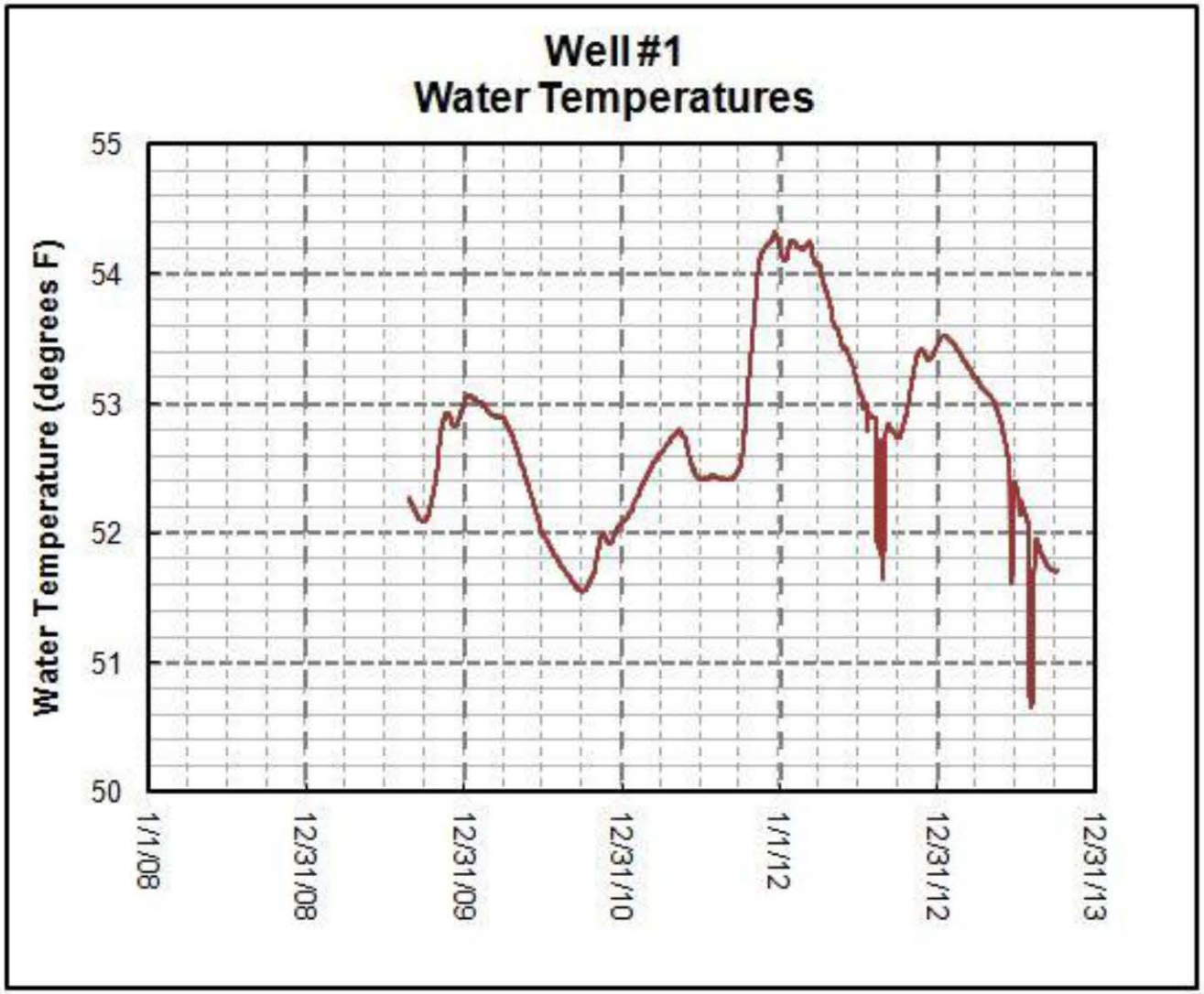

Northern Panhandle Region 2012 Snowpack Comparison Graph (6 sites)
Based on Provisional SNOTEL data as of Sep 27, 2012
Average
WY2002
WY2008
WY2011
WY2012
Current Peak as Pct of Avg Peak: 134%
Current Peak Date: Apr 09
Average Peak Date: Apr 13
Current Meltout Date: Jul 11
Average Meltout Date: Jul 04
NRCS
Natural Resources Conservation Service
Snow Water Equivalent (inches)
50
45
40
35
30
25
20
15
10
5
0
1-Oct
1-Nov
1-Dec
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep

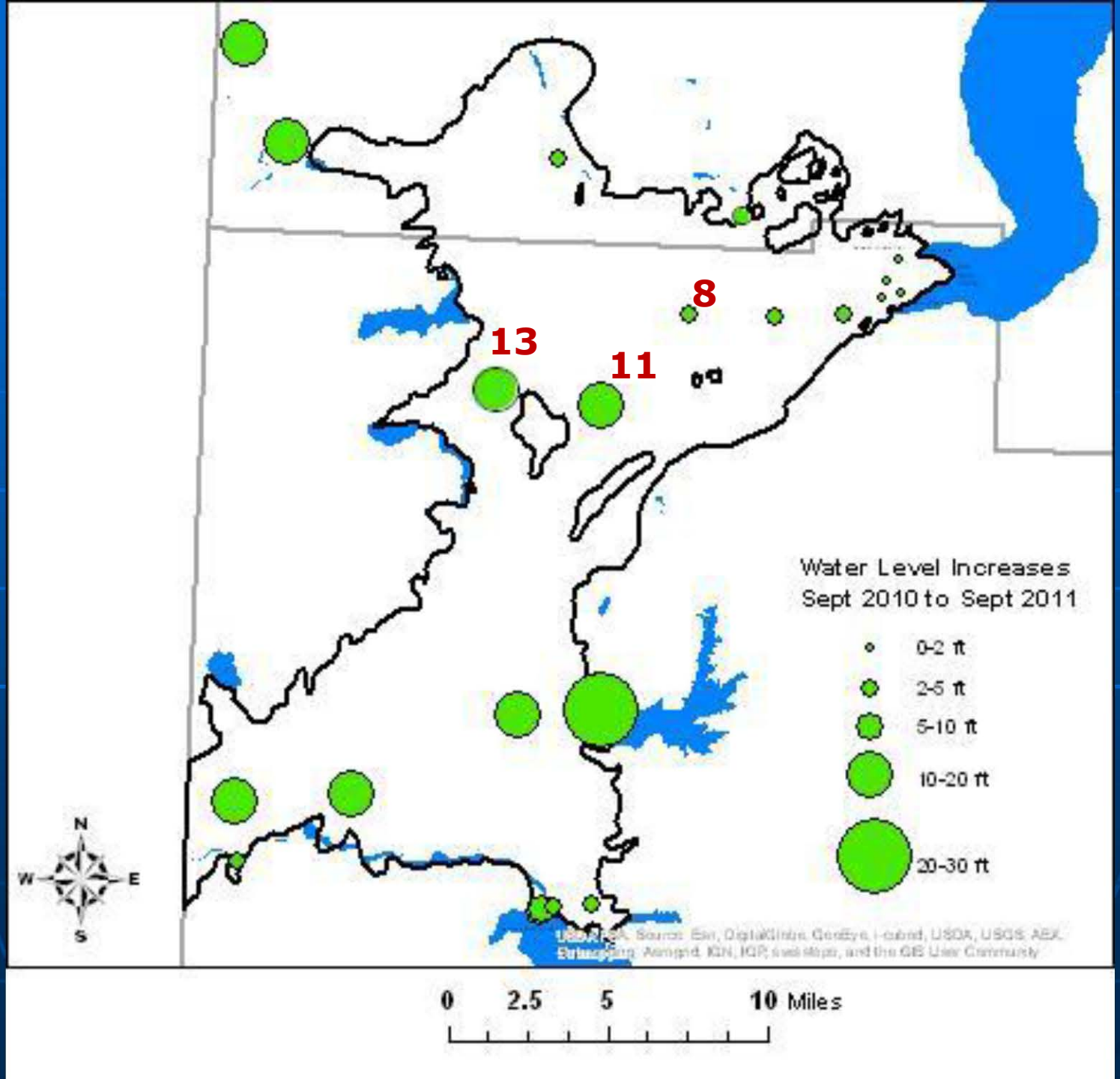

USGS 12395500 PEND OREILLE RIVER AT NEWPORT WA
Discharge, cubic feet per second
200000
100000
10000
2000
2006
2007
2008
2009
2010
2011
2012
2013
Discharge
Period of provisional data
Period of approved data

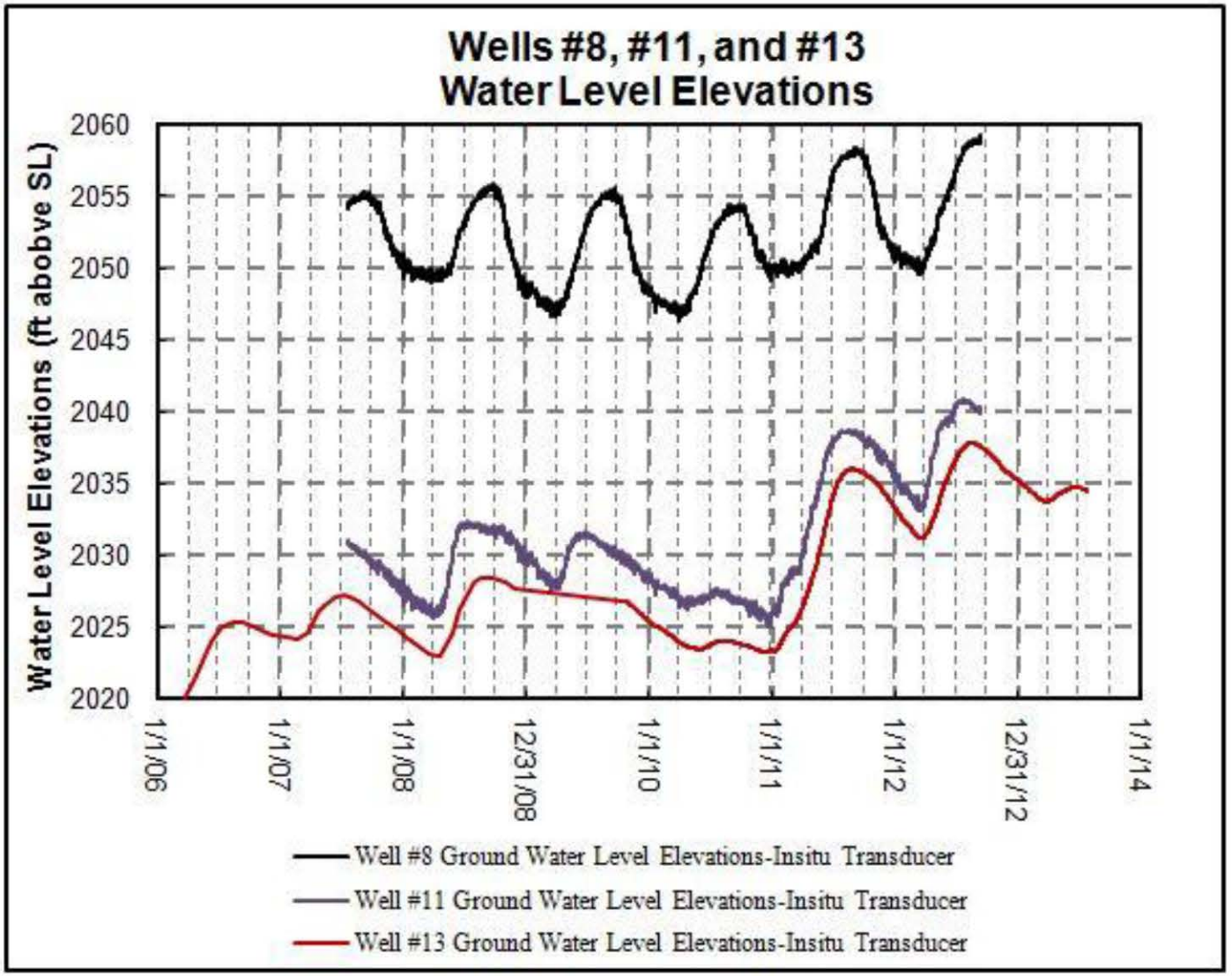

USGS 12413500 COEUR D ALENE RIVER NR CATALDO ID
Gage height, feet
46
44
42
40
38
36
34
32
2006
2007
2008
2009
2010
2011
2012
2013
Gage height
Period of approved data
Equipment malfunction
Value exceeds "standard difference" threshold.
Period of provisional data
National Weather Service Flood Stage

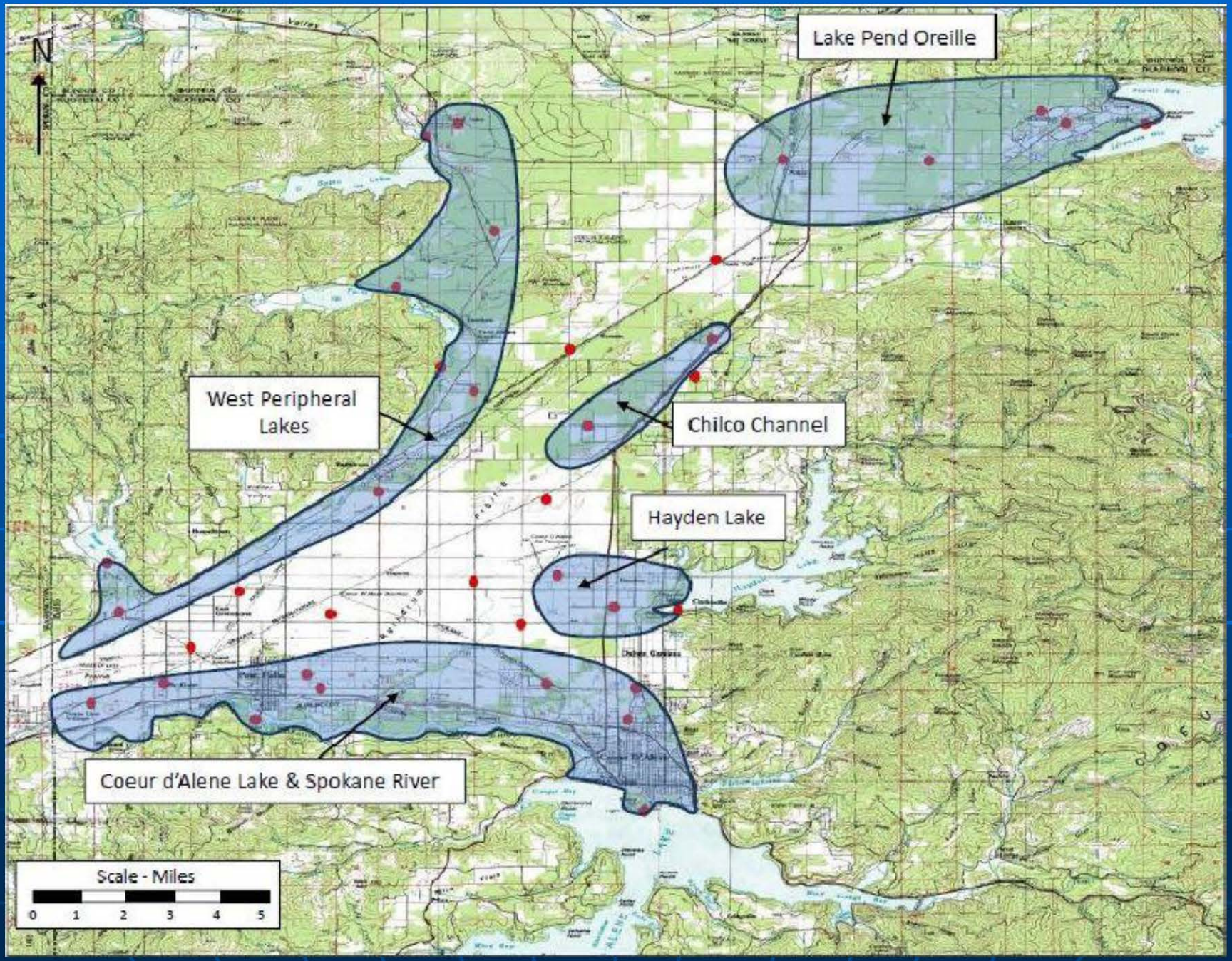

8
6
1
Water Level Increases
Sept 2010 to Sept 2011
0-2 ft
2-5 ft
5-10 ft
10-20 ft
20-30 ft
N
W
E
S
0
2.5
5
10 Miles

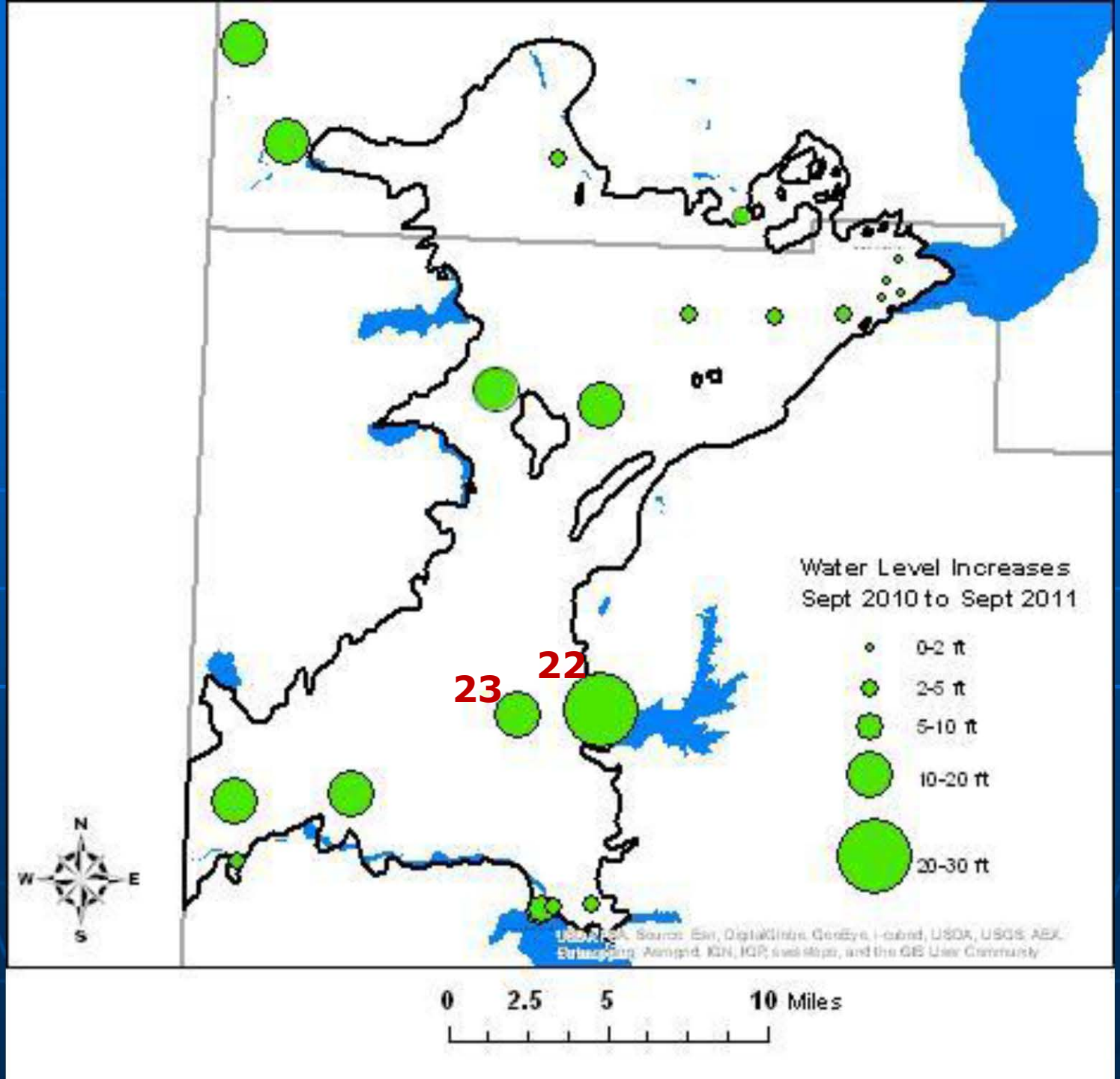

Wells #1, #6, and #8
Water Level Elevations
Water Level Elevations (feet above SL)
2068
2066
2064
2062
2060
2058
2056
2054
2052
2050
2048
2046
1/1/06
1/1/07
1/1/08
12/31/08
1/1/10
1/1/11
1/1/12
12/31/12
1/1/14
Well #1 Ground Water Level Elevations-USGS and IDWR Hand Measurements
Well #1 Ground Water Level Elevations-Insitu Transducer
Well #6 Ground Water Level Elevations-Insitu Transducer
Well #8 Ground Water Level Elevations-Insitu Transducer

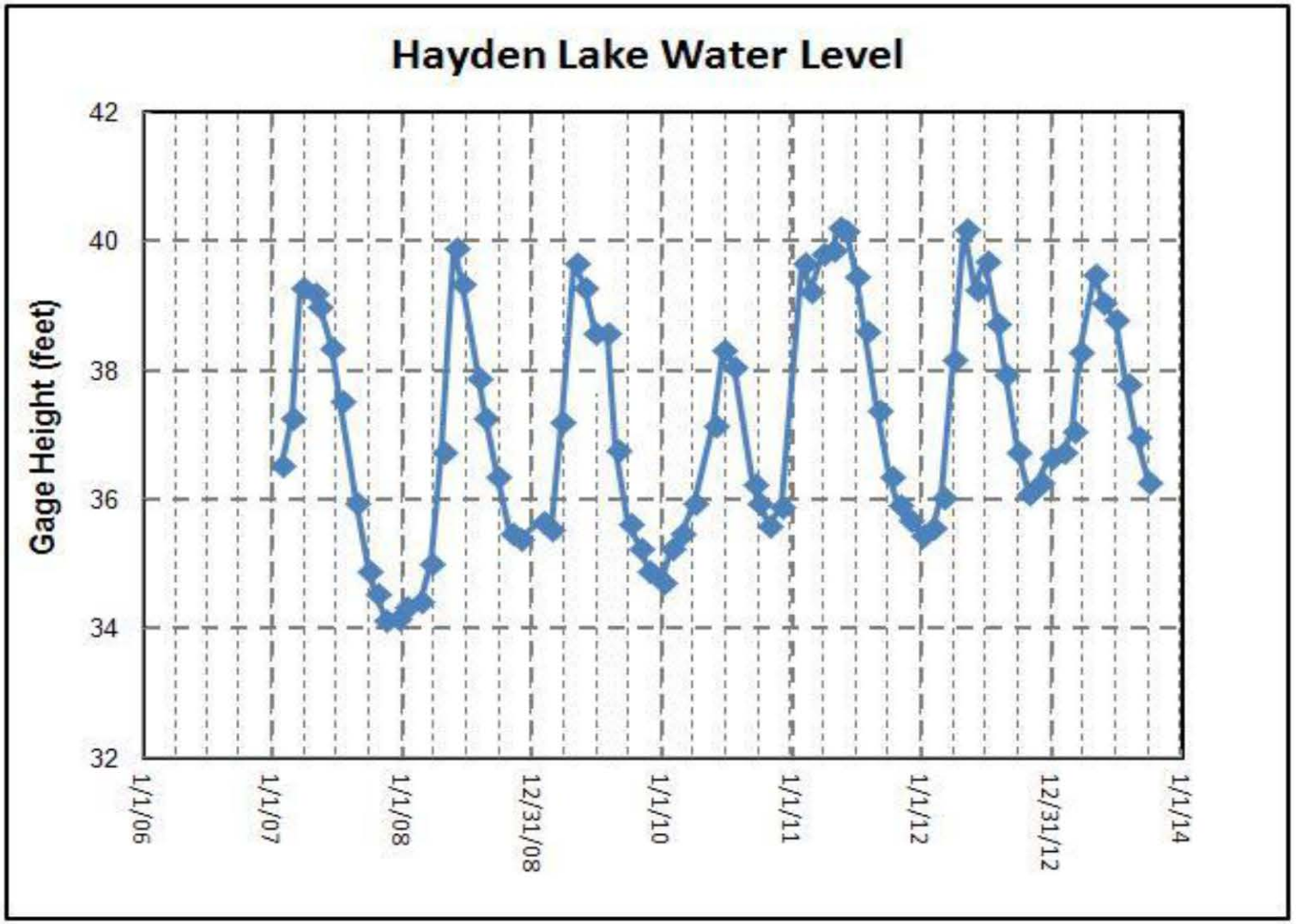

Well #1
Water Temperatures
Water Temperature (degrees F)
55
54
53
52
51
50
1/1/08
12/31/08
12/31/09
12/31/10
1/1/12
12/31/12
12/31/13

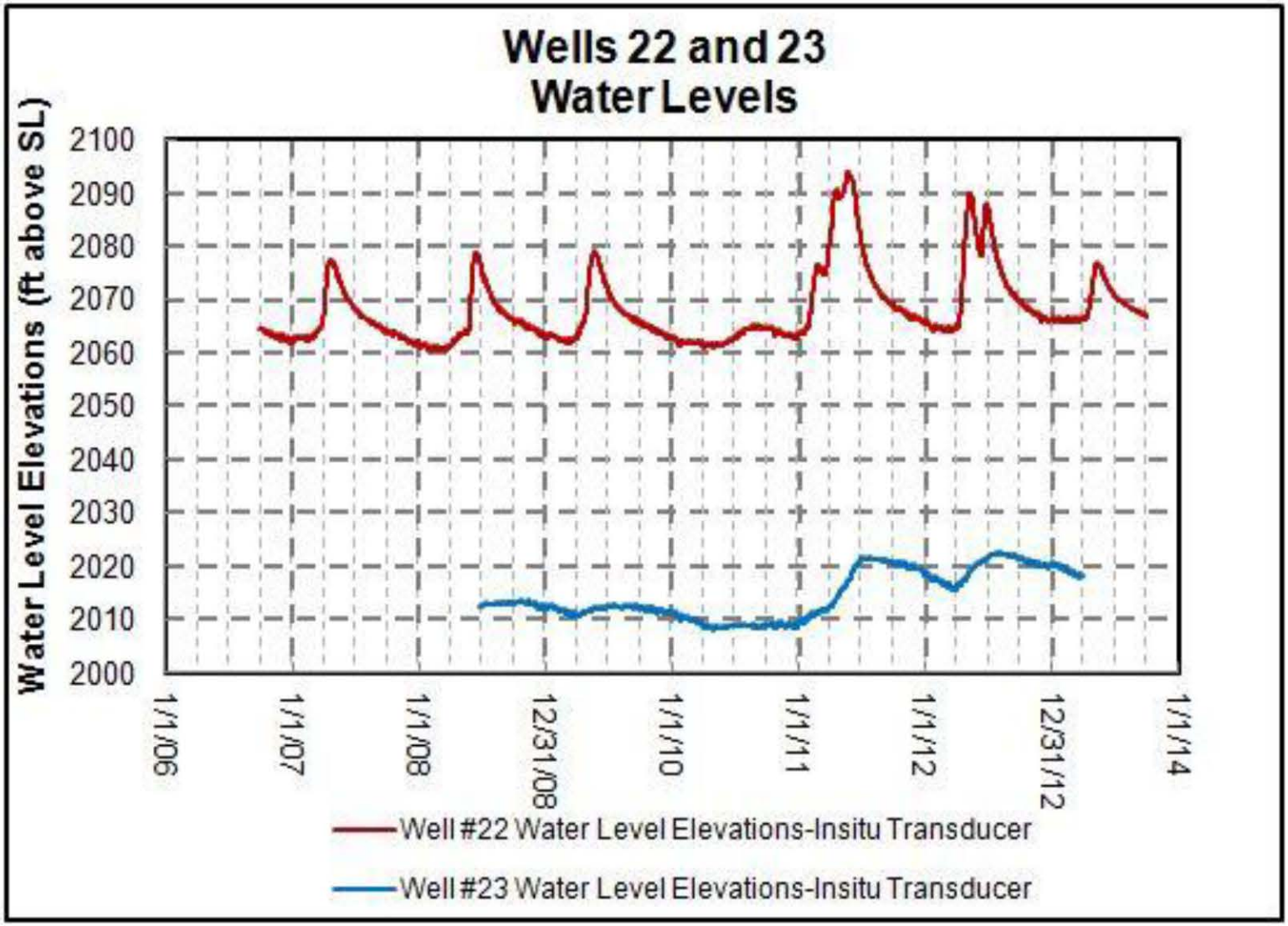

8
13
11
Water Level Increases
Sept 2010 to Sept 2011
0-2 ft
2-5 ft
5-10 ft
10-20 ft
20-30 ft
N
W
E
S
0
2.5
5
10 Miles

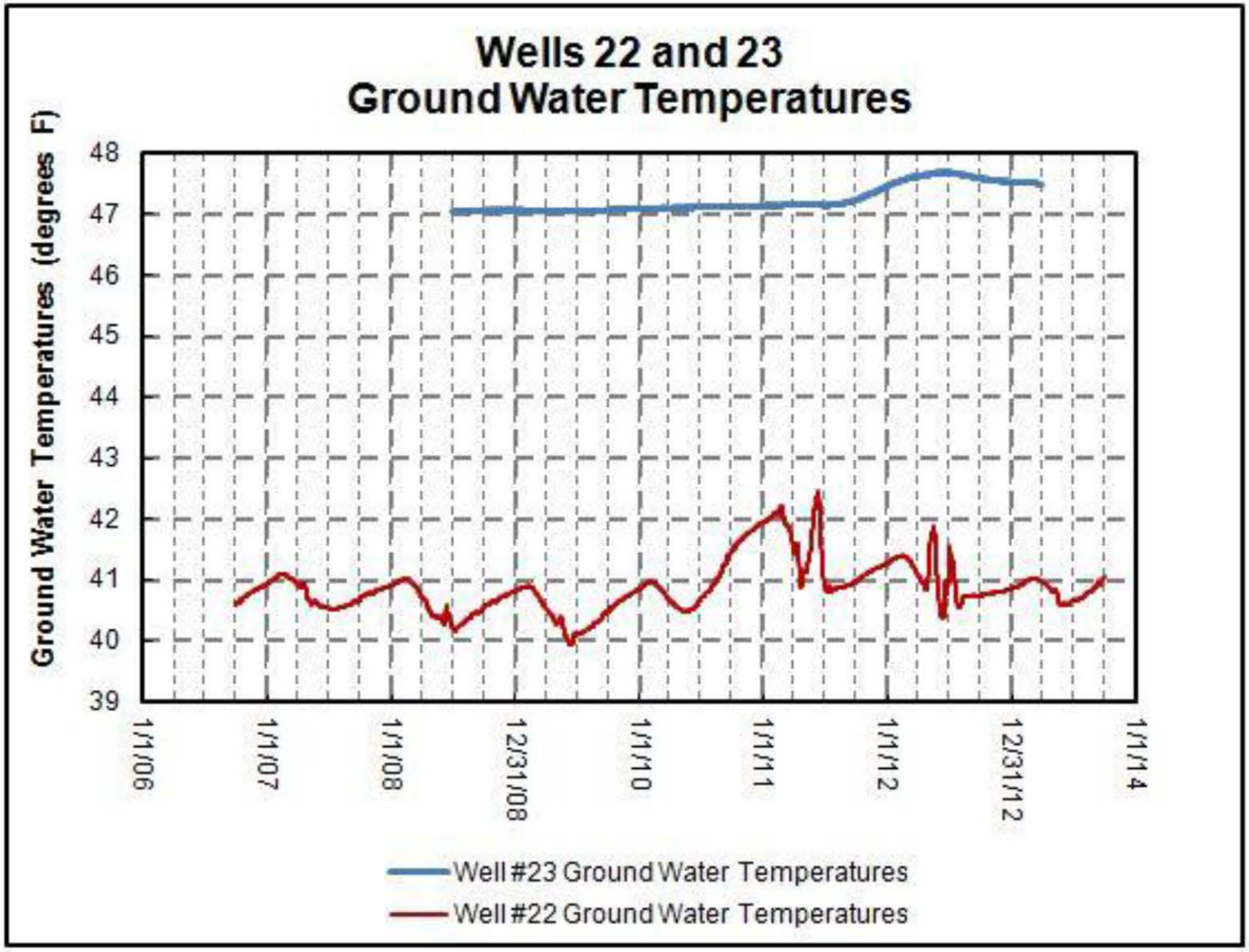

Wells #8, #11, and #13
Water Level Elevations
Water Level Elevations (ft abobve SL)
2060
2055
2050
2045
2040
2035
2030
2025
2020
1/1/06
1/1/07
1/1/08
12/31/08
1/1/10
1/1/11
1/1/12
12/31/12
1/1/14
Well #8 Ground Water Level Elevations-Insitu Transducer
Well #11 Ground Water Level Elevations-Insitu Transducer
Well #13 Ground Water Level Elevations-Insitu Transducer

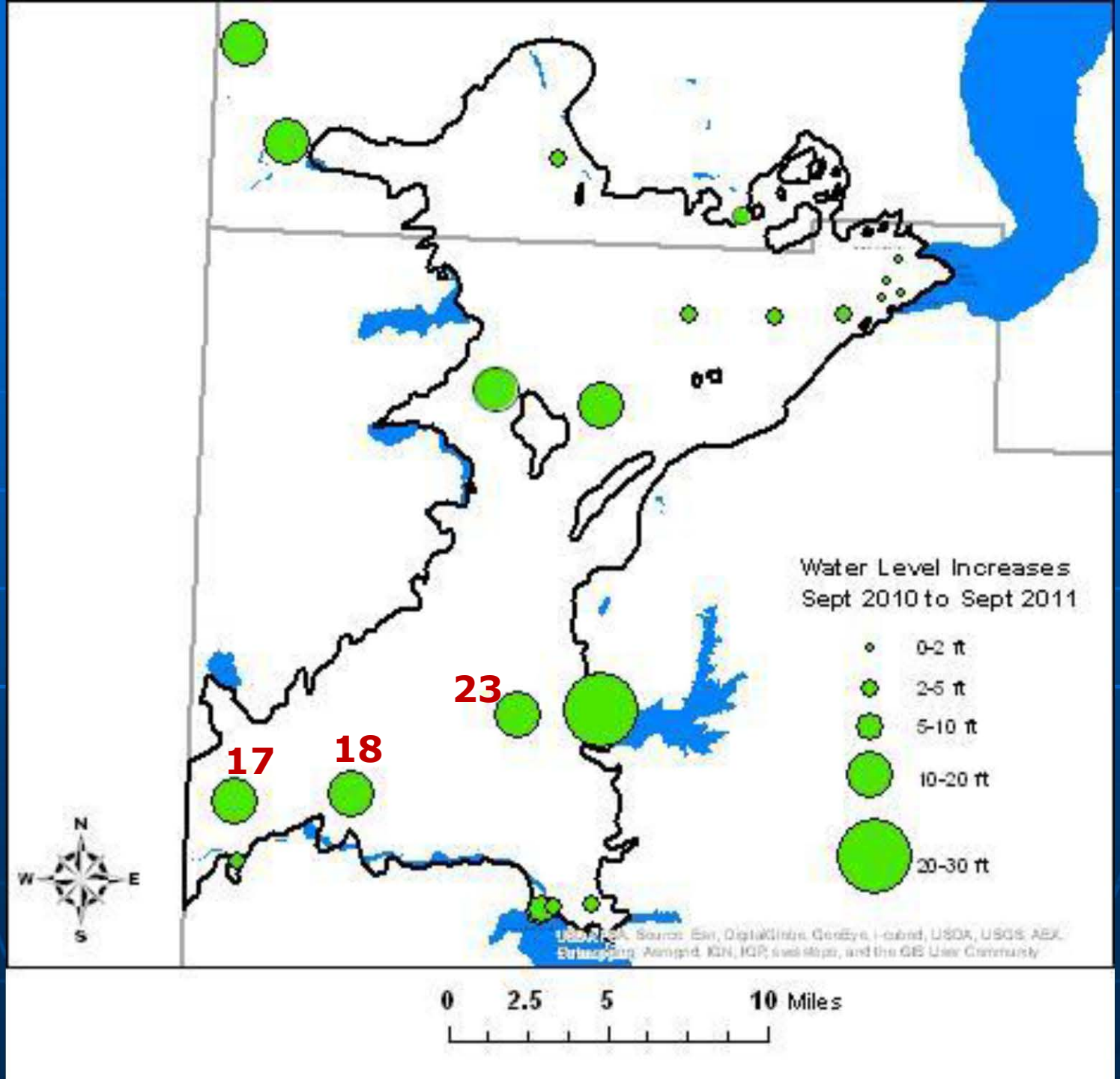

N
Lake Pend Oreille
West Peripheral Lakes
Chilco Channel
Hayden Lake
Coeur d'Alene Lake & Spokane River
Scale - Miles
0 1 2 3 4 5

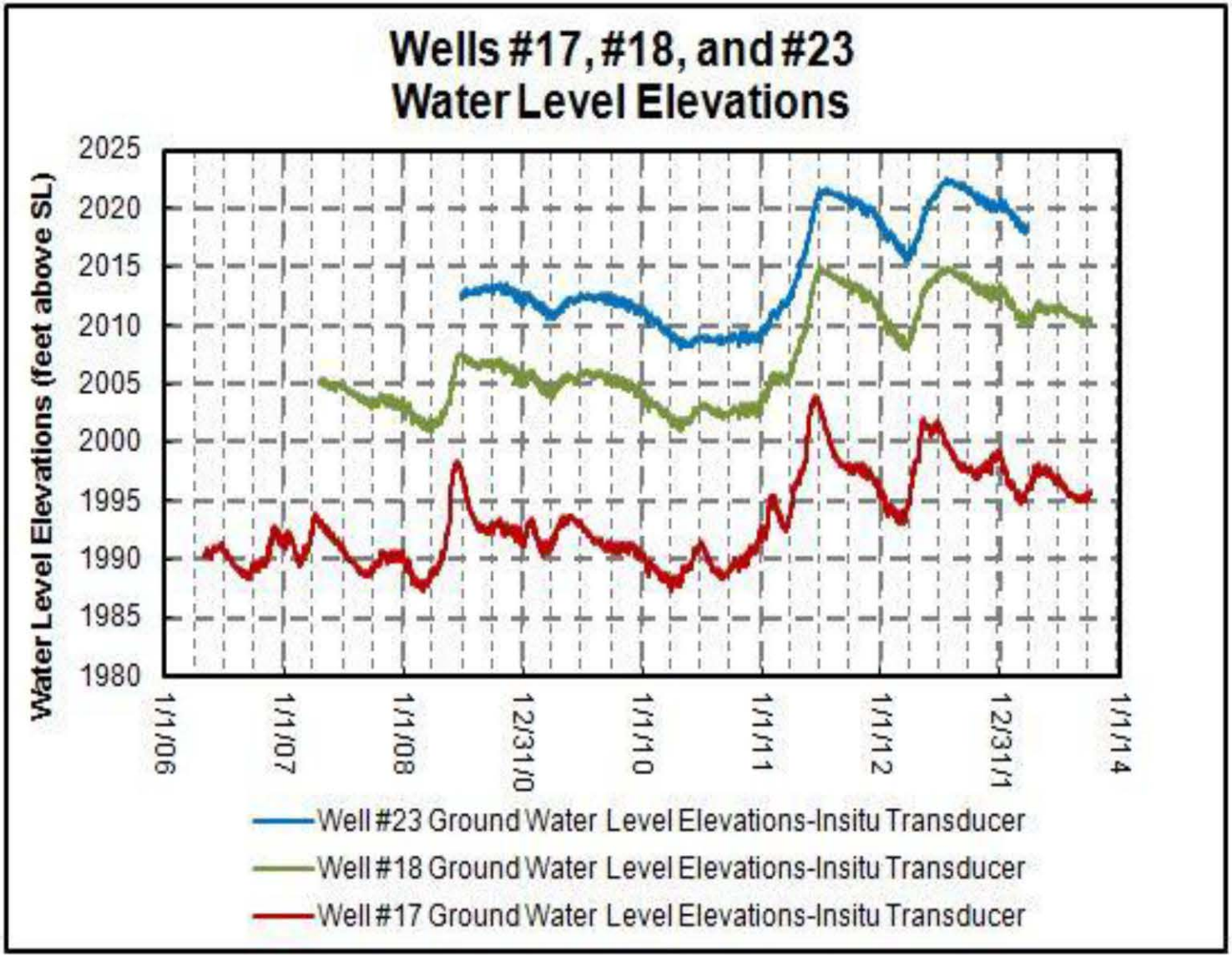

Water Level Increases
Sept 2010 to Sept 2011
0-2 ft
2-5 ft
5-10 ft
10-20 ft
20-30 ft
23
22
N
W
E
S
0
2.5
5
10 Miles

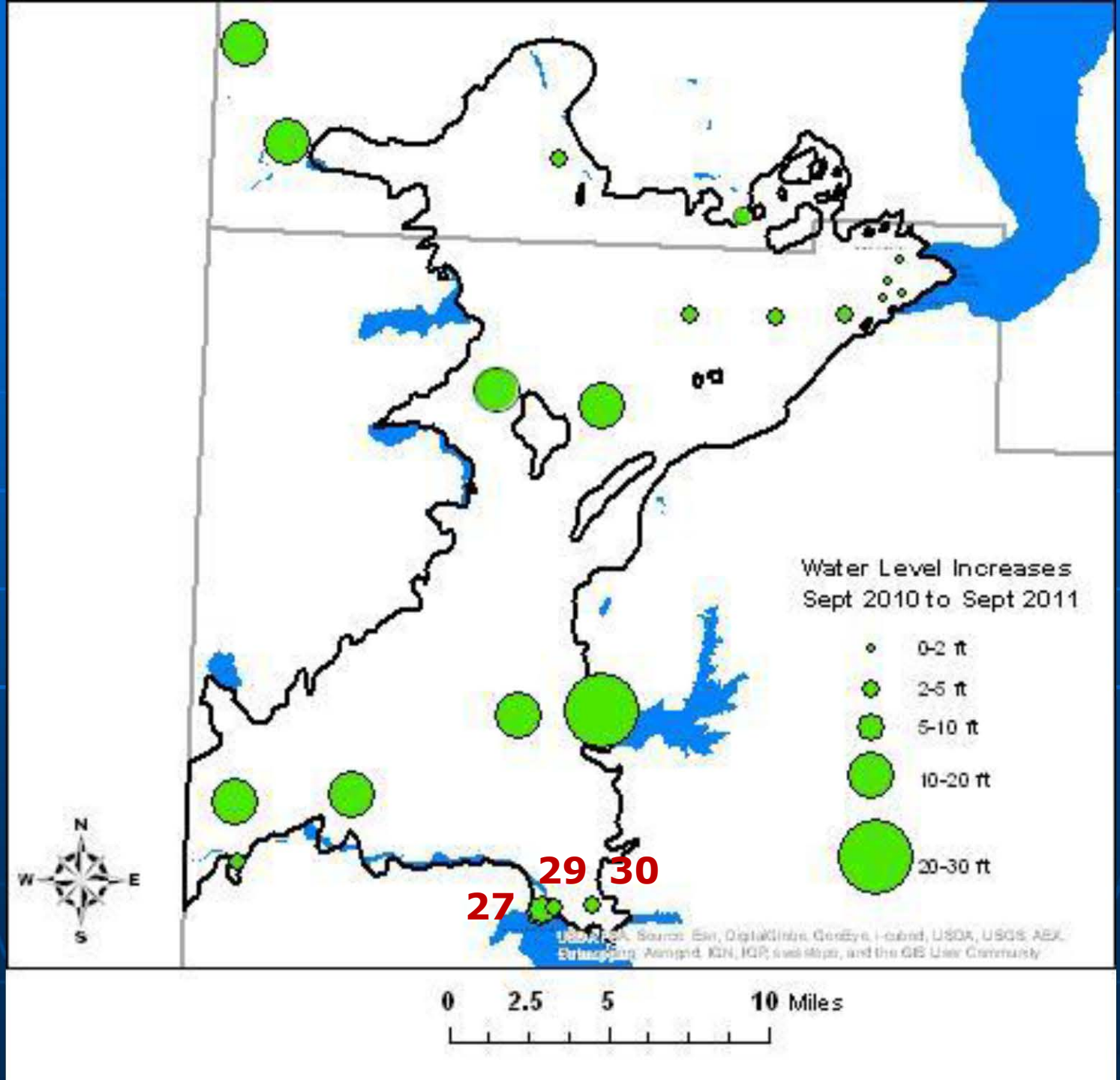

Hayden Lake Water Level
Gage Height (feet)
42
40
38
36
34
32
1/1/06
1/1/07
1/1/08
12/31/08
1/1/10
1/1/11
1/1/12
12/31/12
1/1/14

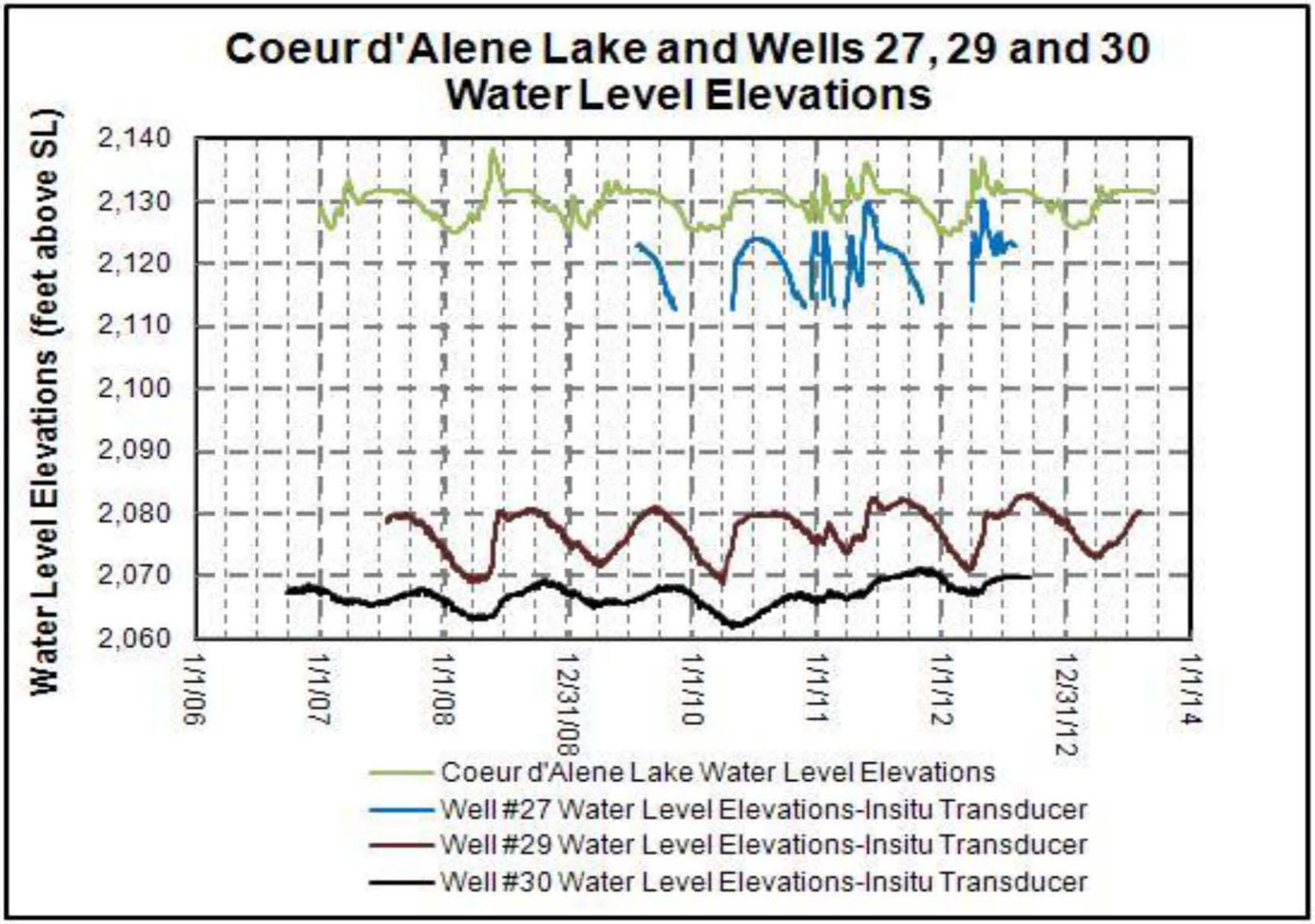

Wells 22 and 23
Water Levels
Water Level Elevations (ft above SL)
2100
2090
2080
2070
2060
2050
2040
2030
2020
2010
2000
1/1/06
1/1/07
1/1/08
12/31/08
1/1/10
1/1/11
1/1/12
12/31/12
1/1/14
Well #22 Water Level Elevations-Insitu Transducer
Well #23 Water Level Elevations-Insitu Transducer

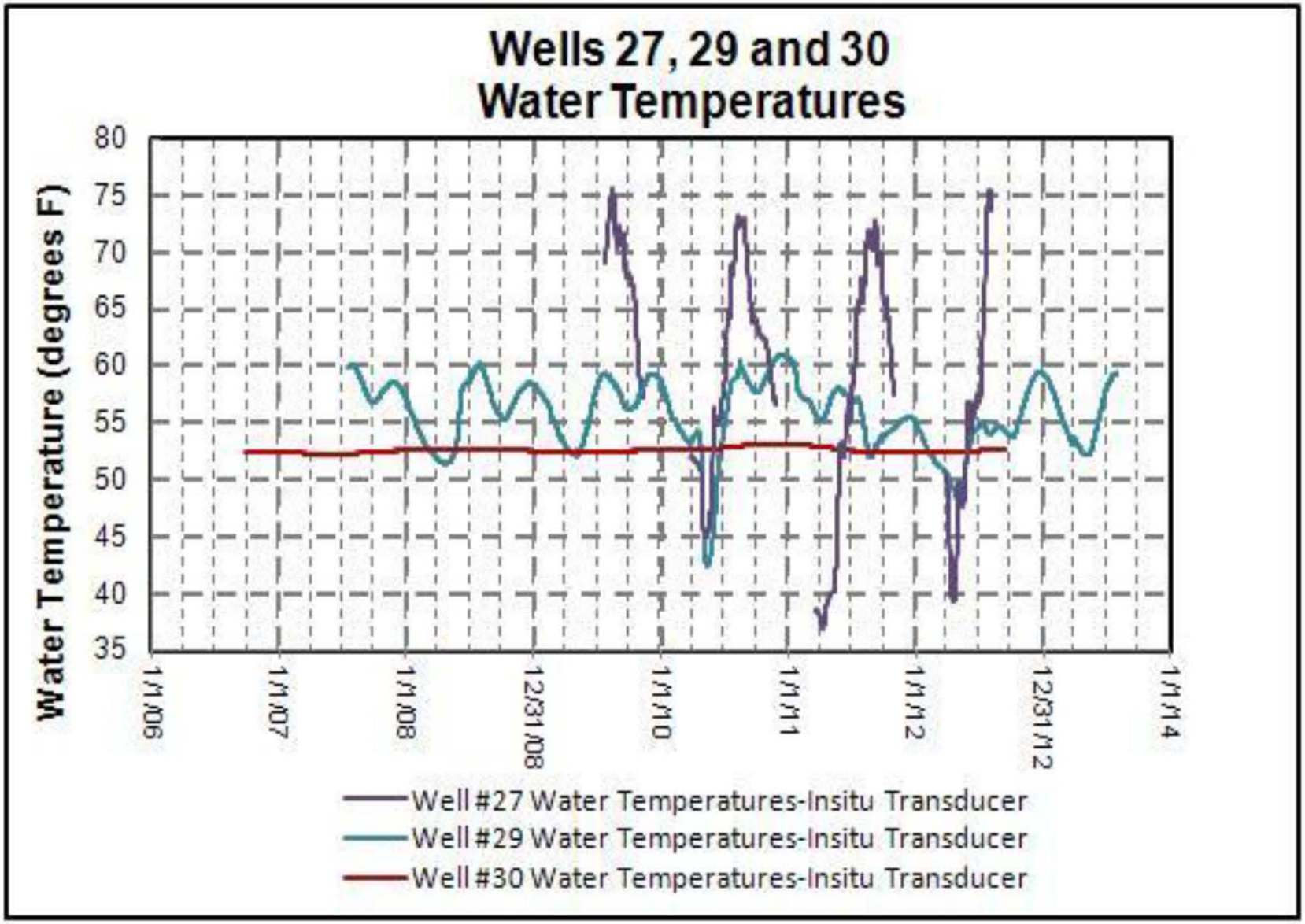

Wells 22 and 23
Ground Water Temperatures
Ground Water Temperatures (degrees F)
48
47
46
45
44
43
42
41
40
39
1/1/06
1/1/07
1/1/08
12/31/08
1/1/10
1/1/11
1/1/12
12/31/12
1/1/14
Well #23 Ground Water Temperatures
Well #22 Ground Water Temperatures


Water Level Increases
Sept 2010 to Sept 2011
0-2 ft
2-5 ft
5-10 ft
10-20 ft
20-30 ft
23
17
18
N
W
E
S
0
2.5
5
10 Miles


Wells #17, #18, and #23
Water Level Elevations
Water Level Elevations (feet above SL)
2025
2020
2015
2010
2005
2000
1995
1990
1985
1980
1/1/06
1/1/07
1/1/08
12/31/0
1/1/10
1/1/11
1/1/12
12/31/1
1/1/14
Well #23 Ground Water Level Elevations-Insitu Transducer
Well #18 Ground Water Level Elevations-Insitu Transducer
Well #17 Ground Water Level Elevations-Insitu Transducer

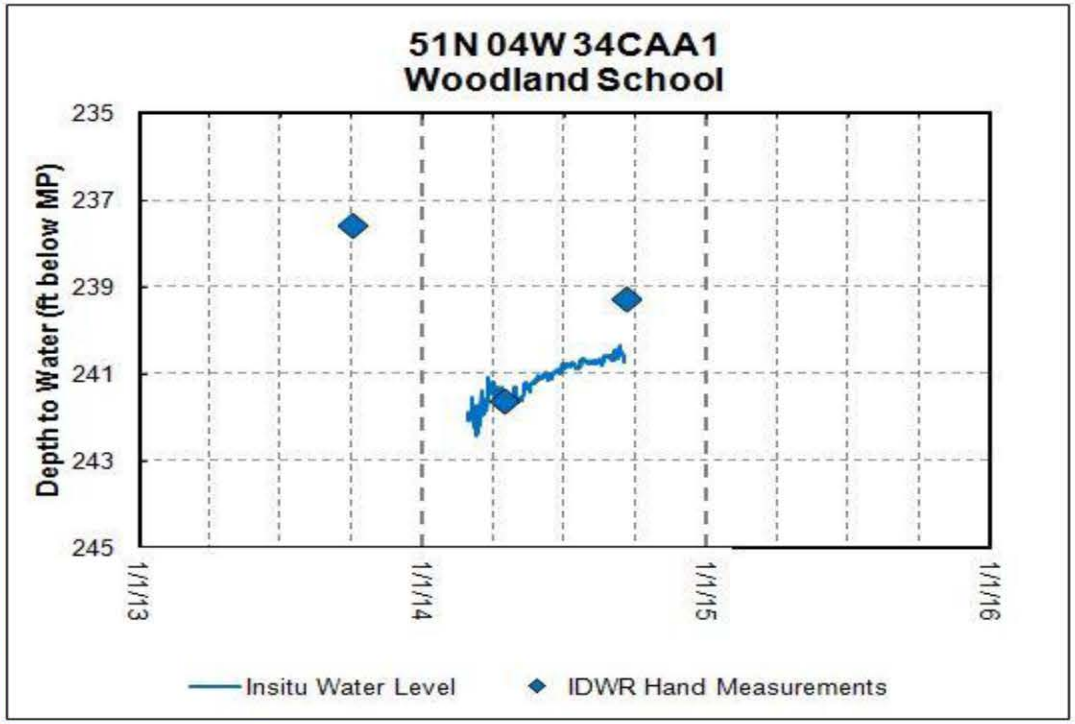

Water Level Increases
Sept 2010 to Sept 2011
0-2 ft
2-5 ft
5-10 ft
10-20 ft
20-30 ft
N
W
E
S
29
30
27
0
2.5
5
10 Miles

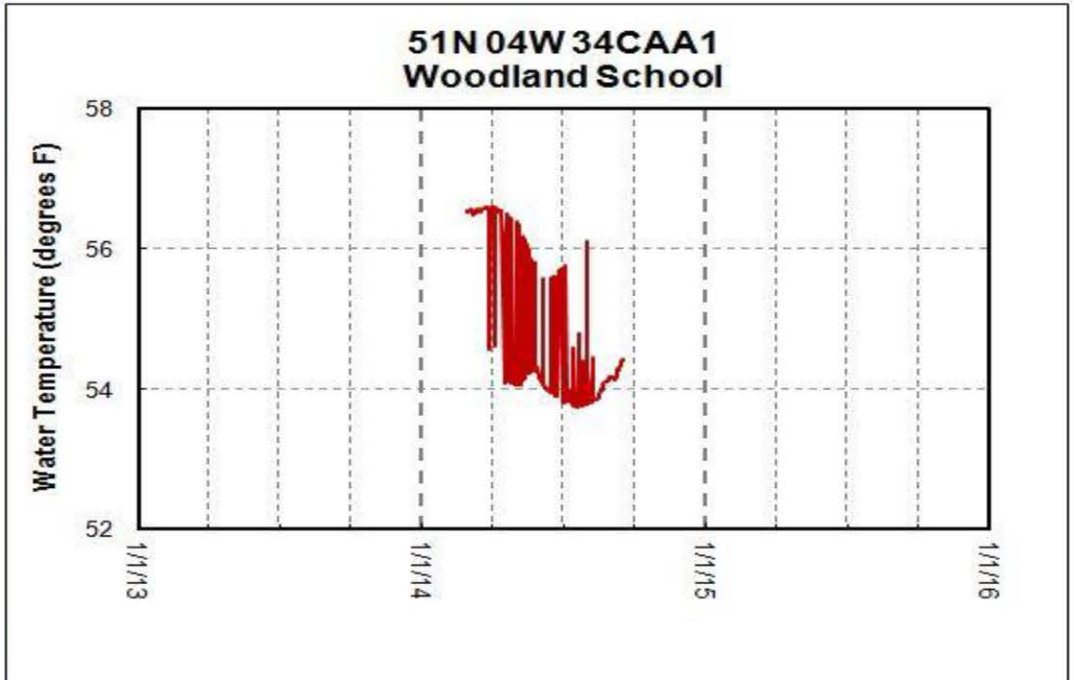

Coeur d'Alene Lake and Wells 27, 29 and 30
Water Level Elevations
Water Level Elevations (feet above SL)
2,140
2,130
2,120
2,110
2,100
2,090
2,080
2,070
2,060
1/1/06
1/1/07
1/1/08
12/31/08
1/1/10
1/1/11
1/1/12
12/31/12
1/1/14
Coeur d'Alene Lake Water Level Elevations
Well #27 Water Level Elevations-Insitu Transducer
Well #29 Water Level Elevations-Insitu Transducer
Well #30 Water Level Elevations-Insitu Transducer

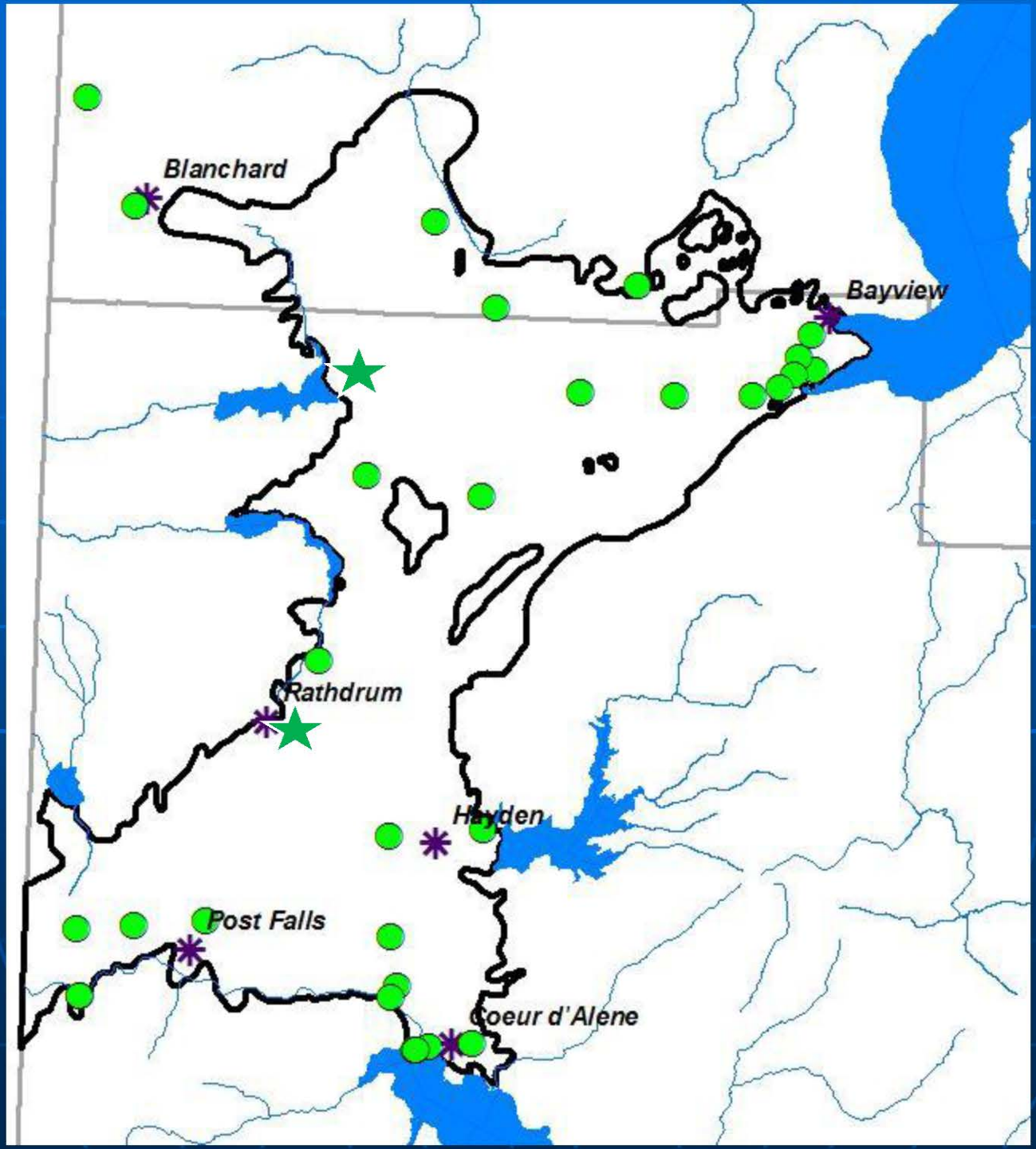

Wells 27, 29 and 30
Water Temperatures
Water Temperature (degrees F)
80
75
70
65
60
55
50
45
40
35
1/1/06
1/1/07
1/1/08
12/31/08
1/1/10
1/1/11
1/1/12
12/31/12
1/1/14
Well #27 Water Temperatures-Insitu Transducer
Well #29 Water Temperatures-Insitu Transducer
Well #30 Water Temperatures-Insitu Transducer

Monitoring Wells for Classroom Education and Data Collections


CSI
CAN'T STAND IDIOTS


51N 04W 34CAA1
Woodland School
Depth to Water (ft below MP)
235
237
239
241
243
245
1/1/13
1/1/14
1/1/15
1/1/16
Insitu Water Level
IDWR Hand Measurements


51N 04W 34CAA1
Woodland School
Water Temperature (degrees F)
58
56
54
52
1/1/13
1/1/14
1/1/15
1/1/16


Blanchard
Bayview
Rathdrum
Hayden
Post Falls
Coeur d'Alene

AGENDA

IDAHO WATER RESOURCE BOARD
MEETING NO. 6-15

July 14, 2015 at 8:00am

Red Lion Templin's
Chief Seltice/Margaret Post Conference Room
414 East First Avenue, Post Falls ID 83854

1. Roll Call
2. Executive Session – Board will meet pursuant to Idaho Code § 67-2345 (1) subsection (f), for the purpose of communicating with legal counsel regarding legal ramifications of and legal options for pending litigation, or controversies not yet being litigated but imminently likely to be litigated. Executive Session is closed to the public. Topics: North Idaho Adjudication, Shoshone-Bannock Water Bank

Following adjournment of Executive Session -- meeting reopens to the public

3. Agenda and Approval of Minutes 5-15
4. Public Comment
5. Financial Status Update
6. Swan Falls Minimum Flows
7. Last Chance Canal Company Loan Request
8. St. John's Irrigating Company Loan Request
9. Recharge
10. Storage Studies Update
11. Surface Water Coalition Settlement Update
12. Palouse Ground Water Basin Water Supply Alternatives Project
    - *Paul Kimmell, PBAC*
13. IDWR Director's Report
14. Other Non-Action Items for Discussion
15. Next Meetings and Adjourn

Americans with Disabilities

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

IDAHO WATER RESOURCE BOARD

MEETING MINUTES 5-15

Keefer's Convention Center (Shilo Inn)
Twin Falls Room
780 Lindsay Blvd, Idaho Falls, Idaho 83402

May 21, 2015
Work Session

Chairman Roger Chase called the meeting to order at approximately 7:30 am. All the Board members were present.

The Board resolved into Executive Session by unanimous consent pursuant to Idaho Code Section 67-2345 (1) subsections (f), for the purpose of communicating with legal counsel regarding legal ramifications of and legal options for pending litigation, or controversies not yet being litigated but imminently likely to be litigated. Topics discussed were the North Idaho Adjudication and Conjunctive Management Litigation. Director Spackman excused himself during the discussion of Conjunctive Management Litigation.

No action was taken by the Board during the Executive Session. The Board resolved out of Executive Session and into Regular Session at approximately 8:30 am.

During the Work Session the following items were discussed:

- Letter from Governor Otter regarding Sustainability by Brian Patton
- Open Meeting Law by Clive Strong
- Surface Water Coalition Settlement by Clive Strong
- Swan Falls Minimum Flows Update by Brian Patton
- Financial Status Update by Brian Patton
- Proposed FY16 Budget- Secondary Aquifer Planning, Management, and Implementation Fund by Brian Patton
- Recharge Update by Wesley Hipke
- Influence of Groundwater Management on Fish and Wildlife by Rob Van Kirk, Henrys Fork Foundation
- Consolidated Irrigation Company Loan Request by Cynthia Bridge Clark
- Mountain Home Air Force Base Pipeline Project by Cynthia Bridge Clark

Mr. Bert Stevenson moved to prepare a response letter signed by Mr. Raybould and Chairman Chase to the Governor regarding sustainability. Mr. Alberdi seconded the motion. Voice Vote. All were in favor.

May 22, 2015
IWRB Meeting

At 8:00 am the Chairman called the meeting to order. All Board members were present.

Agenda Item No. 1, Roll Call

Board Members Present

Roger Chase, Chairman	Jeff Raybould, Vice-Chairman
Vince Alberdi, Secretary	Pete Van Der Meulen
Chuck Cuddy	Bert Stevenson
Albert Barker	Dale Van Stone

Staff Members Present

Gary Spackman, IDWR Director	Brian Patton, Bureau Chief
Neeley Miller, Senior Planner	Cynthia Bridge Clark, Section Manager
Mandi Pearson, Admin. Assistant	Wesley Hipke, Recharge Project Manager
Clive Strong, Deputy Attorney General	

Guests Present

Jeff Seamons, Oneida Narrows Forever	Tom Lucia, Bear River
Glade Moser, Bear River	Rodney Pearce, Bear River
Jerry Rigby, Rigby Andrus & Rigby	Kathy Rinaldi, Greater Yellowstone Coalition
Teresa Molitor, Great Feeder	Roger Warner, Rocky Mountain Environmental
Lyle Swank, Water District 1	Stephen Goodson, Office of the Governor
Mike Webster, Office of the Governor	Lyla Dettmer, Franklin SWID
Brian Jensen, Consolidated Irrigation Co	Lyle Porter, Consolidated Irrigation Co
Walt Poole, Idaho Fish and Game	Amy Verbeten, Friends of the Teton River

Agenda Item No. 2, Agenda and Approval of Minutes

There were no changes to the agenda. Mr. Stevenson made a motion that the minutes for meetings 3-15 and 4-15 be approved as printed. Mr. Barker seconded the motion. Voice Vote. All were in favor. Motion passed.

Agenda Item No. 3, IWUA Memorial Resolution

Mr. Brian Patton discussed a Memorial Resolution adopted by the Idaho Water Users Association in honor of Frank Davis "Dave" Rydalch. Mr. Rydalch was a former Chairman of the Idaho Water Resource Board.

Agenda Item No. 4, Public Comment

Chairman Chase opened up the meeting for Public Comment. Mr. Jeff Seamons addressed the Board regarding Oneida Narrows. He discussed the unique and diverse values of the Oneida Narrows Canyon and requested that the Board consider the Bear River Narrows for a Protected River designation. There was discussion among the parties regarding a formal proposal and the requirements for protected river designation. Mr. Tom Lucia, Ms. Kathy Rinaldi, and Mr. Rodney Pearce also addressed the Board regarding this topic.

Mr. Jerry Rigby addressed the Board regarding the Water Supply Bank and a recent decision by the courts regarding "recovery" wells. He requested that the Board look at possibilities for the Water Supply Bank staff to expedite applications. There was discussion among the parties regarding the request and alternative solutions. Mr. Roger Warner also addressed the Board regarding this topic.

Mr. Lyle Swank addressed the Board regarding recharge-related issues. He described the success the Board has had this year and described recharge opportunities above American Falls. There was discussion among the parties regarding additional recharge in the Upper Valley.

Agenda Item No. 5, 2015 Legislative Final Update

Mr. Patton provided a final update to the Board regarding water legislation of interest. There was discussion among the parties regarding Senate Bill 1100 regarding cloud seeding.

Agenda Item No. 6, Water District 01 Rental Pool

Mr. Patton discussed the proposed procedures adopted by the Water District 1 in March 2015. These procedures were sent to the Board for consideration and approval. Due to ongoing discussions with the Shoshone Bannock Tribes and the United States which may involve certain provisions of the procedures, the Committee of Nine requested the Board delay any action on the procedures. There was discussion among the parties regarding reinstating 2014 procedures.

Agenda Item No. 7, Proposed FY16 Budget- Secondary Aquifer Planning, Management, and Implementation Fund

Mr. Patton discussed the proposed annual budget for the use of the available funds in the Secondary Aquifer Planning, Management, and Implementation Fund for ESPA recharge and other statewide aquifer stabilization efforts.

Mr. Alberdi moved to adopt the resolution approving the budget. Mr. Barker seconded the motion. There was further discussion among the parties regarding details of the budget and resolution.

Roll Call Vote: Mr. Cuddy: Aye; Mr. Alberdi: Aye; Mr. Stevenson: Aye; Mr. Raybould: Absent; Mr. Van Der Meulen: Aye; Mr. Van Stone: Aye; Mr. Barker: Aye; Chairman Chase: Aye. Motion passed.

Agenda Item No. 8, Consolidated Irrigation Company Loan Request

Ms. Clark discussed a $500,000 loan increase request by Consolidated Irrigation Company (CIC). The loan is intended to supplement an existing loan approved by the Board in 2012. The CIC was formed through the consolidation of a number of irrigation and canal companies in the Preston, Idaho area. CIC delivers water to 456 share holders irrigating 17,000 acres. The project would convert 6 miles of winding canal to 3.65 miles of gravity pressurized HDPE pipeline with a new small hydro-facility at the end. A number of factors have impacted project cost and construction schedule including delays in receipt of equipment shipped internationally and FERC application processing delays. This project will reduce seepage from the unlined canal, and water savings from the project will be used to shore up irrigation deliveries under drought conditions or sold to other irrigation districts or municipalities in average water years.

Mr. Lyle Porter of Consolidated Irrigation Company expressed his thanks to the Board and discussed the reasons for the delay of project completion. There was discussion among the parties regarding the capacity of the hydro-facility, water savings, the power sales agreement, project costs, and the security interest. Mr. Barker proposed the resolution be amended to include the phrase "including the hydroelectric plant" to the security clause.

Mr. Van Stone moved to approve the resolution to increase the loan with the proposed amendment. Mr. Barker seconded the motion.

Roll Call Vote: Mr. Cuddy: Aye; Mr. Alberdi: Aye; Mr. Stevenson: Aye; Mr. Raybould: Aye; Mr. Van Der Meulen: Aye; Mr. Van Stone: Aye; Mr. Barker: Aye; Chairman Chase: Aye. Motion passed.

Agenda Item No. 9, Mountain Home Air Force Base Pipeline Project

Ms. Clark provided a status report on the on the Mountain Home Air Force Base (MHAFB) Water Supply Project. The project involves efforts by the State of Idaho to assist the Military in providing an alternative and sustainable water supply to the MHAFB. She discussed the project background and status. There was discussion among the parties regarding preliminary cost estimates. Ms. Clark discussed the project concept, including financing, construction, major components, and operation. There was discussion among the parties regarding design requirements. Ms. Clark discussed a recent meeting with U.S. Military personnel regarding the project status and the Board's authority. Ms. Clark noted that near term actions include refining project costs and developing the utility service agreement. There was discussion among the parties regarding other potential users, and ownership of the water right.

Mr. Raybould made a motion to adopt the resolution to approve funds in the matter of the Mountain Home Air Force Base Water Supply Project. Mr. Cuddy seconded the motion.

Roll Call Vote: Mr. Cuddy: Aye; Mr. Alberdi: Aye; Mr. Stevenson: Aye; Mr. Raybould: Aye; Mr. Van Der Meulen: Aye; Mr. Van Stone: Aye; Mr. Barker: Aye; Chairman Chase: Aye. Motion passed.

Ms. Clark discussed the recent meeting with the Elmore County Commissioners and other interested parties regarding water supply issues in the basin. There was discussion among the parties regarding water treatment options.

Agenda Item No. 10, Water District 02 WaterSMART Grant Update

Mr. Neeley Miller provided a status report on the WaterSMART grant. Phase-One received funding in May 2013. Installation and calibration of measurement devices is mostly complete. On-going telemetry installation will continue through spring 2016. Phase-Two received funding in July 2014. Installation and calibration of equipment will continue through September 2016. There was discussion among the parties regarding trust water rights and the term of the grant.

Agenda Item No. 11, Regional Conservation Partnership Program Update

Mr. Miller provided an update on the Regional Conservation Partnership Program (RCPP). The Board submitted an RCPP proposal in October 2014 with several collaborating partners. The proposal requested NRCS funds to target high priority actions identified by the State of Idaho to stabilize and recover ground water levels in the ESPA and stabilize and recover spring discharges to help maintain minimum stream flows in the Snake River. In January, NRCS announced the Board's proposal would receive funding for 2015 and 2016. A Memorandum of Understanding with NRCS was executed in May 2015. Board staff will work with partners and NRCS to develop a timeline for sign-up, ranking, and obligation of funds. NRCS has announced the availability of additional funds for 2017-2019. Pre-proposals are due July 2015, and staff plan to work with partners to develop and submit the pre-proposal unless directed otherwise. There was discussion among the parties regarding the CREP program and ongoing maintenance costs.

Agenda Item No. 12, Storage Studies Update

Ms. Clark discussed the current status of the Weiser-Galloway Project. The Operations Analysis is close to completion. The report will be made public in fall 2015. The Galloway reservoir size optimization study is moving ahead and scheduled for completion by spring 2016. An Evaluation of Weiser River Trail impacts and relocation options is currently scheduled for kick-off in May 2015. Staff

is developing a plan to compile a pre-application document during the Federal Energy Regulatory Commission (FERC) preliminary permit. Stakeholder engagement efforts are continuing with sister state agencies. There was discussion among the parties regarding the Weiser River Trail relocation options and impacts.

Ms. Clark discussed the current status of the Boise River Feasibility Study. The project is moving ahead and on schedule. A draft feasibility study report and EIS for public review will be available for public review in the fall 2015. There has been extensive coordination between federal and state agencies. Ms. Clark provided an update on the Island Park Reservoir Enlargement Project. Staff is preparing to issue a Request for Qualifications to complete an assessment of potential impacts to land and real estate resulting from a raise of the normal surface elevation. Staff is in the process of developing a project website and informational materials and will coordinate with stakeholders in the basin going forward. There was discussion among the parties regarding public outreach.

Ms. Clark discussed the potential for an Anderson Ranch Dam raise. The US Bureau of Reclamation is involved in this project and recently held a public information meeting regarding a Feasibility Study. There was discussion among the parties regarding Board involvement in the project.

Agenda Item No. 13, Friends of the Teton River Water Transaction Costs

Ms. Clark introduced Amy Verbeten from Friends of the Teton River (FTR). Ms. Clark discussed a request to pursue funding from the Columbia Basin Water Transactions Program (CBWTP) to cover programmatic costs associated with requirements or activities specific to Board procedure or direction. Estimated costs for FTR programmatic activities, including travel and monitoring costs, is $15,614. Ms. Verbeten thanked the Board for the opportunity to present this request. There was discussion among the parties regarding the intent of the resolution, communication with BPA, and timing. Mr. Raybould suggested an amendment to add the words "subject to CBWTP funding" in the seventh paragraph of the resolution and "and no other Board Transactions programs are impacted by this funding request" to the end of the eighth paragraph. Mr. Barker also suggested the addition of the words "with CBWTP funding" in the last "Whereas" clause of the resolution.

Mr. Van Der Meulen made a motion to adopt the resolution to request additional funding in the matter of the Idaho Water Transaction Program Partnership with Friends of the Teton River, with the discussed changes. Mr. Barker seconded the motion.

Roll Call Vote: Mr. Alberdi: Aye; Mr. Stevenson: Aye; Mr. Cuddy: Aye; Mr. Raybould: Aye; Mr. Van Der Meulen: Aye; Mr. Van Stone: Aye; Mr. Barker: Aye; Chairman Chase: Aye. Motion passed.

Agenda Item No. 14, IDWR Director's Report

Director Spackman discussed the Mountain Home project. He has learned that the Air Force is excited about this project and promotes the partnership with local entities. Director Spackman spoke about the Surface Water Coalition delivery call. He discussed required adjustments to the computation of rights and obligations of water right holders, resulting in an approximate additional 50,000 acre-feet of obligation every year. He anticipates recurring and chronic obligations in the future unless changes are made.

Director Spackman spoke about the recent court decision regarding recovery wells. He discussed events that led up to the lawsuit and court decision. There was discussion among the parties regarding this matter.

Director Spackman presented a service award to Brian Patton for twenty years of service to the State of Idaho.

Agenda Item No. 15, Other Non-Action Items for Discussion

The Board had no non-action items to discuss.

Agenda Item No. 16, Next Meetings and Adjourn

Mr. Patton discussed the upcoming IWUA conference on June 22-23, 2015. The next Board meeting is currently scheduled for July 13-14, 2015 in Post Falls. There was discussion among the parties regarding compliance with the Open Meeting Law at the IWUA conference. Mr. Raybould made a motion to Adjourn, and Mr. Cuddy seconded the motion. Voice Vote. All were in favor. Motion Carried.

The IWRB Meeting 5-15 adjourned at approximately 12:10 pm.

Respectfully submitted this _____ day of July, 2015.

_____

Vince Alberdi, Secretary

_____

Mandi Pearson, Administrative Assistant II

Board Actions:

1. Mr. Bert Stevenson moved to prepare a response letter signed by Mr. Raybould and Chairman Chase to the Governor regarding sustainability. Mr. Alberdi seconded the motion. Voice Vote. All were in favor.

2. Mr. Stevenson made a motion that the minutes for meetings 3-15 and 4-15 be approved as printed. Mr. Barker seconded the motion. Voice Vote. All were in favor. Motion passed.

3. Mr. Alberdi moved to adopt the resolution approving the FY 16 budget for the Secondary Aquifer Planning, Management and Implementation Fund. Mr. Barker seconded the motion. There was further discussion among the parties regarding details of the budget and resolution. Roll Call Vote. 7 Ayes, 1 Absent. Motion passed.

4. Mr. Van Stone moved to approve the resolution to increase the Consolidated Irrigation Company loan with the proposed amendment. Mr. Barker seconded the motion. Roll Call Vote. 8 Ayes. Motion passed.

5. Mr. Raybould made a motion to adopt the resolution to approve funds in the matter of the Mountain Home Air Force Base Water Supply Project. Mr. Cuddy seconded the motion. Roll Call Vote. 8 Ayes. Motion passed.

6. Mr. Van Der Meulen made a motion to adopt the resolution to request additional funding in the matter of the Idaho Water Transaction Program Partnership with Friends of the Teton River, with the discussed changes. Mr. Barker seconded the motion. Roll Call Vote. 8 Ayes. Motion passed.

MEMO

To: Idaho Water Resource Board
From: Brian Patton
Subject: Financial Status Report
Date: June 30, 2015

As of **June 1st** the IWRB's available and committed balances in the Revolving Development Account, Water Management Account, and the Secondary Aquifer Management Account are as follows.

Revolving Development Account (main fund)		
Committed or earmarked but not disbursed		
Loans for water projects	$3,565,171	
Water storage studies	1,156,782	
Aqualife Hatchery, HB644 2014	0	
HB479 2014		
Mountain Home	1,493,785	
Galloway	1,912,500	
Boise/Arrowrock	1,167,464	
Island Park	2,500,000	
Water supply Bank	500,000	
Total committed/earmarked but not disbursed		12,295,692
Loan principal outstanding		11,302,023
Uncommitted balance		725,707
Estimated revenues next 12 months		3,500,000
Commitments from revenues next 12 months		0
Estimated uncommitted funds over next 12 months		4,225,707
Rev. Dev. Acct. Bell Rapids Sub-Account		
Committed but not disbursed		$168,518
Estimated revenues next 12 months *(1)*		1,000
Commitments from revenues over next 12 months		1,000
Estimated uncommitted funds over next 12 months		0
Rev. Dev. Acct. Pristine Springs Sub-Account (5)		
Committed but not disbursed		
Repair/Replacement Fund		$1,007,428
To go to Aquifer Planning Fund		716,000
Loan principal outstanding		7,127,940
Uncommitted balance		0
Estimated revenues next 12 months		1,000,000
Commitments from revenues over next 12 months		1,000,000
Estimated uncommitted funds over next 12 months		0
Rev. Dev. Acct. Treasure Valley & Rathdrum Prairie CAMP Sub-Account		
Committed but not disbursed		$2,000
Available for RP and TV CAMP projects		173,745
Estimated revenues next 12 months (5)		200,000
Estimated Available funds over next 12 months		373,745

Rev. Dev. Acct. Upper Salmon/CBWTP Sub-Account		
Committed but not disbursed		$3,237,624
(Upper Salmon flow enhancement/reconnect projects)		
Estimated revenues next 12 months *(4)*		10,000
Commitments from revenues over next 12 months		10,000
Estimated available funds over next 12 months		0
Rev. Dev. Acct. Water District 02 Water Smart Grant Sub-Account (6)		
Committed but not disbursed		$103,491
(Water District 02 Measurement Devices)		
Commitments from revenues over next 12 months		$103,491
Estimated available funds over next 12 months		0
Rev. Dev. Acct. Water Supply Bank Sub-Account (7)		
Committed but not disbursed		$512,245
(Owners share – water bank lease/rentals)		
Estimated revenues next 12 months		1,000
Commitments from revenues over next 12 months		$512,245
Estimated available funds over next 12 months		$1,000
Rev. Dev. Acct. ESPA Sub-Account		
Committed but not disbursed		
CREP	2,419,581	
Aquifer recharge	337,594	
Bell Rapids	361,620	
Palisades storage	10,000	
Black Canyon Exchange	485,749	
Total committed but not disbursed		$3,614,643
Loan principal outstanding		266,589
Uncommitted balance		494,711
Estimated revenues next 12 months		100,000
Commitments from revenues over next 12 months		0
Estimated uncommitted funds over next 12 months		595,596
Rev. Dev. Acct. Dworshak Hydropower (2)		
Committed but not disbursed (repair fund, etc.)		$1,337,151
Estimated revenues next 12 months *(3)*		200,000
Commitments from revenues over next 12 months		200,000
Estimated uncommitted funds over next 12 months		0
Water Management Account		
Committed but not disbursed:		$111,376
Loan principal outstanding		0
Uncommitted balance		9,915
Estimated revenues next 12 months		0
Commitments from revenues over next 12 months		0
Estimated uncommitted funds over next 12 months		$9,915

Secondary Aquifer Management Fund	
Committed or earmarked but not disbursed:	
HB 479 2014 Northern Idaho Future Water Needs	288,843
Cloud Seeding	512,000
Public Information Services (Steubner)	40,303
Other	261,045
FY2016 Budgeted Funds	
ESPA managed recharge expenses	1,200,000
ESPA managed recharge infrastructure	6,250,000
ESPA managed recharge engineering	300,000
Administrative	50,000
GW conservation grants in priority aquifers	200,000
Reserved for projects in other priority aquifers	1,000,000
Total Committed or earmarked	$10,202,192
Loan principal outstanding	1,260,000
Uncommitted balance	$559,992
Estimated revenues next 12 months (Cigarette Tax)	5,500,000
Commitments from revenues over next 12 months	0
Estimated uncommitted funds over next 12 months	6,059,992
Secondary Aquifer Fund Aquifer Mon. Meas. & Model Sub-Acct (8)	
Committed but not disbursed	$324,325
Commitments from revenues over next 12 months	$324,325
Estimated available funds over next 12 months	0
Total committed/earmarked but not disbursed	**$32,933,583**
Total loan principal outstanding	**19,956,554**
Total uncommitted balance	**1,964,070**
Total estimated uncommitted funds over next 12 months	**11,265,955**

(1) Exclusive of pass-through payments made by the U.S. Bureau of Reclamation.
(2) Excess funds generated by the Dworshak Hydropower Project are deposited into the Revolving Development Account (Main Fund) on a monthly basis. To the date of this report this has totaled $2,425,085.
(3) This line item includes power sales and interest income after removing debt service. Debt service is paid prior to the funds being deposited in the Revolving Development Account.
(4) Exclusive of project funds provided by Bonneville Power Administration or federal appropriation sources. These funds are provided to the Board based on individual project proposals and so are not included in the income projection.
(5) Excess funds generated by the Pristine Springs Project are deposited into the Revolving Development Account (Main Fund) or into the Rathdrum Prairie/Treasure Valley Sub Account.
(6) Pass-through for Bureau of Reclamation grant to assist with installation of measurement devices in Water District 02.
(7) Pass-through for owners share of Water Supply Bank lease/rentals. Interest earned accrues to IWRB.
(8) Source is Pristine Springs loan repayments of $716,000.

The following is a list of potential loans:

Potential Applicant	Potential Project	Preliminary Loan Amount	Comment
Last Chance Canal Company	Renovate Bear River diversion dam	$2.5 million	Will consider in July. Winter 2015 construction
St. John Irrigation Company	Open canal to gravity pipeline	$1.5 million	Will Consider in July. Also received WaterSmart grant from BOR. 3-year construction schedule.
IGWA/Ground Water Districts	Additional projects in Hagerman Valley	$14 million	Includes tailwater pipeline from Magic Springs to offset irrigation use from Billingsley Creek and other projects.
Raft River Ground Water District	Ground water-to-surface water conversion pipeline	$4 million	Project in planning. Applying for NRCS cost share grants.
Marysville Irrigation Company/North Fremont	Gravity pipeline system – next phase	$1.5 million	Project in planning and design. Applying for NRCS cost share grants
Big Wood Canal Co.	Gravity pipeline	$2 million	Project in planning

There are several large loan repayments totaling in excess of $1M that were received during the month of June. Because they were received during June, they do not show on the current balance sheets but will show on the next balance sheets.

The 10 **Ground Water Districts on the Eastern Snake Plain** have collectively received judicial confirmation to incur up to $15M in debt for projects to carry out the Hagerman Valley Settlement. This includes the cost of the $4M Magic Springs-Rangen Pipeline which is already built, as well as several other projects. As you may recall, the IWRB loaned $1.26M to the North Snake GWD and the Magic Valley GWD for the Magic Springs-Rangen Pipeline with those two districts covering the rest of the construction cost (the long-term cost will be borne by all 10 districts). The $1.26M loan amount and the repayment date of September 2015, was dictated by the Districts' previous borrowing authority.

The plan is for the 10 districts to finance the $15M package through IWRB-issued revenue bonds. This process will take approximately 6 months to complete. In the interim, the North Snake and Magic Valley GWD's would like to extend the term of the $1.26M loan, and add to it, up to a total of $4M, that would be repaid upon completion of the long-term financing in 6 months. The North Snake and Magic Valley GWD's purpose for the request is to be able to cash-flow the remaining costs on the Magic Springs-Rangen Pipeline and the costs of their obligations under the Surface Water Coalition Settlement.

Since the interim financing term would be approximately 6 months, and $1.26M is already outstanding, the requested interim financing could potentially be provided using dollars committed for ESPA managed recharge infrastructure in the Secondary Aquifer Fund. The funds would then be returned to the Secondary Aquifer Fund upon completion of the long-term financing, before being needed for recharge infrastructure costs.

Staff suggests convening a Finance Committee meeting to review the situation and provide a recommendation to the full IWRB in the next few weeks.

IDAHO WATER RESOURCE BOARD
Sources and Applications of Funds
as of May 31, 2015
REVOLVING DEVELOPMENT ACCOUNT

Original Appropriation (1969)	$500,000.00
Legislative Audits	($49,404.45)
IWRB Bond Program	($15,000.00)
Legislative Appropriation FY90-91	$250,000.00
Legislative Appropriation FY91-92	$280,700.00
Legislative Appropriation FY93-94	$500,000.00
IWRB Studies and Projects	($249,067.18)
Loan Interest	$7,214,902.29
Interest Earned State Treasury (Transferred)	$1,688,673.99
Filing Fee Balance	$47,640.20
Bond Fees	$1,469,601.45
Arbitrage Calculation Fees	($12,000.00)
Protest Fees	($625.00)
Series 2000 (Caldwell/New York) Pooled Bond Issuers fees	$43,657.93
2012 Ground Water District Bond Issuer fees	$377,000.00
Bond Issuer fees	$33,707.59
Attorney fees for Jughandle LID	($3,600.00)
Attorney fees for A&B Irrigation	($4,637.50)
Water Supply Bank Receipts	$4,378,285.64
Legislative Appropriation FY01	$200,000.00
Pierce Well Easement	$2,000.00
Transferred to/from Water Management Account	$317,253.80
Legislative Appropriation 2004, HB843	$500,000.00
Legislative Appropriation 2009, SB 1511 Sec 2, Teton/Minidoka Studies	$1,800,000.00
Legislative Appropriation 2009, SB 1511 Sec 2, Teton/Minidoka Studies Expenditures	($1,229,460.18)
Weiser Galloway Study - US Army Corps of Engineers	($1,597,099.12)
Boise River Storage Feasibility Study	($333,000.00)
Geotech Environmental (Transducers)	($6,402.61)
Legislative Appropriation 2014, HB 479 Sec 1 and 2	$10,500,000.00
Appraisal (LeMoyne Appraisal LLC)	($4,500.00)
Payment to JR Simplot Co for water rights	($2,500,000.00)
IWRB WSB Lease Application	($750.00)
Mountain Home Misc Costs	($11.32)
Galloway Dam & Reservoir Project (HB 479)	($87,500.00)
Water District 02 Assessments for Mtn Home	($964.61)
Boise River (Arrowrock Enlargement) Feasibility Study (HB479)	($332,536.11)
Aqua Life Hatchery, HB644, 2014	($1,885,000.00)
Aqualife Lease receipt from Seapac	$47,760.00
Treasureton Irrigation Ditch Co	($5,000.00)

Bell Rapids Water Rights Sub-Account		
Legislative Appropriation 2005, HB392	$21,300,000.00	
Interest Earned State Treasury	$693,164.55	
Bell Rapids Purchase	($16,006,558.00)	
Bureau of Reclamation Principal Amount Lease Payment Paid	$8,294,337.54	
Bureau of Reclamation Interest Paid	$179,727.97	
Bureau of Reclamation Remaining Amount Lease Payment Paid	$9,142,649.54	
First Installment Payment to Bell Rapids	($1,313,236.00)	
Second Installment Payment to Bell Rapids	($1,313,236.00)	
Third Installment Payment to Bell Rapids	($1,313,236.00)	
Fourth Installment Payment to Bell Rapids	($1,040,431.55)	
Interest Credit due to Bureau of Reclamation (Part of Fourth Installment)	($19,860.45)	
Fifth Installment Payment to Bell Rapids	($1,055,000.00)	
Transfer to General Fund - Principal	($21,300,000.00)	
Transfer to General Fund - Interest	($772,052.06)	
BOR payment for Bell Rapids	$1,040,431.55	
BOR payment for Bell Rapids	$1,313,236.00	
BOR prepayment for Bell Rapids	$1,302,981.70	
BOR prepayment for Bell Rapids	$1,055,000.00	
BOR payment for Alternative Financing Note	$7,117,971.16	
Payment to US Bank for Alternative Financing Note	($7,118,125.86)	
Payment for Water District 02 Assessments	($12,506.10)	
Payment for Ongoing Bell Rapids Finance Costs (trustee fees, water bank, etc.)	($6,740.10)	
Commitments		
Ongoing Bell Rapids Finance Costs (trustee fees, WD02)	$168,473.42	
Committed for alternative finance payment	$44.47	
Total Commitments	$168,517.89	
Balance Bell Rapids Water Rights Sub-Account		**$0.00**

Pristine Springs Project Sub-Account	
Legislative Appropriation 2008, SB1511, Pristine Springs	$10,000,000.00
Legislative Appropriation 2006, HB870, Water Right Purchases	$5,000,000.00
Interest Earned State Treasury	$37,947.01
Loan Interest	$2,116,784.68
Transfer from ESP Sub-Account	$1,000,000.00
Payment for Purchase of Pristine Springs (3)	($16,000,000.00)
Payment from Magic Valley & Northsnake GWD for Pristine Springs	$3,630,980.51
Appraisal	($25,500.00)
Insurance	($33,662.25)
Recharge District Assessment	($26,605.25)
Water District 130 Annual Assessment	($3,841.45)
Hydro Plants Engineering Certification (Straubhar)	($3,000.00)
Payment to EHM Engineers for pipeline work	($1,200.00)
Payment to John Root for Easement Survey	($1,000.00)
Payment to MWH Americas Inc	($11,326.27)
Payment to Dan Lafferty Contruction	($16,846.68)
Telemetry Station Equipment	($15,193.92)

Rein Tech LLC (Satellite phone annual payment)		($1,485.00)	
Standley Trenching (Trac system for communication equip)		($2,863.99)	
Property Taxes and other fee assessments (Jerome County)		($6,939.15)	
Rental Payments		$1,469,239.14	
Payments to Scott Kaster		($93,506.82)	
Utility Payments (Idaho Power)		($37,729.68)	
Costs for property maintenance		($102,849.21)	
Travel costs for property maintenance		($351.30)	
Pipeline repair (IGWA)		($170,000.00)	
Transferred to Secondary Aquifer Fund (2011 Legislature; HB 291)		($2,465,300.00)	
Transferred to Secondary Aquifer Fund (2012 Legislature; SB 1389)		($1,232,000.00)	
Transferred to Secondary Aquifer Fund (2013 Legislature; HB 270)		($716,000.00)	
Transferred to Secondary Aquifer Fund (2014 Legislature; HB 618)		($716,000.00)	
Pristine Springs Hydropower Projects			
Net power sales revenues		$487,061.54	
Pristine Springs Committed Funds			
ESPA CAMP (to be transferred to Secondary Fund)	716,000.00		
Repair/Replacement Fund	$1,007,427.96		
TOTAL COMMITTED FUNDS	$1,723,427.96		
Loans Outstanding			
North Snake and Magic Valley Ground Water Districts	$7,127,940.18		
Total Loans Outstanding	$7,127,940.18		
Funds to RP CAMP & TV CAMP Sub-Account		**$271,672.34**	
Pristine Springs Revenues into Main Revolving Development Account			**$63,711.61**
Rathdrum Prairie CAMP & Treasure Valley CAMP Sub-Account			
Pristine Springs Hydropower and Rental Revenues		$271,672.34	
Interest Earned State Treasury		$573.11	
Spokane River Forum		($8,000.00)	
Treasure Valley Water Quality Summit		($500.00)	
Kootenai-Shoshone Soil & Water Cons. Dist. - Agrimet Station		($18,000.00)	
Rathdrum Prairie-Spokane Valley Aquifer Pumping Study (CON00989)		($70,000.00)	
Committed Funds			
Kootenai-Shoshone Soil & Water Cons. Dist. - Agrimet Station	$2,000.00		
Spokane River Forum	$0.00		
Rathdrum Prairie-Spokane Valley Aquifer Pumping Study	$0.00		
Treasure Valley Water Quality Summit	$0.00		
TOTAL COMMITTED FUNDS	$2,000.00		
Balance Rathdrum Prairie CAMP & Treasure Valley CAMP Sub-Account		**$173,745.45**	
Upper Salmon/CBWTP Sub-Account			
Water Transaction Projects Payment Advances from CBWTP/Accord		$2,846,320.47	
PCSRF Funds for Administration of Non-Diversion Easements on Lemhi River		$237,807.26	
Interest Earned State Treasury		$106,346.18	
Transfer to Water Supply Bank		($64,801.33)	
Change of Ownership		($600.00)	
Alturas Lake Creek Appraisal		($8,989.23)	
Payments for Water Acquisition		($627,423.03)	
Committed Funds			
Administration of Non-Diversion Easements on Lemhi River	$148,686.69		
Alturas Lake Creek (Breckenridge)	($0.00)		
Bayhorse Creek (Peterson Ranch)	$34,748.18		
Beaver Creek (DOT LLP)	$0.00		
Big Hat Creek	$0.00		
Big Timber Tyler (Leadore Land Partners)	$521,949.64		
Canyon Creek/Big Timber Creek (Beyeler)	$479,809.99		
Fourth of July Creek (Vanderbilt)	$18,437.16		
Iron Creek (Phillips)	$0.00		
Iron Creek (Koncz)	$259,273.22		
Kenney Creek Source Switch (Gail Andrews)	$26,363.56		
Lemhi - Big Springs (Merrill Beyeler)	$65,133.50		
Lemhi River & Little Springs Creek (Kauer)	$23,004.68		
Little Springs Creek (Snyder)	$307,687.37		
Lower Eighteenmile Creek (Ellsworth Angus Ranch)	$1,777.78		
Lower Lemhi Thomas (Robert Thomas)	$2,100.00		
P-9 Bowles (River Valley Ranch)	$331,363.86		
P-9 Charlton (Sydney Dowton)	$21,933.08		
P-9 Dowton (Western Sky LLC)	$262,827.99		
P-9 Elzinga (Elzinga)	$325,096.74		
Patterson-Big Springs (PBSC9)	$201,170.12		
Spring Creek (Richard Beard)	$1,628.64		
Spring Creek (Ella Beard)	$2,387.07		
Whitefish (Leadore Land Partners)	$202,244.87		
Total Committed Funds	$3,237,624.14		
Balance CBWTP Sub-Account		**($748,963.82)**	
Water District 02 WaterSmart Grant Sub-Account			
Received from BOR		$97,677.36	
Payments made to contractors		($111,472.62)	
Committed Funds:			
Grant Approval	$103,491.00		
Total Committed Funds	$103,491.00		
Balance WaterSmart Grant Sub-Account		**($13,795.26)**	
Water Supply Bank Sub-Account			
Payments received from renters for 2013 season		$529,823.25	
Payments received from renters for 2014 season		$609,120.41	
Payments received from renters for 2015 season		$511,933.59	
Payments made to owners for 2013 season		($522,645.12)	
Payments made to owners for 2014 season		($599,422.75)	
Payments made to owners for 2015 season		$0.00	
Interest Earned State Treasury		$1,758.22	

Water Supply Bank Sub-Account Subtotal			**$530,567.60**
Committed Funds:			
Owners Share	$512,244.95		
Total Committed Funds	$512,244.95		
Balance Water Supply Bank Sub-Account			**$18,322.65**
Eastern Snake Plain Sub-Account			
Legislative Appropriation 2005, HB392		$7,200,000.00	
Legislative Appropriation 2005, HB392, CREP Program		$3,000,000.00	
Interest Earned State Treasury		$1,905,435.87	
Loan Interest		$222,926.89	
Bell Rapids Water Rights Closing Costs		($6,558.00)	
First Installment Payment to Bell Rapids Irr. Co. (Partial)		($361,800.00)	
Second Installment Payment to Bell Rapids Irr. Co. (Partial)		($361,800.00)	
Third Installment Payment to Bell Rapids Irr. Co. (Partial)		($361,800.00)	
Fourth Installment Payment to Bell Rapids Irr. Co. (Partial)		($614,744.00)	
Fifth Installment Payment to Bell Rapids Irr. Co. (Final)		($1,675,036.00)	
Reimbursement from Commerce & Labor W-Canal		$74,709.77	
Transfer to Pristine Springs Sub Account		($1,000,000.00)	
Reimbursement from Magic Valley GWD - Pristine Springs		$500,000.00	
Reimbursement from North Snake GWD - Pristine Springs		$500,000.00	
Reimbursement from Water District 1 for Recharge		$159,764.73	
Palisades (FMC) Storage Costs		($3,515,891.11)	
Reimbursement from BOR for Palisades Reservoir		$2,381.12	
W-Canal Project Costs		($326,834.11)	
Black Canyon Exchange Project Costs		($115,276.00)	
Black Canyon Exchange Project Revenues		$23,800.00	
2008 Recharge Conveyance Costs		($14,580.00)	
2009 Recharge Conveyance Costs		($355,253.00)	
2010 Recharge Conveyance Costs		($484,231.62)	
Additional recharge projects preliminary development		($12,405.89)	
Pristine Springs Cost Project Costs		($6,863.91)	
Loans and Other Commitments			
Commitment - Remainder of Bell Rapids Water Rights Purchase (1)		$361,620.00	
Commitment - CREP Program (HB392, 2005)		$2,419,580.50	
Commitment - Additional recharge projects preliminary development		$337,594.00	
Commitment - Palasades Storage O&M		$10,000.00	
Commitment - Black Canyon Exchange Project (fund with ongoing revenues)		$485,848.95	
Total Loans and Other Commitments		$3,614,643.45	
Loans Outstanding:			
American Falls-Aberdeen GWD (CREP)	$87,332.55		
Bingham GWD (CREP)	$0.00		
Bonneville Jefferson GWD (CREP)	$52,873.39		
Magic Valley GWD (CREP)	$83,345.10		
North Snake GWD (CREP)	$43,038.87		
TOTAL ESP LOANS OUTSTANDING	$266,589.91		
Uncommitted Balance Eastern Snake Plain Sub-Account			**$494,711.38**
Dworshak Hydropower Project			
Dworshak Project Revenues			
Power Sales & Other	$6,251,812.94		
Interest Earned State Treasury	491,650.08		
Total Dworshak Project Revenues		$6,743,463.02	
Dworshak Project Expenses (2)			
Transferred to 1st Security Trustee Account	$148,542.63		
Construction not paid through bond issuance	$226,106.83		
1st Security Fees	$314,443.35		
Operations & Maintenance	$1,865,051.31		
Powerplant Repairs	$58,488.80		
Capital Improvements	$318,366.79		
FERC Payments	$50,227.33		
Total Dworshak Project Expenses		($2,981,227.04)	
Dworshak Project Committed Funds			
Emergency Repair/Future Replacement Fund	$1,314,575.00		
FERC Fee Payment Fund	$22,576.30		
Total Dworshak Project Committed Funds		$1,337,151.30	
Excess Dworshak Funds into Main Revolving Development Account			$2,425,084.68
TOTAL			**$24,323,421.10**

Loans Outstanding:	Amount Loaned	Principal Outstanding
A&B Irrigation District (18-July-14; pipeline and conversion project)	3,500,000	$3,500,000.00
Aberdeen-Springfield Canal Company (WRB-491; Diversion structure)	$329,761	$126,593.43
Boise City Canal Company (WRB-492)...Grove St Canal Rehab	$110,618	$29,997.00
Bonnie Laura Water Corporation (14-Jul-06; Well repairs)	$71,000	$24,101.33
Canyon County Drainage District No. 2 (28-Nov-12; Drain tile pipeline	$35,000	$29,362.87
Challis Irrigation Company (28-Nov-07; river gate replacement)	$50,000	$20,744.35
Chaparral Water Association	$90,154	$5,167.79
Chaparral Water Association (21-Jan-11; Well deepening & improvem	68,000	$22,466.45
Clearview Water Company	50,000	$50,000.00
Cloverdale Ridge Water Corp. (irrigation system rehab 25-sep-09)	106,400	$52,672.97
Consolidated Irrigation Company (July 20, 2012; pipeline project)	1,360,543	$1,360,542.50
Country Club Subdivision Water Association (18-May-07, Well Project)	$102,000	$35,855.03
Cub River Irrigation Company (18-Nov-05; Pipeline project)	$1,000,000	$692,203.48
Cub River Irrigation Company	$500,000	$345,326.67
Enterprise Irrigation District (14-Jul-06; Pipeline project)	$37,270	$9,073.06
Enterprise Irrigation District (North Lateral Pipeline)	$105,420	$36,135.10
Firth, City of	$112,888	$19,814.64
Foothills Ranch Homeowners Association (7-oct-11; well rehab)	$150,000	$122,566.54
Harvest Valley Homeowners Association (22-Mar-13; Pump Replaceme	4,500.00	$2,312.33
Jefferson Irrigation Company (well deepenings)	$207,016	$0.00
Jefferson Irrigation Company (9-May-2008 Well Replacement)	$81,000	$49,420.63

Jughandle HOA/Valley County Local Improvement District No. 1 (well p	$907,552	$664,623.59	
King Hill Irrigation District (24-Sep-10; Pipeline replacement_	$300,000	$89,351.27	
Lake Reservoir Company (29-July-11; Payette Lake-Lardo Dam Outle	$594,000	$146,009.05	
Last Chance Canal Company (WRB-497)	$500,000	$28,326.23	
Lava Hot Springs, City of	$347,510	$139,078.44	
Lindsay Lateral Association (22-Aug-03)	$9,600	$922.49	
Lindsay Lateral Association (Engineering Design Project & Pipeline Stu	$19,700	$16,236.53	
Live-More Lake Community (9-Jun-04)	$42,000	$13,432.26	
Lower Payette Ditch Company (2-Apr-04; Diversion dam replacement)	$875,000	$0.00	
Marsh Center Irrigation Company (13-May-05; Hawkins Dam)	$236,141	$116,524.33	
Marysville Irrigation Company (18-May-07, Pipeline Project Phase 1)	$625,000	$238,164.82	
Marysville Irrigation Company (9-May-08, Pipeline Project Phase 2)	$1,100,000	$467,140.18	
McGuire Estates Water Users Association (4-Mar-05)	$60,851	$9,209.33	
Meander Point Subdivsion Homeowners Association (7-Sep-07; comn	$330,000	$33,905.66	
Mores Creek Rim Ranches Water District	$221,400	$8,248.01	
North Fremont Canal Systems (25-Jan-13; Marysville Project)	$2,500,000	$2,000,000.00	
Pinehurst Water District (23-Jan-15)	100,000	$63,650.00	
Point Springs Grazing Association (July 20, 2012; stock water pipeline)	48,280.00	$43,753.18	
Preston-Whitney Irrigation Company (29-May-09; Fairview Lateral Pipe	$800,000	$61,332.40	
Producers Irrigation Company (17-Mar-06; well replacements)	$185,000	$22,766.04	
Ranch Subdivision Property Owners Assoc	$24,834	$5,654.31	
Riverside Independent Water District	$350,000	$122,045.42	
Skin Creek Water Association	$188,258	$75,745.13	
Spirit Bend Water Association	$92,000	$25,855.17	
Sunset Heights Water District (17-May-13; Exchange water project)	$48,000	$43,747.40	
Twin Lakes Canal Company (Winder Lateral Pipeline Project)	$500,000	$297,061.24	
Twin Lakes Canal Company (Bear River Narrows)	$90,000	$23,119.83	
Whitney-Nashville Water Company	$225,000	$11,764.94	
TOTAL LOANS OUTSTANDING			**$11,302,023.42**

Loans and Other Funding Obligations:		
Legislative Appropriation 2014, HB 479 Sec 1 and 2		
Mountain Home AFB Water Rights (HB479)	$1,493,774.07	
Galloway Dam & Reservoir Project (HB 479)	$1,912,500.00	
Boise River (Arrowrock Enlargement) Feasibility Study (HB479)	$1,167,463.89	
Island Park Enlargement (HB479)	$2,500,000.00	
Water Supply Bank Computer Infrastructure (HB 479)	$500,000.00	
Aqua Life Hatchery, HB644, 2014	$0.00	
Senate Bill 1511 - Teton Replacement and Minidoka Enlargement Studies	$678,161.82	
Boise River Storage Feasibility Study	$17,000.00	
Weiser-Galloway Study (28-May-10)	$461,620.87	
A&B Irrigation District (18-July-14; pipeline and conversion project)	$1,700,000.00	
Bee Line Water Association (Sep 23, 2014; System Improvements)	$400,000.00	
Clearview Water Company (5-Nov-14)	$0.00	
Clearwater Water District - pilot plant (13-jul-07)	$80,000.00	
Consolidated Irrigation Company (July 20, 2012; pipeline project)	$639,457.50	
Dover, City of (23-Jul-10; Water Intake project)	$194,063.00	
Lindsay Lateral Association	$15,300.00	
North Fremont Canal Systems (25-Jan-13; Marysville Project)	$500,000.00	
Pinehurst Water District (23-Jan-15)	$36,350.00	
Point Springs Grazing Association (July 20, 2012; storck water pipeline)	$0.00	
TOTAL LOANS AND OTHER FUNDING OBLIGATIONS		**$12,295,691.15**
Uncommitted Funds		**$725,706.53**
TOTAL		**$24,323,421.10**

(1) Actual amount needed may vary depending on final determination of water actually purchased and interest income received.

(2) Debt service on the Dworshak Project bonds is paid before the Dworshak monies are deposited into the Revolving Development Account and is therefore not shown on this balance sheet.

Idaho Water Resource Board
Sources and Applications of Funds
as of May 31, 2015
WATER MANAGEMENT ACCOUNT

Original Appropriation (1978)	$1,000,000.00
Legislative Audits	($10,645.45)
IWRB Appraisal Study (Charles Thompson)	($5,000.00)
Transfer funds to General Account 1101(HB 130, 1983)	($500,000.00)
Legislative Appropriation (6/29/1984)	$115,800.00
Legislative Appropriation (HB988, 1994)	$75,000.00
Turned Back to General Account 6/30/95, (HB988, 1994)	($35,014.25)
Legislative Appropriation (SB1260, 1995, Aquifer Recharge, Caribou Dam)	$1,000,000.00
Interest Earned	$120,475.04
Filing Fee Balance	$2,633.31
Water Supply Bank Receipts	$841,803.07
Bond Fees	$277,254.94
Funds from DEQ and IDOC for Glenns Ferry Water Study	$10,000.00
Legislative Appropriation FY01	$200,000.00
Western States Wate Council Annual Dues	($7,500.00)
Tranfer to/from Revolving Development Account	($317,253.80)
Legislative Appropriation (SB1239, Sugarloaf Aquifer Recharge Project)	$60,000.00
Legislative Appropriation (HB 843 Sec 6)	$520,000.00
Legislative Appropriation (SB1496, 2006, ESP Aquifer Management Plan)	$300,000.00
Legislative Appropriation (HB 320, 2007, ESP Aquifer Management Plan)	$849,936.99
TOTAL	**$4,497,489.85**

Grants Disbursed:

Completed Grants	$1,291,110.72
Arco, City of	$7,500.00
Arimo, City of	$7,500.00
Bancroft, City of	$7,000.00
Bloomington, City of	$4,254.86
Boise City Canal Company	$7,500.00
Bonners Ferry, City of	$7,500.00
Bonneville County Commission	$3,375.00
Bovill, City of	$2,299.42
Buffalo River Water Association	$4,007.25
Butte City, City of	$3,250.00
Cave Bay Community Services	$6,750.00
Central Shoshone County Water District	$7,500.01
Clearwater Regional Water Project Study, City of Orofino et al	$10,000.00
Clearwater Water District	$3,750.00
Cottonwood Point Water and Sewer Association	$7,500.00
Cottonwood, City of	$5,000.00
Cougar Ridge Water & Sewer	$4,661.34
Curley Creek Water Association	$2,334.15
Downey, City of	$7,500.00
Fairview Water District	$7,500.01
Fish Creek Reservoir Company, Fish Creek Dam Study	$12,500.00
Franklin, City of	$6,750.00
Grangeville, City of	$7,500.00
Greenleaf, City of	$3,000.00
Hansen, City of	$7,450.00
Hayden Lake Irrigation District	$7,500.00
Hulen Meadows Water Company	$7,500.00
Iona, City of	$1,425.64
Kendrick, City of	$7,500.00
Kooskia, City of	$7,500.00
Lakeview Water District	$2,250.00
Lava Hot Springs, City of	$7,500.00
Lindsay Lateral Association	$7,500.00
Lower Payette Ditch Company	$5,500.01
Maple Grove Estates Homeowners Association	$5,020.88
Meander Point Homeowners Association	$7,500.00
Moreland Water & Sewer District	$7,500.00
New Hope Water Corporation	$2,720.39
North Lake Water & Sewer District	$7,500.00

Northside Estates Homeowners Association	$4,492.00	
North Tomar Butte Water & Sewer District	$3,575.18	
North Water & Sewer District	$3,825.00	
Parkview Water Association	$4,649.98	
Payette, City of	$6,579.00	
Pierce, City of	$7,500.00	
Potlatch, City of	$6,474.00	
Preston Whitney Irrigation Company	$7,500.00	
Preston & Whitney Reservoir Company	$3,606.75	
Preston & Whitney Reservoir Company	$7,000.00	
Roberts, City of	$3,750.00	
Round Valley Water	$3,000.00	
Sagle Valley Water & Sewer District	$2,117.51	
South Hill Water & Sewer District	$3,825.00	
St Charles, City of	$5,632.88	
Swan Valley, City of	$5,000.01	
Twenty-Mile Creek Water Association	$2,467.00	
Valley View Water & Sewer District	$5,000.02	
Victor, City of	$3,750.00	
Weston, City of	$6,601.20	
Winder Lateral Association	$7,000.00	
TOTAL GRANTS DISBURSED		**($1,632,755.21)**
IWRB Expenditures		
Lemhi River Water Right Appraisals	$31,000.00	
Expenditures Directed by Legislature		
Obligated 1994 (HB988)	$39,985.75	
SB1260, Aquifer Recharge	$947,000.00	
SB1260, Soda (Caribou) Dam Study	$53,000.00	
Sugarloaf Aquifer Recharge Project (SB1239)	$55,953.69	
ESPA Settlement Water Rentals (HB 843 2004)	$504,000.00	
ESP Aquifer Management Plan (SB1496, 2006)	$300,000.00	
ESP Aquifer Management Plan (HB320, 2007)	$801,077.75	
TOTAL IWRB AND LEGISLATIVE DIRECTED EXPENDITURES		**($2,732,017.19)**
WATER RESOURCE BOARD RECHARGE PROJECTS		**($11,426.88)**
CURRENT ACCOUNT BALANCE		**$121,290.57**
Committed Funds:		
Grants Obligated		
Cottonwood Point Water & Sewer Association	$0.00	
Preston - Whintey Irrigation Company	$7,500.00	
Water District No. 1 (Blackfoot Equalizing Reservoir Automation)	$35,000.00	
Legislative Directed Obligations		
Sugarloaf Aquifer Recharge Project (SB1239)	$4,046.31	
ESPA Settlement Water Rentals (HB 843, 2004)	$16,000.00	
ESPA Management Plan (SB 1496, 2006)	$0.00	
ESP Aquifer Management Plan (HB320, 2007)	$48,829.24	
TOTAL GRANTS & LOANS OBLIGATED & UNDISBURSED		**$111,375.55**

Loans Outstanding:	Amount Loaned	Principal Outstanding	
Arco, City of	$7,500	$0.00	
Butte City, City of	$7,425	$0.00	
Roberts, City of	$23,750	$0.00	
Victor, City of	$23,750	$0.00	
TOTAL LOANS OUTSTANDING			**$0.00**
Uncommitted Funds			**$9,915.02**
CURRENT ACCOUNT BALANCE			**$121,290.57**

Idaho Water Resource Board
Sources and Applications of Funds
as of May 31, 2015
SECONDARY AQUIFER PLANNING, MANAGEMENT, & IMPLEMENTATION FUND

Legislative Appropriation (HB 291, Sec 2)		2,465,300.00
Legislative Appropriation (SB 1389, Sec 5)		1,232,000.00
Legislative Appropriation (HB270, Sec 3)		716,000.00
Legislative Appropriation (HB479, Sec 1)		4,500,000.00
Legislative Appropriation (HB547)		4,309,608.19
Legislative Appropriation (HB479, Sec 1) Managed Recharge Infrastructure Expenses		(671,230.47)
Legislative Appropriation (HB479, Sec 1)Northern Idaho Future Water Needs Studies		(111,156.60)
Interest Earned State Treasury (Transferred)		76,820.15
Water Users Contributions		100.00
Conversion project (AWEP) measurement device payments		(16,455.21)
Contribution from GWD's for 2011 ESPA Managed Recharge		71,893.16
Contribution from GWD's for Revenue Bond Prep Expenses		14,462.50
American Falls Res. Dist#2 - MP31 Recharge Site Engineering		(1,593.75)
American Falls Res. Dist#2 - MP31 Recharge Site Construction		(34,435.44)
Bond issuer Fees		(3,500.00)
Payments for 2012 Recharge		(260,031.02)
Payments for 2013 Recharge		(8,133.00)
Payments for 2014 Recharge		(16,404.00)
Payment for Recharge		(80,000.00)
Payment for High Country RC&D Cloud Seeding		(20,000.00)
Payment for Idaho Irrigation District		(13,200.00)
Payment for Magic Valley GWD and A&B Irrig. Dist. - Walcott Recharge Engineering		(113,163.84)
Public Information Services (Steubner)		(14,696.25)
Loan - Magic Valley & North Snake GWDs (Magic Springs Pipeline)		(1,260,000.00)
Aquifer Monitoring, Measurement, and Modeling Sub-Account		
Legislative Appropriation/Funds Transfer (HB618, Sec 3)		716,000.00
Interest Earned State Treasury (Transferred)	1109.93	
Personnel Costs	(240,316.70)	
Professional Services	(118,275.36)	
Equipment Purchases	(24,117.83)	
Travel Expenses	(6,193.62)	
Supplies	(2,705.38)	
Miscellaneous Expenses	(1,176.21)	
Total Expenses	(392,785.10)	
Balance Aquifer Monitoring, Measurement, and Modeling Sub-Account		**$324,324.83**
Loans Outstanding		
North Snake & Magic Valley Ground Water Districts (Magic Springs Pipeline)		$1,260,000.00
Committed Funds		
Northern Idaho Future Water Needs Studies (HB479)		388,843.40
Measurement devices for AWEP conversion projects		183,544.79
High Country RC&D Cloud Seeding		20,000.00
Cooperative Weather Modification Program (Cloud Seeding)		492,000.00
Public Information Services (Steubner)		40,303.75
GWD Bond Prepatory Expenses		37,500.00
Fremont-Madison Irrigation District Egin Recharge		40,000.00
Committed - FY2016 Budgeted Funds		
ESPA Managed Recharge Operations	1,200,000	
ESPA Managed Recharge Infrastructure		
Milner-Gooding concrete flume	700,000	
Milner-Gooding Dietrich Drop hydro plant bypass	50,000	
Twin Falls Canal recharge improvements	500,000	
Northside canal hydro plant bypasses	2,000,000	
Great Feeder Canal recharge improvements	500,000	
Milner Pool Development and other Projects	2,000,000	
Egin Recharge Enlargement	500,000	
Investigation/engineering for further ESPA recharge capacity improvements	300,000	
Administrative expenses	50,000	
Ground water conservation grants in priority aquifers (Roger's proposal)	200,000	
Amount reserved for projects in other priority aquifers	1,000,000	
TOTAL FY2016 BUDGETED FUNDS	9,000,000	
Total Committed Funds		**$10,202,191.94**
TOTAL UNCOMMITTED FUNDS		**$559,992.48**
CURRENT ACCOUNT BALANCE		**$11,086,509.25**

Patton, Brian

From: Stanaway, Dan
Sent: Tuesday, July 07, 2015 4:39 PM
To: Stanaway, Dan; Hoekema, David; IWRB Members; Baxter, Garrick; Billy Wolfe; Chris Bryant; Clive Strong; Cresto, Liz; dbenner@fpc.org; Greg Sullivan; James Frisch; Jon Bowling; Knowles, Corbin; Kresta-Davis Butts; Luke, Tim; Lynn Tominaga; Marcus J. Gibbs; Mark Frost; Mark Henslee; Mark Noble; Merrill Brown; Merritt, Allen; Pam Pace; Patton, Brian; Peppersack, Jeff; Vincent, Sean; Senator Steve Bair; Spackman, Gary; Steve Tarbett; Vic Conrad; Weaver, Mathew; Westra, John; Clark, Cynthia (Bridge); Hipke, Wesley; Jamestucker@idahopower.com; shiger@idahopower.com; jks@idahowaters.com; Rigby, Richard
Subject: AADF update
Attachments: AADF.pdf; AADF Graphs-Weekly.pdf

Members of the Board and Swan Falls Monitoring Group,

Please see the attachments for graphical and numerical representation of the AADF at the Snake River near Murphy Gage.

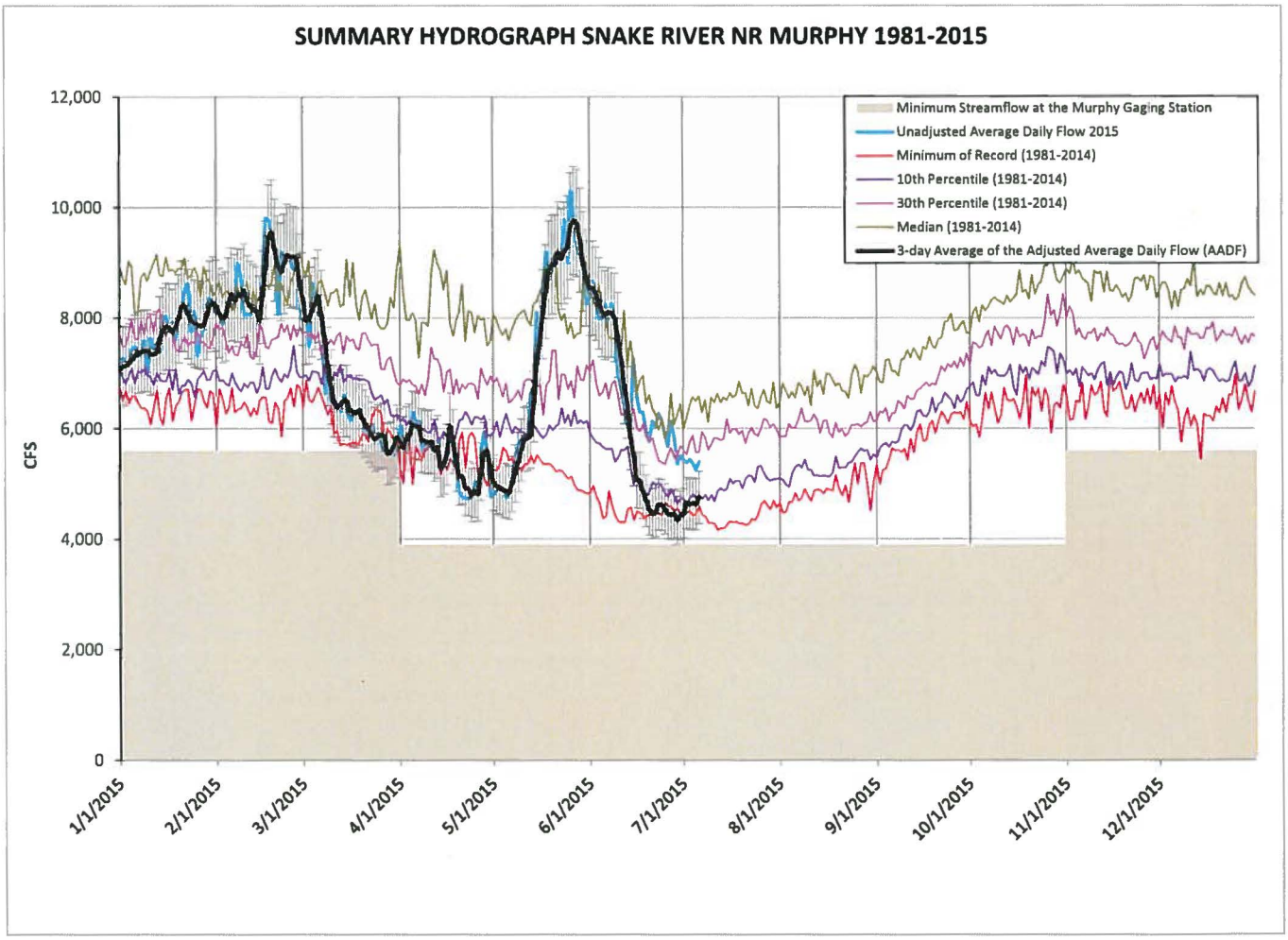
The most recent calculated AADF value for July 7th is 4748 cfs.

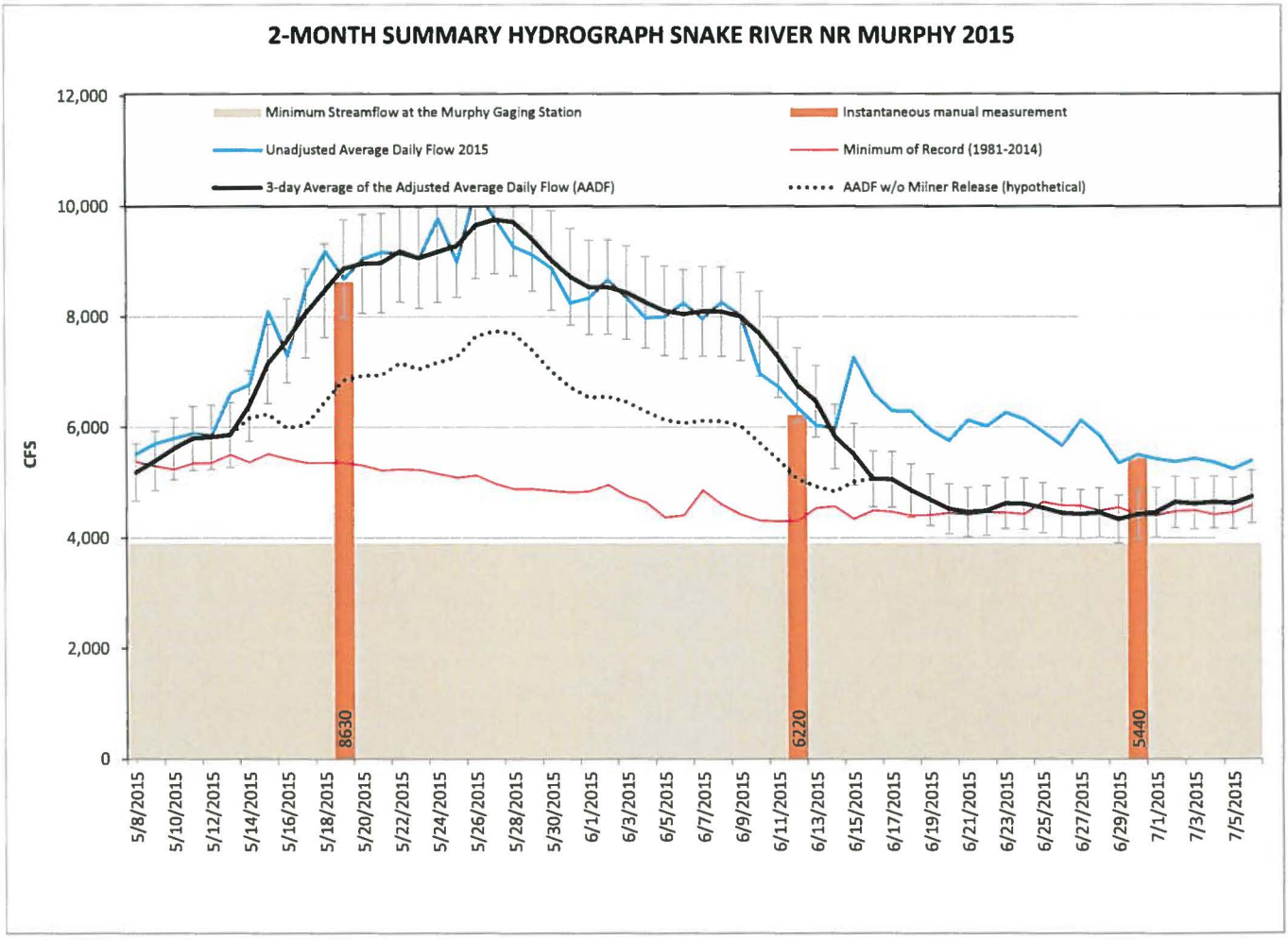
An instantaneous manual measurement will be taken July 8th. The previous June 30th measurement resulted in a -0.07 shift. We anticipate that tomorrow's manual measurement will result in another shift adjustment. There is currently a difference of approximately 300 cfs between the new USGS Snake River gage that is directly below Swan Falls Dam and the Snake River near Murphy gage.

Please contact me with questions or clarifications.

Thanks
Dan

Daniel Stanaway
Staff Hydrologist
Idaho Department of Water Resources
phone: (208) 287-4937
email: dan.stanaway@idwr.idaho.gov


SUMMARY HYDROGRAPH SNAKE RIVER NR MURPHY 1981-2015
CFS
12,000
10,000
8,000
6,000
4,000
2,000
0
1/1/2015
2/1/2015
3/1/2015
4/1/2015
5/1/2015
6/1/2015
7/1/2015
8/1/2015
9/1/2015
10/1/2015
11/1/2015
12/1/2015
Minimum Streamflow at the Murphy Gaging Station
Unadjusted Average Daily Flow 2015
Minimum of Record (1981-2014)
10th Percentile (1981-2014)
30th Percentile (1981-2014)
Median (1981-2014)
3-day Average of the Adjusted Average Daily Flow (AADF)


2-MONTH SUMMARY HYDROGRAPH SNAKE RIVER NR MURPHY 2015
Minimum Streamflow at the Murphy Gaging Station
Instantaneous manual measurement
Unadjusted Average Daily Flow 2015
Minimum of Record (1981-2014)
3-day Average of the Adjusted Average Daily Flow (AADF)
AADF w/o Milner Release (hypothetical)
CFS
12,000
10,000
8,000
6,000
4,000
2,000
0
8630
6220
5440
5/8/2015
5/10/2015
5/12/2015
5/14/2015
5/16/2015
5/18/2015
5/20/2015
5/22/2015
5/24/2015
5/26/2015
5/28/2015
5/30/2015
6/1/2015
6/3/2015
6/5/2015
6/7/2015
6/9/2015
6/11/2015
6/13/2015
6/15/2015
6/17/2015
6/19/2015
6/21/2015
6/23/2015
6/25/2015
6/27/2015
6/29/2015
7/1/2015
7/3/2015
7/5/2015

Patton, Brian

From: Stanaway, Dan
Sent: Wednesday, July 01, 2015 2:21 PM
To: Stanaway, Dan; Hoekema, David; IWRB Members; Baxter, Garrick; Billy Wolfe; Chris Bryant; Clive Strong; Cresto, Liz; dbenner@fpc.org; Greg Sullivan; James Frisch; Jon Bowling; Knowles, Corbin; Kresta-Davis Butts; Luke, Tim; Lynn Tominaga; Marcus J. Gibbs; Mark Frost; Mark Henslee; Mark Noble; Merrill Brown; Merritt, Allen; Pam Pace; Patton, Brian; Peppersack, Jeff; Vincent, Sean; Senator Steve Bair; Spackman, Gary; Steve Tarbett; Vic Conrad; Weaver, Mathew; Westra, John; Clark, Cynthia (Bridge); Hipke, Wesley; Jamestucker@idahopower.com; shiger@idahopower.com; jks@idahowaters.com
Attachments: AADF Graphs-Weekly.pdf; AADF.pdf

Members of the Board and Swan Falls Monitoring Group,

Please see the attachments for graphical and numerical representation of the AADF at the Snake River near Murphy Gage.

The most recent calculated AADF value for June 30th is 4673 cfs. The AADF has been in the range of approximately 4400 – 4900 cfs since the end of flow augmentation on June 12th. For the last 7 days of June, 2015 AADF values are greater than those of 2014 by an average of 190 cfs when comparing flows without Milner releases.

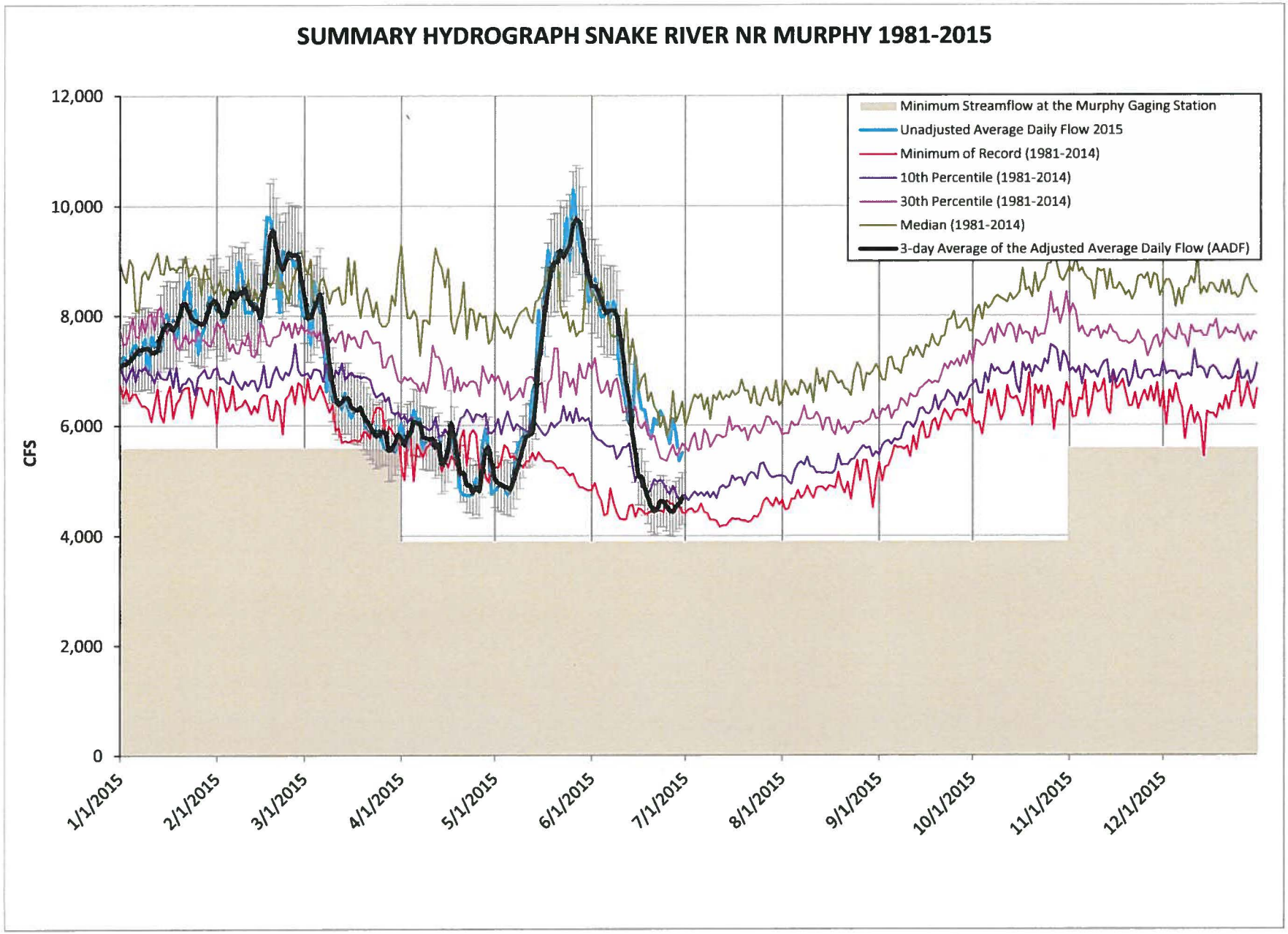
An instantaneous manual measurement was taken yesterday, June 30th, resulting in a -0.07 shift that reduced measured flow at the Snake River near Murphy gage. The AADF materials attached here reflect this shift adjustment. The previous manual measurement of June 12th resulted in no shift adjustment.

Return flows from Rock Creek, Malad River, and Salmon Falls Creek are near historical medians for this time of year. The Bruneau River flow is below the 25th percentile and has declined since the end of May to its current daily average value of 134 cfs on June 30th. WD02 diversions at CJ Strike are reduced for the next week to 10 days because of hay and grain cutting.

Please look for weekly AADF updates early in the week during the low flow period and contact me with questions.

Thanks
Dan

Daniel Stanaway
Staff Hydrologist
Idaho Department of Water Resources
phone: (208) 287-4937
email: dan.stanaway@idwr.idaho.gov


SUMMARY HYDROGRAPH SNAKE RIVER NR MURPHY 1981-2015
CFS
12,000
10,000
8,000
6,000
4,000
2,000
0
1/1/2015
2/1/2015
3/1/2015
4/1/2015
5/1/2015
6/1/2015
7/1/2015
8/1/2015
9/1/2015
10/1/2015
11/1/2015
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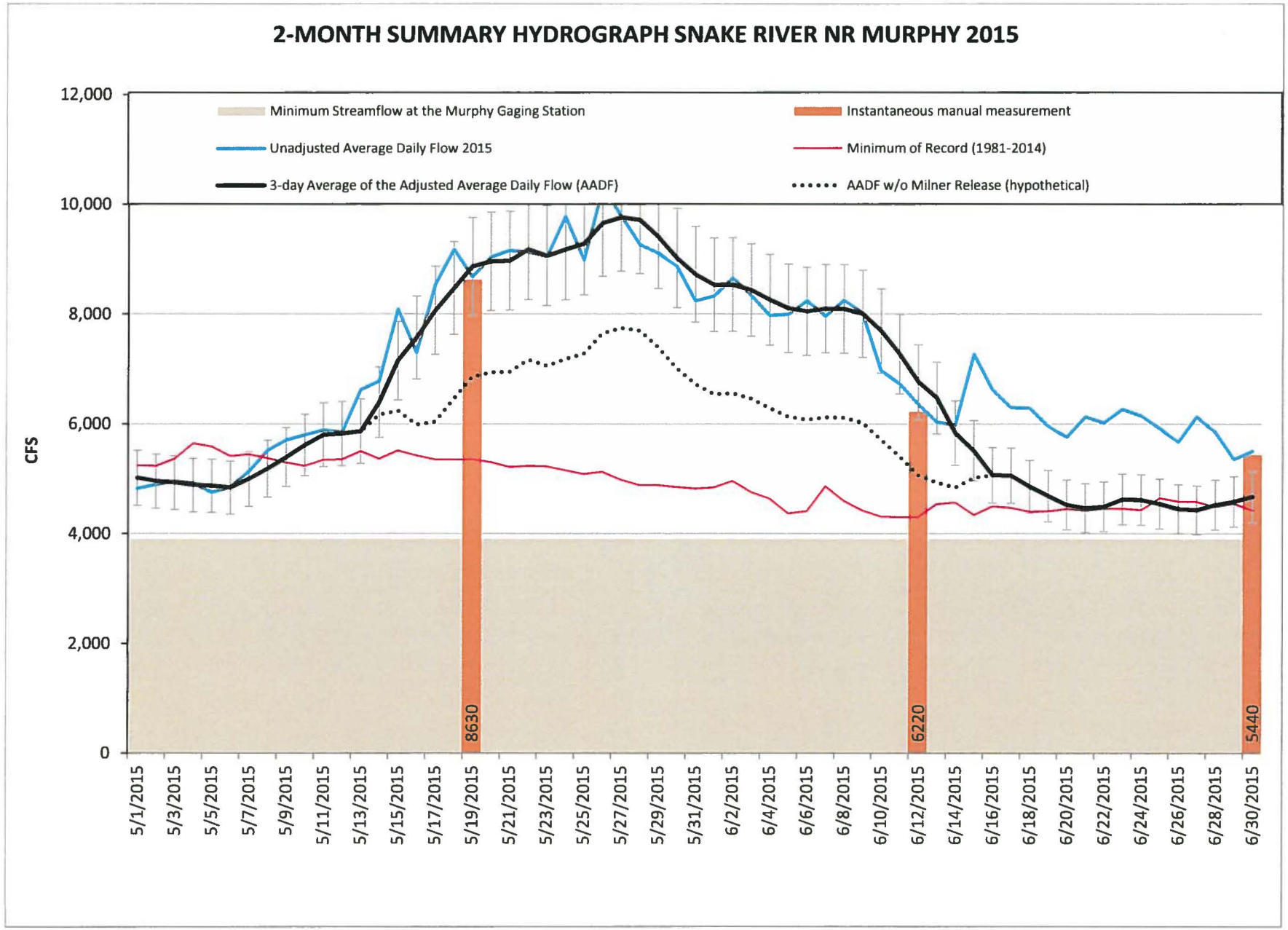
Minimum Streamflow at the Murphy Gaging Station
Unadjusted Average Daily Flow 2015
Minimum of Record (1981-2014)
10th Percentile (1981-2014)
30th Percentile (1981-2014)
Median (1981-2014)
3-day Average of the Adjusted Average Daily Flow (AADF)


2-MONTH SUMMARY HYDROGRAPH SNAKE RIVER NR MURPHY 2015
Minimum Streamflow at the Murphy Gaging Station
Instantaneous manual measurement
Unadjusted Average Daily Flow 2015
Minimum of Record (1981-2014)
3-day Average of the Adjusted Average Daily Flow (AADF)
AADF w/o Milner Release (hypothetical)
CFS
12,000
10,000
8,000
6,000
4,000
2,000
0
8630
6220
5440
5/1/2015
5/3/2015
5/5/2015
5/7/2015
5/9/2015
5/11/2015
5/13/2015
5/15/2015
5/17/2015
5/19/2015
5/21/2015
5/23/2015
5/25/2015
5/27/2015
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5/31/2015
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6/18/2015
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6/22/2015
6/24/2015
6/26/2015
6/28/2015
6/30/2015

Memorandum

To: Idaho Water Resource Board

From: Wesley Hipke, Randy Broesch

Date: May 10, 2015

Re: Milner-Gooding Canal Improvements for Eastern Snake Plain Aquifer Recharge

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The following is a status report on the Eastern Snake Plain Aquifer Recharge efforts occurring on the Milner Gooding Canal for the 2015-2016 recharge season. These projects are being coordinated with American Falls Reservoir District No. 2 (AFRD2) who owns and operations the Milner-Gooding Canal. The various projects and the associated recharge capacity are depicted on Figure 1 (the Dietrich Drop Hydro Plant project will be presented to the Board at a later time).

- Gravel Surfacing of the Canal Roads from Milepost 31 to the Shoshone Recharge Site- The canal road is used for IDWR Staff and AFRD2 personnel to inspect conditions of the canal while recharge is occurring. Currently some roads are maintained by hydro-plant operators for year round access. Other roads are primitive dirt roads that are navigable only when there are reasonably dry conditions. This project would provide a suitable driving surface during the recharge season (fall, winter, and spring) from the Milepost 31 Recharge Site to the Shoshone Recharge site. In total there are 25.0 miles of canal road, but upon IDWR staff's field inspection of the roads, only 21.0 miles will need a gravel surface to safely navigate the canal road during the recharge season. Staff is seeking authorization for expenditure of up to $150,000 to complete this project by the spring of 2016. To date gravel surfacing has been provided on the canal roads from I-84 to the Milepost 31 Recharge Site along the Milner-Gooding Canal.

- Milepost 31 Expansion- After one season of monitoring at the Milepost 31 Recharge Site, it appears the recharge basin can receive higher flows than are currently being delivered through the existing diversion turnout from the Milner-Gooding Canal. Construction of a second turnout would allow additional flow into the basin, thereby optimizing the recharge capacity of the site. The capacity of the existing diversion structure is approximately 150 cfs. The current estimated capacity of the Milepost 31 recharge site is 250 cfs. Therefore, staff recommends construction of a second turnout, capable of passing at least 100 cfs, to maximize the delivery of recharge water to the site. Staff is seeking authorization for expenditure of up to $200,000 to design, solicit bids, and construct the project this fall.

- Repair and Rehabilitation of the Concrete- Currently the Shoshone Recharge site is not being utilized because of the condition of a 3-mile section of the concrete flume along the Milner-Gooding Canal. There are several large and hairline cracks that need to be repaired and several of the walls are leaning because of the antiquated construction techniques used at the time. The flume is in need of rehabilitation to maintain general canal operations, and to allow delivery of non-irrigation season recharge flows. The current conditions prevent winter time recharge flows because of the potential freeze/thaw condition that would accelerate the growth of cracks and eventual decay of these critical conveyance structures.

  In order to capitalize on the potential of the Shoshone Recharge Basin by using the concrete flume conveyance structures, AFRD2 and the IWRB entered into to a cost share agreement to study the repair and rehabilitation of the concrete flumes near the Shoshone Recharge Site. The study identified several needs for improvement to maintain the longevity of this conveyance structure.

Improvements to repair and rehabilitate the canal include construction of buttress walls, filling in voids under the flume, and sealing large to hairline cracks along the full length of the flumes. AFRD2 has independently completed construction of buttress walls and fill the voids under the flumes with in-house staff as recommended in the study. It is now seeking assistance from the IWRB to cost share on the sealing of the large and hairline cracks in the concrete flumes.

Upon completion of the study, AFRD2 had a consultant prepare a bid package to solicit to contractors for sealing and rehabilitating the concrete flume. Bids were opened on June 15th at the AFRD2 office. The low bid for sealing and rehabilitating the concrete flume was $1,372,000. AFRD2 accepted the low bid, awarded the project, and is seeking a 50% cost share totaling $686,000 on the labor and materials. Staff is seeking authorization for expenditure of up to $700,000 for the rehabilitation of the concrete flume to allow delivery of winter-time recharge flows to the Shoshone Recharge Site in the season of 2016-2017. Construction is expected to commence immediately after the 2015 irrigation season and be completed prior to the commencement of the 2016 irrigation season.

REQUIRED ACTIONS: Consider the attached resolution to authorize expenditure of funds in the amounts identified below, not to exceed, from the Secondary Aquifer Planning, and Management and Implementation Fund to design and construct the expansion of Milepost 31 Recharge Site, Graveling the Canal Road Surface from Milepost 31 to the Shoshone Site, and to Repair and Rehabilitate the Concrete Flume sections of the Milner-Gooding Canal. The resolution also authorizes development of a twenty (20) year agreement between the IWRB and AFRD2 through which AFRD2 shall commit to deliver recharge water under the IWRB's water right at the same or greater delivery rate currently in effect for canals diverting from the Milner Pool. Conditions of the agreement will be negotiated upon approval of the resolution.

Gravel Surfacing of the Canal Roads from MP 31 to Shoshone Recharge Site	$150,000
Milepost 31 Expansion	$200,000
Repair and Rehabilitation of the Concrete Flumes	$700,000
Total Cost for Improvements with Resolution	**$1,050,000.00**

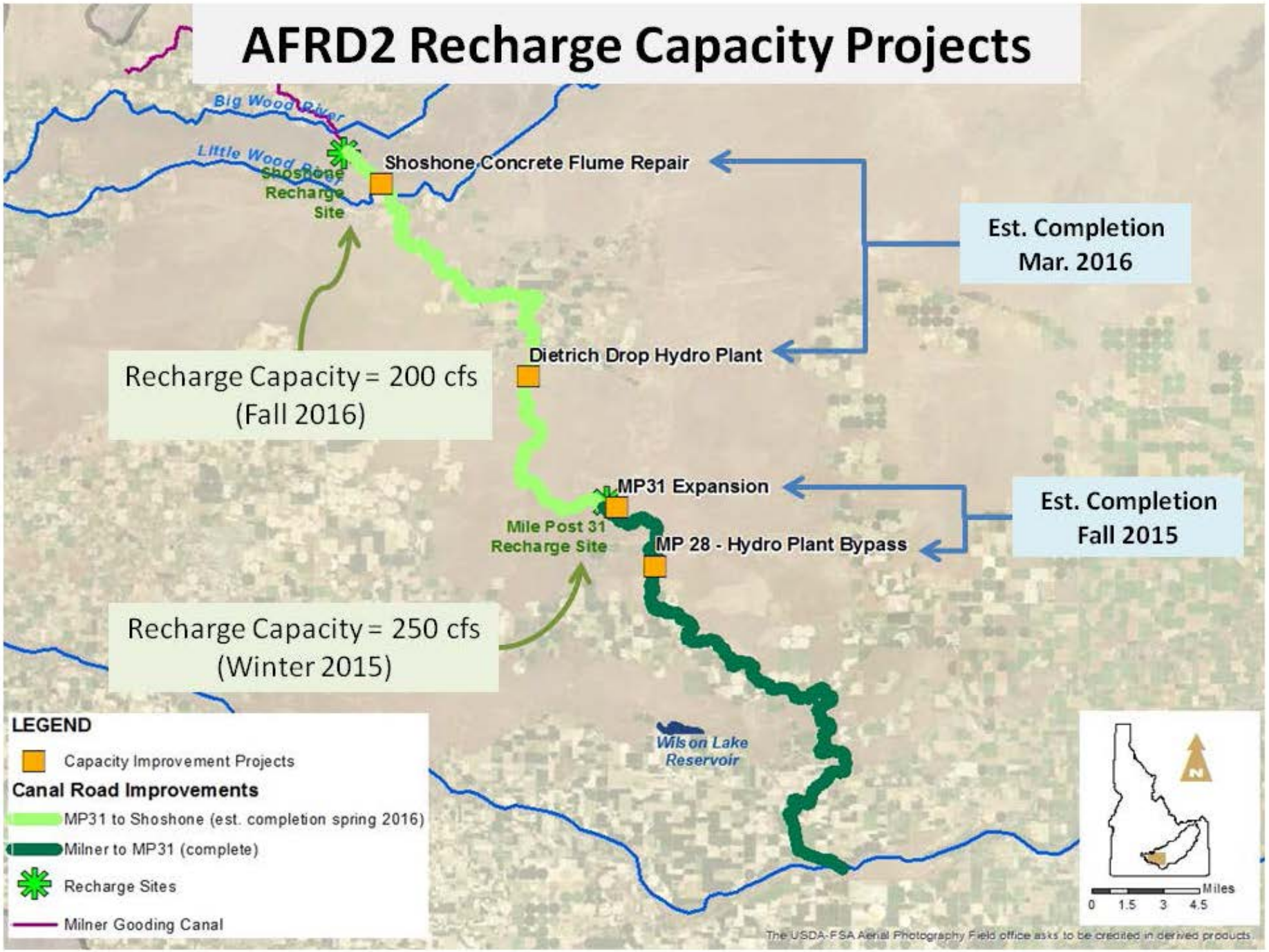

Figure 1. AFRD2 recharge capacity improvement projects on the Milner Gooding Canal.

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF AQUIFER STABILIZATION AND EASTERN SNAKE PLAIN AQUIFER RECHARGE	)))	A RESOLUTION TO APPROVE FUNDS FOR RECHARGE INFRASTRUCTURE IMPROVEMENTS

WHEREAS, House Bill 547 passed and approved by the 2014 legislature allocates $5 million annually from the Cigarette Tax to the Idaho Water Resource Board (IWRB), for statewide aquifer stabilization, with funds to be deposited into the Secondary Aquifer Planning, Management, and Implementation Fund; and

WHEREAS, House Bill 479 passed and approved by the 2014 legislature allocates $4 million for Eastern Snake Plain Aquifer (ESPA) managed recharge capacity, and Senate Bill 1190 passed and approved by the 2015 legislature allocated $500,000 for aquifer recharge; and

WHEREAS, the State of Idaho relies on spring discharge from the ESPA through the Thousand Springs to assist in meeting minimum streamflow water rights at the Murphy Gage that were established under the Swan Falls Agreement; and

WHEREAS, the ESPA has been losing approximately 200,000 acre-feet annually from aquifer storage since the 1950's resulting in declining ground water levels in the aquifer and declining spring flows from the aquifer; and

WHEREAS, stabilizing the ESPA will assist with maintaining the minimum flows at the Murphy Gage and reducing water user conflicts with groundwater and surface water users; and

WHEREAS, managed aquifer recharge was identified as a key strategy in the ESPA Comprehensive Aquifer Management Plan (CAMP) which held stabilization and recovery of the ESPA as a goal; and

WHEREAS, in 2014, American Falls Reservoir District No. 2 (AFRD2), which owns and operates the Milner-Gooding Canal, entered into a 5-year recharge delivery agreement with the IWRB under an incentivized payment plan; and

WHEREAS, AFRD2 delivered recharge water under the IWRB's water right during the 2014-2015 season and plans to continue to deliver recharge water during the non-irrigation season through seepage from the Milner-Gooding Canal at Milepost (MP) 31, Shoshone, and the Big Wood River recharge locations; and

WHEREAS, to increase reliability and capacity of recharge during the non-irrigation season, AFRD2 proposes several improvements to its conveyance system; and

WHEREAS, a concrete flume that currently conveys water through a 3-mile portion of the Milner-Gooding Canal requires rehabilitation to maintain normal operations and to allow delivery of water during winter months; and

WHEREAS, an engineering study of the necessary concrete flume improvements was completed in March of 2015 and AFRD2 accepted a bid for construction of the improvements of

$1,372,000 in June, 2015; and

WHEREAS, AFRD2 proposes to expand the recharge capacity of the MP31 Recharge Site from approximately 150 cubic feet per second (cfs) to 250 cfs by installing a larger turnout structure at an estimated cost for design and construction of $200,000; and

WHEREAS, to allow safe access by personnel along the Milner-Gooding Canal access road during winter months, AFRD2 completed improvements to the canal access road from Milner Dam to MP31 in 2014 to 2015;

WHEREAS, in order to accomplish non-irrigation season recharge in the Milner-Gooding Canal from the MP31 Recharge Site to the Shoshone Recharge Site, it is necessary to complete additional canal access road improvements to Big Wood River at an estimated cost of $150,000; and

WHEREAS, on May 22, 2015, the IWRB adopted a budget for Fiscal Year 2016 authorizing use of continuously-appropriated Secondary Aquifer Planning and Management, and Implementation Fund for ESPA managed aquifer infrastructure development; and

NOW THEREFORE BE IT RESOLVED that the IWRB authorizes expenditures for the following projects up to the identified amount, not to exceed actual costs, from Secondary Aquifer Planning, Management, and Implementation Fund, in order to deliver water under the IWRB's recharge water right from the Milner Pool to the Milepost 31, Shoshone, and Big Wood River recharge sites:

1) Up to $700,000 (approximately fifty percent of the project bid price) for labor and material costs to repair and rehabilitate the concrete flume in the Milner-Gooding Canal
2) Up to $200,000 for the design and construction to expand the MP31 Recharge Site
3) Up to $150,000 for labor and materials to improve the canal road from MP31 to the Big Wood River

BE IT FURTHER RESOLVED that the IWRB and AFRD2 shall enter into a twenty (20) year agreement through which AFRD2 commits to deliver recharge water under the IWRB's water right. The recharge delivery rate shall be at least that currently in effect for canals diverting from the Milner Pool.

DATED this 14th day of July, 2015.

_____
ROGER CHASE, Chairman
Idaho Water Resource Board

ATTEST _____
VINCE ALBERDI, Secretary

Memorandum

To: Idaho Water Resource Board

From: Cynthia Bridge Clark

Date: July 2, 2015

Re: Status of Storage Water Studies

The following is a status report on the surface water storage studies initiated by the Idaho Water Resource Board (IWRB). This memorandum describes activities and progress since the last IWRB meeting in May 2015.

Weiser-Galloway Project

- Operations Analysis: The analysis includes evaluation of different operation scenarios to optimize hydropower, reduce flood risk, provide recreation, provide additional water supply for the basin, and provide flows for anadromous fish recovery efforts. A final report and results of the Operations Analysis will be presented at a IWRB Storage Committee meeting to be scheduled in fall of 2015 or in coordination with the results of the other ongoing studies.
- Galloway reservoir size optimization study: The IWRB and Corps initiated a study to optimize the project size, develop a conceptual design layout, and revise construction costs. The study will use the models, hydrologic data, operational constraints, water demands, and total benefits developed in the Operations Analysis. It will also leverage the project expertise of the technical study team who performed the Operations Analysis to provide a more refined project design. On June 15, 2015 IWRB Staff attended a 4-day design charette in Walla Walla, WA to kickoff the optimization study. From the meeting, alternative project designs were developed along with initial screening criteria to assist with the research and development of the study. Results will be coordinated with Operations Analysis.
- Evaluation of Weiser River Trail impacts and relocation options: The project as proposed would inundate 15 miles of the Weiser River Trail (WRT). This analysis will identify potential relocation options to better understand impacts, and mitigation or enhancement opportunities to the WRT. The analysis will include coordination with WRT stakeholders. The study was initiated in mid-June and a site visit is planned in July for the project team. Initial data gathering for both the Consultant and IWRB staff have commenced and will continue for next 6 months on this evaluation.
- Federal Energy Regulatory Commission (FERC) preliminary permit: IDWR staff is developing a plan to compile a pre-application document (PAD) during the preliminary permit period. This includes a project schedule/timeline and a plan for stakeholder coordination. Staff filed progress report No. 1 on April 6, 2015. Staff will provide a recommended plan to complete the necessary studies and actions during the preliminary permit period once the results of the ongoing project studies are complete.

REQUIRED ACTIONS: No action is required by the IWRB at this time.

Boise River Feasibility Study

- Evaluation of the selected water supply and flood risk reduction measures is ongoing. This includes the Arrowrock Dam raise, managed aquifer recharge, upgraded irrigation headgates, replacement of push-up dams, bridge upgrades, controlled flooding of pits/ponds, temporary conveyance of water in the floodplain, flow split structure, and other non-structural measures.

- Reservoir modeling and refill frequency of the Arrowrock Dam raise has been completed to help determine an optimum size of a potential raise. Corresponding cost engineering, real estate impacts analysis and Environmental Impacts Statement (EIS) activities are ongoing.
- The Corps continues to hold regular meetings with state and federal agencies to evaluate potential impacts related to each measure. Agency outreach will continue throughout the feasibility process.
- Staff and the Corps have determined that the Lands, Easements, Right-of-Way, Relocations, and Dredging (LERRD) process will be initiated after a record of decision has been made regarding the feasibility study. In the mean time, a preliminary lands assessment is scheduled to begin July 20, 2015 to evaluate the lands needs for the proposed project measures. A process to withdraw lands under the Arrowrock Dam measure has been developed.
- IDWR staff is coordinating with the Corps to quantify water supply needs and to provide information on the draft Environmental Impact Statement (EIS) related to all of the measures.
- A revised schedule was submitted to IWRB Staff on June 12, 2015. The revised schedule has a draft feasibility study report and EIS open for public review on February 2016.

REQUIRED ACTIONS: No action is required by the IWRB at this time.

Island Park Reservoir Enlargement Project

- IDWR staff is preparing to issue a Request for Qualifications (RFQ) to complete an assessment of potential impacts to land and real estate resulting from a raise of the normal reservoir water surface elevation of the Island Park Reservoir (Land Assessment).
- An agreement with the US Bureau of Reclamation to cooperate on the Assessment is being developed.

REQUIRED ACTIONS: No action is required by the IWRB at this time.

Capital Press
The West's Ag Website

Idaho negotiations seek to stave water calls

John O'Connell
Capital Press

Published:
June 25, 2015 8:31AM

Last changed:
June 25, 2015 8:32AM

Idaho House Speaker Scott Bedke stands outside of the Pocatello, Idaho, lawfirm Racine, Olson, Nye, Budge and Bailey on June 18, prior to mediating negotiations between members of Idaho Ground Water Appropriators, Inc., and the Surface Water Coalition on an agreement intended to stabilize the Eastern Snake Plain Aquifer. JOHN O'CONNELL/CAPITAL PRESS

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4 of 4

A proposed agreement could stabilize Idaho's aquifer into the future and avert potentially ruinous water calls.

BOISE — State leaders say Idaho's economic future hangs in the balance as surface water and groundwater users seek to hammer out terms of a tenuous agreement resolving a decade-old water call.

Irrigators with the Surface Water Coalition filed the call against junior well users on the Eastern Snake Plain Aquifer in response to the role of their pumping on declining spring flows into the Snake River from Blackfoot to Milner Dam.

Rather than pursuing a solution to eek through a single season, as in the past, the sides have proposed a monumental plan to address underlying causes behind the unsustainable groundwater outlook, thereby averting future water calls.

They agree failure to act would leave Idaho on a path toward a depleted aquifer and well curtailments that would devastate farms and industries from Magic Valley to Ashton. State political leaders, including Gov. Butch Otter and House Speaker Scott Bedke, have taken a lead role in facilitating negotiations.

"I am optimistic we'll have a valid, defensible proposal that each of these entities can take back to their boards and put on the table," said Bedke, an Oakley farmer and rancher who is acting as mediator in the discussions. "It's too important to not be successful."

The urgency to resolve the longstanding problem was heightened on May 1, when groundwater users failed to meet a deadline to acquire 89,000 acre feet Idaho Department of Water Resources Director Gary Spackman ordered in mitigation for this season's surface water injuries.

But Spackman stayed curtailment — which would have affected wells junior to 1982, including more than 86,000 acres of agricultural land, cities and industry — when the parties announced their intentions to negotiate a long-term settlement.

Agreement terms

The sides have agreed on broad concepts.

The Coalition has withdrawn its methodology order, which sets the rules governing curtailment. Idaho Ground Water Appropriators, Inc., will provide 110,000 acre feet of mitigation water this season, which should now be feasible given heavy May rainfall.

Perhaps the hardest pill for IGWA irrigators to swallow is a proposed mandate that they reduce their water usage by roughly 13 percent in the future to conserve 240,000 acre feet annually, about equal to the aquifer's rate of decline. The reduction would be averaged out over a few years to accommodate rotations with higher-water crops.

IGWA would also provide the coalition a flat 50,000 acre feet of mitigation water annually. In wet years, mitigation water could be left to soak into the aquifer, called managed recharge.

IGWA will also spend about $1.1 million per year to expand "soft conversions" that switch well users to surface water when possible.

To monitor progress, wells would be fitted with meters, replacing less accurate consumption estimates based on power usage. And water rights transfers would be scrutinized more closely.

A final term sheet addressing the finer points of the agreement is due to Spackman by July 1, and the sides have until Aug. 1 to get the plan approved by as many of their members as possible. Groundwater users who opt in will be granted safe harbor going forward; those who don't will remain subject to curtailment.

The state has also agreed to devote resources toward building aquifer levels, promising to build new infrastructure for conducting aquifer recharge, with the goal of injecting 250,000 acre feet of surface water into the aquifer annually.

"The good news is everyone is kind of willing to do their part, but they don't want to do the part their neighbor is responsible for," Bedke said prior to mediating negotiations in Pocatello on June 18.

Change on the horizon

Rep. Jim Patrick, R-Twin Falls, who farms with surface water, believes groundwater users could achieve much of the proposed water savings by removing pivot end guns and better maintaining sprinklers to reduce leaks.

"When there's accountability — and a 13 percent reduction creates that accountability — people will watch their crops and not over-water," Patrick said.

But Patrick fears large-scale curtailment would be economically devastating.

Brian Olmstead, general manager of Twin Falls Canal Co., predicts farmers will also have to change crop rotations and farming practices. Olmstead, whose company was one of two Coalition members that stood to receive mitigation water this season under Spackman's order, anticipates well irrigators will shift from raising water-intensive forage crops to more water-efficient malt barley.

"This may very well have a limiting affect on expansion of dairy cow levels on the aquifer," Olmstead said.

He believes growers may opt to graze rather than plant their least productive ground.

"There are ways to conserve water and still make a profit," Olmstead said.

Olmstead hopes additional savings will be achieved by eliminating illegal diversions.

IGWA attorney Randy Budge expects most affected groundwater users will opt into the agreement, but agrees they'll have to raise fewer water-intensive crops and fallow some acres to meet the necessary reduction.

"We're at a crossroads where we can have chronic pain or acute pain," Budge said.

Gradual decline

Farming practices of the past, such as running canals during winter and flood irrigating crops, artificially enhanced aquifer levels through extra seepage.

The aquifer peaked around 1960. Then levels began a steady and continuing decline, largely due to the rise of efficient sprinkler irrigation and the expansion of groundwater pumping.

"There have been a lot of industries built up on the water levels that were at least temporarily artificially enhanced by early irrigation practices of flood irrigation," said Lyle Swank, watermaster for the district that includes the Upper Snake River.

Nearly 30 years ago, Idaho was among the first states to acknowledge concerns with its major groundwater source when it commenced with the Snake River Adjudication — an exhaustive process to catalogue tens of thousands of water rights and establish how much water was available to be appropriated. The recent completion of that process, coupled with improvements to state groundwater models, has opened the door to water calls by senior users, in a state governed by the principle "first in time, first in right."

To date, calls have all been resolved through mitigation plans, but absent change, water managers fear the day will come when curtailment is the only option.

Lingering questions

The Coalition's call stems from spring declines at the center of the aquifer and encompasses well irrigators throughout the Snake Plain.

Growers in the aquifer's eastern portion are less experienced at dealing with water calls. Swank believes they face a steep learning curve but will be critical to the agreement's success.

"There are people who haven't been on the front lines of this who don't understand how big of a concern it could be if they don't get a permanent solution," Swank said.

Growers also eagerly await answers to questions regarding how much credit farmers should receive for their past efforts to implement water-efficient farming practices and the amount of burden that should be placed on junior well users relative to pumpers with more senior rights. Bedke said such details will likely be addressed by individual groundwater districts.

There are even questions regarding whom should be at the table, based on a recent court ruling Fifth District Judge Eric Wildman rendered in a call filed by the Rangen, Inc., trout farm in Hagerman. Wildman disagreed with IDWR's justification for a trim line — a practice excluding portions of the aquifer from calls in which the injured party would derive relatively insignificant benefits from well curtailments.

A trim line was also applied in the Coalition's call, excluding about 20 percent of the aquifer below parts of Rexburg, St. Anthony, Bliss, Wendell and King Hill. Though the Coalition's trim line was based on different rationale, IDWR Deputy Director Mat Weaver said it's on shaky ground, given the Rangen ruling, and growers within the designated area of common groundwater but outside of the trim line could be affected by a future call.

Otter said he won't let such details derail the agreement.

"Reaching a consensus agreement that takes into account all of the competing needs and the limited resource is absolutely necessary for continuing development and economic growth in the watershed," said Mark Warbis, a spokesman for Otter. "We've long since passed the time when we can consider surface and groundwater as a separate resource."

SETTLEMENT AGREEMENT ENTERED INTO JUNE 30, 2015 BETWEEN PARTICIPATING MEMBERS OF THE SURFACE WATER COALITION[1] AND PARTICIPATING MEMBERS OF THE IDAHO GROUND WATER APPROPRIATORS, INC.[2]

IN SETTLEMENT OF LITIGATION INVOLVING THE DISTRIBUTION OF WATER TO THE MEMBERS OF THE SURFACE WATER COALITION, THE PARTIES AGREE AS FOLLOWS:

1. **Objectives.**
   a. Mitigate for material injury to senior surface water rights that rely upon natural flow in the Near Blackfoot to Milner reaches to provide part of the water supply for the senior surface water rights.
   b. Provide "safe harbor" from curtailment to members of ground water districts and irrigation districts that divert ground water from the Eastern Snake Plain Aquifer (ESPA) for the term of the Settlement Agreement and other ground water users that agree to the terms of this Settlement Agreement.
   c. Minimize economic impact on individual water users and the state economy arising from water supply shortages.
   d. Increase reliability and enforcement of water use, measurement, and reporting across the Eastern Snake Plain.
   e. Increase compliance with all elements and conditions of all water rights and increase enforcement when there is not compliance.
   f. Develop an adaptive groundwater management plan to stabilize and enhance ESPA levels to meet existing water right needs.

[1] The Surface Water Coalition members ("SWC") are A&B Irrigation District (A&B), American Falls Reservoir District No. 2 (AFRD2), Burley Irrigation District (BID), Milner Irrigation District (Milner), Minidoka Irrigation District (MID), North Side Canal Company (NSCC), and Twin Falls Canal Company (TFCC). The acronym "SWC" in the Settlement Agreement is used for convenience to refer to all members of the Surface Water Coalition who are the actual parties to this Settlement Agreement.

[2] The Idaho Ground Water Appropriators, Inc. ("IGWA") are Aberdeen-American Falls Ground Water District, Bingham Ground Water District, Bonneville-Jefferson Ground Water District, Carey Valley Ground Water District, Jefferson Clark Ground Water District, Madison Ground Water District, Magic Valley Ground Water District, North Snake Ground Water District, Southwest Irrigation District, and Fremont-Madison Irrigation District, Anheuser-Busch, United Water, Glambia Cheese, City of Blackfoot, City of American Falls, City of Jerome, City of Rupert, City of Heyburn, City of Paul, City of Chubbuck, and City of Hazelton. The acronym "IGWA" in the Settlement Agreement is used for convenience to refer to all members of the Idaho Ground Water Appropriators, Inc. who are the actual parties to this Settlement Agreement.

2. **Near Term Practices.**
    a. For 2015 IGWA on behalf of its member districts will acquire a minimum of 110,000 ac-ft for assignment as described below:
        i. 75,000 ac-ft of private leased storage water shall be delivered to SWC;
        ii. 15,000 ac-ft of additional private leased storage water shall be delivered to SWC within 21 days following the date of allocation;
        iii. 20,000 ac-ft of common pool water shall be obtained by IGWA through a TFCC application to the common pool and delivered to SWC within 21 days following the date of allocation; and
        iv. Secure as much additional water as possible to be dedicated to on-going conversion projects at a cost not to exceed $1.1 million, the cost of which will be paid for by IGWA and/or the converting members.
    b. The parties stipulate the director rescind the April 16 As-Applied Order and stay the April 16 3rd Amended Methodology Order, and preserve all pending rights and proceedings.
    c. "Part a" above shall satisfy all 2015 "in-season" mitigation obligations to the SWC.
    d. This Settlement Agreement is conditional upon approval and submission by the respective boards of the Idaho Ground Water Appropriators, Inc. ("IGWA") and the Surface Water Coalition ("SWC") to the Director by August 1.
    e. If the Settlement Agreement is not approved and submitted by August 1 the methodology order shall be reinstated and implemented for the remainder of the irrigation season.
    f. Parties will work to identify and pass legislative changes needed to support the objectives of this Settlement Agreement, including, development of legislation memorializing conditions of the ESPA, obligations of the parties, and ground water level goal and benchmarks identified herein.

3. **Long Term Practices, Commencing 2016**.
    a. *Consumptive Use Volume Reduction.*
        i. Total ground water diversion shall be reduced by 240,000 ac-ft annually.
        ii. Each Ground Water and Irrigation District with members pumping from the ESPA shall be responsible for reducing their proportionate share of the total annual ground water reduction or in conducting an equivalent private recharge activity. Private recharge activities cannot rely on the Water District 01 common Rental Pool or credits acquired from third parties, unless otherwise agreed to by the parties.
    b. *Annual storage water delivery.*
        i. IGWA will provide 50,000 ac-ft of storage water through private lease(s) of water from the Upper Snake Reservoir system, delivered to SWC 21 days after the date of allocation, for use to the extent needed to meet irrigation

requirements. Any excess storage water will be used for targeted conversions and recharge as determined by SWC and IGWA.

ii. IGWA shall use its best efforts to continue existing conversions in Water Districts 130 and 140.

c. *Irrigation season reduction.*

Ground water users will not irrigate sooner than April 1 or later than October 31.

d. *Mandatory Measurement Requirement.*

Installation of approved closed conduit flow meter on all remaining unmeasured and power consumption coefficient (PCC) measured ground water diversions will be completed by the beginning of the 2018 irrigation season. Measurement device installation will be phased in over three years, by ground water district, in a sequence determined by the parties. If an adequate measurement device is not installed by the beginning of the 2016 irrigation season, a cropping pattern methodology will be utilized until such measuring device is installed.

e. *Ground Water Level Goal and Benchmarks.*

i. Stabilize and ultimately reverse the trend of declining ground water levels and return ground water levels to a level equal to the average of the aquifer levels from 1991-2001. Utilize groundwater levels in mutually agreed upon wells with mutually agreed to calculation techniques to measure ground water levels. A preliminary list of 19 wells has been agreed to by the parties, recognizing that the list may be modified based on additional technical information.

ii. The following benchmarks shall be established:

- Stabilization of ground water levels at identified wells by April 2020, to 2015 ground water levels;
- Increase in ground water levels by April 2023 to a point half way between 2015 ground water levels and the ground water level goal; and
- Increase of ground water levels at identified wells by April 2026 to the ground water level goal.

iii. Develop a reliable method to measure reach gain trends in the Blackfoot to Milner reach within 10 years.

iv. When the ground water level goal is achieved for a five year rolling average, ground water diversion reductions may be reduced or removed, so long as the ground water level goal is sustained.

v. If any of the benchmarks, or the ground water level goal, is not achieved, adaptive measures will be identified and implemented per section 4 below.

f. *Recharge*.

Parties will support State sponsored managed recharge program of 250 KAF annual-average across the ESPA, consistent with the ESPA CAMP and the direction in HB

547. IGWA's contributions to the State sponsored recharge program will be targeted for infrastructure and operations above American Falls.

g. *NRCS Programs*.
Parties will support NRCS funded permanent water conservation programs.

h. *Conversions*.
IGWA will undertake additional targeted ground water to surface water conversions and/or fallow land projects above American Falls (target near Blackfoot area as preferred sites).

i. *Trust Water Rights*.
The parties will participate and support the State in initiating and conducting discussions regarding long-term disposition of trust water rights and whether trust water rights should be renewed or cancelled, or if certain uses of trust water rights should be renewed or cancelled.

j. *Transfer Processes*.
Parties agree to meet with the State and water users to discuss changes in transfer processes within or into the ESPA.

k. *Moratorium Designations*.
State will review and continue the present moratoriums on new applications within the ESPA, including the non-trust water area.

l. *IDWR Processes*.
Develop guidelines for water right applications, transfers and water supply bank transactions for consideration by the IDWR.

m. *Steering Committee*.
   i. The parties will establish a steering committee comprised of a representative of each signatory party and the State.
   ii. Steering committee will be formed on or before September 10, 2015 and will meet at least once annually.
   iii. The Steering Committee will develop an adaptive management plan for responding to changes in aquifer levels and reach gain trends, review progress on implementation and achieving benchmarks and the ground water goal.
   iv. A technical work group ("TWG") will be created to support the Steering Committee. The TWG will provide technical analysis to the Steering Committee, such as developing a better way to predict and measure reach gains and ground water levels, to assist with the on-going implementation and adaptive management of the Settlement Agreement.

4. **Adaptive Water Management Measures**.
   a. If any of the benchmarks or the ground water level goal is not met, additional recharge, consumptive use reductions, or other measures as recommended by the

Steering Committee shall be implemented by the participating ground water parties to meet the benchmarks or ground water level goal.

b. The SWC, IGWA and State recognize that even with full storage supplies, present (2015) reach gain levels in the Near Blackfoot to Milner reach (natural flows) are not sufficient to provide adequate and sustainable water supplies to the SWC.

5. **Safe Harbor**.
   No ground water user participating in this Settlement Agreement will be subject to a delivery call by the SWC members as long as the provisions of the Settlement Agreement are being implemented.

6. **Non-participants**.
   Any ground water user not participating in this Settlement Agreement or otherwise have another approved mitigation plan will be subject to administration.

7. **Term**.
   This is a perpetual agreement.

8. **Binding Effect**.
   This Agreement shall bind and inure to the benefit of the respective successors of the parties.

9. **Entire Agreement**.

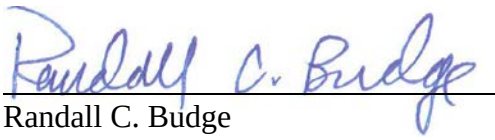
   This Agreement sets forth all understandings between the parties with respect to SWC delivery call. There are no other understandings, covenants, promises, agreements, conditions, either oral or written between the parties other than those contained herein. The parties expressly reserve all rights not settled by this Agreement.

10. **Effect of Headings**.
    Headings appearing in this Agreement are inserted for convenience and reference and shall not be construed as interpretations of the text.

11. **Effective Date**.
    This Agreement shall be binding and effective when the following events have occurred:
    a. This Agreement is approved and executed by the participating parties consistent with paragraph 2.e. above; and
    b. IGWA has assigned all of the storage water required by paragraph 2.a.i. , ii., and iii. to the SWC by July 8, 2015.

The parties have executed this Agreement on the date following their respective signatures.

RACINE OLSON NYE BUDGE AND BAILEY, CHARTERED



7/1/2015

Randall C. Budge Date

Attorney for Idaho Ground Water Appropriators, Inc.

IDAHO GROUND WATER APPROPRIATORS, INC.

7/1/2015

Tim Deeg Date

President

FLETCHER LAW OFFICE

7-2-15

W. Kent Fletcher Date

On Behalf of the Surface Water Coalition

BARKER ROSHOLT AND SIMPSON LLP

7/7/15

John K. Simpson Date

On Behalf of the Surface Water Coalition

The following signature pages are for the August 1 Deadline

W. Kent Fletcher Date

Attorney for Minidoka Irrigation District
and American Falls Reservoir District No. 2

BARKER ROSHOLT AND SIMPSON LLP

_____

John K. Simpson Date

Attorney for A&B Irrigation District, Burley Irrigation District, Milner Irrigation District, North Side Canal Company, and Twin Falls Canal Company

ABERDEEN-AMERICAN FALLS GROUND WATER DISTRICT

_____

Nick Behrend Date

Chairman

BINGHAM GROUND WATER DISTRICT

Craig Evans Date

Chairman

BONNEVILLE-JEFFERSON GROUND WATER DISTRICT

_____

Dane Watkins Date

Chairman

CAREY VALLEY GROUND WATER DISTRICT

Leta Hansen Date

Chairman

JEFFERSON CLARK GROUND WATER DISTRICT

_____

Kirk Jacobs Date

Chairman

MADISON GROUND WATER DISTRICT

Jason Webster Date

Chairman

MAGIC VALLEY GROUND WATER DISTRICT

Dean Stevenson Date

Chairman

NORTH SNAKE GROUND WATER DISTRICT

Lynn Carlquist Date

Chairman

FREEMONT MADISON IRRIGATION DISTRICT

_____

Dale L. Swenson Date

Manager

SOUTHWEST IRRIGATION DISTRICT

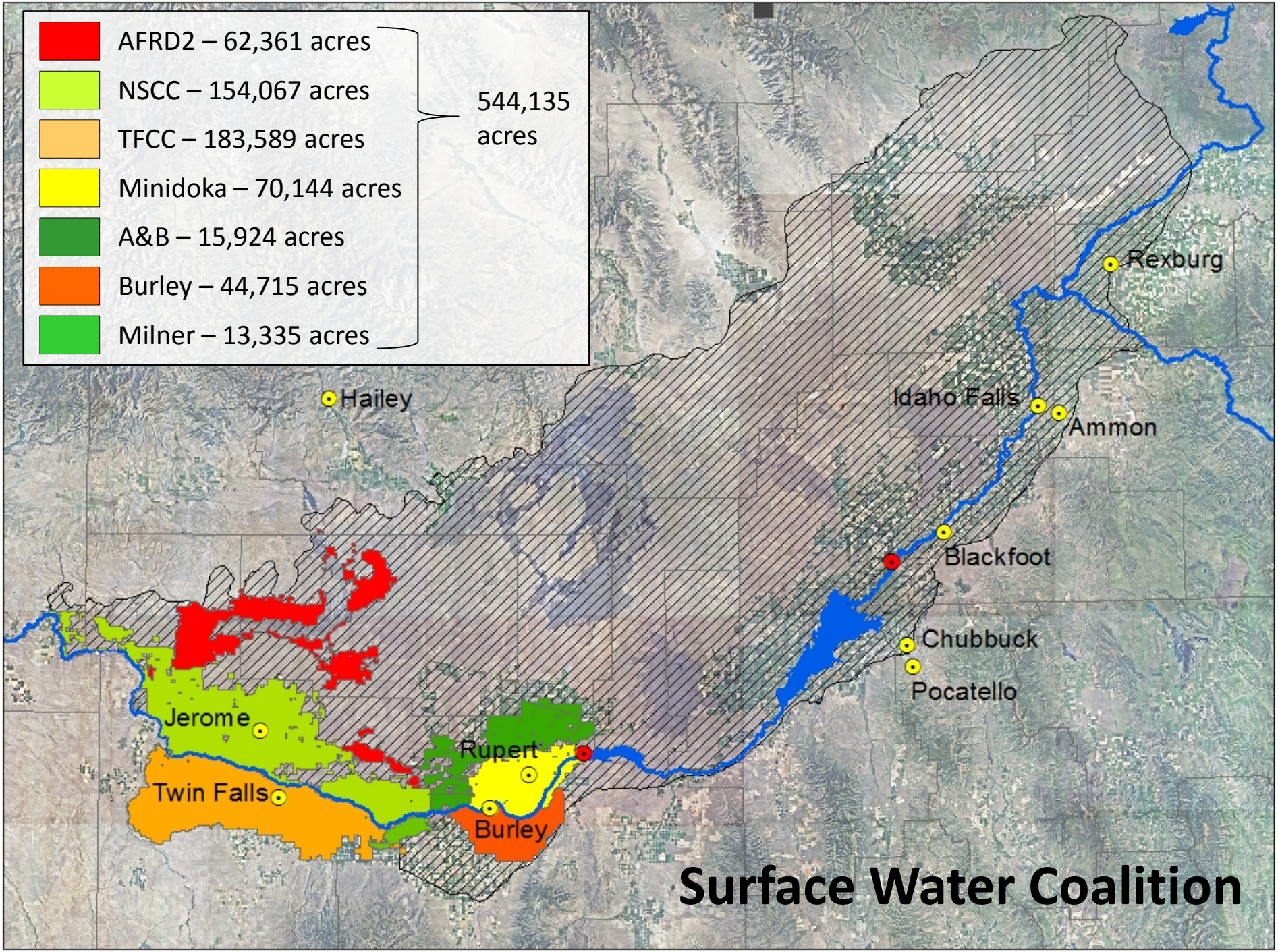
RANDY BROWN Date

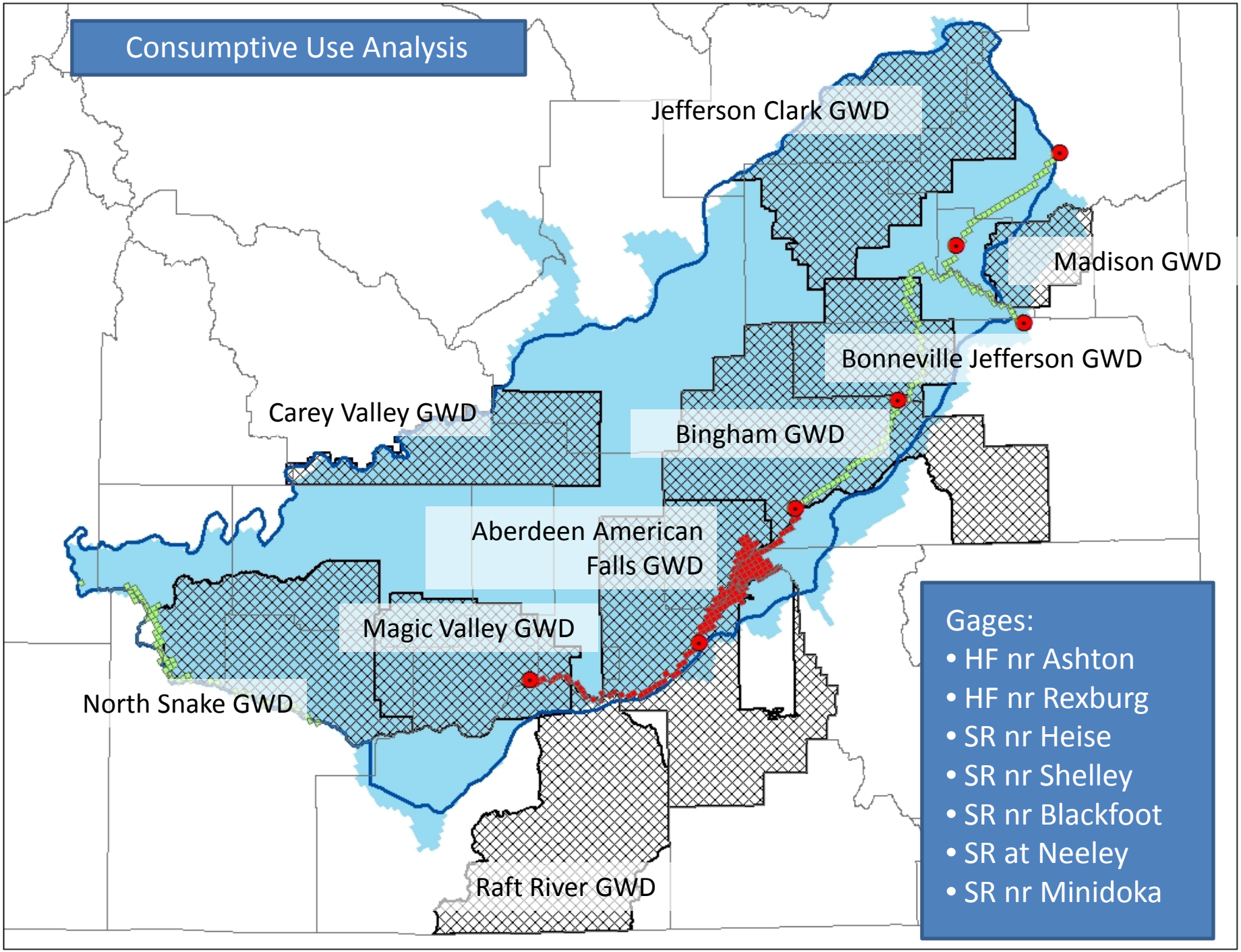
Chairman

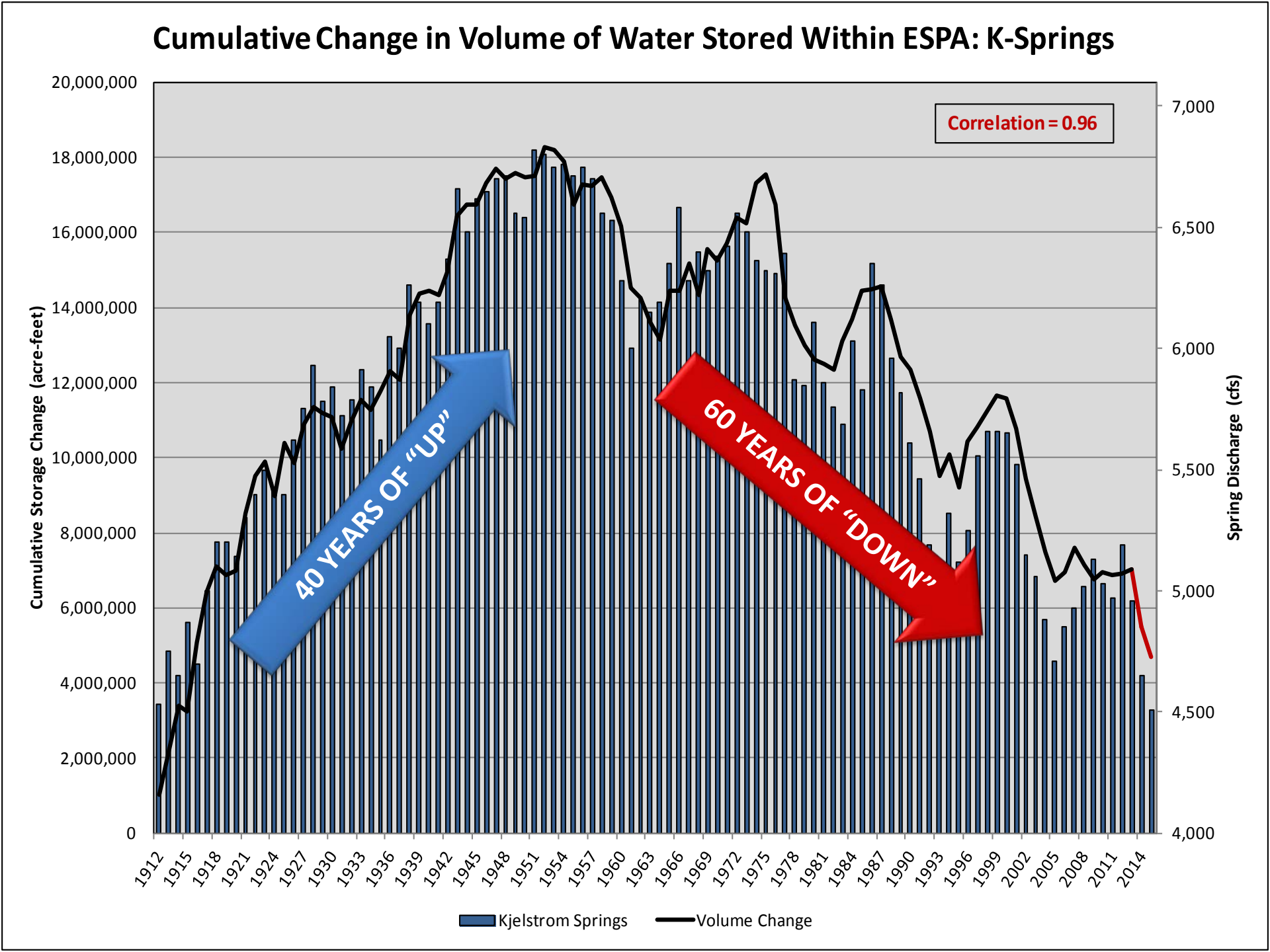
SWC Delivery Call Settlement Agreement

Idaho Water Resource Board Meeting

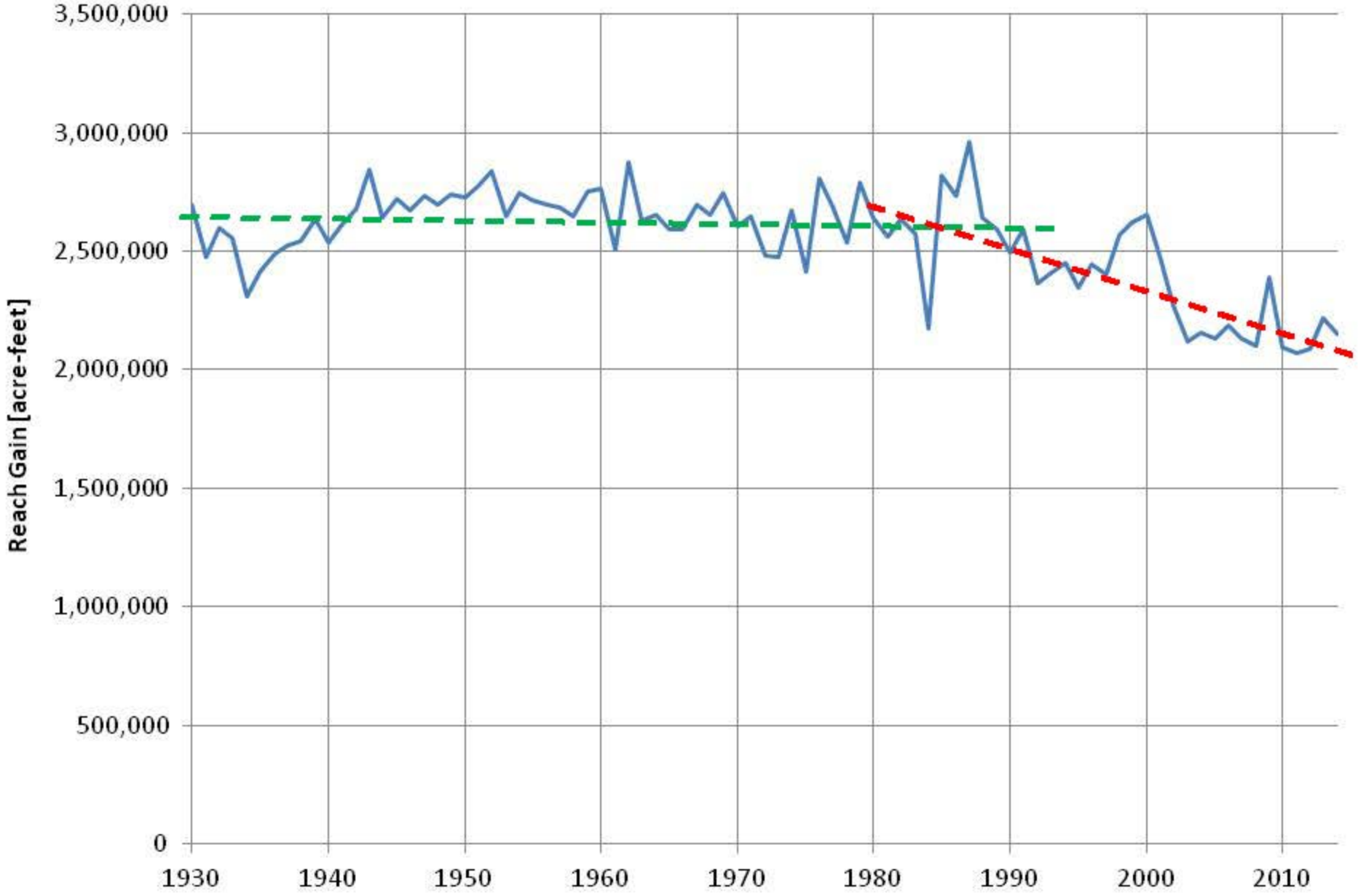
Presented by Mat Weaver, July 14, 2015


AFRD2 – 62,361 acres
NSCC – 154,067 acres
TFCC – 183,589 acres
Minidoka – 70,144 acres
A&B – 15,924 acres
Burley – 44,715 acres
Milner – 13,335 acres
544,135 acres
Hailey
Rexburg
Idaho Falls
Ammon
Blackfoot
Chubbuck
Pocatello
Jerome
Rupert
Twin Falls
Burley
Surface Water Coalition

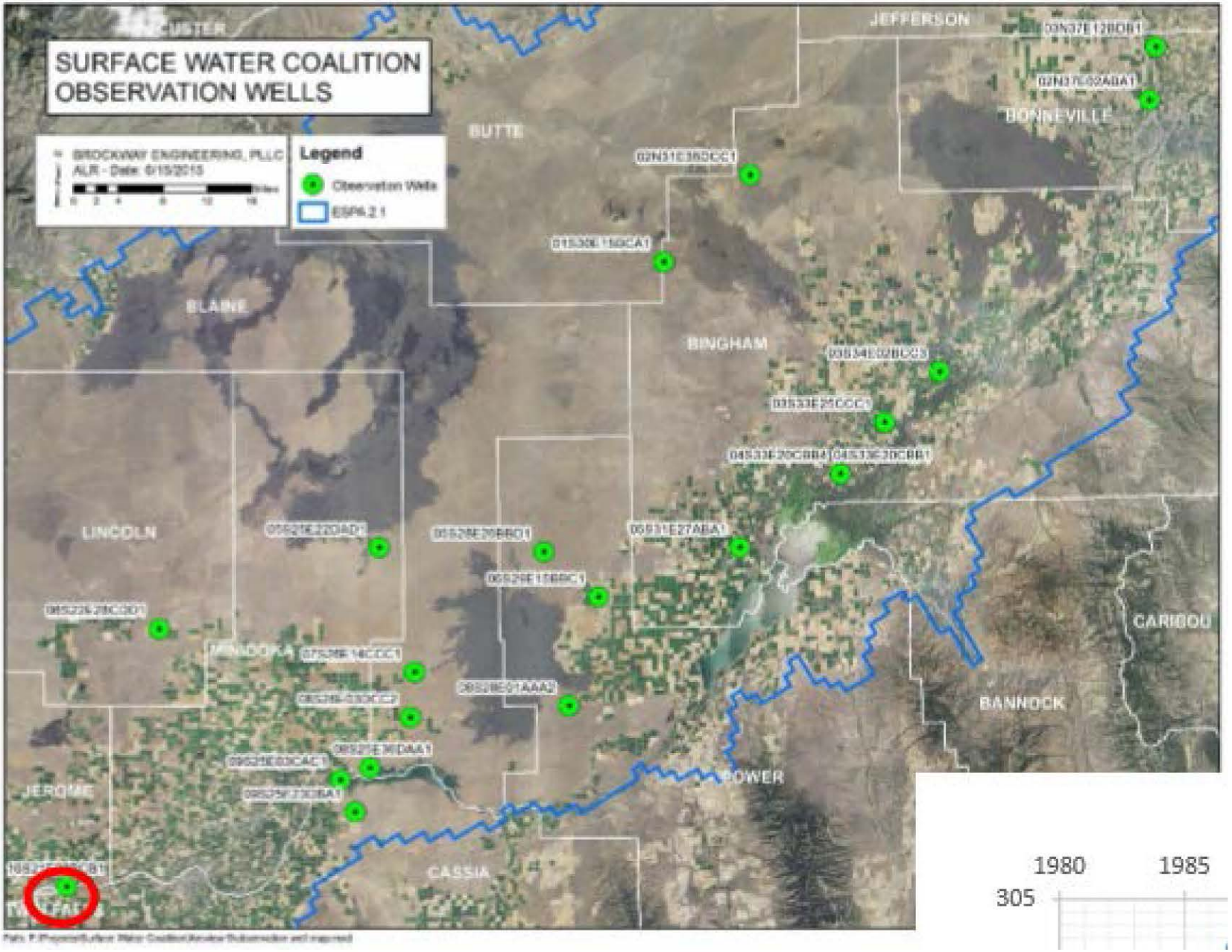

Consumptive Use Analysis
Jefferson Clark GWD
Madison GWD
Bonneville Jefferson GWD
Carey Valley GWD
Bingham GWD
Aberdeen American Falls GWD
Magic Valley GWD
North Snake GWD
Raft River GWD
Gages:
• HF nr Ashton
• HF nr Rexburg
• SR nr Heise
• SR nr Shelley
• SR nr Blackfoot
• SR at Neeley
• SR nr Minidoka

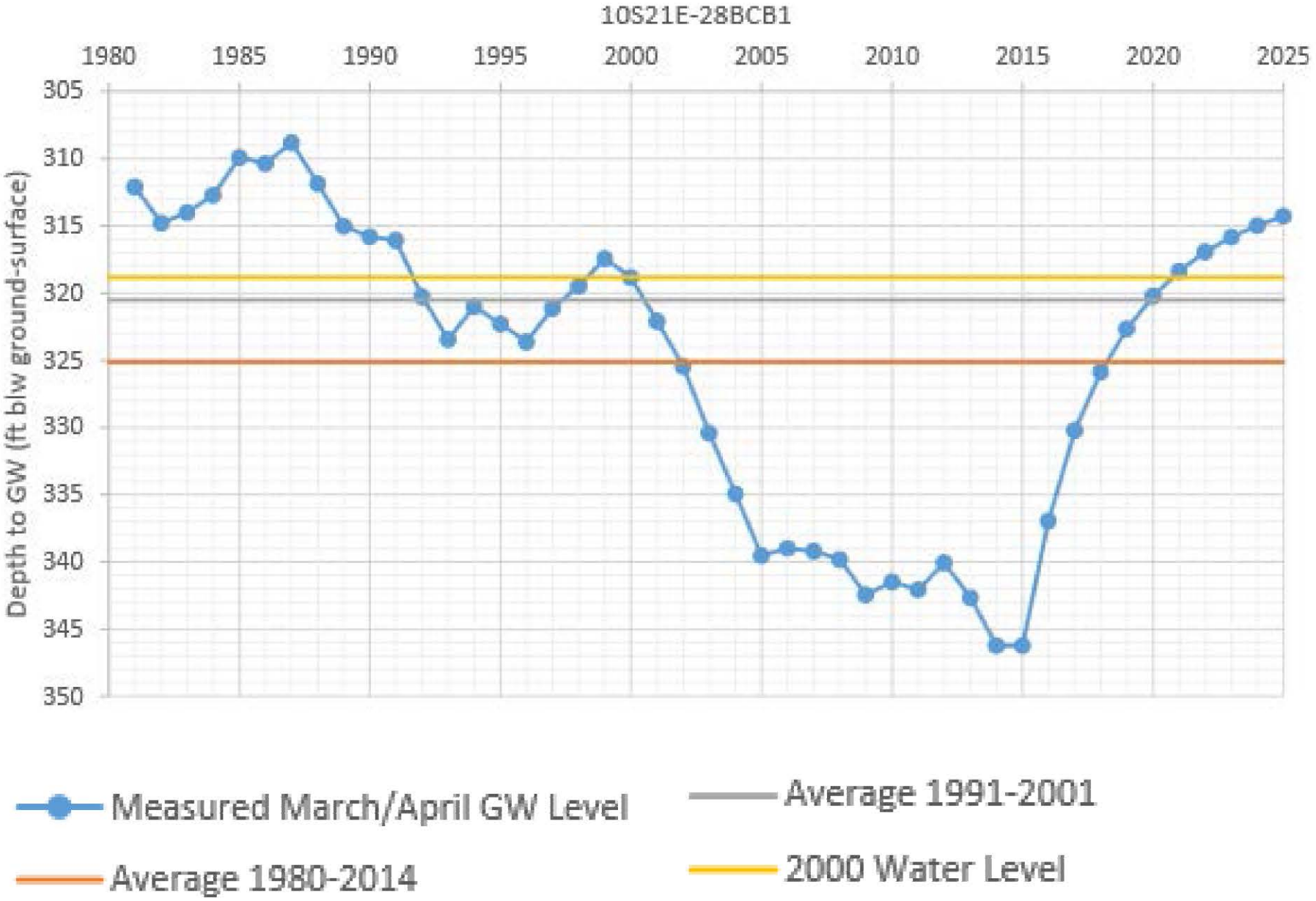

Cumulative Change in Volume of Water Stored Within ESPA: K-Springs
Correlation = 0.96
40 YEARS OF "UP"
60 YEARS OF "DOWN"
Cumulative Storage Change (acre-feet)
Spring Discharge (cfs)
20,000,000
18,000,000
16,000,000
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
7,000
6,500
6,000
5,500
5,000
4,500
4,000
1912
1915
1918
1921
1924
1927
1930
1933
1936
1939
1942
1945
1948
1951
1954
1957
1960
1963
1966
1969
1972
1975
1978
1981
1984
1987
1990
1993
1996
1999
2002
2005
2008
2011
2014
Kjelstrom Springs
Volume Change

Nr Blackfoot to Minidoka

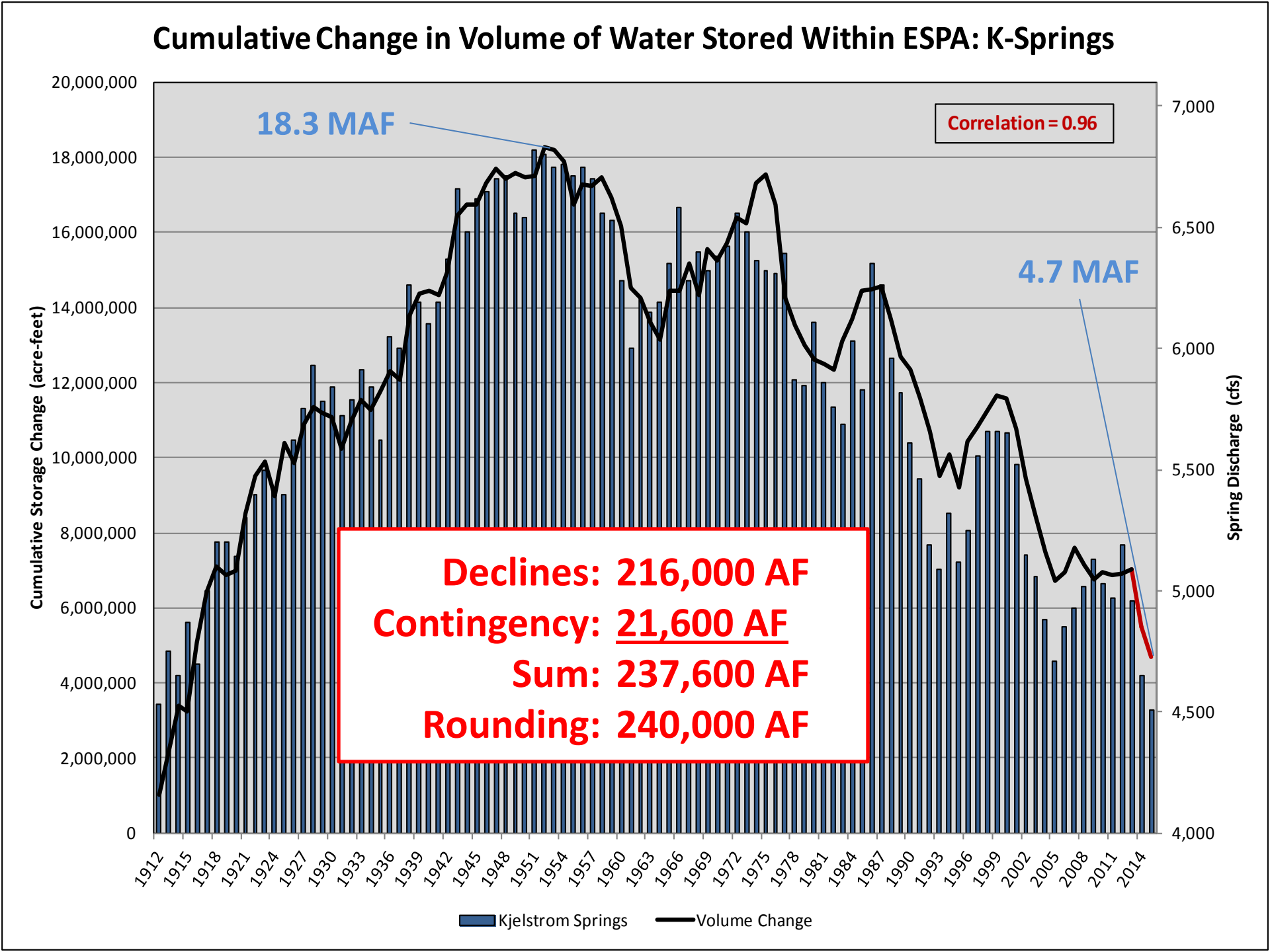


Note: *2013 and 2014 data values are preliminary.*


SURFACE WATER COALITION
OBSERVATION WELLS
BROCKWAY ENGINEERING, PLLC
ALR - Date: 6/15/2015
Legend
Observation Wells
ESPA 2.1
JEFFERSON
BUTTE
BONNEVILLE
BLAINE
BINGHAM
LINCOLN
CARIBOU
BANNOCK
POWER
JEROME
CASSIA
1980
1985
305


10S21E-28BCB1
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
305
310
315
320
325
330
335
340
345
350
Depth to GW (ft blw ground-surface)
Measured March/April GW Level
Average 1991-2001
Average 1980-2014
2000 Water Level


The End?


Cumulative Change in Volume of Water Stored Within ESPA: K-Springs
18.3 MAF
4.7 MAF
Correlation = 0.96
Declines: 216,000 AF
Contingency: 21,600 AF
Sum: 237,600 AF
Rounding: 240,000 AF
Cumulative Storage Change (acre-feet)
Spring Discharge (cfs)
20,000,000
18,000,000
16,000,000
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
7,000
6,500
6,000
5,500
5,000
4,500
4,000
1912 1915 1918 1921 1924 1927 1930 1933 1936 1939 1942 1945 1948 1951 1954 1957 1960 1963 1966 1969 1972 1975 1978 1981 1984 1987 1990 1993 1996 1999 2002 2005 2008 2011 2014
Kjelstrom Springs
Volume Change

Summary of Consumptive Losses to the ESP Aquifer - 2013

NAME	Groundwater Acres	CIR ft	Total C.L. (AF/Year)	GWD Percent Impact to Aquifer
Aberdeen-American Falls Ground Water District	146,988	2.1	310,874	16.9%
Bingham Ground Water District	134,083	2.3	308,759	16.8%
Bonneville-Jefferson Ground Water District	91,086	1.9	175,336	9.5%
Carey Valley Ground Water District	2,513	2.2	5,623	0.3%
Jefferson Clark Ground Water District	171,488	1.9	332,810	18.1%
Madison Ground Water District	739	1.7	1,284	0.1%
Magic Valley Ground Water District	189,990	2.6	500,457	27.2%
North Snake Ground Water District	84,601	2.4	204,770	11.1%
Raft River Ground Water District	11	1.8	20	0.0%
Total (or Average for CIR)	821,497	2.2	1,839,933	--

Summary of Consumptive Losses to ESPA by Year

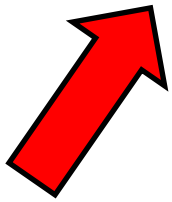
Year	Groundwater Acres	CIR (ft)	Total C.L. (AF/Year)
2000	798,079	2.25	1,901,055
2010	792,176	2.07	1,802,237
2013	821,497	2.23	1,839,933
Avg.:	803,918	2.18	1,847,742
S.D.:	15,508	0.10	49,870
% S.D.	1.9%	4.5%	2.7%

$$\frac{240{,}000}{1{,}839{,}933} = \mathbf{13.1\%}$$

240 KAF Reduction - Benefit to the Aquifer

Summary of Consumptive Loss Impacts from GW Pumping to Entire Aquifer - 2013

NAME	Ground-water Acres	CIR ft	Total C.L. (AF/Year)	Aquifer Percent	Aquifer Losses (AF/Year)	Gains (AF/Year) - 13.1% Reduction	GWD % Impact
Aberdeen-American Falls Ground Water District	146,988	2.1	310,874	100.0%	310,874	40,724	16.9%
Bingham Ground Water District	134,083	2.3	308,759	100.0%	308,759	40,447	16.8%
Bonneville-Jefferson Ground Water District	91,086	1.9	175,336	100.0%	175,336	22,969	9.5%
Carey Valley Ground Water District	2,513	2.2	5,623	100.0%	5,623	737	0.3%
Jefferson Clark Ground Water District	171,488	1.9	332,810	100.0%	332,810	43,598	18.1%
Madison Ground Water District	739	1.7	1,284	--	--	--	--
Magic Valley Ground Water District	189,990	2.6	500,457	100.0%	500,457	65,560	27.2%
North Snake Ground Water District	84,601	2.4	204,770	100.0%	204,770	26,825	11.1%
Raft River Ground Water District	11	1.8	20	--	--	--	--
Total (or Average for CIR)	821,497	2.2	1,839,933	--	1,838,629	240,860	100.0%

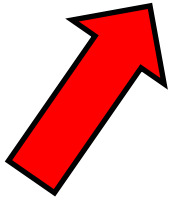


~240,860 AF Decrease in Consumptive Losses to the Aquifer

240 KAF Reduction - Benefit to the NBtM Reach

Summary of Consumptive Loss Impacts from GW Pumping to the Near Blackfoot to Minidoka River Reaches - 2013

NAME	Ground-water Acres	CIR ft	Total C.L. (AF/Year)	NBtM Percent	NBtM Losses (AF/Year)	Gains (AF/Year) - 13.1% Reduction	GWD % Impact
Aberdeen-American Falls Ground Water District	146,988	2.1	310,874	61.2%	190,324	24,932	23.0%
Bingham Ground Water District	134,083	2.3	308,759	64.3%	198,656	26,024	24.0%
Bonneville-Jefferson Ground Water District	91,086	1.9	175,336	53.0%	92,921	12,173	11.2%
Carey Valley Ground Water District	2,513	2.2	5,623	36.0%	2,026	265	0.2%
Jefferson Clark Ground Water District	171,488	1.9	332,810	32.3%	107,412	14,071	13.0%
Madison Ground Water District	739	1.7	1,284	--	--	--	--
Magic Valley Ground Water District	189,990	2.6	500,457	41.4%	206,999	27,117	25.1%
North Snake Ground Water District	84,601	2.4	204,770	13.7%	27,987	3,666	3.4%
Raft River Ground Water District	11	1.8	20	--	--	--	--
Total (or Average for CIR)	821,497	2.2	1,839,933	--	826,325	108,249	100.0%

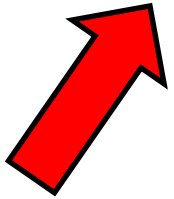


~108,249 AF Increase in Reach Gains
to the Near Blackfoot to Minidoka Reach

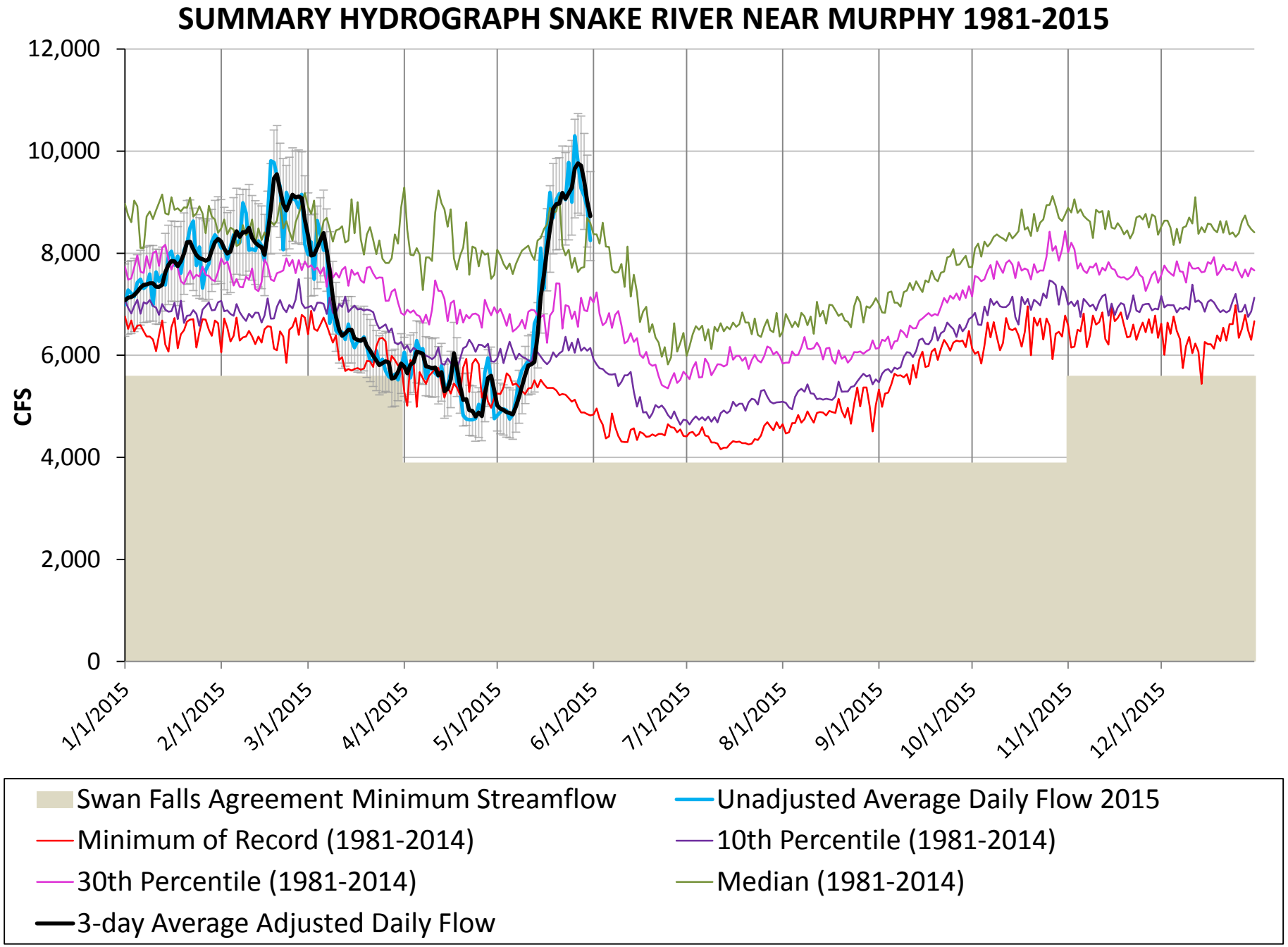
240 KAF Reduction - Benefit to the Murphy Gage

Summary of Consumptive Loss Impacts from GW Pumping to the Snake River Below Milner - 2013

NAME	Ground-water Acres	CIR ft	Total C.L. (AF/Year)	KtKH Percent	KtKH Losses (CFS)	Gains (AF/Year) - 13.1% Reduction	GWD % Impact
Aberdeen-American Falls Ground Water District	146,988	2.1	310,874	13.0%	55.91	7.32	9.2%
Bingham Ground Water District	134,083	2.3	308,759	3.9%	16.73	2.19	2.8%
Bonneville-Jefferson Ground Water District	91,086	1.9	175,336	3.4%	8.24	1.08	1.4%
Carey Valley Ground Water District	2,513	2.2	5,623	48.3%	3.75	0.49	0.6%
Jefferson Clark Ground Water District	171,488	1.9	332,810	2.2%	10.13	1.33	1.7%
Madison Ground Water District	739	1.7	1,284	--	--	--	--
Magic Valley Ground Water District	189,990	2.6	500,457	40.8%	282.30	36.98	46.7%
North Snake Ground Water District	84,601	2.4	204,770	80.4%	227.45	29.80	37.6%
Raft River Ground Water District	11	1.8	20	--	--	--	--
Total (or Average for CIR)	821,497	2.2	1,839,933	--	604.51	79.19	100.0%



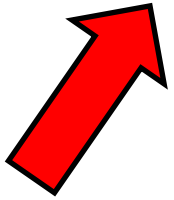
Up to ~80 CFS Increase in Snake River flows at the Murphy Gage below Swan Falls Dam.


SUMMARY HYDROGRAPH SNAKE RIVER NEAR MURPHY 1981-2015
12,000
10,000
8,000
6,000
4,000
2,000
0
CFS
1/1/2015
2/1/2015
3/1/2015
4/1/2015
5/1/2015
6/1/2015
7/1/2015
8/1/2015
9/1/2015
10/1/2015
11/1/2015
12/1/2015
Swan Falls Agreement Minimum Streamflow
Unadjusted Average Daily Flow 2015
Minimum of Record (1981-2014)
10th Percentile (1981-2014)
30th Percentile (1981-2014)
Median (1981-2014)
3-day Average Adjusted Daily Flow

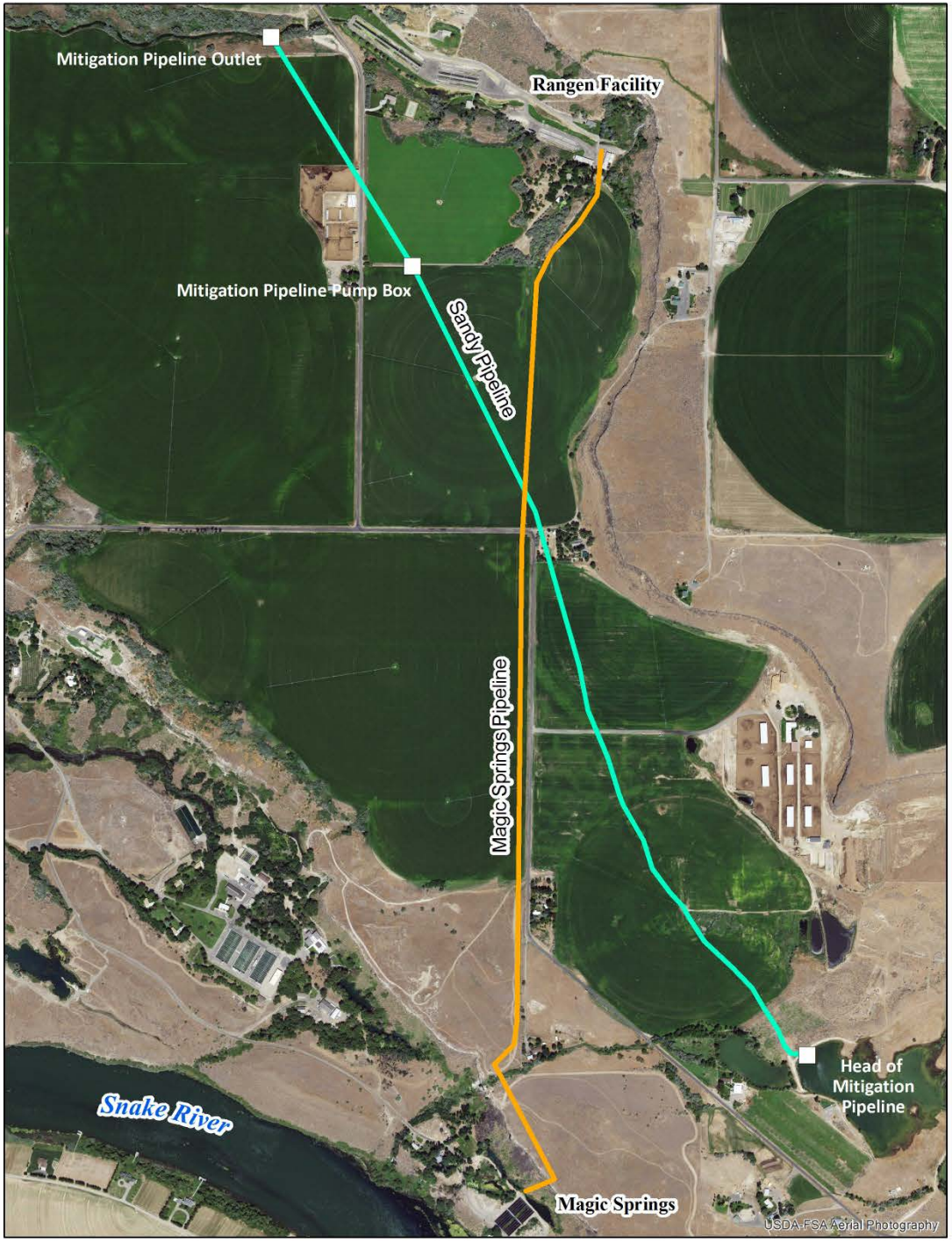
240 KAF Reduction - Benefit to Billingsley Creek

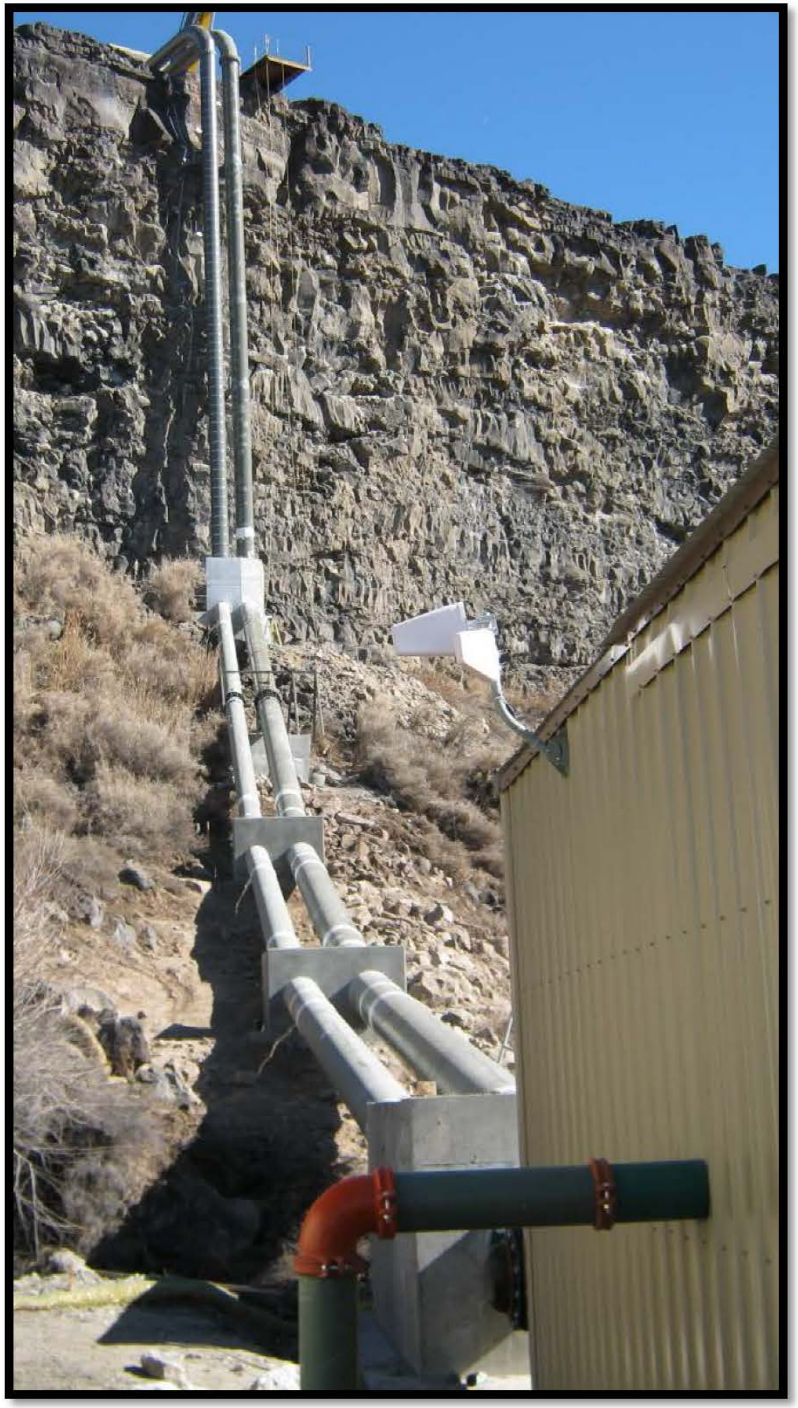
Summary of Consumptive Loss Impacts from GW Pumping to Billingsley Creek - 2013

NAME	Ground-water Acres	CIR ft	Total C.L. (AF/Year)	Billingsley Percent	Billingsley Losses (CFS)	Gains (AF/Year) - 13.1% Reduction	GWD % Impact
Aberdeen-American Falls Ground Water District	146,988	2.1	310,874	1.2%	5.14	0.67	9.1%
Bingham Ground Water District	134,083	2.3	308,759	0.4%	1.54	0.20	2.7%
Bonneville-Jefferson Ground Water District	91,086	1.9	175,336	0.3%	0.76	0.10	1.3%
Carey Valley Ground Water District	2,513	2.2	5,623	4.5%	0.35	0.05	0.6%
Jefferson Clark Ground Water District	171,488	1.9	332,810	0.2%	0.93	0.12	1.7%
Madison Ground Water District	739	1.7	1,284	--	--	--	--
Magic Valley Ground Water District	189,990	2.6	500,457	3.7%	25.53	3.34	45.3%
North Snake Ground Water District	84,601	2.4	204,770	7.8%	22.16	2.90	39.3%
Raft River Ground Water District	11	1.8	20	--	--	--	--
Total (or Average for CIR)	821,497	2.2	1,839,933	--	56.42	7.39	100.0%



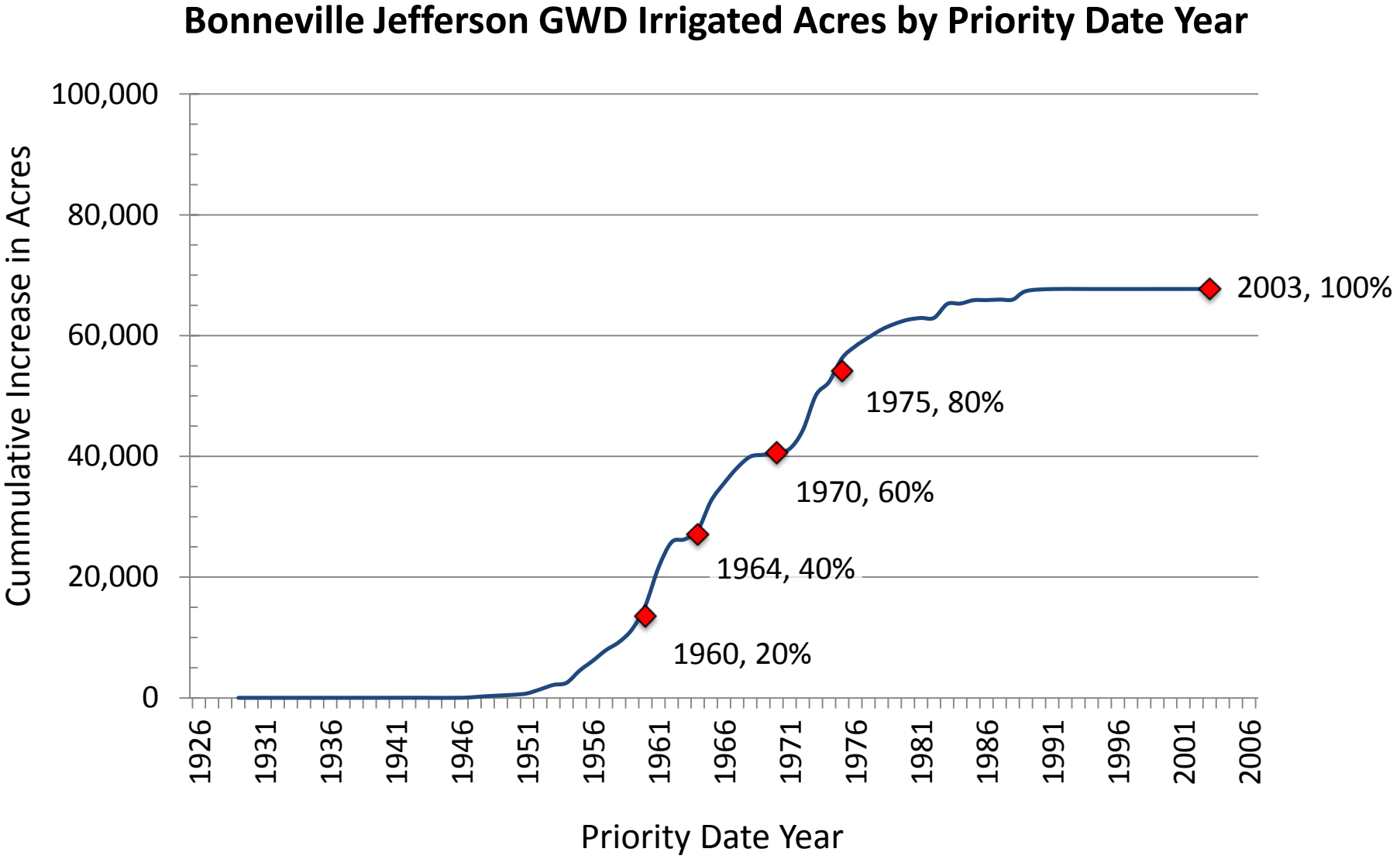
~7 CFS Increase in flows of Billingsley Creek.


Mitigation Pipeline Outlet
Rangen Facility
Mitigation Pipeline Pump Box
Sandy Pipeline
Magic Springs Pipeline
Head of Mitigation Pipeline
Snake River
Magic Springs
USDA FSA Aerial Photography

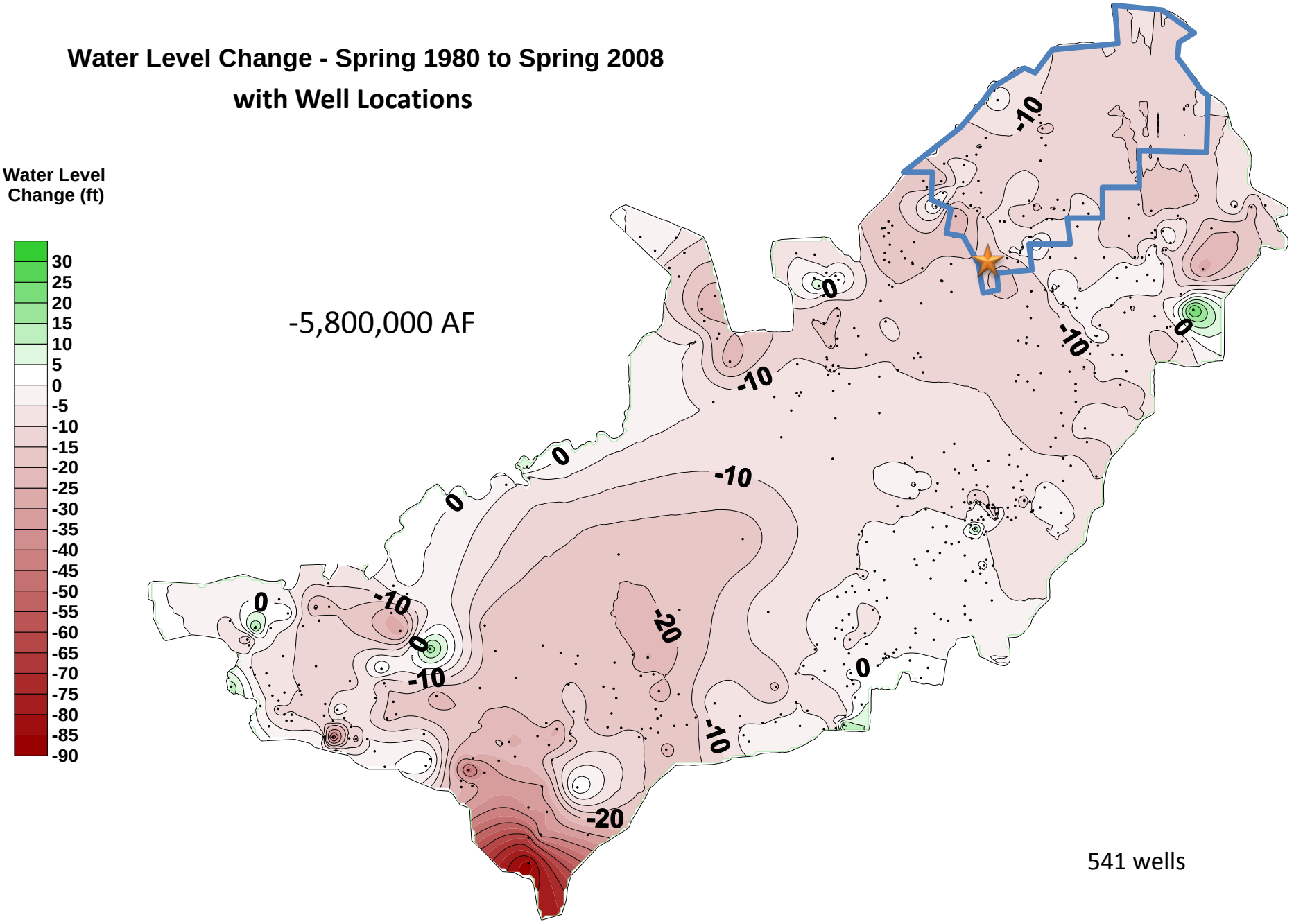


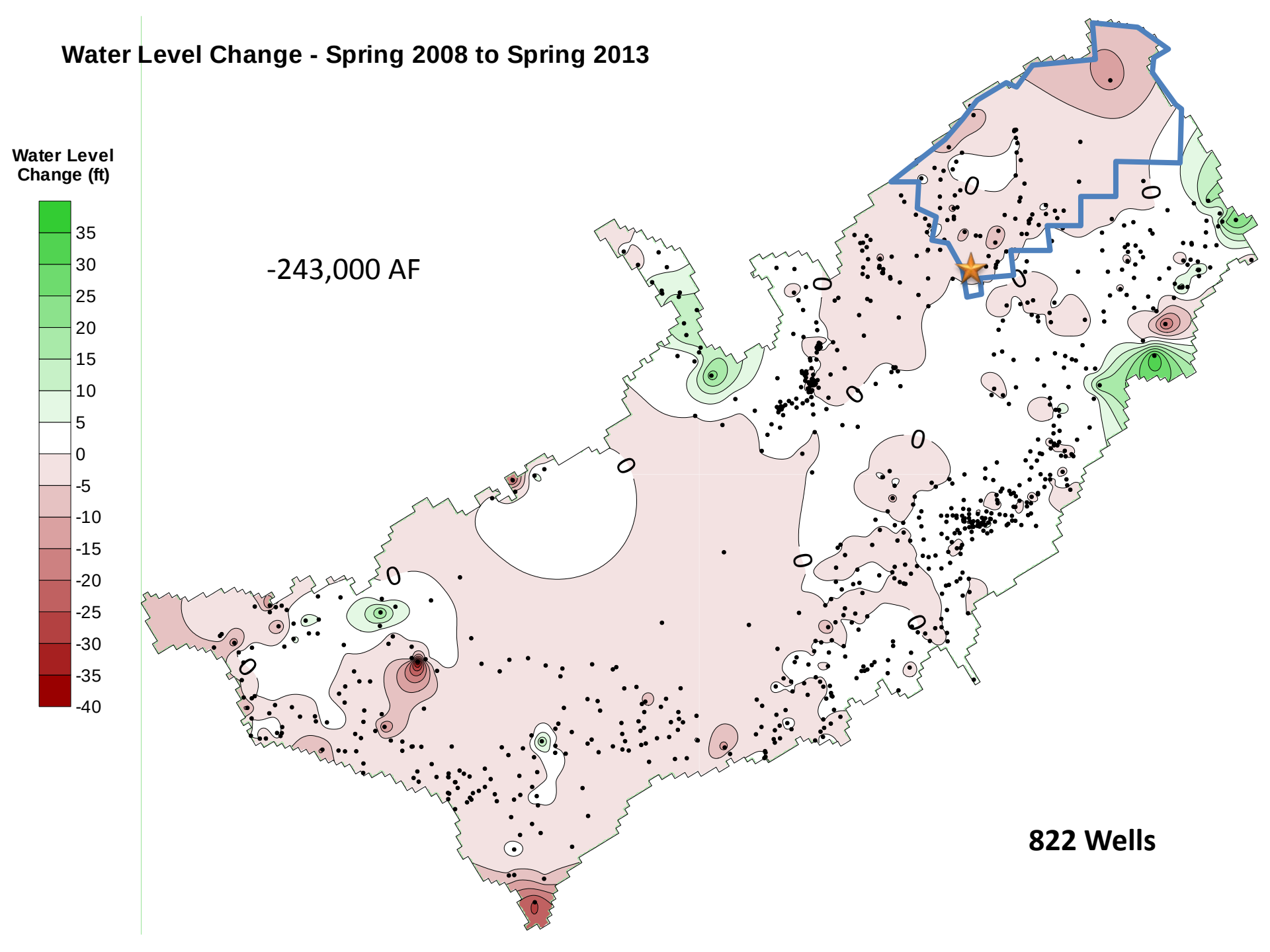
SWC Settlement Terms

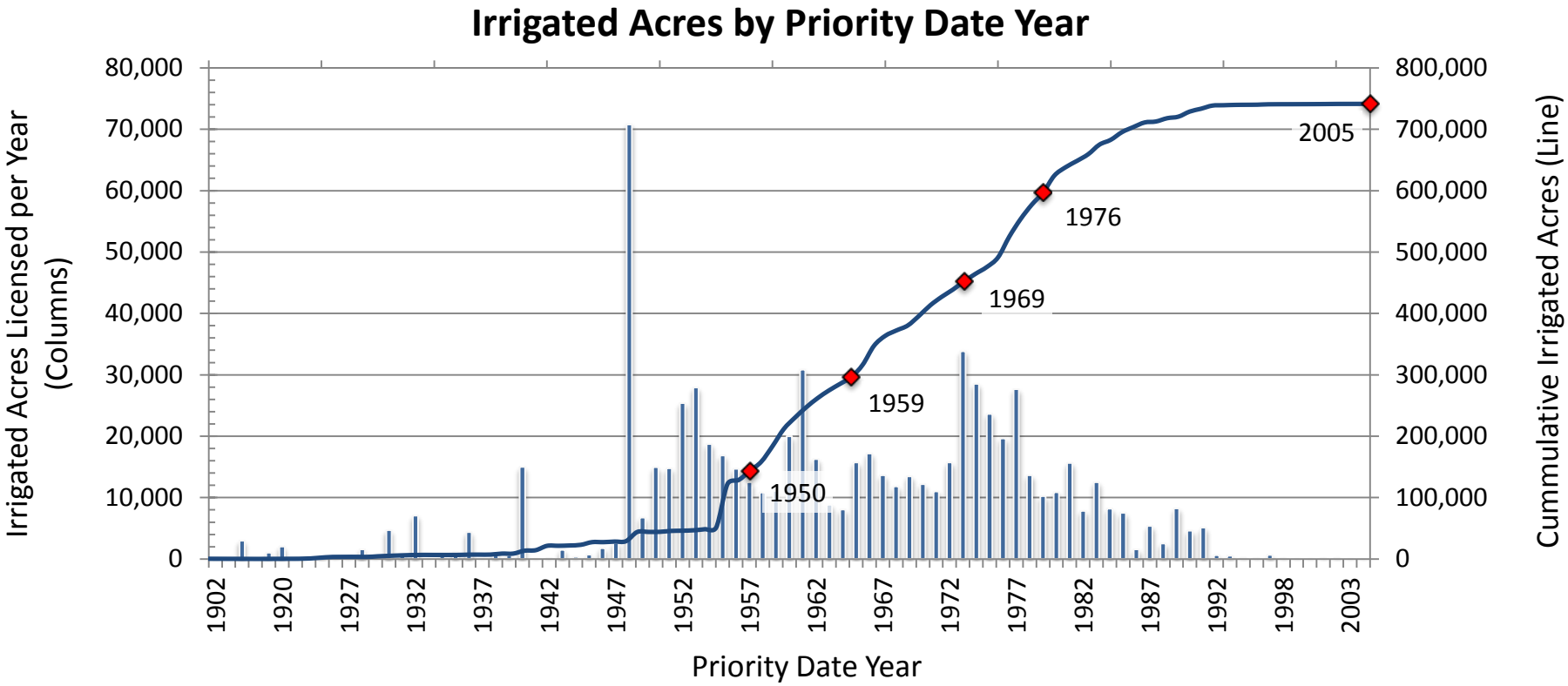
- Objectives
  - Mitigation for Injury to the Senior
  - Safe Harbor to the Junior
  - Stabilize aquifer levels and increase water supplies
  - Minimize economic impact
  - Increase reliability of measurement/compliance/enforcement
- Near Term Practices
  - 110,000 acre-feet of storage water
  - $1.1 Million towards existing conversions
- Long Term Practices
  - Ground water diversions reduced by 240,000 acre-feet/year
  - 50,000 acre-feet/year of storage water
  - Continue existing conversions
  - Shorten irrigation season (April 1 – October 31)
  - Measuring devices by 2018
  - State sponsored recharge equal to 250,000 acre-feet/year


Bonneville Jefferson GWD Irrigated Acres by Priority Date Year
Cummulative Increase in Acres
100,000
80,000
60,000
40,000
20,000
0
1926
1931
1936
1941
1946
1951
1956
1961
1966
1971
1976
1981
1986
1991
1996
2001
2006
Priority Date Year
1960, 20%
1964, 40%
1970, 60%
1975, 80%
2003, 100%

Water Level Change - Spring 1980 to Spring 2008 with Well Locations



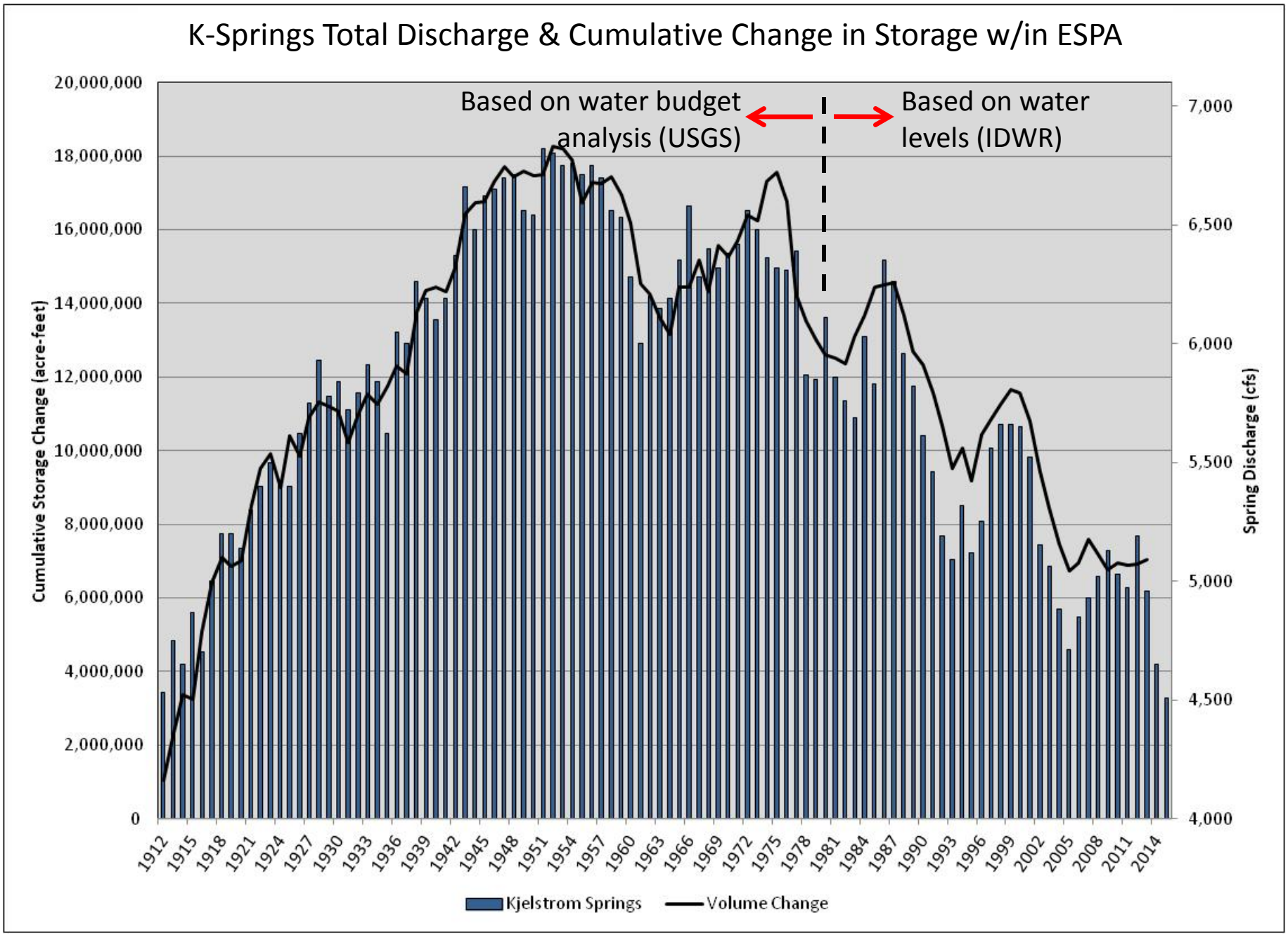

Water Level Change - Spring 2008 to Spring 2013
Water Level Change (ft)
35
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-243,000 AF
822 Wells



Cumulative Groundwater Irr. Acres within GWD from 1902 to Present = 741,343 Acres

Summary of Possible Priority Date Weighting Scheme

Quintile	Q Break	Start Prior. Date	End Prior. Date	Weighted Consumptive Use Reduction			
				0.5% Offset	1% Offset	2% Offset	3% Offset
Q1	148,269	<	12/31/1950	12.1	11.1	9.1	7.1
Q2	296,537	1/1/1951	12/31/1959	12.6	12.1	11.1	10.1
Q3	444,806	1/1/1960	12/31/1968	13.1	13.1	13.1	13.1
Q4	593,075	1/1/1969	12/31/1976	13.6	14.1	15.1	16.1
Q5	741,343	>	1/1/1977	14.1	15.1	17.1	19.1
			Average:	13.1	13.1	13.1	13.1


K-Springs Total Discharge & Cumulative Change in Storage w/in ESPA
Based on water budget analysis (USGS)
Based on water levels (IDWR)
Cumulative Storage Change (acre-feet)
Spring Discharge (cfs)
20,000,000
18,000,000
16,000,000
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
7,000
6,500
6,000
5,500
5,000
4,500
4,000
1912 1915 1918 1921 1924 1927 1930 1933 1936 1939 1942 1945 1948 1951 1954 1957 1960 1963 1966 1969 1972 1975 1978 1981 1984 1987 1990 1993 1996 1999 2002 2005 2008 2011 2014
Kjelstrom Springs
Volume Change

SUNDAY EDITION

Idaho Statesman

$2 MAY 10, 2015 72° / 48° SEE A15

SUNNY AND BRIGHT

DROUGHT

HIGH AND DRY

Idaho's warm winter, light snowpack and early runoff mean that irrigators and others will have to draw down our cushion of reservoir water this summer

KIRSTEN STROUGH / Bureau of Reclamation

Old Man Winter seemed to be looking favorably on Idaho in late 2014, with early storms and above-normal snowfall. But in 2015, Mother Nature left Idaho high and dry. The southernmost part of the state has been hit the hardest, enduring the same warm, dry weather pattern that has California gasping in drought. Owyhee Reservoir, above, is only 26 percent full, and not expected to get any more runoff this year. The Bruneau River watershed is entering its fourth year of drought, coming off its driest three-year period since 1944. Statesman reporter Rocky Barker examines the state of our water and snowpack, and previews what's in store for the state. DEPTH, D1

► Also, the drought is having a major effect on animals and the ecosystem in the West. D1

Idahoans touched by breast cancer and wanting to fund research and fight for its prevention turn out for the annual Komen event. A5

IDAHO MOMENT

MOM, DAUGHTER SHOW OFF DOLLS

Photojournalist Katherine Jones brings you the story of two women, more than 5,000 dolls and one crowded house. EXPLORE, E1

'DEBT-FREE COLLEGE'

GROUP DRIVES DEMS' GOAL A14

IDAHO HISTORY

The Swiss and the Gem State NEWS, A6

ON THE WEB

VOTER GUIDE 2015

On May 19, Valley residents will elect school board members, library trustees and highway district representatives. They'll also decide the fates of six levies and bonds, including a possible new elementary school for Notus. Visit **IDAHOSTATESMAN.COM/ELECTIONS** for a guide to the candidates, or check our Statesman and Idaho Politics apps this week.

MOTHER'S DAY

Show us how you celebrated! Send photos and we'll post them in a festive online gallery. See our website for submission instructions.

A BIG WEEKEND

Boise State held a massive graduation and the annual Race for the Cure had a massive turnout. Find photo galleries from both events.

Tuesday · May 12, 2015 www.magicvalley.com · $1.00

TIMES-NEWS

Idaho Lawmakers Rack Up $300,000 in Travel Expenses • A2

New Water Pact a 'Momentous Occasion'

p d to bring major changes for irrigators

MYCHEL MATTHEWS
mmatthews@magicvalley.com

TWIN FALLS • Details of a historic agreement between groundwater and surface water users are coming to light after the groups say they reached a landmark deal last week.

Water managers on Thursday negotiated a deal intended to settle all short- and long-term disputes brought on by over-allocation of water from the aquifer that supports much of south-central Idaho.

Groundwater and surface water users have had a long and contentious battle over water rights. While most of the spats have been handled administratively through the state, some have gone to the Supreme Court.

The deal reached last week aims to end the fighting and bring back health to the aquifer, which has reached its lowest levels since 1912.

"This is a momentous occasion," said Randy Budge, a lead attorney for the groundwater users.

In 2016 and beyond, groundwater users will give up a whopping 240,000 acre-feet — enough water to cover Twin Falls County with 2.33 inches of water — per year. This will require an estimated 13.1 percent reduction in diversions by each water user.

On Friday, Gary Spackman, director of the Idaho Department of Water Resources, approved the agreement and outlined how the 2015 mitigation obligation will be met.

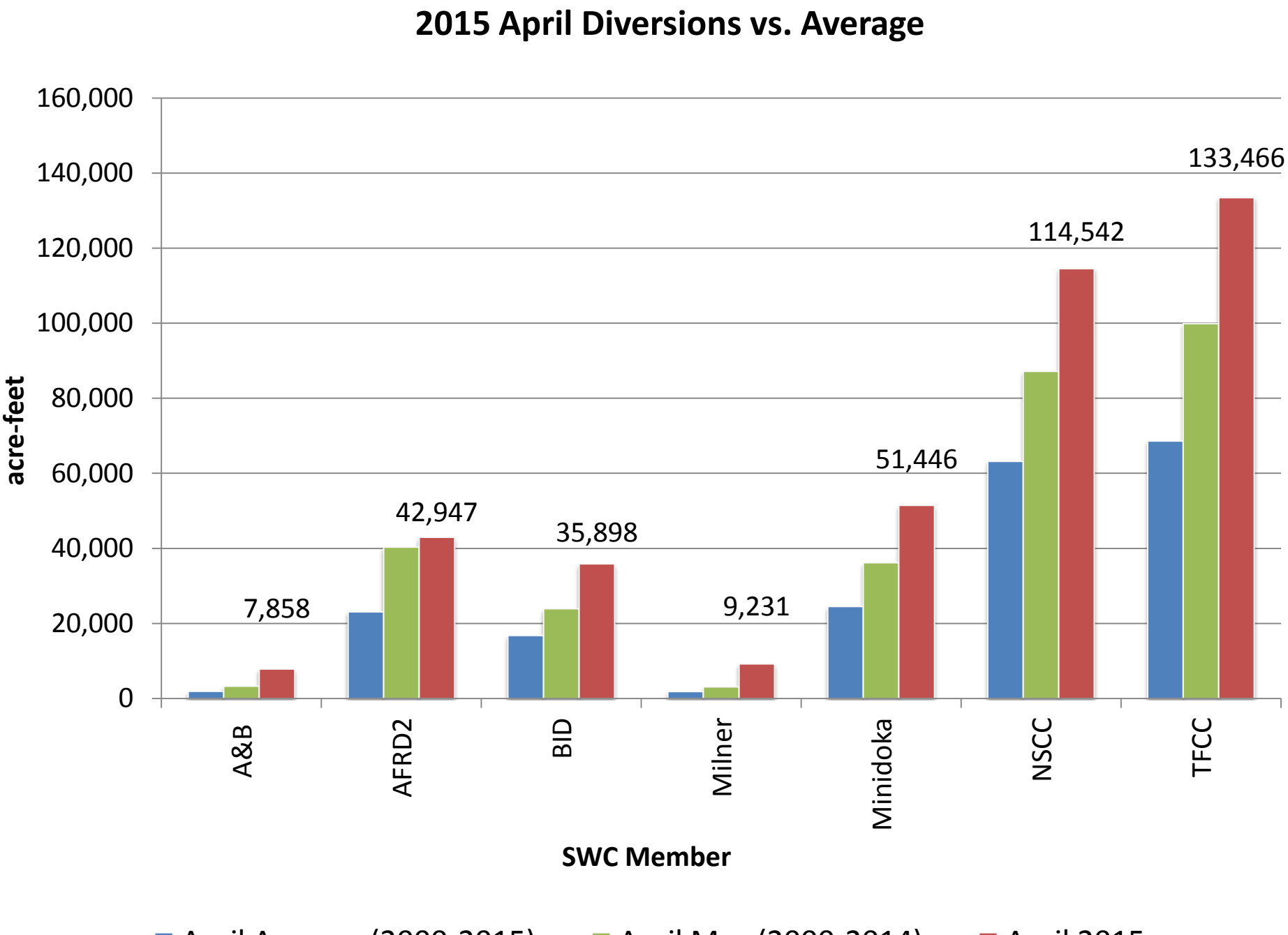
The state has given water managers until July 1 to complete the agreement to avoid massive shutdowns that could devastate many farmers and businesses with junior water rights.

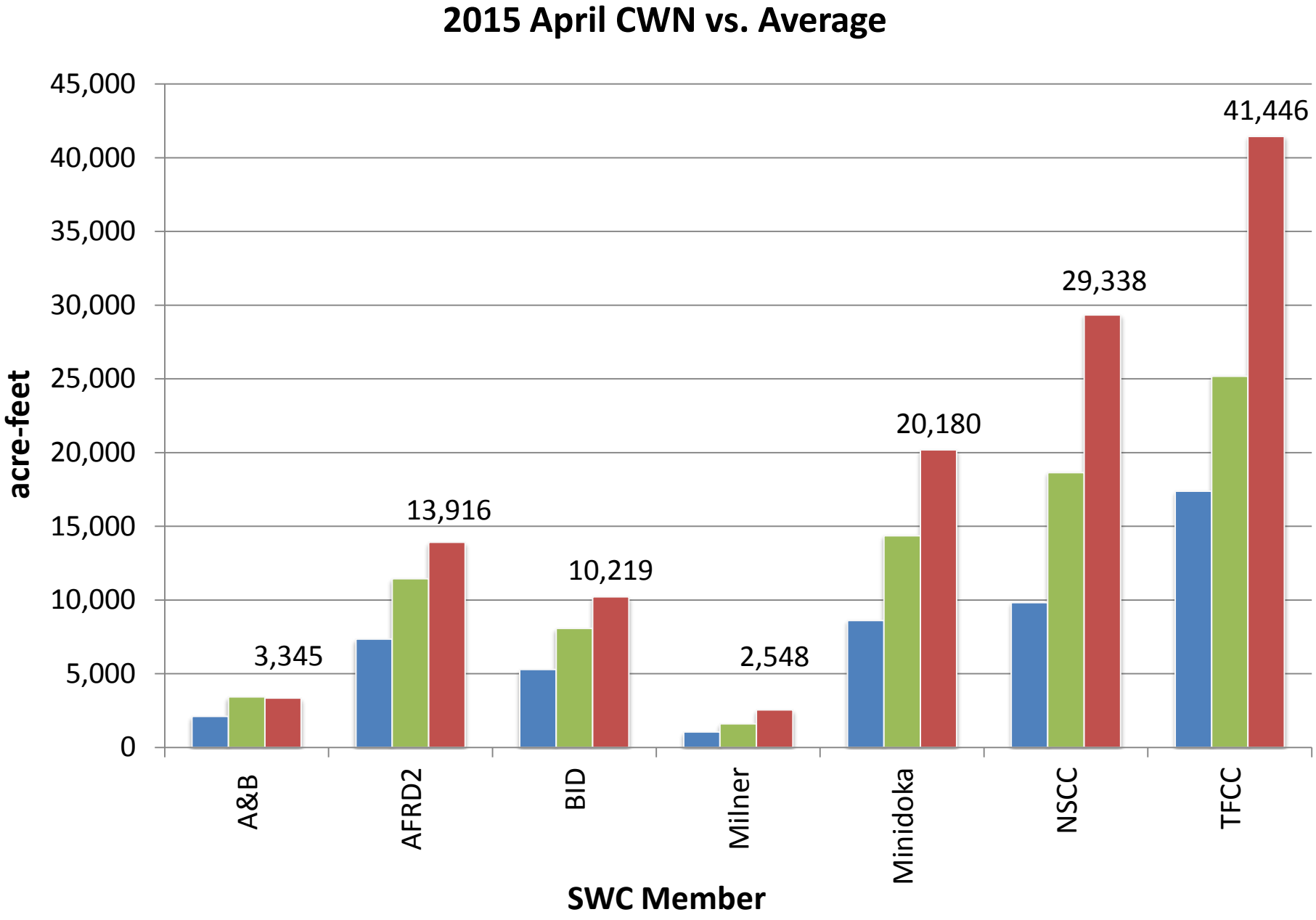
"Groundwater users were pretty well represented during negotiations," Brian Olmstead, general manager of Twin Falls Canal Co., said Monday. "If there is any push-back, it would come from those groundwater users with senior water rights. They may not feel they need to carry the burden for those with junior rights."

Idaho's first-in-time, first-in-line water law stipulates that older senior water rights have priority over generally younger junior rights. Surface water rights tend to be senior to junior groundwater water rights, but many irrigators have a mix of senior and junior rights.

According to a document obtained by the *Times-News*, Idaho Ground Water Appropriators and the Surface Water Coalition agreed on a set of objectives including stabilizing the Eastern Snake Plain Aquifer, increasing Blackfoot to Milner reach gains,

Please see PACT, A9


2015 April Diversions vs. Average
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
acre-feet
7,858
42,947
35,898
9,231
51,446
114,542
133,466
A&B
AFRD2
BID
Milner
Minidoka
NSCC
TFCC
SWC Member
April Average (2000-2015)
April Max (2000-2014)
April 2015


2015 April CWN vs. Average
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
acre-feet
3,345
13,916
10,219
2,548
20,180
29,338
41,446
A&B
AFRD2
BID
Milner
Minidoka
NSCC
TFCC
SWC Member
April Average (2000-2015)
Apr Max (2000-2014)
April 2015

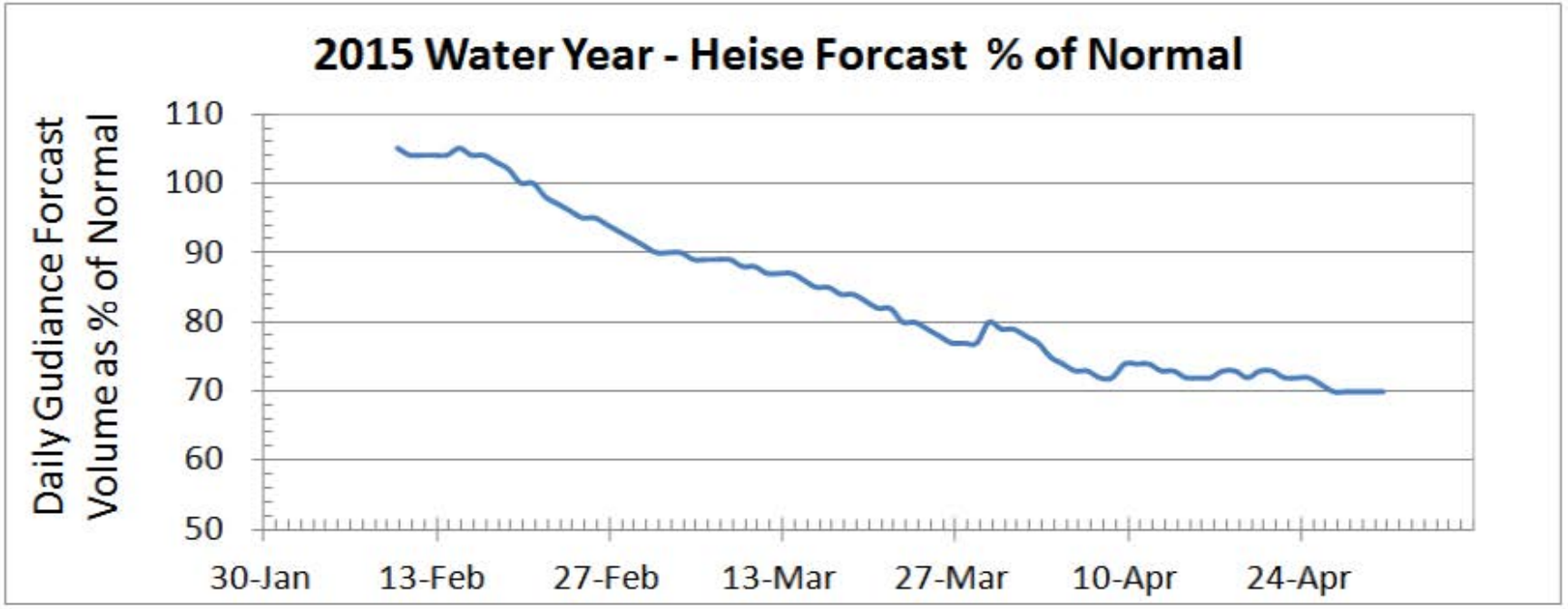
National Water and Climate Center, Natural Resources Conservation Service, USDA, Portland OR
Contact: Cara McCarthy (503) 414-3088

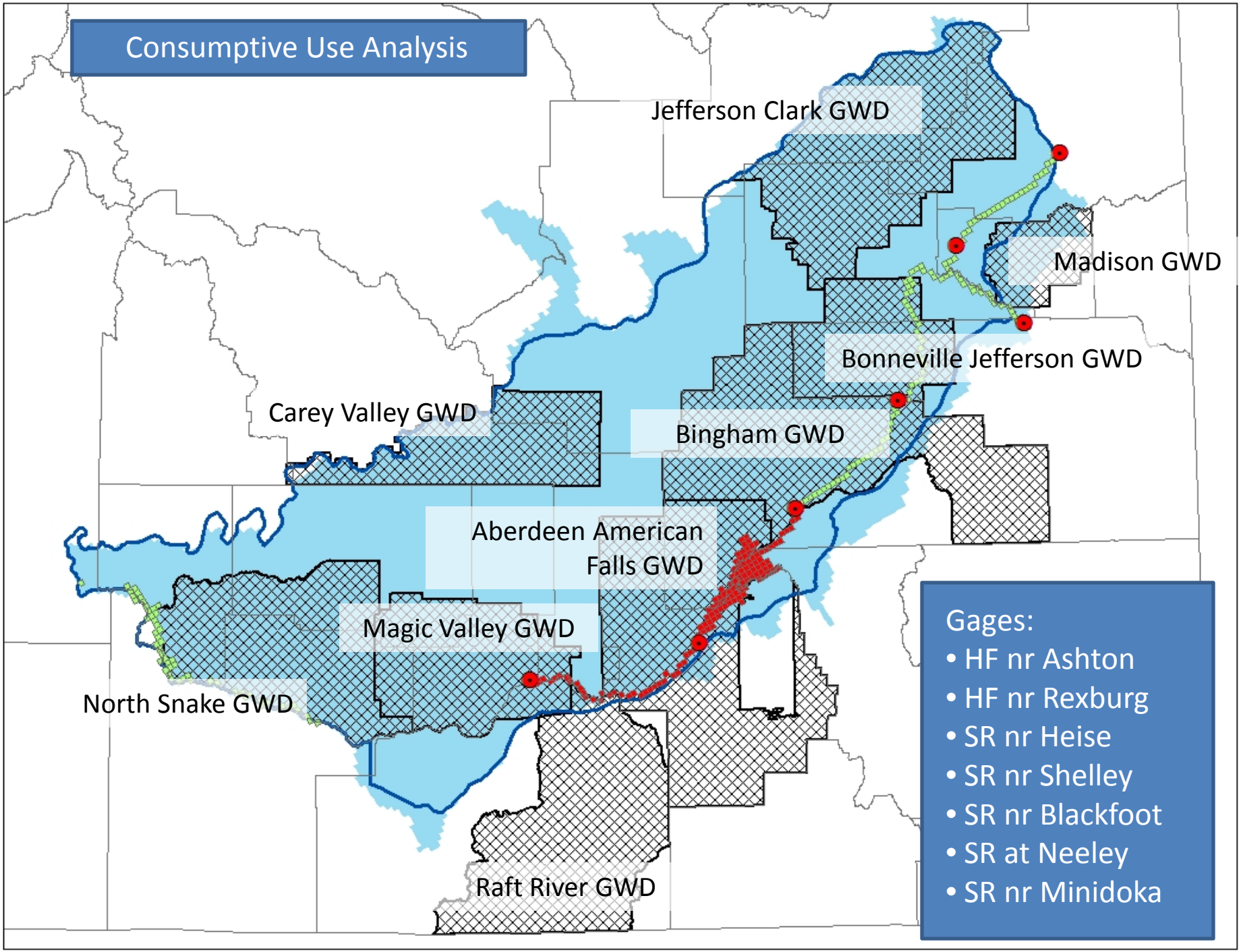
5/1/2015 7:12

Disclaimer: This is a completely automated product based on SNOTEL data.
SNOTEL data is often verfied and edited 1-5 days after the collection of the data and therefore the most recent forecast may be based on unedited data. This product is not meant to replace or supercede monthly forecasts produced in collaboration with the National Weather Service.
Stations used in analysis: 868,419,353,761,764,577,816,314

Forecast name: Snake River nr Heise
Units: 1000 ac-ft
Forecast ID: 13037500
1981-2010 Average: 3240
Forecast target: Apr-Jul Volume

	Chances of exceeding						
Volumes	9 in 10	7 in 10	5 in 10	3 in 10	1 in 10	5 in 10 % avg	
Period of record norm (51-13)	2175	2627	3326	3791	4876	103	
Most recent official (none)							
	9 in 10	7 in 10	5 in 10	3 in 10	1 in 10	5 in 10 % avg	Skill (r2)
01-May	1781	2042	2239	2446	2750	69	0.89

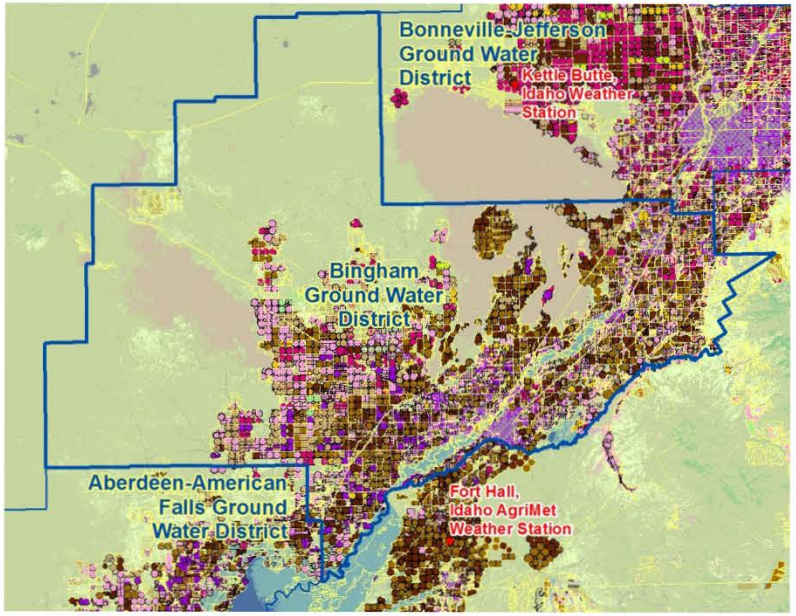



Consumptive Use Analysis
Jefferson Clark GWD
Madison GWD
Bonneville Jefferson GWD
Carey Valley GWD
Bingham GWD
Aberdeen American Falls GWD
Magic Valley GWD
North Snake GWD
Raft River GWD
Gages:
• HF nr Ashton
• HF nr Rexburg
• SR nr Heise
• SR nr Shelley
• SR nr Blackfoot
• SR at Neeley
• SR nr Minidoka

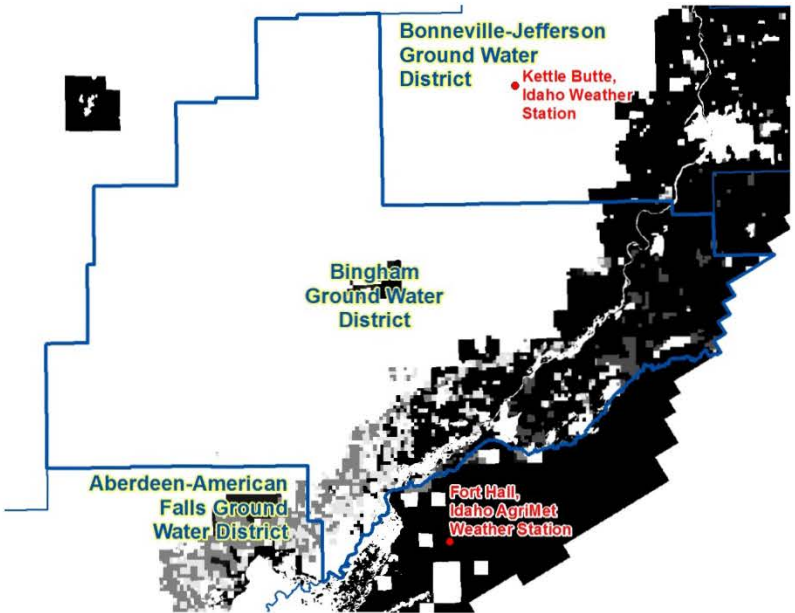
2013 AgriMet Fort Hall ET by crop type

Agr_Code	FTHI_ETmm
ALFM	1069
PAST	860
LAWN	1047
WGRN	695
SGRN	680
BEET	873
POTA	784
BEAN	680
FCRN	762
SCRN	762
PEAS	680
NONE	0

2013 USDA Crop Data Layer

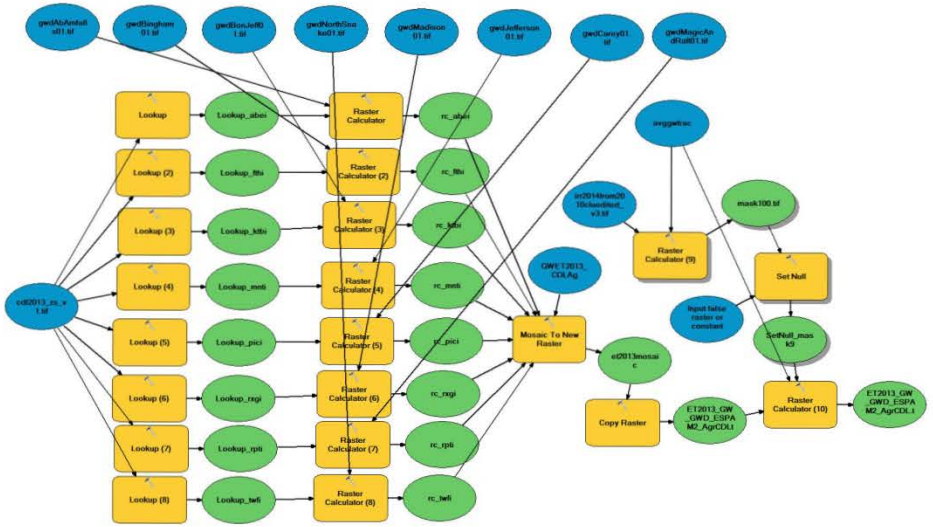


Ground Water Fraction

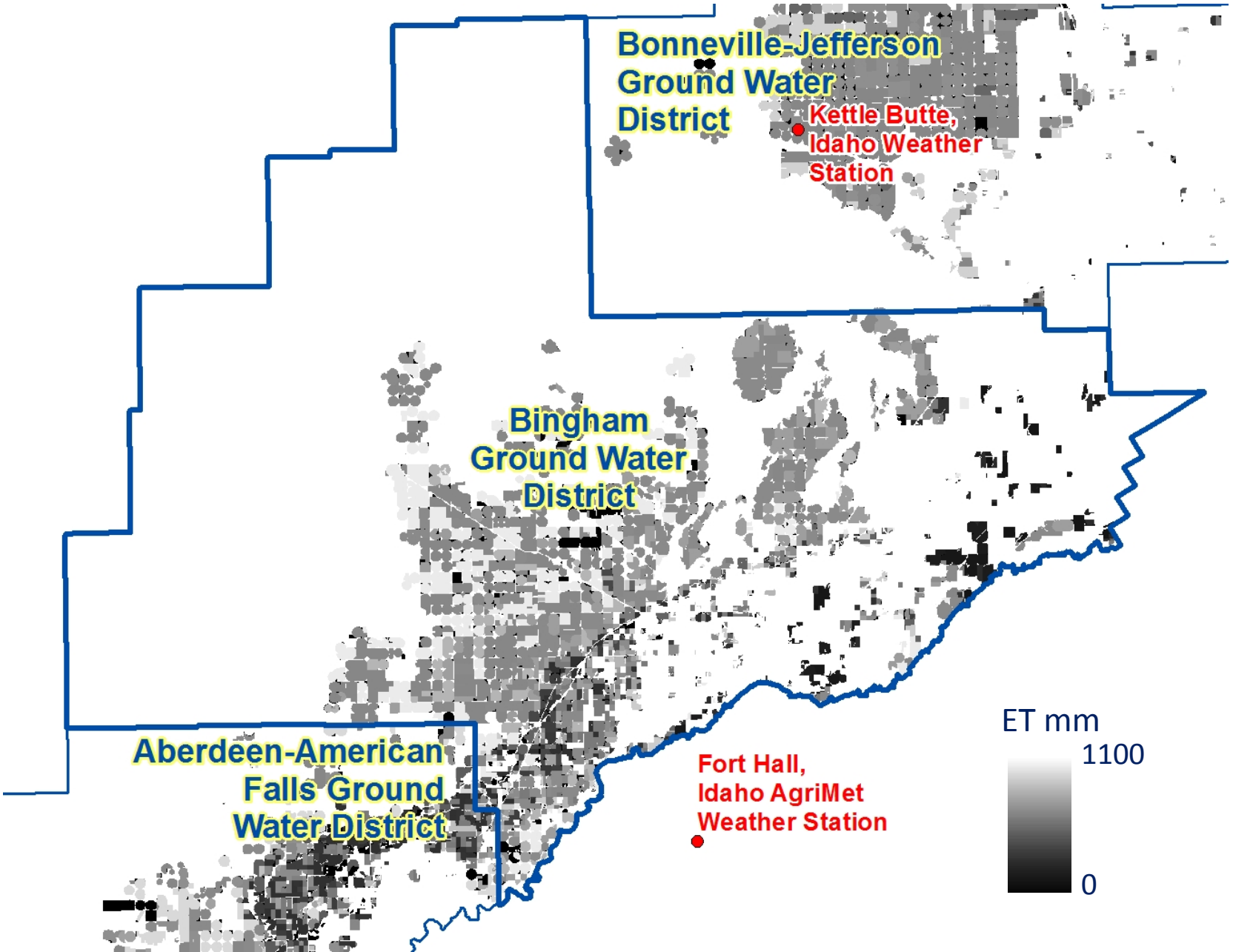


ArcGIS Model

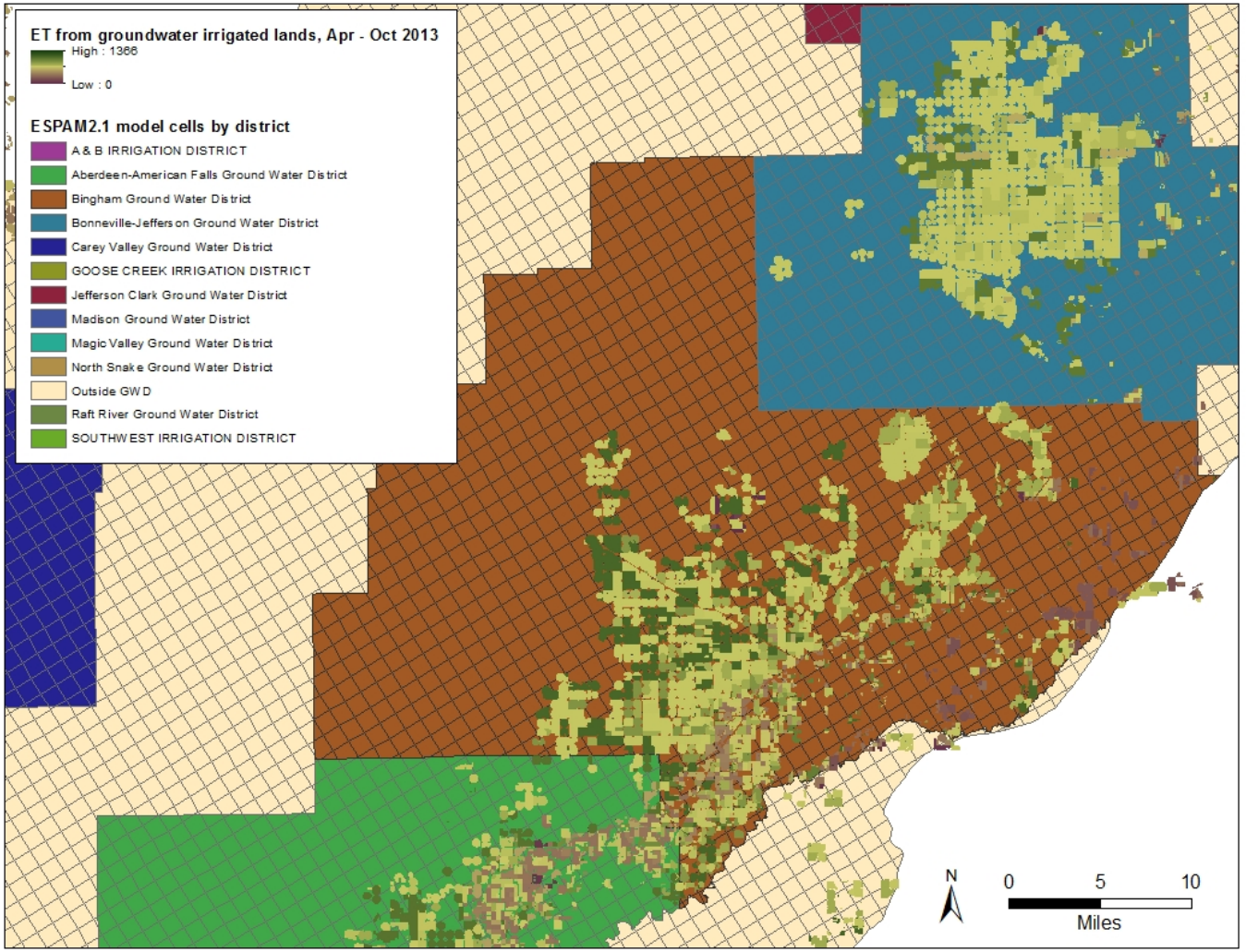
Input: AgriMet, CDL, GWF



ArcGIS Model Output: 2013 ET for Ground Water



Irrigation season ET on groundwater irrigated lands was summed by ESPAM2.1 model cell within each district boundary.



From: Kimmell, Paul [mailto:Paul.Kimmell@avistacorp.com]
Sent: Tuesday, July 07, 2015 10:24 AM
To: Miller, Neeley
Cc: Patton, Brian
Subject: PBAC Update

Hi Neeley,

Hope your summer is going well. All is good on the Palouse except for drought, losing Vandal football program and related issues ☺

Seriously though, PBAC will be selecting a consultant today on our Palouse Ground Water Basin Water Supply Alternatives Project. I would be happy to come to the IDWR Board meeting next week (July 14th) and update the Board on our selection, progress, projected outcomes and future desired states? 10-20 minutes tops.

Thanks.

Paul J. Kimmell
Business & Public Affairs
Palouse Region

AVISTA

125 YEARS OF SERVICE 1889–2014

107 South Grand Avenue, Suite E
Pullman, WA 99163
P 509.336-6236
C 509-592-7801
paul.kimmell@avistacorp.com
http://www.avistautilities.com

REQUEST FOR QUALIFICATIONS
Professional Engineering Consulting Services

Palouse Ground Water Basin Water Supply Alternatives Project

University of Idaho
Moscow, Idaho

To: Qualified Consultants serving the interests of Ground Water, Water Resources Research, Water Resources Management and Public Water Works

From: Eugene P. Gussenhoven, Director Utilities and Engineering Services
Facilities, University Of Idaho

Subject: Investigation Programming, Planning Phase of Engineering Services in relation to the Palouse Ground Water Basin Water supply alternatives project, Located in the Counties of Latah, Idaho and Whitman, Washington

Date of Issue: **Amendment, March 25, 2015**

The University of Idaho is seeking qualification statements from interested Engineering Consulting Firms, Geologists, Hydrogeologists, Hydrologic Engineers, Hydrologists, Researchers and Qualified Institutions of Higher Education to assist the Palouse Aquifer Basin Committee in the investigation, programming, and development of Water Supply and Demand Management Alternatives supporting the Palouse Ground Water Management Plan. Qualification Statements from firms/teams interested in providing related services for this effort will be received at the office of Utilities & Engineering Services, University of Idaho, Moscow, Idaho 83844-2281 until close of business at **5:00 p.m., Monday, May 11, 2015**.

Any questions shall be submitted in writing 15- working days prior to the submission of the consultant's statement of qualification, which arise from this request, shall be addressed to:

Eugene P. Gussenhoven, Director
Utilities and Engineering Utilities Services
University of Idaho
875 Perimeter Drive MS 2281
Moscow, Idaho 83844-2281
(208) – 885 - 6246
eugeneg@uidaho.edu

Interested consulting firms are to limit their contacts to the named individual and contact only this person in the interest of maintaining a consistency of response and fairness to all

respondents. Please make no contact with other members of the University of Idaho or PBAC, except regarding certain items as specifically directed herein.

Background Setting

The Palouse Ground Water Basin (the Basin) underlies an approximately 500 square mile area of north central Idaho and eastern Washington. The over 60,000 residents of the basin rely on ground water for their municipal supply. Water levels in the lower Grande Ronde aquifer system have been declining since measurements began in the early 1900's. In the 1960's water level concerns resulted in the creation of the Pullman-Moscow Water Resources Committee (PMWRC, Known today as the Palouse Basin Aquifer Committee, or (PBAC)), a voluntary, cooperative, inter-jurisdictional group composed of representatives from each of the major pumping entities in the basin and the two Counties. The group formed to study the aquifer systems in the basin and provide recommendations to the entities for management of the resource. In 1992, the committee, in conjunction with the Idaho Department of Water Resources and the Washington Department of Ecology, enacted a ground water management plan for the basin. The plan included voluntary pumping targets as well as a call for continued pumping and water level monitoring and research involving hydro-geologic characterization and water supply alternatives options.

Implementation of the plan has resulted in an 11% decline in basin wide pumping since 1992, and an increased awareness among basin residents of the importance of using the resource wisely. Unfortunately, although the rate of decline has lessened and individuals are using less, water levels continue to decline. The committee has identified that additional demand management and augmented supply strategies will need to be implemented to stabilize water levels and ensure a long term, quality water supply for the basin residents.

Description of the Project

In the past 50 years a number of supply augmentation and demand management alternatives have been investigated by the committee, member entities, university researchers and government agencies. These investigations have resulted in numerous reports containing the details of the investigations as well as conclusions and recommendations for follow on action (see Appendix A, Water Supply Alternatives Document List). It is currently not possible to access a single source that identifies and evaluates in a consistent manner all the potential alternatives that may be available to local decision makers. In order to move forward with selecting one or more strategies for implementation, such a source is necessary.

General: To achieve this end, the University of Idaho (UI) is requesting statements of qualifications on behalf of PBAC for compilation, synthesis and comparison of existing water supply alternatives and demand management studies that have been previously completed for the Basin, and an identification of data gaps precluding selection or ranking of preferred alternative(s). Management options include but are not limited to conservation rate design and

demand reduction, surface water supply (direct use, above ground storage, below ground storage), ground water supply (intra-basin water right transfers, inter-basin water supply), water reuse, and rainwater harvesting.

Vision: The purpose of the project is to compile information available on water supply alternatives for the Basin into a single document and provide a useful means of comparison.

Scope of Work / Intent: This project will compile existing studies and information on alternative water supplies and provide a methodology for reasonable and effective comparison of various alternatives with the goal of assisting decision makers in determining the most promising alternatives, considering life cycle cost, as well as non-economic criteria such as public acceptability, ease of implementation, environmental permitting, overall benefit, etc. The project will also identify any existing data gaps precluding comparison.

Funding: Project funding will be provided by PBAC. The University of Idaho shall provide the contracting representative and authority. The University of Idaho on behalf of the PBAC reserves the right to terminate the contract contingent upon the availability of funding.

Form of Agreement

The university intends to enter into a contract with the selected firm for the services described herein. The university typically relies on AIA standard forms of agreement modified by a supplemental agreement developed by the university use in all professional service contracts. Initial university assumptions for required services are based on budgetary assumptions to include all fees, soft costs, contingencies and miscellaneous costs. Additional services may be required beyond these initial assumptions.

Required Services

The selected consultant shall acquire, review, and assess existing documents related to water supply and demand management: The consultant shall provide the necessary engineering and hydrogeologic expertise to permit such review and assessment. The consultant shall review studies previously attained by PBAC or its member entities. The consultant shall develop appropriate economic analyses and cost estimates as required during the course of the development of the project in order to evaluate and support planning and programming decisions. The consultant may also be required to advise the owner of other cost and value analyses as required. The consultant will prepare appropriate reports for review by PBAC, member entities, and the public.

The selected consultant shall be required to meet as required with the PBAC and University project manager and other concerned stakeholders to discuss and refine issues and inputs during the planning, programming and development phases of the project.

Future services may or may not be required at PBAC and the university's discretion. If such additional services are desired of the consultant, these will be administered by the University of Idaho as determined by an amended or separate agreement.

Qualification Format

Interested parties must submit ten (10) hard copies and one (1) electronic (Adobe format) copy of a qualification containing the following minimum information:

Qualification Content

A. **Basic Qualifications**: A description of your firm, including work history on similar projects, and hydrogeological or water related engineering experience in the Palouse Basin, and on the Columbia Plateau, or other basalt-hosted municipal water supply settings.

B. **Specific Qualifications**: The names, qualifications and roles of key personnel who will be assigned to this project. List the team and team members anticipated to accomplish the work required by this request, including any anticipated sub-consultants. Describe who will perform the various tasks, the amount of their involvement, responsibilities and their qualifications. Individual resumes, awards, associations, etc., maybe included in this section.

C. **Approach to Project**: A proposed project approach.

D. **Contract Management**: The name, title, address, and telephone number of individuals with authority to negotiate and execute contracts and who may be contacted during the evaluation process.

Submittal Requirements

The qualification shall be limited to 12 pages, not including the cover letter, résumés of key individuals, or section dividers. To be considered for award of this work, sealed qualifications must be received at the UI office shown below no later than **5 p.m. on Monday, May 11, 2015**. Late qualifications will not be considered. Qualifications should be mailed to:

Mr. Eugene P. Gussenhoven,
Director of Utilities and Engineering
University of Idaho
875 Perimeter Drive MS 2281
Moscow, ID 83844-2281

At the direction of PBAC, UI will issue a notice to proceed or task order for each defined work task before work under each task is authorized to begin. UI and PBAC reserves the right to not proceed with any tasks under this Request for Qualifications. UI requires that the selected party

identify a project manager for this work, who will reside locally or be available to travel to the Basin approximately once per quarter and present a progress report or oral presentation at a regular PBAC meeting. A proposed project scope task list outline below, with suggested and negotiable deliverables, will be the basis for the scope of work and then further refined with the selected consultant.

The project will be divided into the following five tasks.

Task 1 – Project Management

Project administration and management, including regular coordination with PBAC on project updates, draft report review and comments, etc.

- Facilitation of project meetings and other activities.
- Monthly email progress reports available for review at regularly scheduled PBAC meetings.
- Quarterly progress reports to PBAC.

Deliverables: Regular communication and coordination with PBAC.

Task 2 – Compilation, Synthesis and Comparison

Compile, review, and synthesize all known and available previous studies and reports related to water supply alternatives and demand management in the Basin. Obtain electronic copies of all studies and reports from PBAC or member entity sources. The review will include available cost estimates (capital and O&M), projected annual water savings or supply amount, and non-economic data/factors if available such as public acceptability, ease of implementation, environmental permitting on an alternative by alternative basis. Present in tabular format known alternatives. Construct, justify, and provide a methodology for comparison. Review cost estimating approach of various studies and recommend adjustments as needed to make alternatives reasonably comparable in present day dollars.

Deliverables: Fifteen (15) DVD (Adobe .pdf and native file formats accessible to standard Microsoft Office 2000 products) copy containing a Draft and Final Technical Memorandum and compiled data. The Draft Memorandum will be made available for review and comment and any comments received will be contained in and responded to in an appendix to the Final Memorandum.

Task 3 – Data Gap Identification

Evaluate reliability and quality of existing information, areas of uncertainty, and identify key areas in which data gaps exist. It is expected that tasks 2 and 3 will be done concurrently, though the timing of Task 3 will likely lag Task 2 somewhat to better inform data gap areas.

Deliverables: Fifteen (15) DVD (.pdf and Office 2000 compatible) copies of Draft and Final Memorandum summarizing existing data, evaluating data quality and applicability to utilization

in follow-on studies, identification of additional data required for better refinement of alternatives, including ability to effectively compare and contrast water supply alternatives options. A Draft Memorandum will be made available for review and comment and any comments received will be contained in and responded to in the Final Memorandum.

Task 4 – Conclusions and Recommendations

Develop conclusions and recommendations on available water supply alternatives and provide recommendations for necessary follow-on studies, including draft scopes of work for any PBAC selected planning level studies. Identify state and federal options for capital financing (e.g. grants, loans, cost shares, etc.). Provide an evaluation and projection relative to impacts on water rates for each alternative and a relative value of operating and capital investment costs. Included will be a draft report presentation for PBAC members prior to a 30 day review and comment period.

Deliverables: Fifteen (15) hard and twenty five (25) DVD (Adobe .pdf format) copies of Draft and Final Reports summarizing work completed in previous tasks and detailing overall conclusions and recommended planning level scope details (including degree of necessity and optimal staging strategy) for follow-on studies necessary to develop the most promising basin water supply alternatives. Draft Reports will be made available for review and comment and any comments received will be contained in and responded to in the Final Report.

Special Conditions

A. **General Terms**

This request for qualifications does not commit UI or PBAC to enter into an agreement, to pay any costs incurred in the preparation of the qualification or subsequent negotiations, or to contract for the project. All information furnished in this request for qualifications was gathered from sources deemed to be reliable. No representation or warranty is intended as to the accuracy or completeness of the information contained herein and UI and/or PBAC reserves the right to alter or cancel this request for qualifications.

B. **Reservation of Rights**

The issuance of this request for qualifications does not constitute an agreement by the University of Idaho that any services agreement will actually be entered into by University of Idaho. The University of Idaho expressly reserves the right to:

- Waive any immaterial defect or informality in any qualification or procedure.
- Reject any or all qualifications.
- Reissue the request for qualifications
- Invite additional respondents to the request for qualifications.

- Complete the services contemplated by this request for qualifications by any other means.

- Request additional information and data from any or all respondents.

- Extend the date for submission of qualifications.

- Supplement, amend, or otherwise modify the request for qualifications and cancel this request with or without the substitution of another request for qualifications.

C. **Negotiation Rights**

The acceptance of a qualification and invitation to negotiate an agreement does not commit UI to accept any or all of the terms of the qualification. Final terms of any agreement will be agreed upon during negotiations. Negotiations may be terminated for failure to reach mutually acceptable terms.

D. **Right to Disqualify**

UI reserves the right to disqualify any respondent who fails to provide information or data requested herein or who provides inaccurate or misleading information or data. Further, UI reserves the right to disqualify any respondent on the basis of any real or apparent conflict of interest. By responding to this request for qualifications, the respondent agrees that any finding by UI of any fact in dispute related to this request for qualifications or the responses thereto shall be final and conclusive except as provided herein.

E. **Preparation Costs**

Each respondent will be responsible for all costs incurred in preparing a response to this request for qualifications. All materials and documents submitted by the respondents in response to this request for qualifications will become the property of UI and will not be returned. As such, they constitute public records which may be delivered to a person making an appropriate request for public records. The selected respondent will be responsible for all costs incurred by it during negotiations.

F. **Affirmative Action Requirements**

Respondent, by submission of a response, agrees to not discriminate against any worker, employee, subcontractor, or any member of the public because of race, creed, color, religion, sex, age, marital status, national origin, sensory or physical handicap, or otherwise commit an unfair employment practice and further agrees to comply with all Federal or State equal employment opportunity requirements.

Qualification Evaluation and Selection

Selection of the respondent / consultant shall be based on the following evaluation criteria:

1. Capability to perform the work including party's history, areas of expertise, and commitment to provide necessary resources to perform and complete the project within the expected project time frame (200 pts);

2. Relevant project experience including similar work performed by the respondent and clients for which similar work has been performed during the past five years (include name and phone number for appropriate contact persons) (100 pts);

3. Qualifications of project team including experience of key personnel to be assigned to the project and subcontractors, if any, team organization, roles of key personnel, and location of assigned personnel (250 pts);

4. Project approach including how the respondent proposes to execute each task required to complete the scope of the work, unique aspects of the proposed approach, and alternative approaches that PBAC may want to consider (350 pts);

5. Completeness of qualification (100 pts).

An evaluation committee of select PBAC members, will review and evaluate each qualification based on consideration of those factors set forth above. The evaluation committee may make a selection based solely on the ranked Statements of Qualification or it may decide to short list two or three firms and hold interviews.

Interview Information

The determination on whether to have interviews as part of the selection process will lie solely with the evaluation committee.

Selection and Award

The selection committee will attempt to make a recommendation to the PBAC no later than Thursday, May 21, 2015. The University of Idaho will attempt to select a firm/team no later than Friday, May 22, 2015. Upon selection of consultant firm/team, the university will issue a letter of intent to negotiate and schedule a pre-qualification conference. However, final award shall be contingent upon the successful negotiation and approval of a contract. The contents of a submitted qualification may be incorporated in a legal contract or agreement and proposers should be aware that methods and procedures proposed could be folded into contractual obligations.

Only one firm will be selected for the award of the Palouse Ground Water Basin Water Supply Alternatives Project.

RFQ Proposed Timeline Dates:

Issue Requests for Qualifications: Wednesday, March 25, 2015.

Qualifications Due: before close of business at 5:00 p.m., Monday, 11 May, 2015.

Tentatively Oral Interviews (if needed): week of May 19, 2015.

Announce Selection: Thursday, May 22, 2015.

Anticipated Performance Period: In general, PBAC desires are based on having completed, Deliverables in place November 5, 2016. This date may be adjusted based upon the advice and recommendations of the selected consultant.

Additional services and related performance periods may be awarded by the university at the discretion of the university.

Additional Information

The University of Idaho and the Palouse Basin Aquifer Committee (PBAC) reserve the right to reject any and/or all proposing consultant firms interviewed. The PBAC may also negotiate separately with any source in any manner necessary to serve its best interests.

The university and PBAC reserves the right to investigate and confirm the proposer's financial responsibility. This may include review of financial statements, bank references, and interviews with past clients, employees, consultants and creditors. Unfavorable responses to these investigations may be grounds for rejection.

Protests

Solicitation Questions:

If any respondent is in doubt as to the true meaning of any part of this Request for Qualifications, or detects discrepancies or omissions, such respondent may submit to the university a written request for an interpretation thereof.

If any respondent feels that a particular solicitation provision, condition, or specification limits competition, such respondent may submit to the university a written request for change, including reasons for the request and the proposed change.

Any interpretation of this request for qualifications or approval of changes will be made only by addendum duly issued. A copy of each addendum will be mailed, faxed, or delivered to each invitee receiving an invitation to respond and becomes part thereof. Receipt of each numbered addendum shall be acknowledged by the respondent in the response to the request for qualifications. Respondents will receive their copy of this RFQ from WEB://

www.dfm.uidaho.edu. The university will not be responsible for any other explanation or interpretation of the invitation to respondents.

Prospective respondents may submit a request for change of a particular solicitation provisions and specifications and conditions to Eugene P. Gussenhoven **NO LATER THAN 5:00 p.m., Monday, April 20, 2015**. Such requests for change shall include the reasons for the requests and any proposed changes to the solicitation provisions.

Selection Protests:

Any respondent who claims to have been adversely affected or aggrieved by the selection of competing respondents to interview, or by the final selection of a candidate to recommend to the University of Idaho Executive Leadership for award, shall have five calendar days after notification of those firms who will be considered further for this award to submit a written protest of the selection to the Assistant Vice Present, Facilities, University of Idaho, Moscow, Idaho 83844-2281. This written notification is **TO BE RECEIVED BY 5:00 p.m., 1 June 2015 within the identified five calendar working-day period**.

Document List for PBAC Water Supply Alternatives project

Documents contained in Framework Project Database:

- 1958 EBASCO Services
  Supplemental Water Supply for Moscow, Idaho: Interim Report Phase 1 Preliminary Reconnaissance and Consultation

- 1968 Jones, R.W., S.H. Ross, and R.E. Williams
  Feasibility of Artificial Recharge of a Small Ground Water Basin by Utilizing Seasonal Runoff from Intermittent Streams

- 1969 Williams, R.E., D.D. Eier, and A.T. Wallace
  Feasibility of Re-Use of Treated Wastewater for Irrigation, Fertilization and Ground-Water Recharge in Idaho

- 1970 Stevens, Thompson & Runyan, Inc.
  Water Supply Study

- 1973 Stevens, Thompson & Runyan, Inc
  The Feasibility of Union Flat Creek Pumped Storage

- 1973 Siath, J.
  Water Supply Study for the City of Moscow

- 1981 Nadler, M.
  Feasibility Study: Reclaimed Wastewater for Ground Water Recharge at Moscow, Idaho

- 1984 Ten Eyck, G., and C. Warnick
  Catalog of Water Reports Pertinent to the Municipal Water Supply of Pullman, Washington and Moscow, Idaho – A Summary

- 1986 Machlis, G.E.
  The Conservation of Water in Moscow, Idaho: A Survey of Public Opinion

- 1989 US Army Corps of Engineers
  Reconnaissance Report Palouse River Basin Idaho and Washington

- 2006 Golder Associates
  Palouse Watershed (WRIA 34) Multi-Purpose Storage Assessment, Final Report

- 2014 Palouse Basin Aquifer Committee
  Framework Project Bibliography

Documents on Moscow list otherwise in PBAC possession

- 2011 TerraGraphics/SPF Engineers
  Surface Water Reservoir Feasibility Study - Phase I

- 2012 HDR
  Comprehensive Water System Plan

- 2013 TerraGraphics/SPF Engineers
  Surface Water Reservoir Feasibility Study - Phase II

DOCUMENTS ON MOSCOW LIST NOT IN PBAC POSSESSION (NEED E-COPIES)

- 2001 DEQ
  City of Moscow Source Water Assessment Final Report

- 2004 EES
  City of Moscow Water Conservation Plan

- 2011 Keller Associates

Comprehensive Sewer System Plan

- 2011 JUB Engineers
  Wastewater Treatment Evaluation Temperature Report

- Unknown Date Unknown Author
  Reuse Study for the City of Moscow - Kimball Engineering

- 2015 City of Moscow (?)
  Water Conservation Plan

Documents on Pullman list otherwise in PBAC possession

- 2008 HDR Engineering, Inc., May 2008
  City of Pullman Water System Plan, Volume I and II

DOCUMENTS ON PULLMAN LIST NOT IN PBAC POSSESSION (NEED E-COPIES)

- 1993 Parametrix
  Wastewater Treatment Plant Effluent Reuse: Irrigation at Pullman High School, Military Hill Park and Proposed Golf Course

- 1998 Parametrix/Kimball Engineering/Esvelt Environmental Engineering, 1998
  General Sewer Plan – Chapter 7

- 2000 Parametrix, Inc.
  Washington State University Water Reclamation Project Pre-Design Study

- 2002 Parametrix, Inc.
  Washington State University Water Reclamation Project Design Development Document

- 2007, WestWater Research, LLC
  Water Right Summary, Proof of Beneficial Use, and Impairment Analysis for Application No. WHIT-07-04

- 2010 HDR/Taylor Engineering,
  General Sewer Plan Update – Chapter 7

- 2014 (in progress) Anchor QEA
  City of Pullman Water System Plan Update

- 2014 (in progress) J-U-B Engineers, Inc.
  WSU/Pullman Water Reuse System, Design Update

NO DOCUMENT LIST / E-COPIES RECEIVED FROM UI

NO DOCUMENT LIST / E-COPIES RECEIVED FROM WSU

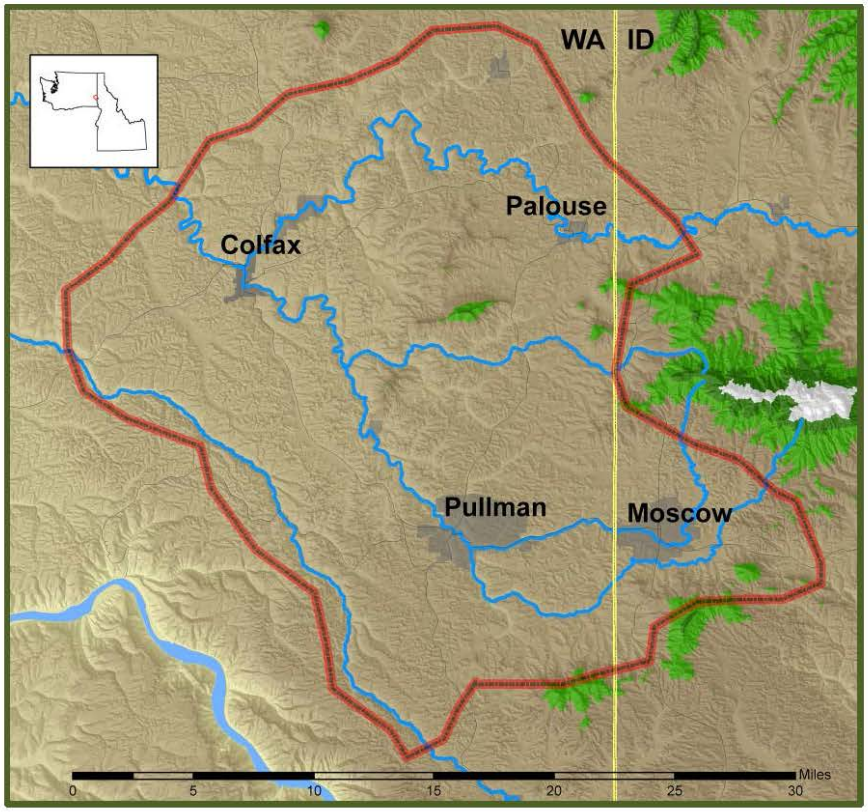
Palouse Groundwater Basin Water Supply Alternatives Project Update
Idaho Water Resource Board

Red Lion Templin's
Post Falls, Idaho
Thursday, July 14, 2015
Paul J. Kimmell, PBAC Chair

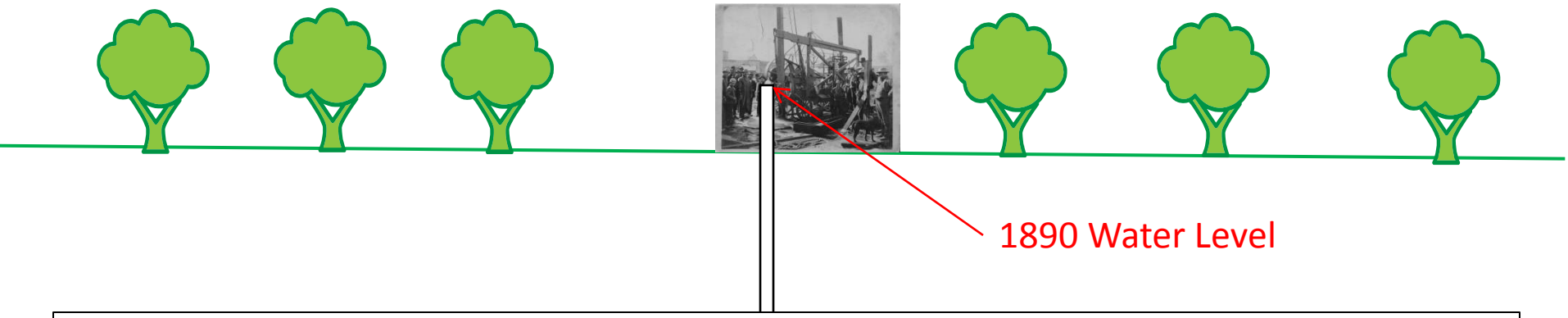
Thank You!

PALOUSE BASIN
AQUIFER
committee

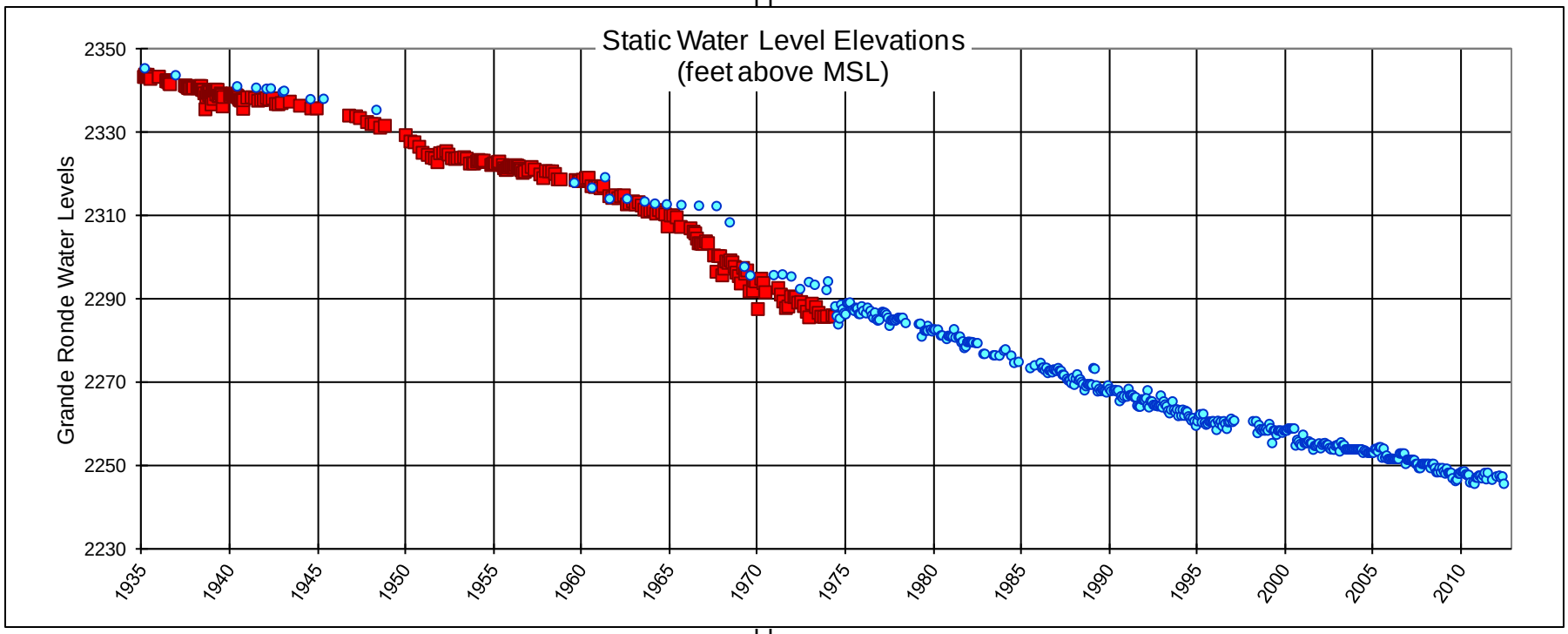
Palouse Basin Boundaries



PALOUSE BASIN
AQUIFER
committee



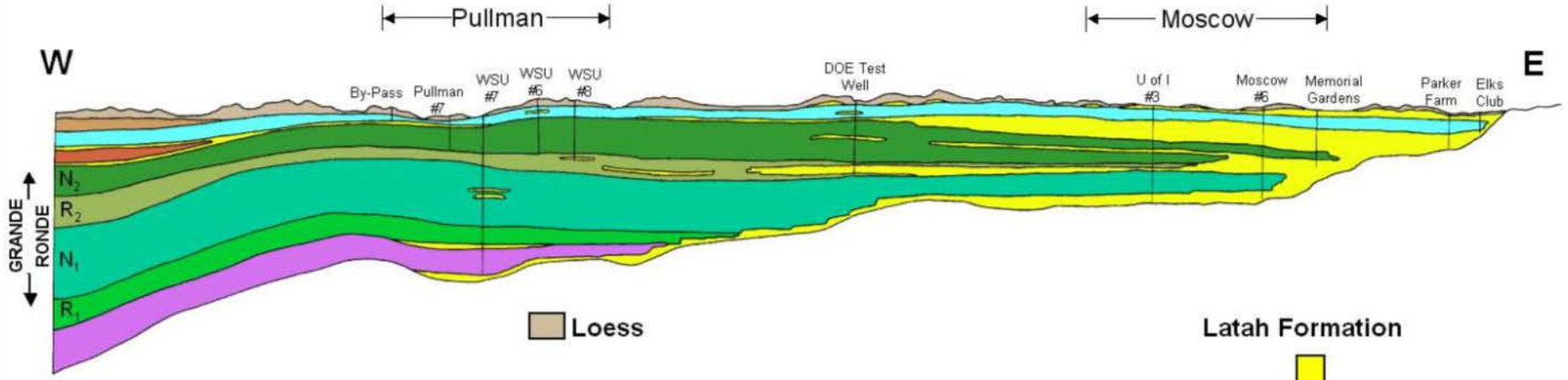
1890 Water Level



2014 Water Level

A Little Local Hydrology

GEOLOGIC CROSS-SECTION MOSCOW-PULLMAN, IDAHO-WASHINGTON



Loess

Latah Formation

Columbia River Basalt Group

Saddle Mountains Formation

Wanapum Formation

- Priest Rapids Member
- Roza Member

Grande Ronde Formation

- N_2 magnetostratigraphic unit
- R_2 magnetostratigraphic unit
- N_1 magnetostratigraphic unit
- R_1 magnetostratigraphic unit

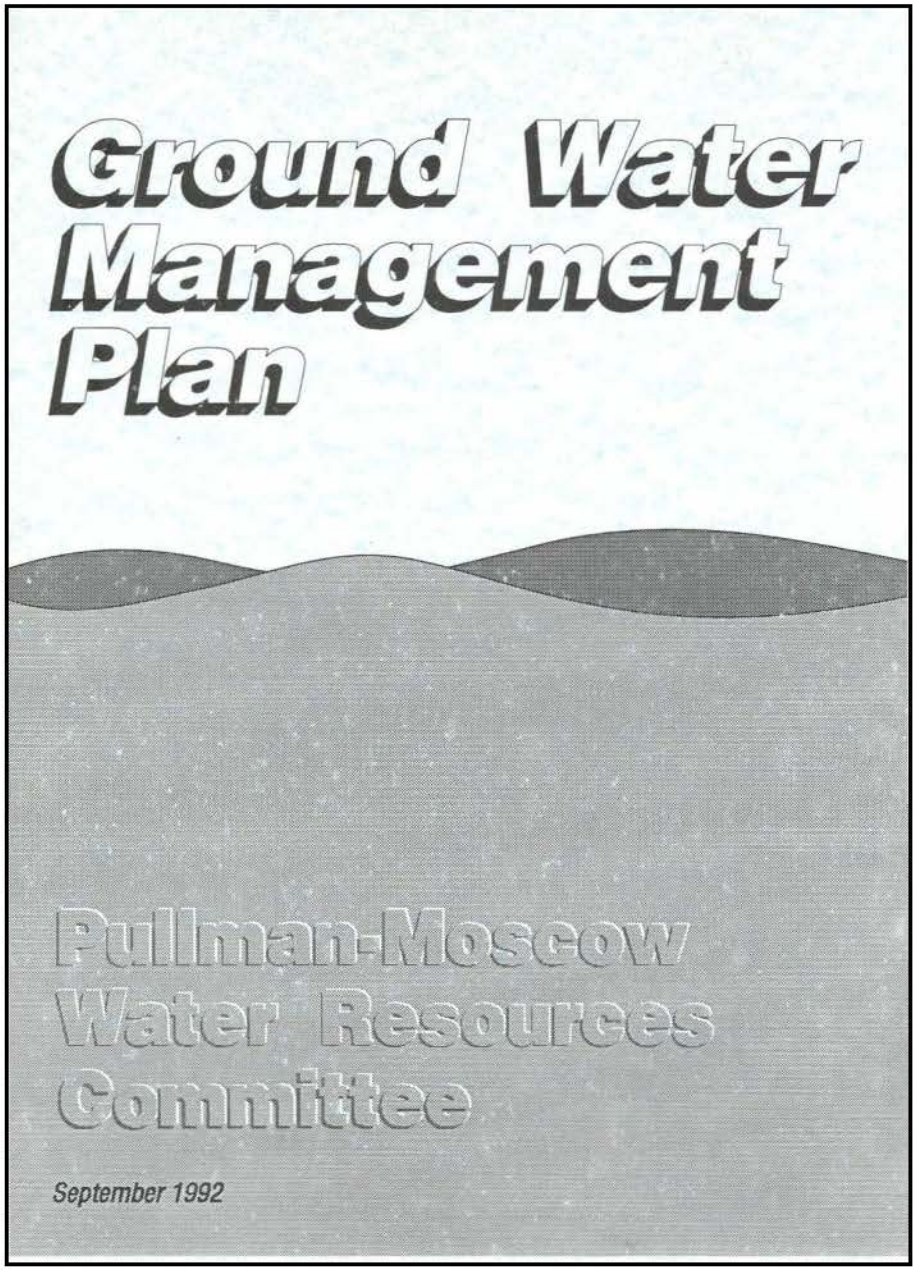
Imnaha Formation

0 1
Mile

Vertical Exaggeration
~4x

John H. Bush and Dean L. Garwood,
2004

Ground Water Management Plan - 1992



PALOUSE BASIN AQUIFER committee

Palouse Basin Aquifer Committee

"To ensure a long-term, quality water supply for the Palouse Basin region"
A Committee (now known as PBAC) was formed in 1967 because of declining groundwater levels in our municipal wells. The Palouse groundwater basin is the sole source of water for over 60,000 residents of ***Pullman, Washington*** *and* ***Moscow, Idaho*** *and outlying areas in both* ***Whitman County (Washington)*** *and* ***Latah County (Idaho)****. Also included among our groundwater users are* ***Washington State University*** *and the* ***University of Idaho.*** *We are a multi-jurisdictional, cooperative group with the mission of ensuring a safe and sustainable supply of water for the future".*

PALOUSE BASIN
AQUIFER
committee

Palouse Basin Aquifer Committee

12 Representatives – 2 from each of the 6 entities

City of Moscow

City of Pullman

Latah County

Whitman County

University of Idaho

Washington State University

Ex-Officio Members: IDWR and WA Ecology

Executive Manager: Steve Robischon

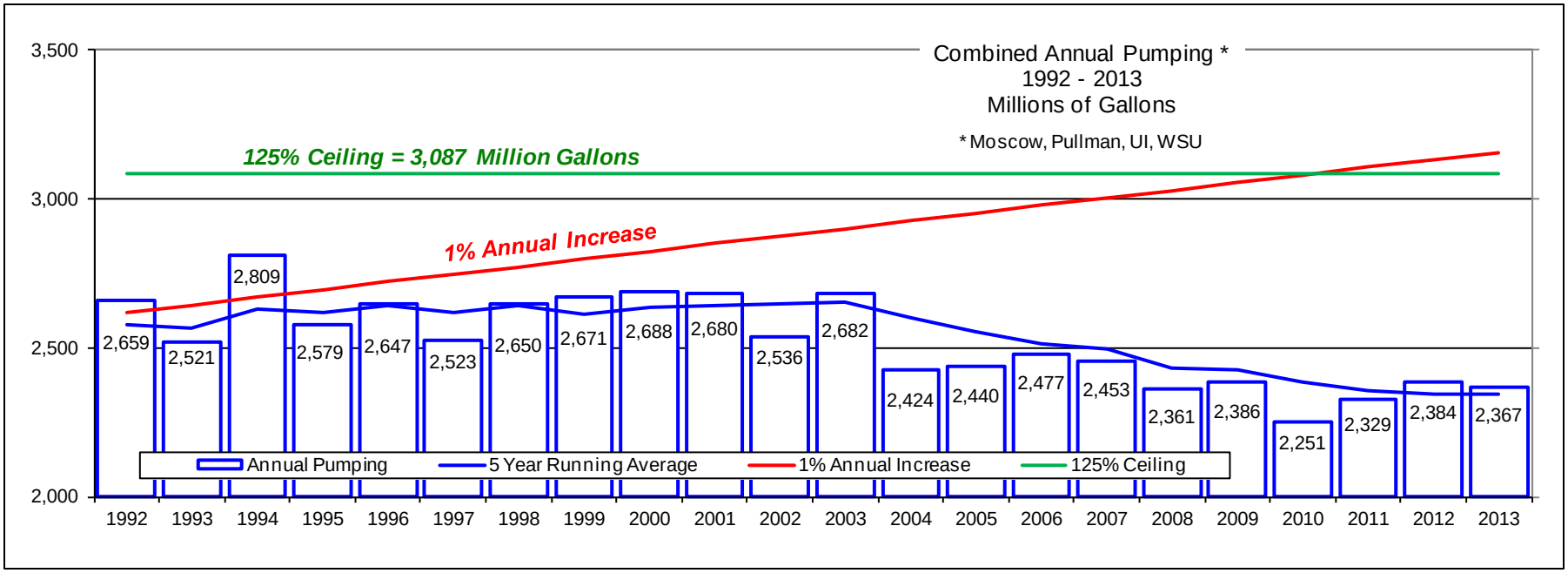
PALOUSE BASIN AQUIFER committee

http://www.webpages.uidaho.edu/pbac/

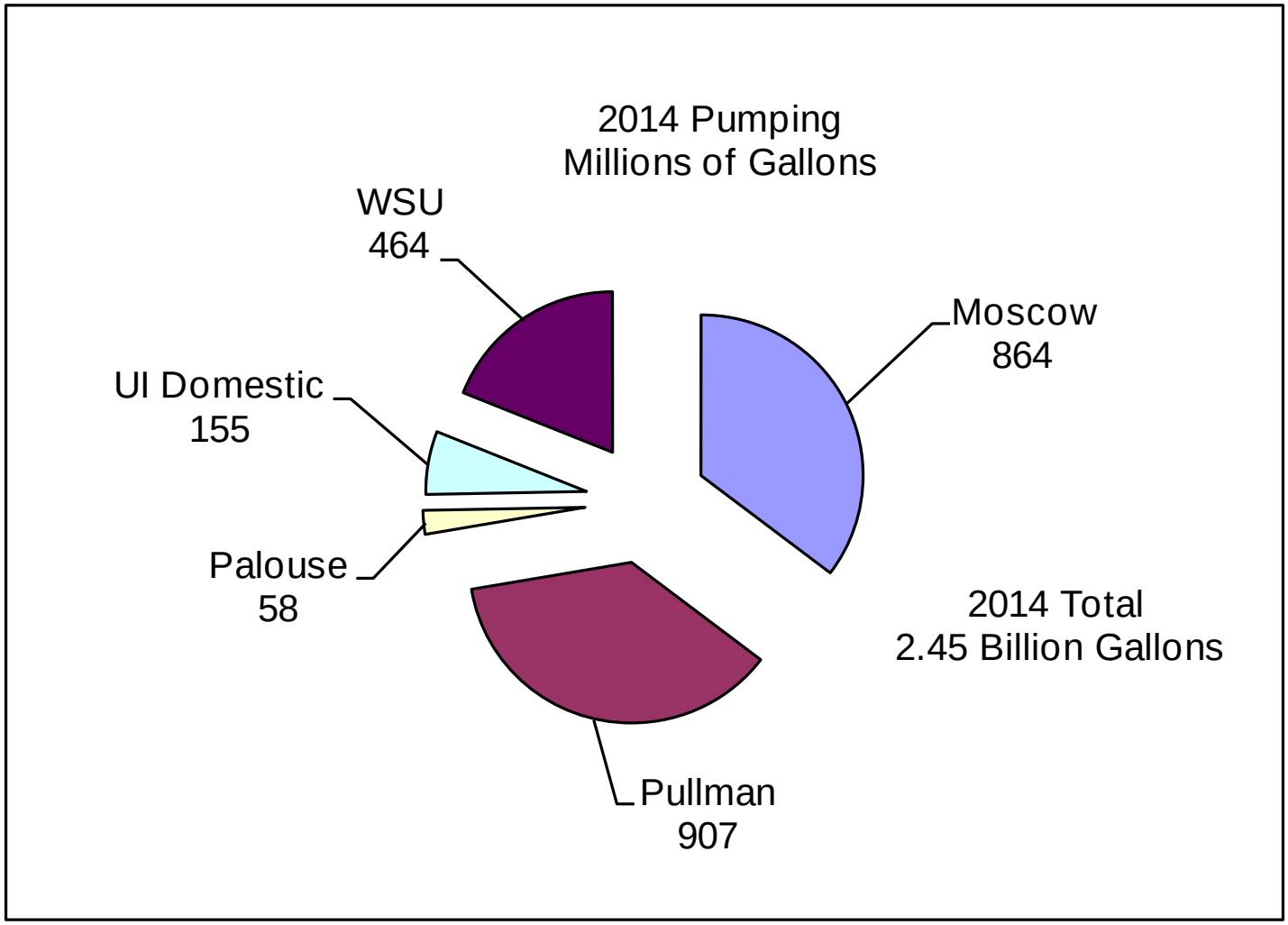
- GOAL -

- **TO PROVIDE FOR FUTURE BENEFICIAL USE OF THE BASIN GROUND WATER WITHOUT DEPLETING THE BASIN AQUIFERS WHILE PROTECTING THE QUALITY OF THE WATER.**

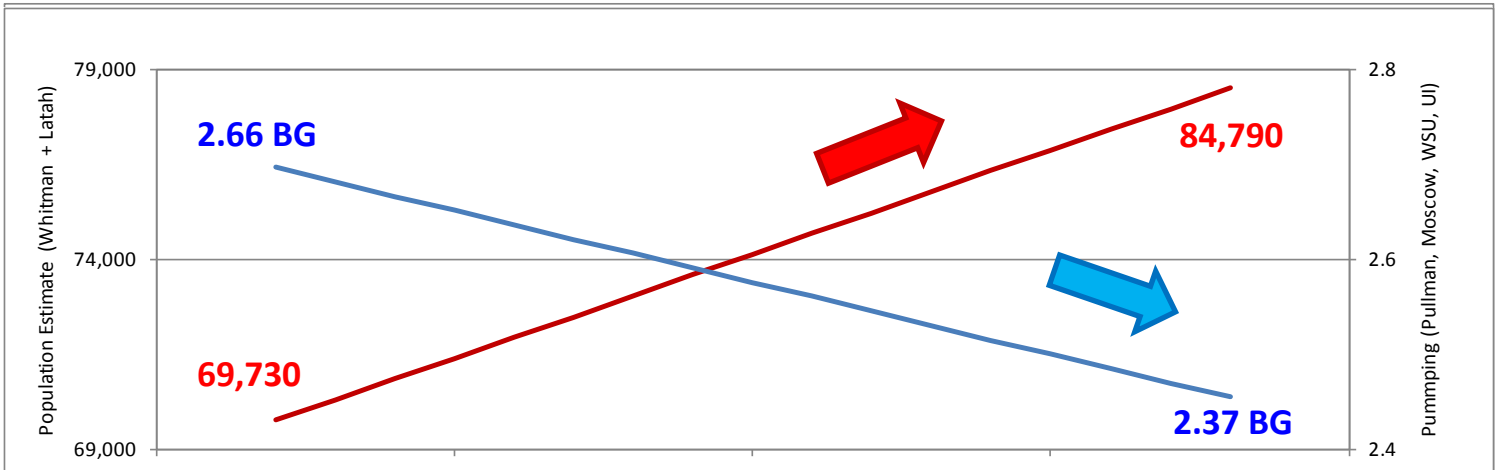
The primary goal is to insure that a stable ground water level is maintained in the **BASIN** aquifers. The **COMMITTEE** adopts the standard that the two universities and the two cities shall attempt to limit their annual aquifer pumping increases to one percent (1.0%) of their pumping volume based on a five (5) year moving average starting with 1986. At no time shall the accumulated total pumping exceed 125% of the 1981-1985 average for the two universities and the two cities. These initial limits on pumping rates are based upon historical data and water levels predicted by the **MODEL**. An estimate of the dispersed county pumping will be made based on an average per capita use for all county residences within the **BASIN** boundaries. Latah and Whitman counties will attempt to limit pumping increases from the **BASIN** aquifers to 125% of the estimated 1990 pumping levels. Further refinement of the **MODEL** will be necessary to establish acceptable limits on long term pumping rates which will confirm a stable water level for future users. The **COMMITTEE** will update the **MODEL** periodically and



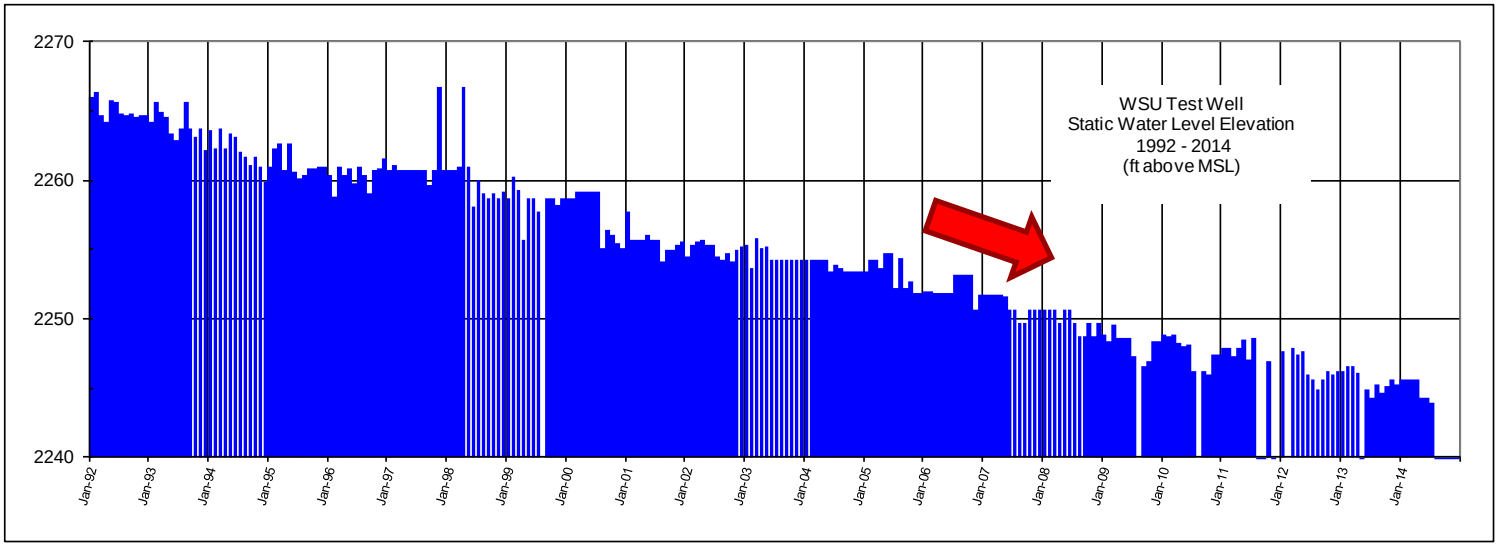
PALOUSE BASIN AQUIFER committee


2014 Pumping
Millions of Gallons
WSU
464
Moscow
864
UI Domestic
155
Palouse
58
2014 Total
2.45 Billion Gallons
Pullman
907

Trends: 1992 - 2014



Population ↑ 22% Pumping ↓ 11% Water Levels ↓ 21 ft



Ground Water Management Plan – Chapter 6 **- 2011 Mission and Goals**

- **Mission: To ensure a long-term, quality water supply for the Palouse Basin region.**

- **Consistent with the Palouse Basin Groundwater Management Plan, develop and Implement a balanced basin wide Water Supply and Use Program by 2025.**

- **Create and maintain an action plan for aquifer system sustainability, enhancement and/or alternate water supply development.**

- **Direct research and implement pilot projects necessary to understand the basin hydrogeology in a manner sufficient to support the Water Supply and Use Program and the affiliated supply projects.**

- **Encourage and facilitate entities in meeting their specific pumping, conservation, efficient use, water recycling and other goals.**

- **Educate entities and the public on the state of the basin water supply and the status of PBAC's mission and goals.**

- **Maintain harmonious and effective working relationships across the state line to fairly meet the needs of all entities.**

Aquifer Studies

Palouse Ground Water Basin Framework Project
Final Report

Prepared by:

TerraGraphics
Environmental Engineering, Inc.

121 S. Jackson St.
Moscow, ID 83843
Web Site: www.terragraphics.com

And

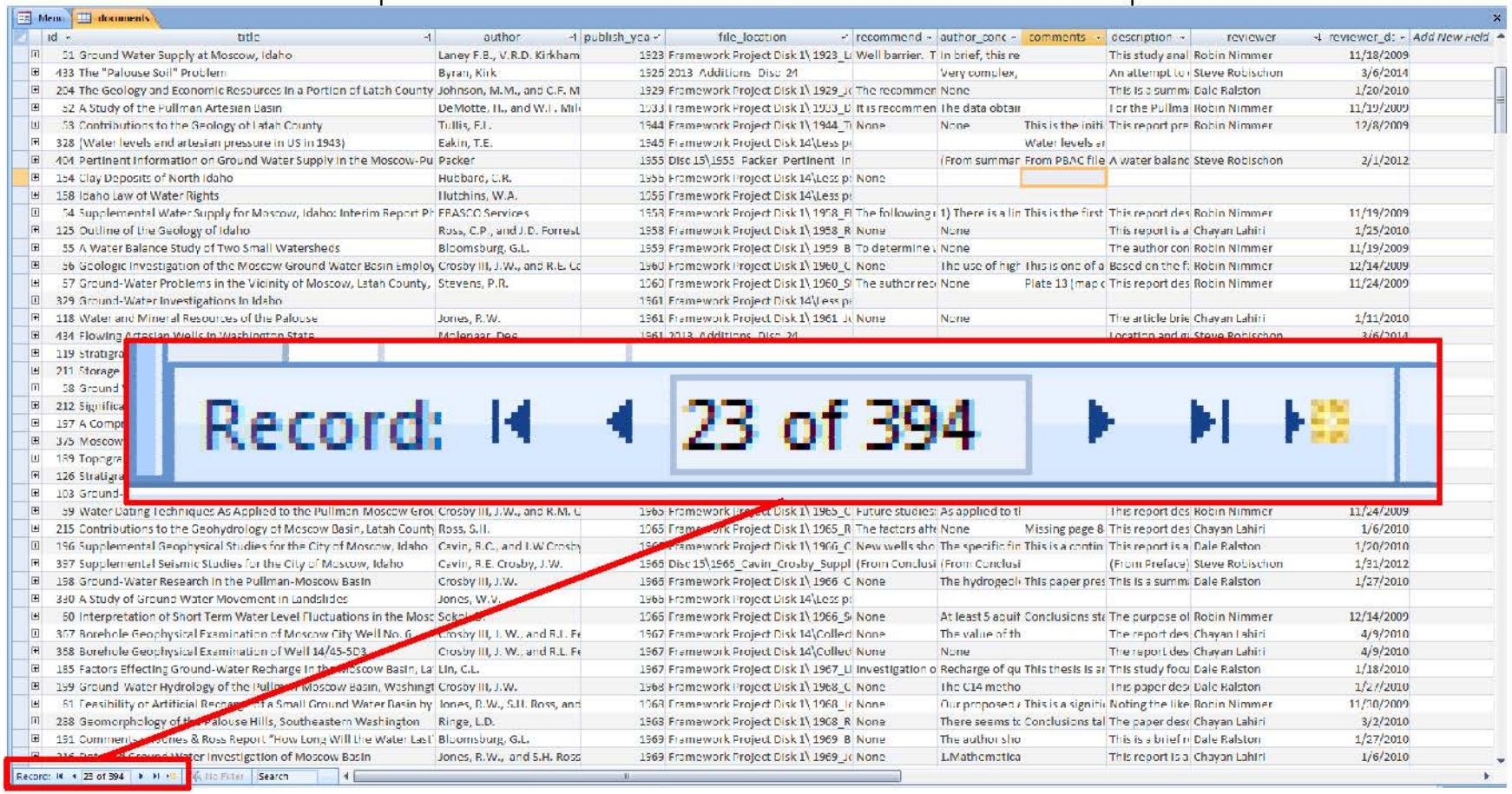
Ralston Hydrologic Services
1122 E. B St.
Moscow, ID 83843

January 31, 2011

PALOUSE BASIN
AQUIFER
committee

Aquifer Studies

Palouse Ground Water Basin Framework Project
Final Report



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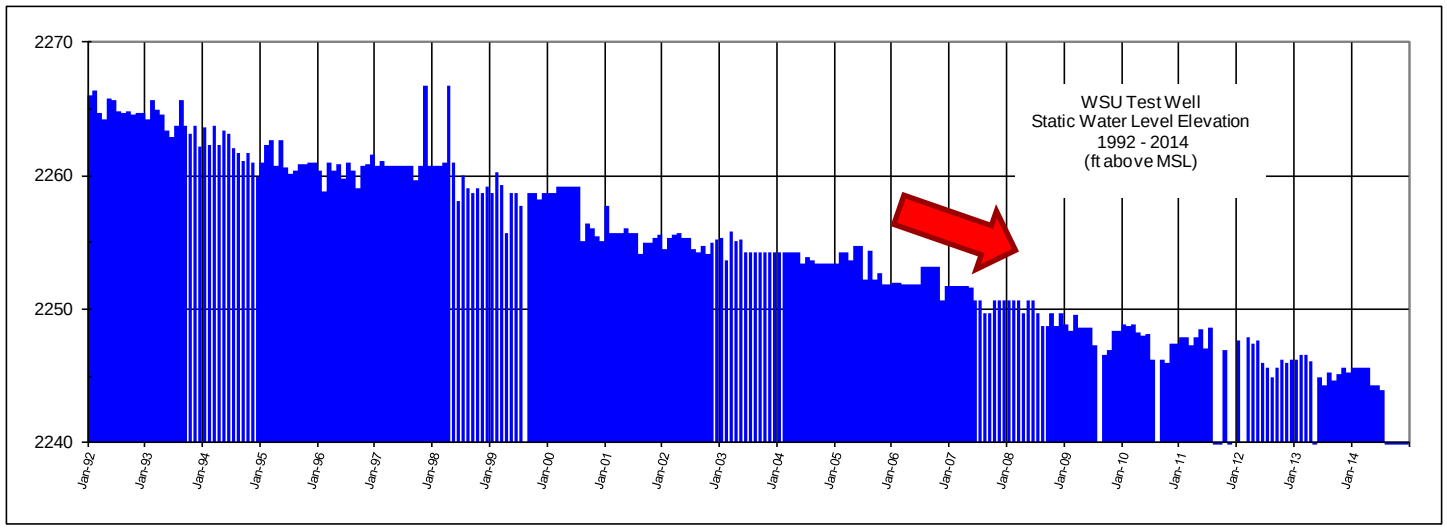
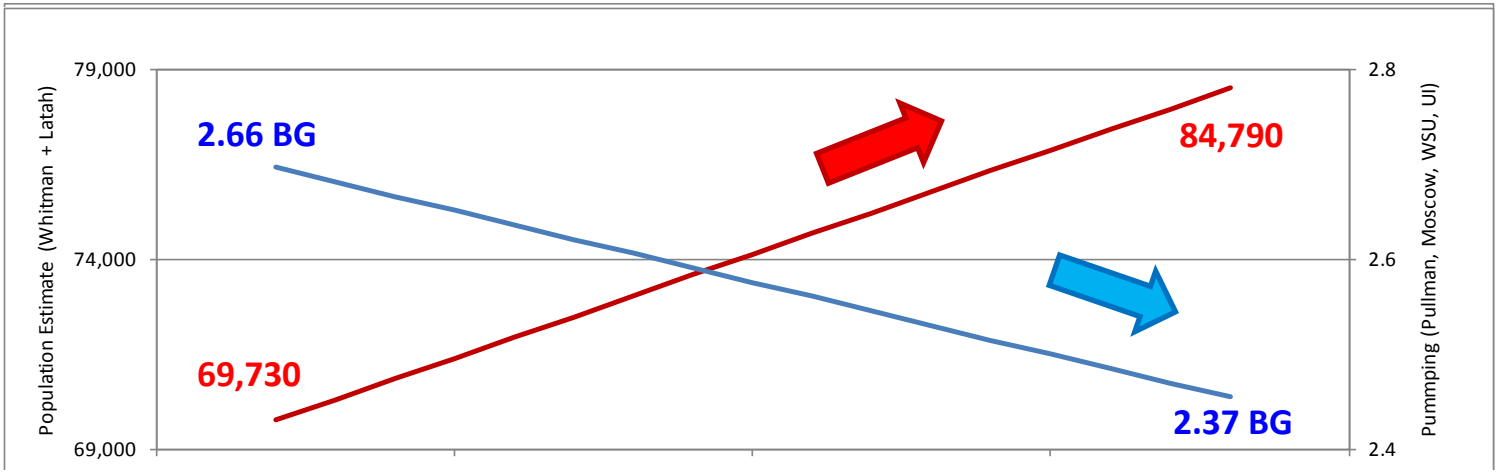


What to Do?

- **Use Less**
  - Inside
  - Outside
- **Reuse Some**
- **Find More**
- **Communicate**

PALOUSE BASIN AQUIFER committee

Trends: 1992 - 2013



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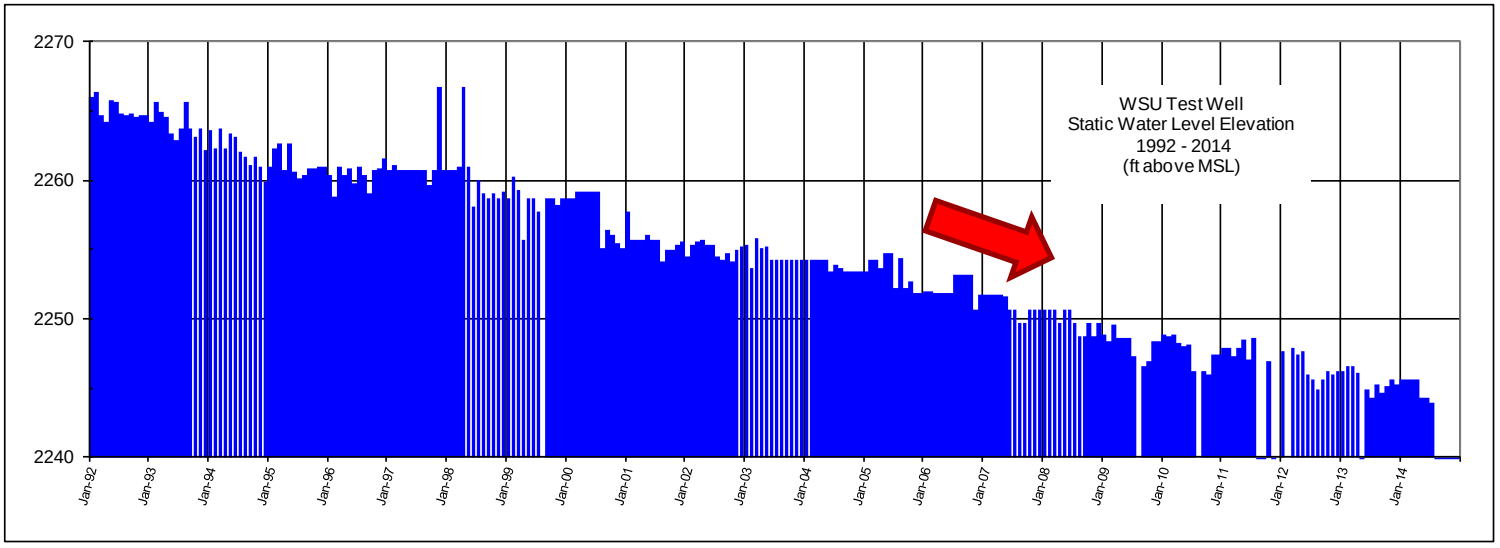

What's next?

- **Use Less**
  - Inside
  - Outside
- **Reuse Some**
- **Find More**
- **Communicate**

PALOUSE BASIN AQUIFER committee

Find More….

Create and maintain an action plan for aquifer system sustainability, enhancement and/or alternate water supply development.

Water Supply Study (circa 2015)

- using today's metrics, science and legal framework
- create a menu of water supply alternatives

PALOUSE BASIN AQUIFER committee

Palouse Basin

Water Supply Alternatives Project

RFQ

Issued March 9, 2015

Description of Work:

"Consulting firms to **compile exiting studies and information on alternative water supplies and provide methodology for reasonable and effective comparison of various alternatives with the goal of assisting decision makers in determining the most promising alternatives, considering life cycle cost, as well as non-economic criteria such as public acceptability, ease of implementation, environmental permitting, overall benefit, etc.** The project will also identify any existing data gaps precluding comparison."

PALOUSE BASIN AQUIFER committee

Palouse Basin

Water Supply Alternatives Project

RFQ

Issued March 9, 2015

Estimated Cost:

"Estimated value Budgetary Assumptions are based upon a total project cost of **$100-150K** to include all professional fees, contingency and soft costs. Initial Regents' Authorization is for planning and design phases only and is limited to $150K in expenditures. Additional authorization for future Phases will be sought upon conclusion of the Conclusion of the project."

PALOUSE BASIN AQUIFER committee

PALOUSE BASIN AQUIFER COMMITTEE
University of Idaho | PO Box 443301
Moscow, ID 83844-3301
208.885.6429
pbac@uidaho.edu | www.uidaho.edu/pbac

SPECIAL MEETING – JULY 7, 2015, 10:30 AM
MOSCOW UI FACILITIES SERVICES CENTER, PONDEROSA MEETING ROOM

Special Meeting Agenda

1) New Business –

- **PBAC Water Supply Alternatives Project – Approval to Proceed with Recommended Consultant**

PALOUSE BASIN AQUIFER committee

PBAC Budget Details

Research Contributions 2005-2014 = 10 * $80,000 = $800,000

Estimated Expenditures 2005-2014 = $465,000

WA Ecology Contributions = $500,000 *

IDWR Contributions = $350,000 *

Total research investment in Basin = $1,315,000 *

Current Research Budget Balance = $443,000

PALOUSE BASIN AQUIFER committee

* Estimated investment

Palouse Basin

Water Supply Alternatives Project

Funding Options:

- Fully funded from PBAC
- Potential cost-share with IDWR
- Fully funded from IDWR
- Other combinations
- Future studies funding

PALOUSE BASIN AQUIFER committee

Thank You!

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