AGENDA

WATER STORAGE PROJECTS COMMITTEE
MEETING NO. 1-14

September 11, 2014 at 1:00 pm

Weiser Vendome Event Center
Room #1
Weiser, Idaho 83672

1. Welcome and Introductions
2. Weiser-Galloway Project Background
3. Preliminary Results of Operational Scenarios and Modeling
4. Additional Project Activities and Next Steps
5. Potential Lost Valley Enlargement
6. Public Comment
7. Next Meeting and Adjourn

Committee Members – Chuck Cuddy (Chairman), Bert Stevenson, Jeff Raybould, Al Barker, Pete Van Der Meulen

Americans with Disabilities

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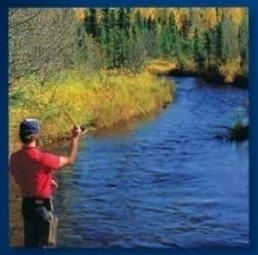
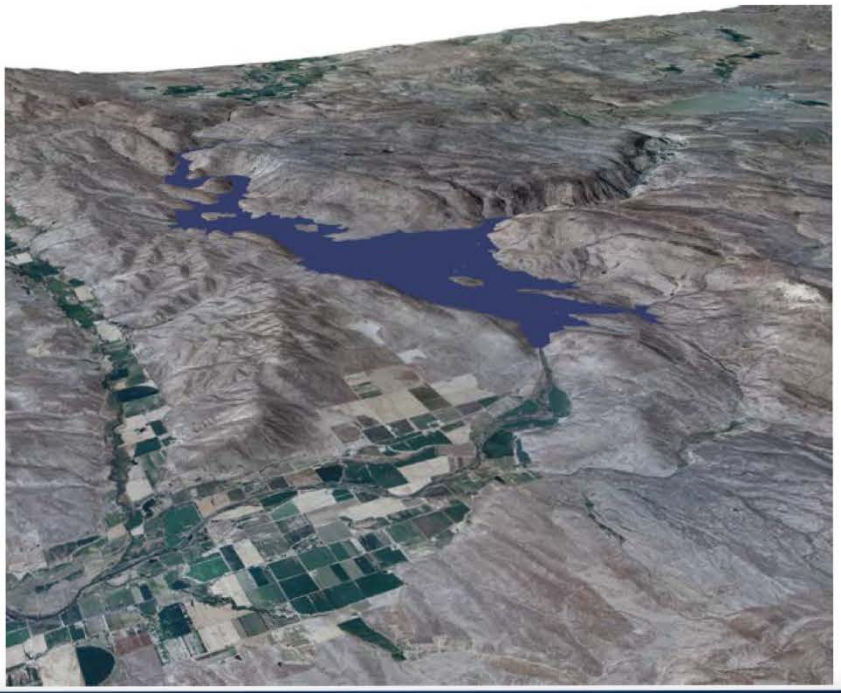


Weiser-Galloway Project Studies

Idaho Water Resource Board
Water Storage Projects Committee
September 11, 2014
Weiser, Idaho



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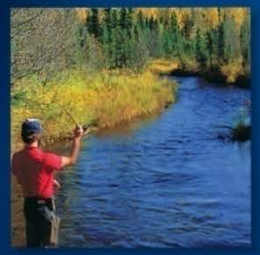
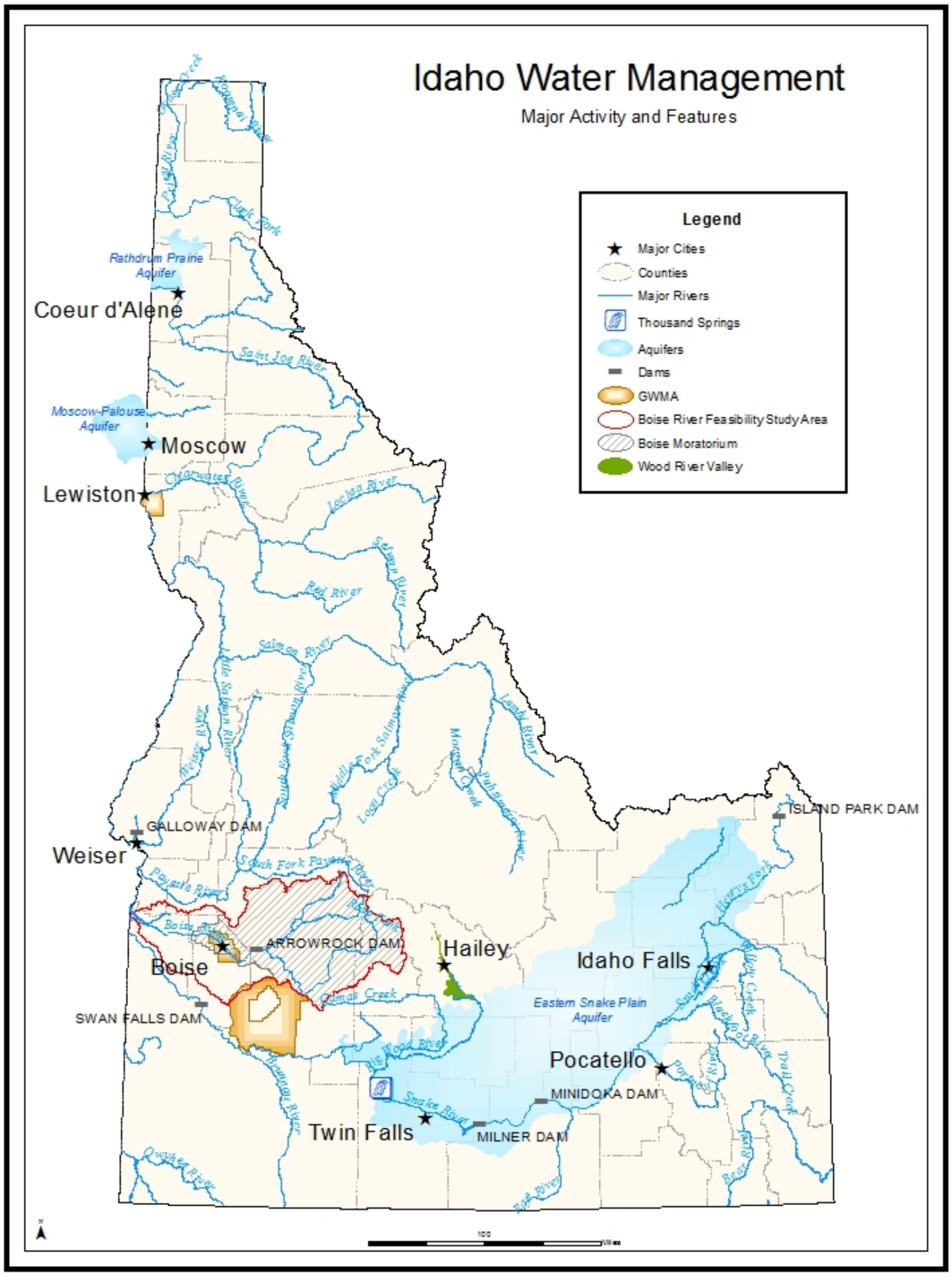


Storage Committee Meeting Agenda

- Weiser-Galloway Project Background
- Preliminary Results of Operations Analysis
- Additional Project Activities and Next Steps
- Potential Lost Valley Reservoir Enlargement
- Public Comment
- Next Meeting and Adjourn



- Wood River Valley – transient GW model under development similar to models in ESPA and RPA
- Mt Home – sustainable replacement water supplies for Air Force Base from Snake River & evaluating further use of surface water for aquifer stabilization
- Treasure Valley – transient GW model under development & evaluating use of surface water to meet future needs; new surface storage
- Lewiston Bench – enhancement of aquifer monitoring system
- Rathdrum Prairie Aquifer – determining extent of Idaho's future needs from Aquifer prior to any interstate water conflict with downstream states
- Other areas – Moscow-Palouse Aquifer

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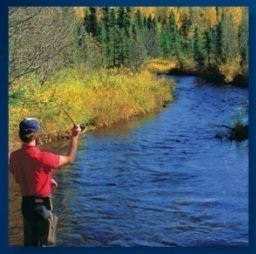


Declining Aquifer Levels

- **Eastern Snake Plain Aquifer (ESPA)**
  - Average annual loss of aquifer storage (1952-2008) is 214,000 acre-feet
  - Causes: Increasingly efficient use of surface water, drought events, increased ground water pumping
- **Decline in discharge from the Thousand Springs**
- **Conjunctive Administration**
  - hydrologically connected surface and ground water administered together
- **Delivery Calls**
  - Potentially resulting in hundreds of millions of dollars in economic loss to the State

Snake River System-wide Water Management Obligations

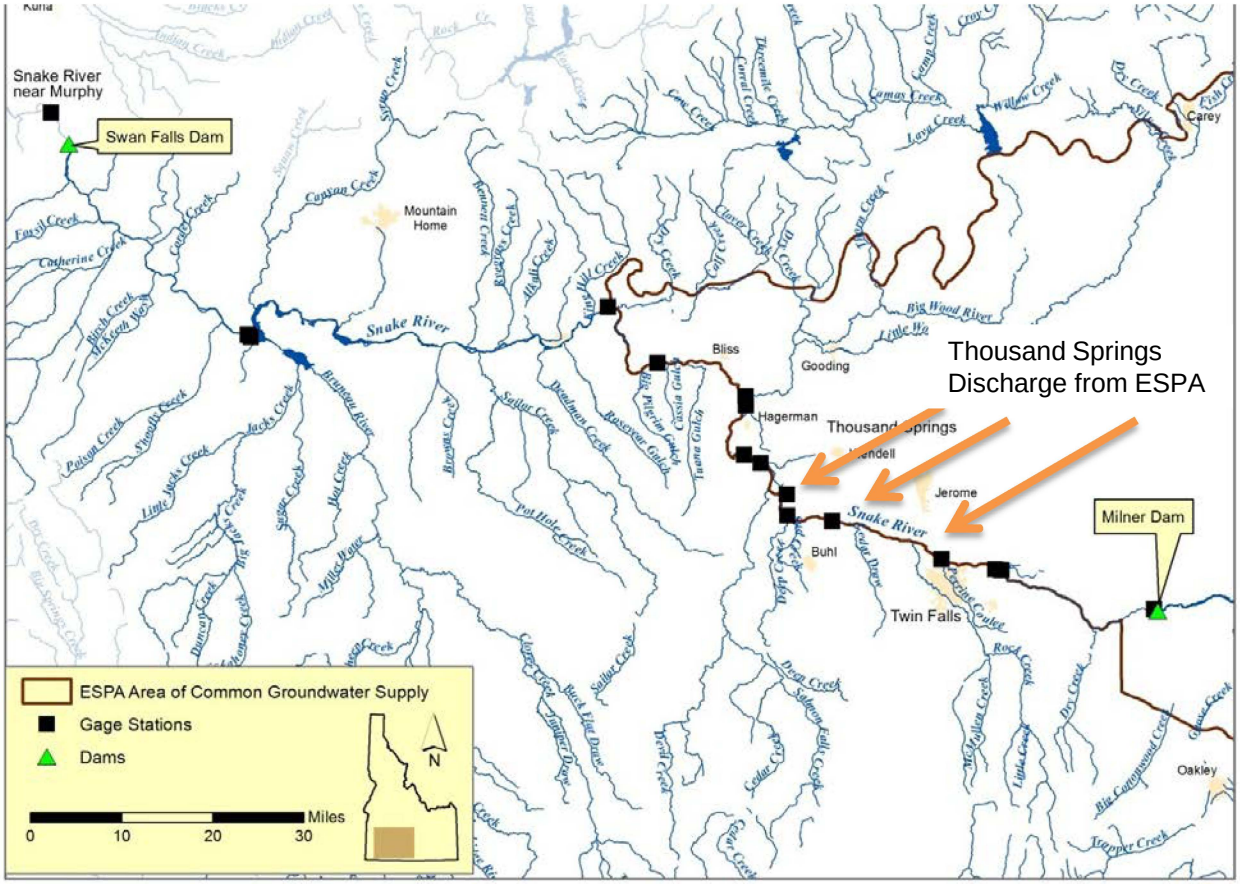
- **Zero flow policy at Milner Dam**
  - Water planning, policy and practice provide for full development of Snake River above Milner Dam
  - At times this practice reduces Snake River flow at Milner Dam to zero.

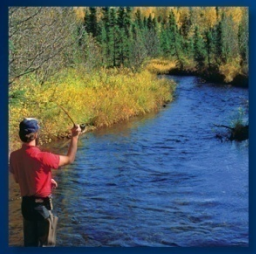
- **Swan Falls Agreement**

  State obligation to ensure minimum flows at Murphy Gage just below Swan Falls Dam of:
  - 3,900 cfs (4/1 through 10/31)
  - 5,600 cfs (11/1 through 3/31)

Implications of Swan Falls Agreement with Milner Zero Flow Policy

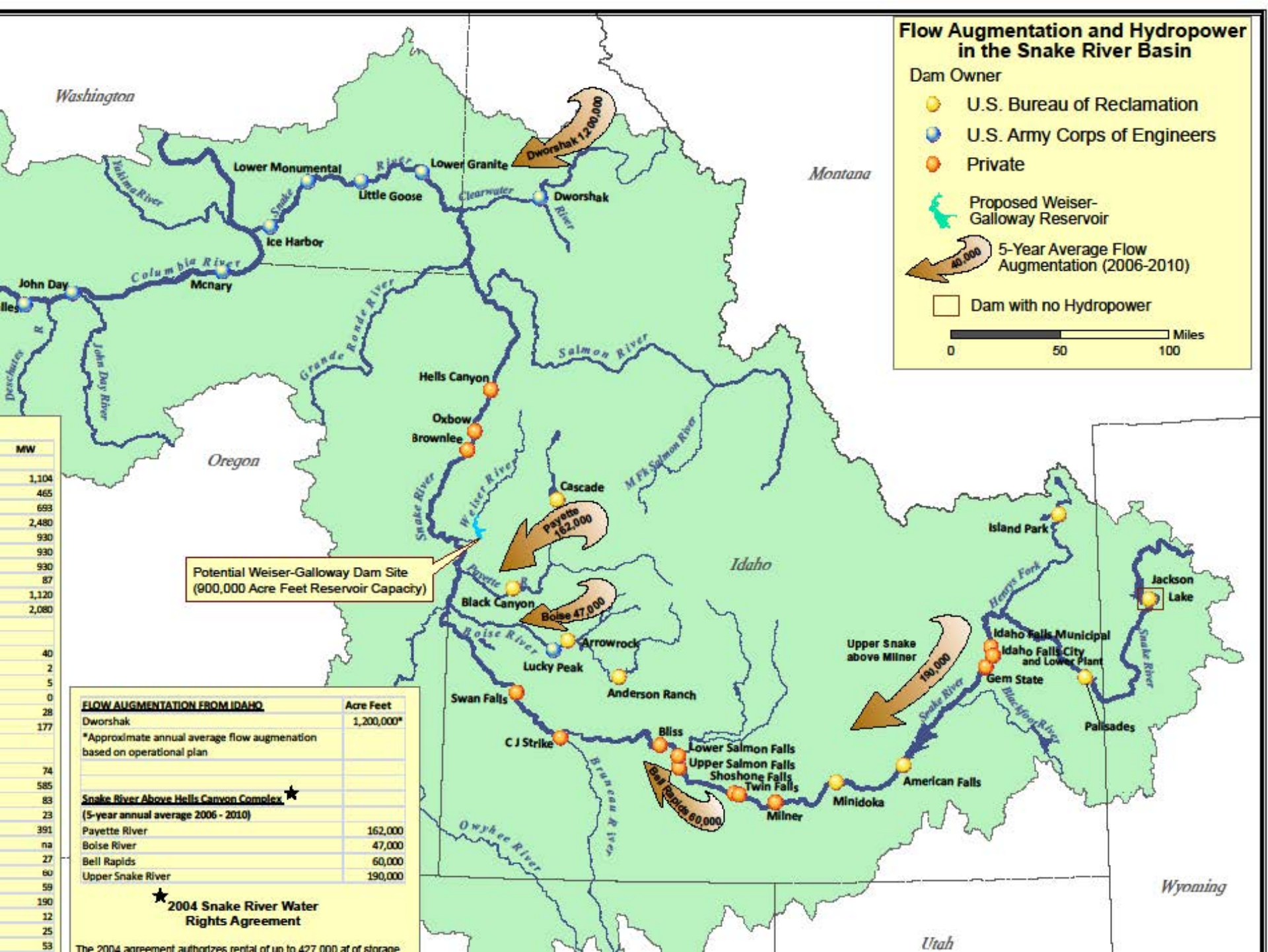
- When flow is zero at Milner, flow at Swan Falls Dam is made up almost entirely of spring flows from the ESPA
- Long-term: ESPA must be managed to sustain spring flows sufficient to meet Swan Falls minimum flows
- Curtailing water rights junior water rights not a good solution





Other Pressures on Water Supplies

- Flow Augmentation:
  - Designed to aid ESA-listed anadromous fish downriver
  - Began in early ‘90’s - formalized as part of 2004 Snake River Water Rights Agreement (Nez Perce Agreement) between Idaho, United States, and the Nez Perce Tribe
  - Requires best efforts to send 427,000 acre-feet/yr downriver from storage reservoirs above Hells Canyon + 60,000 acre-feet/yr (Bell Rapids) in addition to minimum flow at Snake@Weiser Gage (3,750 cfs)
- Population growth and economic development
- Climate change: projections indicate more winter rain & less winter snow; results in less snow water storage (additional storage may be necessary to stay even); already witnessing earlier average runoff



FLOW AUGMENTATION FROM IDAHO	Acre Feet
Dworshak	1,200,000*
*Approximate annual average flow augmenation based on operational plan	
Snake River Above Hells Canyon Complex ★	
(5-year annual average 2006 - 2010)	
Payette River	162,000
Boise River	47,000
Bell Rapids	60,000
Upper Snake River	190,000

★ 2004 Snake River Water Rights Agreement

The 2004 agreement authorizes rental of up to 427,000 af of storage

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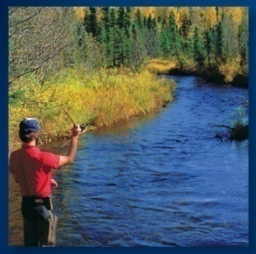

Pursuing Diverse Statewide Actions

- Eastern Snake Plain Aquifer & Spring Stabilization Efforts
  - Managed Recharge
  - GW – SW Replacement Projects
  - Demand Reduction
  - Cloud Seeding/Weather Modification
  - Measurement and monitoring efforts

- Other Activities
  - Mt Home – replacement water supplies for Air Force Base, water right acquisition by IWRB
  - Wood River Valley – GW model under development, cloud seeding
  - Treasure valley – GW model under development, cloud seeding
  - Rathdrum Prairie – CAMP Implementation, Future needs studies
  - Others?

- Buy-outs and Buy-downs – remove water calls and increase river flows

- Water Supply Bank – policy and processing modifications, and database development to improve processing efficiency

- New surface water storage projects under study – additional water supply
  - Galloway, Arrowrock Enlargement, Island Park Enlargement

Water Sustainability Initiative Funding HG479
$15 Million one-time Funds

Project	Amount
Mt. Home AFB Water Rights & Supply	$4 Million
ESPA Managed Recharge Infrastructure & Expenses	$4 Million
Northern Idaho Future Water Needs Studies	$500,000
Water Storage (Galloway, Arrowrock, Island Park)	$6 Million
Water Supply Bank Computer Infrastructure & Costs	$500,000

Included in Governor's Budget and approved by 2014 Legislature

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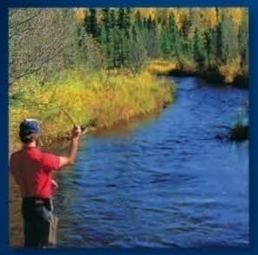
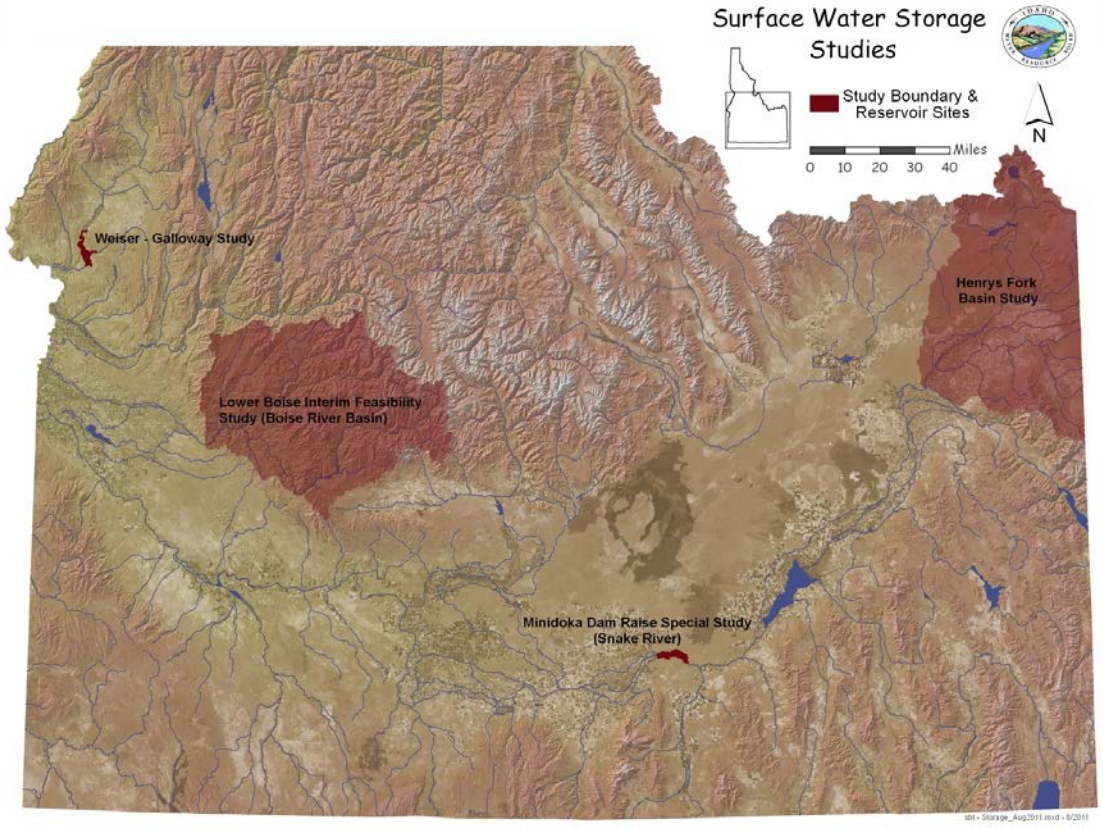


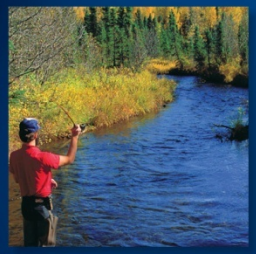
Aquifer Stabilization Funding HB547

- Directs $5 million annually to the Idaho Water Resource Board for statewide aquifer stabilization
- Funds had been used to pay for Capital renovation project – paid off this year
- First priority is Eastern Snake Plain Aquifer, but efforts are underway to support other aquifers

Statewide Water Storage Initiative

- House Joint Memorial 8, passed by the 2008 Legislature, recognized the need for additional water supplies and directed the IWRB to undertake studies of additional water storage
- Idaho State Water Plan
- Initial Water Storage Studies
  - ➢ Minidoka Dam Raise
  - ➢ Boise River Feasibility Study
  - ➢ Island Park Res. Enlargement
  - ➢ Weiser-Galloway Project
  - ➢ Others?



Why Study Galloway?

- There is a need for projects that increase flexibility to help manage state-wide water resource issues
- New water demands, laws and policies, and site conditions allow for reformulation of the project
- Potential to provide benefits as a multi-purpose project – determine whether it can provide Weiser River basin and system-wide benefits

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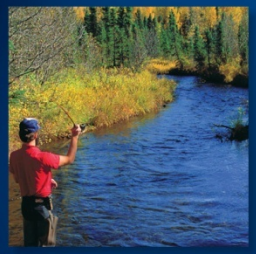

Hope to Accomplish with Galloway Project

- Weiser Basin:
  - Flood control for City of Weiser and lower Weiser Valley
  - Recreational development
  - Additional water supplies for irrigation, M&I, and other uses
  - General economic development in region

- Use Galloway storage to contribute to the total flow augmentation requirements from Idaho storage reservoirs (427,000 af/yr cap) – provide flexibility within the Snake River system upstream of Hell's Canyon and increase reliability

- Hydropower generation – increased at-site hydropower from previous studies

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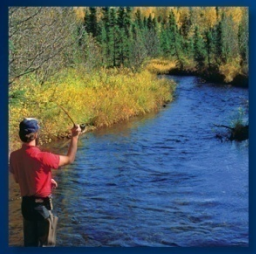
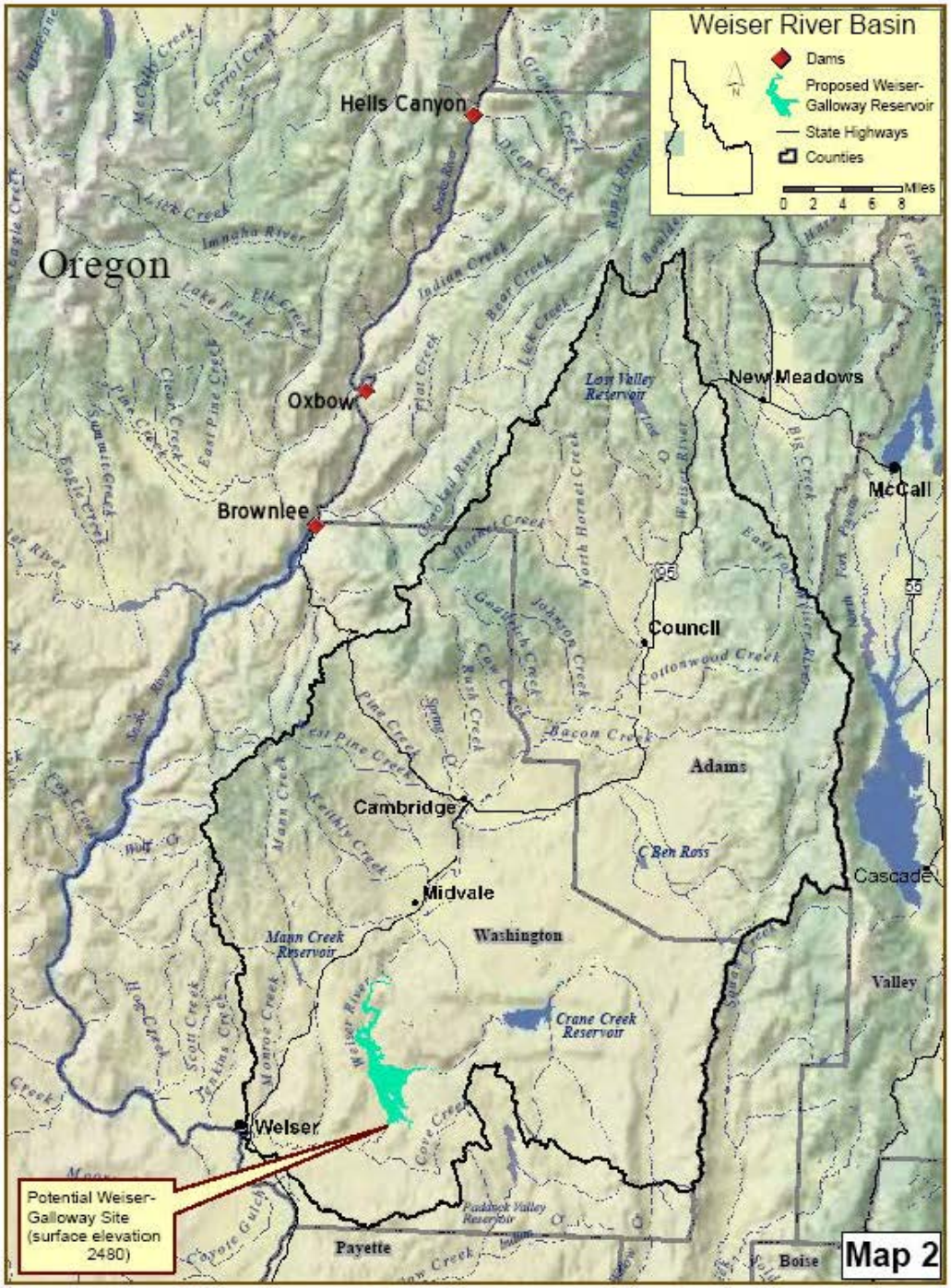
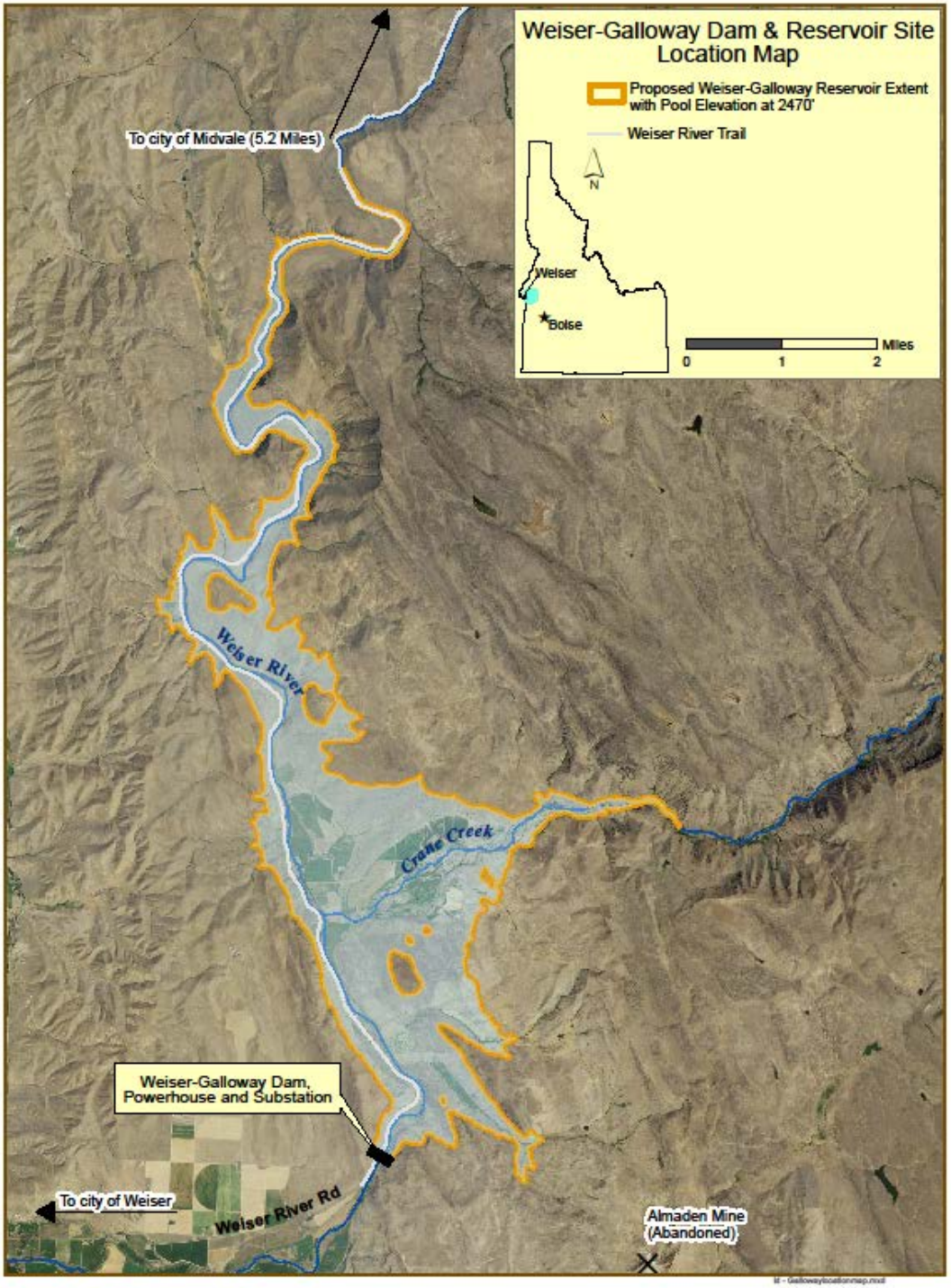


Weiser River Basin Storage Studies

- Columbia River Basin Report (USBOR) (1950)
- Upper Snake River Basin Report (USBOR & USACE) (1961)
- IWRB Studies (1970)
- Weiser River Division Wrap-Up Report (USBOR) (1972)
- Weiser River Basin Water Project Studies (IWRB) (1981)
- Galloway Dam & Reservoir Weiser River Basin Interim, Upper Snake River and Tribs (USACE) (1988-1994)
- Weiser-Galloway Gap, Geologic and Operations Analyses (IWRB) (2011-Current)


Weiser River Basin
Dams
Proposed Weiser-Galloway Reservoir
State Highways
Counties
Miles
0 2 4 6 8
Oregon
Hells Canyon
Oxbow
Brownlee
New Meadows
McCall
Council
Adams
Cambridge
Midvale
Washington
Cascade
Valley
Welser
Payette
Boise
Lost Valley Reservoir
Mann Creek Reservoir
Crane Creek Reservoir
Paddock Valley Reservoir
Ben Ross
Potential Weiser-Galloway Site (surface elevation 2480)
Map 2



Project Details

Location: Weiser River, 13.5 miles upstream of confluence with Snake River

Structure: 283 ft high, embankment dam

Reservoir :

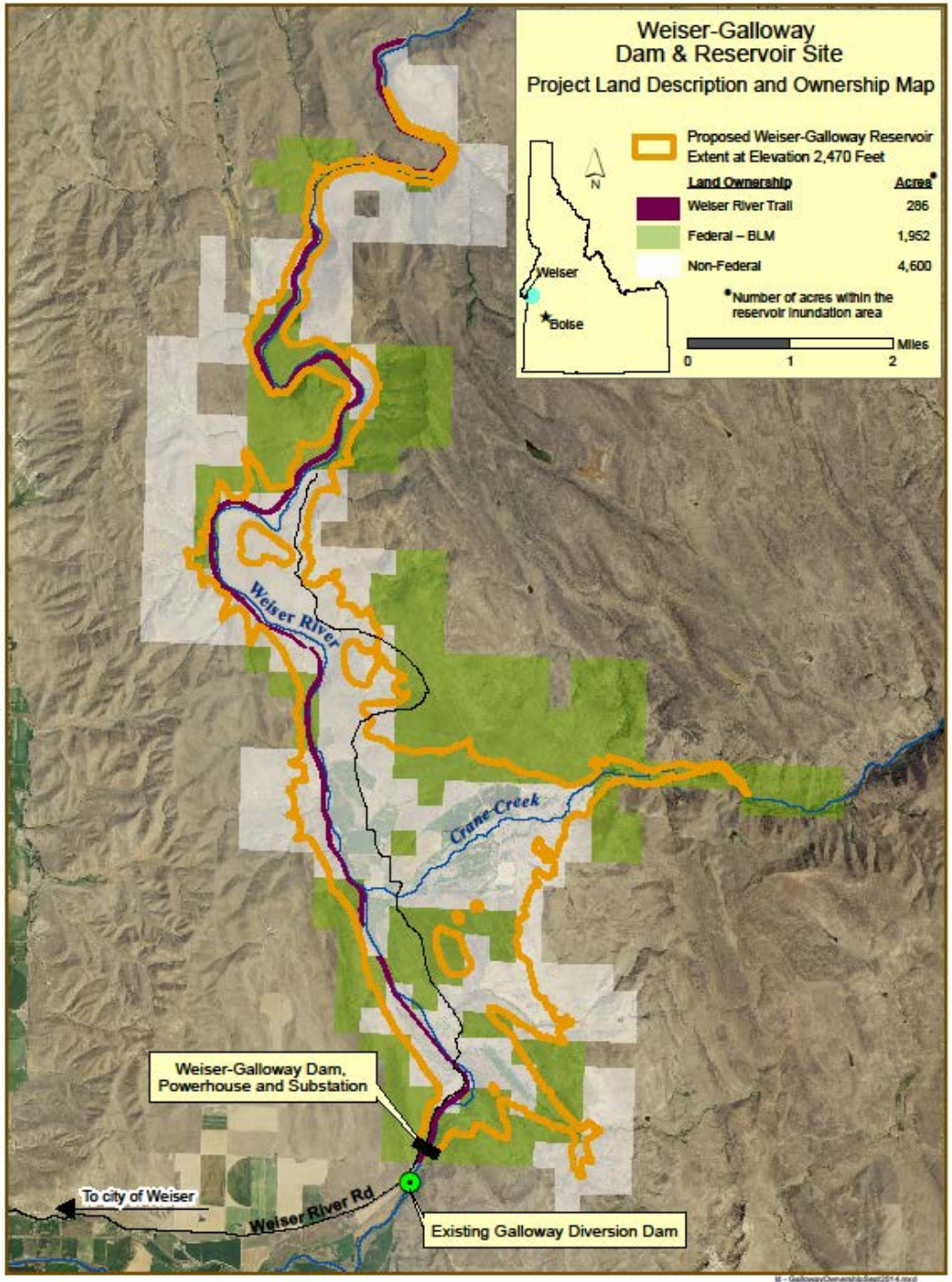
- 750,000 acre-feet at WSE 2,470
- Surface area: 6609 acres
- Maximum length: 13.5 miles
- Weiser River Inundated: 16.1 miles
- Crane Creek Inundated: 4.6 miles
- Weiser River Trail: 15 miles

Upper end of reservoir to Midvale:

- Weiser River: 6.6 miles
- Weiser River Trail: 6.3 miles

Other

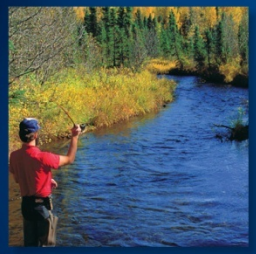
- Almaden Mine: Road Elev below mine approx 3150’
- Shortest distance b/w Almaden Mine: 1.5 miles



Project Site – Land Ownership

Inundated lands:

- 6,840 acres total
- 4,600 acres non-federal lands
- 1,952 acres federal lands
- 268 acres of former Northern Pacific Railroad (Weiser River Trail)
- Approx 1020 acres irrigated

Current Study Process

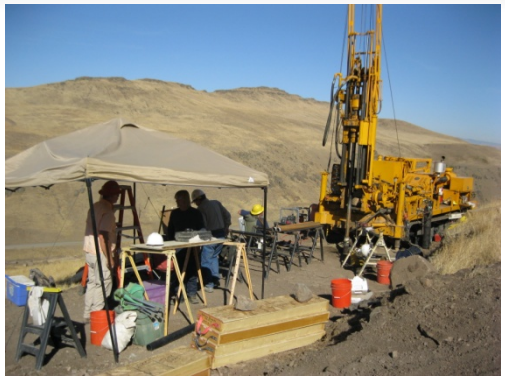
Strategy - build on previous information, reformulate project based on current conditions and demands, study critical gaps first

Gap Analysis (March 2011)

- IWRB and USACE completed the *Weiser-Galloway Gap Analysis, Economic Evaluation and Risk-Based Cost Analysis Project, March 2011*
- Review of earlier studies of the potential Galloway Project to identify data gaps and changed conditions (e.g. water supply needs, policy, laws, and technical tools)
- It was intended to inform decision makers of critical gaps that need to be addressed before deciding whether to move forward with additional action
- The Gap Analysis documented over 180 gaps – System operations, Site, Policy, Planning and Environment
- Two gaps were identified as critical to address prior to moving ahead with further work:
    1) Core drilling at dam site to supplement drilling performed in 1980's to better understand the suitability of the geologic structures at the site
    2) Hydrologic operational analysis to verify and quantify the project benefits.

Geologic Analysis (Sept 2013)

- Drilled 6 holes (1538 ft of core) in abutments - performed on private and BLM land (EA and other access permissions required)
- Testing: Permeability, strength and materials testing on core samples and possible embankment materials
- Geologic Mapping: foundation conditions, seepage and permeability, slope stability, seismic hazards, borrow areas
- Dam type: Embankment dam w/ suggested modifications to 80's studies
- Cost figures updated
- Description of data gaps and recommendations for additional analysis if project pursued to design phase



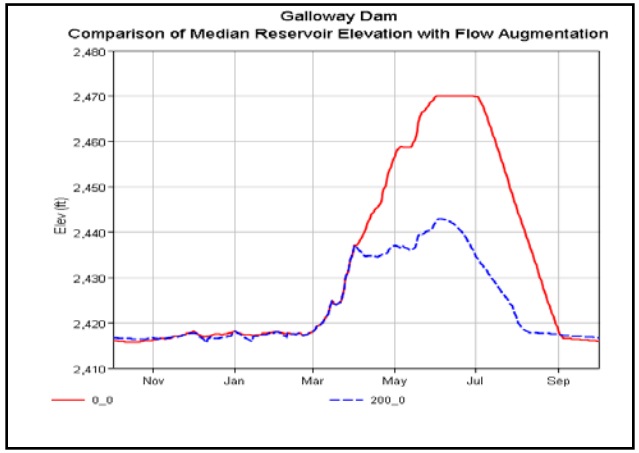
Geologic Analysis (Sept 2013)

Results/Conclusions:

- Foundation suitable for earthen embankment dam
- Potential borrow material located near site – sand, gravel, clay, and rock
- Lower foundation high quality basalt - suitable for tunneled outlet works (allows for smaller, ungated emergency spillway)
- Low seismic activity in local vicinity
- Slope stability – while significant potential issues not identified, additional investigation recommended
- Foundation permeability low to moderate – will require grout curtain but site in Weiser Basalt
- Upper abutments – weaker layers of tuff will require special treatment during design and construction
- Corps concluded the geologic structures are suitable for a dam and reservoir.

Operations Analysis (Ongoing)

- Initiated based on results/conclusions of Geologic Analysis
- Analyze a range of scenarios to optimize the operation of a 750,000 acre-foot reservoir
- Evaluate in-basin benefits – flood risk reduction, supplemental or more reliable water supply, recreation, power generation/hydropower
- Evaluate system benefits – power generation at Hells Canyon Complex and Middle Snake plants, flow augmentation exchange, and possible temperature reduction in Lower Snake
- Quantify hydropower integration within Columbia River System



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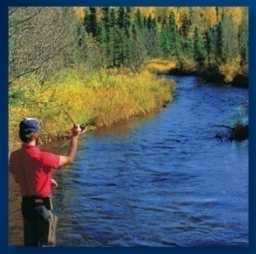

Wrap-Up: Next Steps & Other Activities

- Complete Ongoing Corps Studies
  - Hydropower Integration Study
  - Reservoir Size Optimization, Revised Design and Construction Cost Study
- Economic and Valuation Analysis of Flow Augmentation and Additional Water Supplies from Galloway Project
- Weiser River Trail Relocation Analysis

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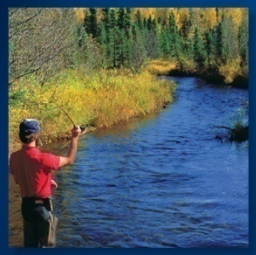

Wrap-Up: Next Steps & Other Activities

- FERC preliminary permit application and process
  - Filing an applications is not a determination of feasibility – allows prospective applicant for hydro-license to secure data and perform investigations necessary to determine project feasibility.
  - Does not authorize ground-disturbing activities, project construction or installation, or guarantee issuance of a project license
  - Valid for a period of 3 years, with option for 2-yr extension
  - Application accepted July 2014, comment period complete, under review by FERC
- Public involvement and outreach
- General scoping of environmental compliance, land exchange, and additional design requirements (pending results of ongoing studies)

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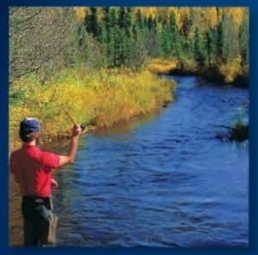

Questions

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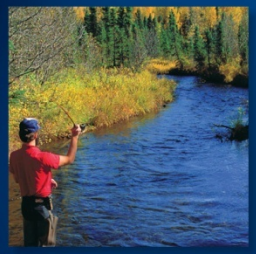

Questions and Issues Raised

- Restudy of a project not pursued in the past
- Structural integrity and geologic conditions at the site
- Lower Weiser River channel be able to handle flows release for salmon flow augmentation?
- Reservoir fill reliability
- Lack of benefits to the communities upstream of the project
- Impacts to landowners in reservoir area
- Concerns about use of Weiser River water to solve Upper Snake River water issues
- Additional water supply for in-basin uses
- Can the project be operated to support recreation?
- Potential impacts of lost tax revenue
- Consideration of basin-wide storage projects

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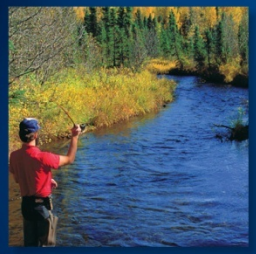

Questions and Issues Raised

- Weiser River Trail inundation
- Impacts to a free flowing river
- Impacts to fish and wildlife
- Impacts to landowners in reservoir area
- Mercury and other water quality issues
- Local fisheries – reservoir and downstream
- Ice jams
- Project cost

Geologic Analysis (Sept 2013)

Results/Conclusions:

- Cost estimate for construction $493 M with 56% contingency
  - Includes 3-unit power plant – increase of $41 M from Gap analysis
  - Contingency decreased 76% to 56.3% (still high due to lack of design for revised outlet works and larger power plant)
  - Lands and Damages escalated to 2013 values – increase of $13.9 M from gap analysis
- Corps concluded the geologic structures are suitable for a dam and reservoir . Recommendations for further study provided.

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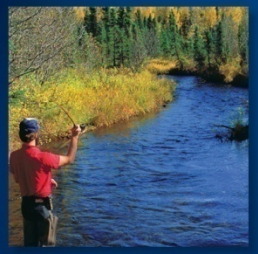
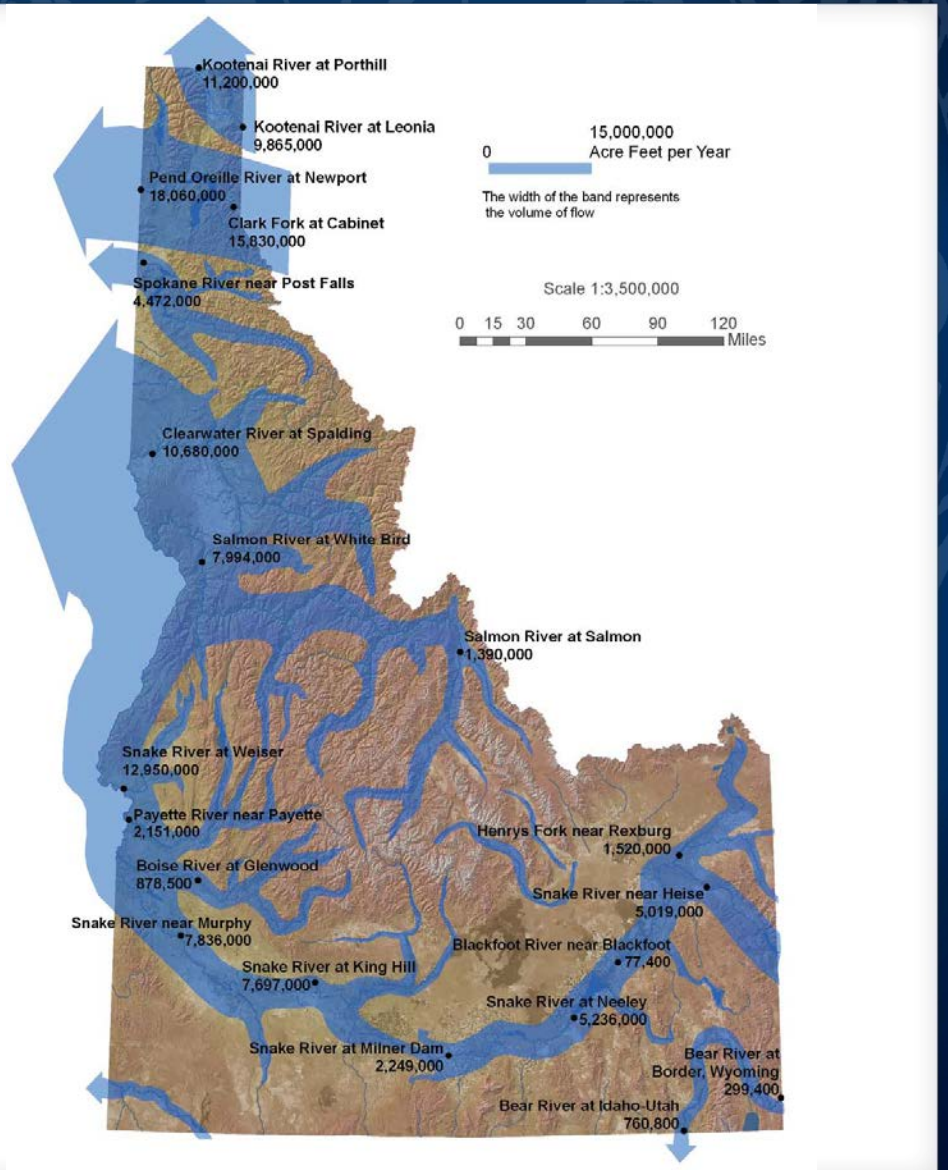


Background - Average Annual Runoff Volumes



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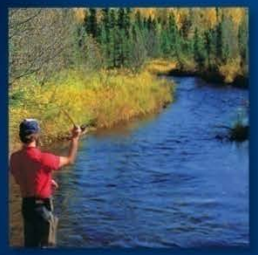
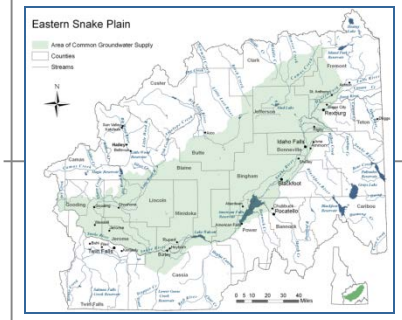


State-Wide Water Management Issues

- **Eastern Snake Plain Aquifer (ESPA)**
  - Sole source of drinking water for many cities and most rural residents
  - 2.1 million irrigated acres (about 60% Idaho's total): 871,000 ac from surface water, 889,000 ac from ground water and 348,000 ac from both ground and surface water
  - Supports food processing and aquaculture and springs that sustain river flows
  - Goods and services produced in ESPA region estimated at $10 billion (2006), and approximately 21% within all Idaho

Thousand Springs Discharge and Eastern Snake Plain Aquifer Cumulative Storage Change



1912 – 1952 Change +17,000,000 AF

1952 – 2008 Change -12,000,000 AF

Average annual 1952-2008 loss of aquifer storage is 214,000 AF

The problem: Declining aquifer storage

Aquifer storage and flows from the Thousand Springs are directly correlated

Discharge (cfs)

7,000
6,500
6,000
5,500
5,000
4,500
4,000

Cumulative Storage Change (AF)

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

1912 1914 1916 1918 1920 1922 1924 1926 1928 1930 1932 1934 1936 1938 1940 1942 1944 1946 1948 1950 1952 1954 1956 1958 1960 1962 1964 1966 1968 1970 1972 1974 1976 1978 1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008

Total Thousand Springs Flows

Volume Change

Weiser/Snake River Operational Analysis

Jeremy Giovando, PE - *USACE*

Mark Mendenhall, PE, PMP - *USACE*

IWRB Storage Committee Briefing

Weiser, ID

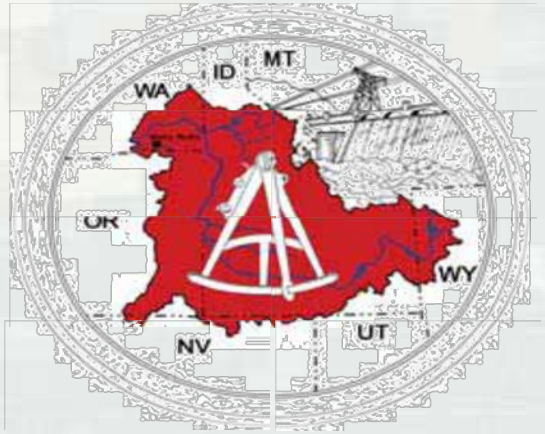
11 September 2014

US Army Corps of Engineers

BUILDING STRONG®

Presentation Overview

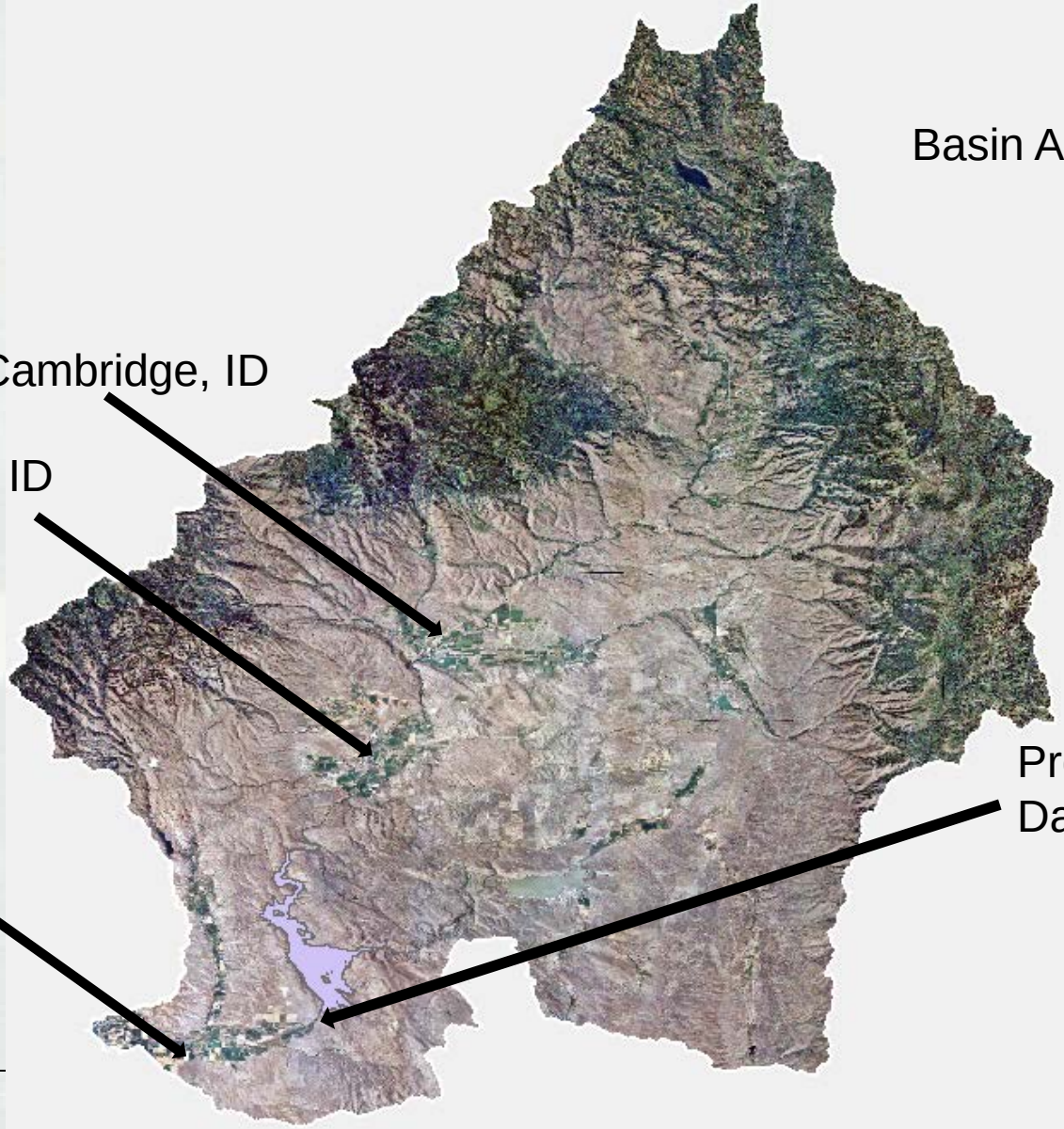
- Purpose of Analysis
- Summary of Findings
- Methodology
- Results
  - Reservoir Modeling
    - In-Basin
    - Hells Canyon Complex
    - Upper Snake River
  - Temperature Modeling on the Weiser River
  - Sensitivity Modeling with Climate Change
  - Reservoir Simulation
- Economics
- Conclusion



Purpose of the Analysis

The purpose of this analysis is to evaluate operations scenarios for the Weiser-Galloway Project that maximize economic outputs. This analysis evaluates the at-site hydropower potential, combined with flow augmentation storage exchanged with other Snake River reservoirs, as well as water supply for the Weiser River Basin. This analysis also considers flood risk management, recreation and a minimum stream flow for the Weiser River Basin in the scenario objectives.

Analysis Area

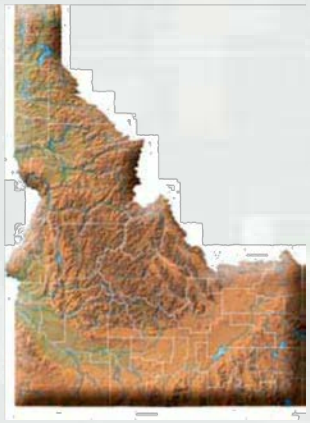


Summary of Findings

- Evaluation Proved Positive for Storage at Weiser-Galloway
  - In-Basin and System-wide Potential Benefits
- Allows for Flexibility and Reliability Meeting Flow Augmentation (up to 200 kaf)
- Relatively High Hydropower Potential
- Reduced Flood Risk for Weiser, ID
- Enhanced Water-based Recreation for Washington County
- Impacts to IPC Negligible
- Temperature Benefits for Weiser River

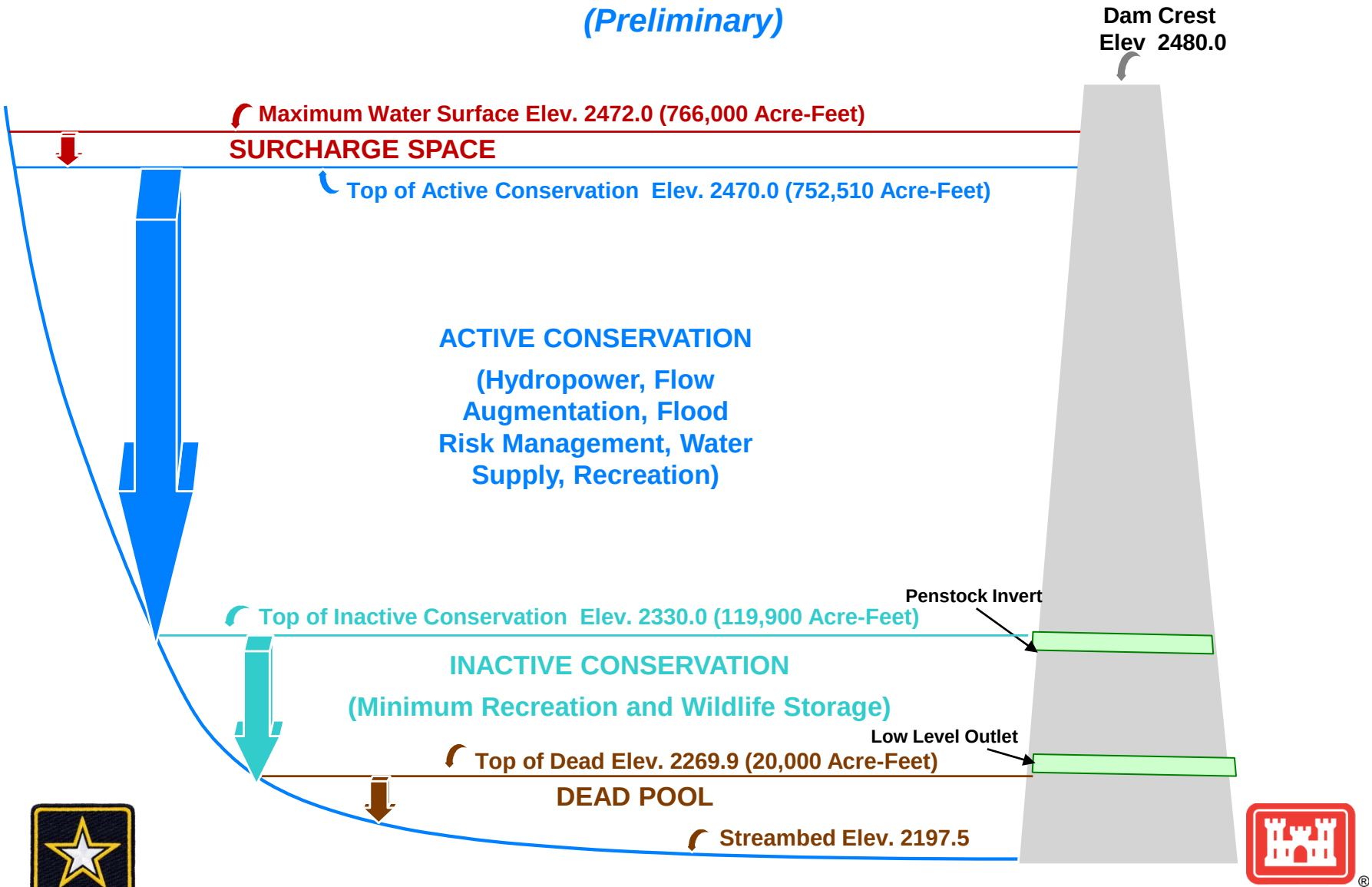
Initial Pertinent Reservoir Data

- Hydraulic Height: 283 ft
- Total Storage: 752 kaf
- Active Storage 632 kaf
- Inactive and Dead Storage 120 kaf
- Power Head: 100 kaf
- Powerhouse Hydraulic Capacity: 3,300 cfs
- Powerhouse Rated Power: 60 MW
- PMF Spillway/Outlet Capacity: 180,000 cfs



GALLOWAY RESERVOIR ALLOCATIONS

(Preliminary)



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BUILDING STRONG®

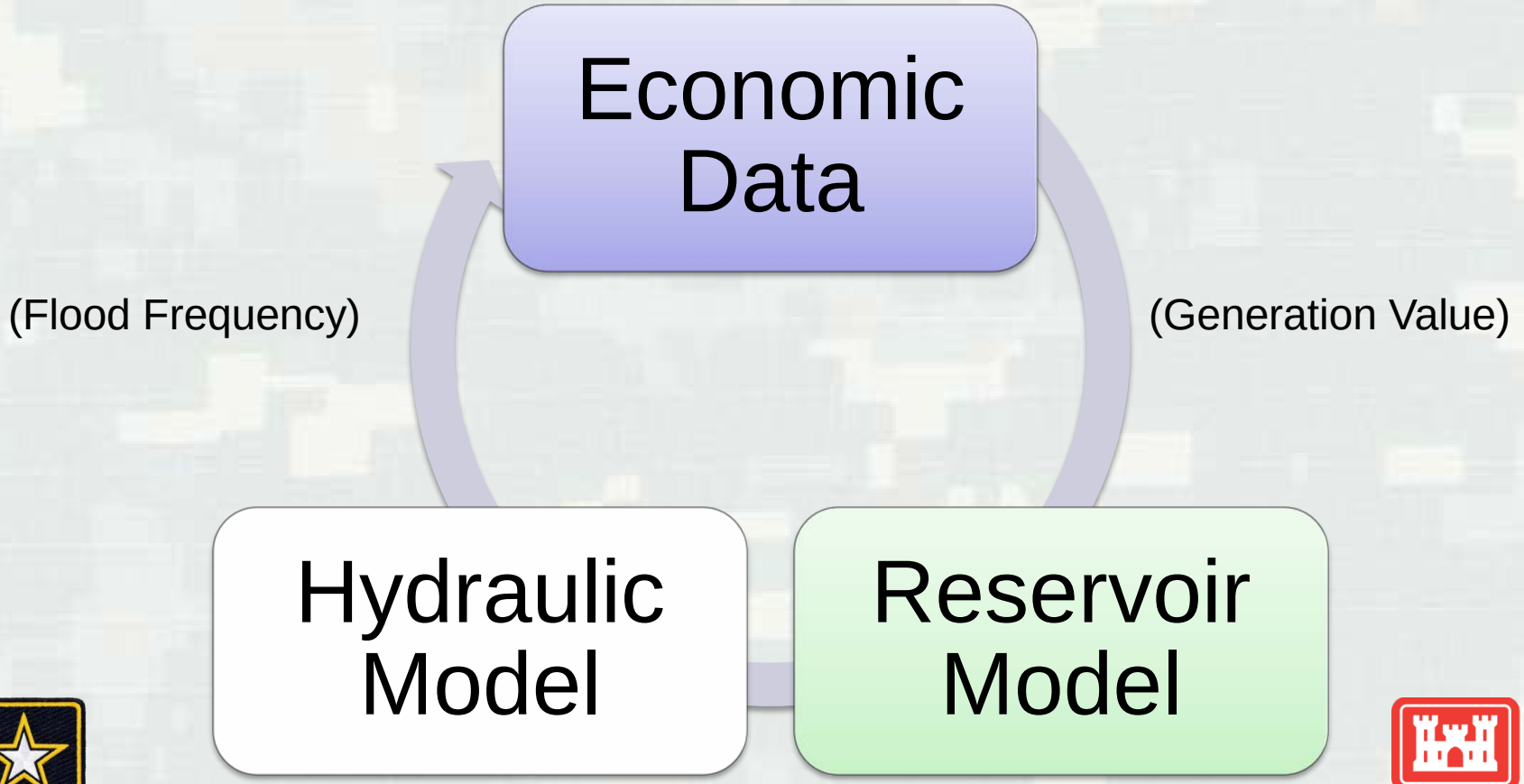
Modeling Assumptions

- Four Operational Alternatives Evaluated Against the 'With and Without Project' Condition
- Four Scenarios for Each Alternative Representing Flow Augmentation and Additional Demands
- All Alternatives Include:
  - Delivery of existing level of diversions
  - Minimum flow of 50 cfs at dam
  - Maximizing at-site hydropower
  - Maximum discharge 3,000 cfs (flow augmentation)

Reservoir Modeling

Iterative Process

- Economic Data required for optimization
- Hydraulic Model results used for finalizing economic analysis



Reservoir Modeling

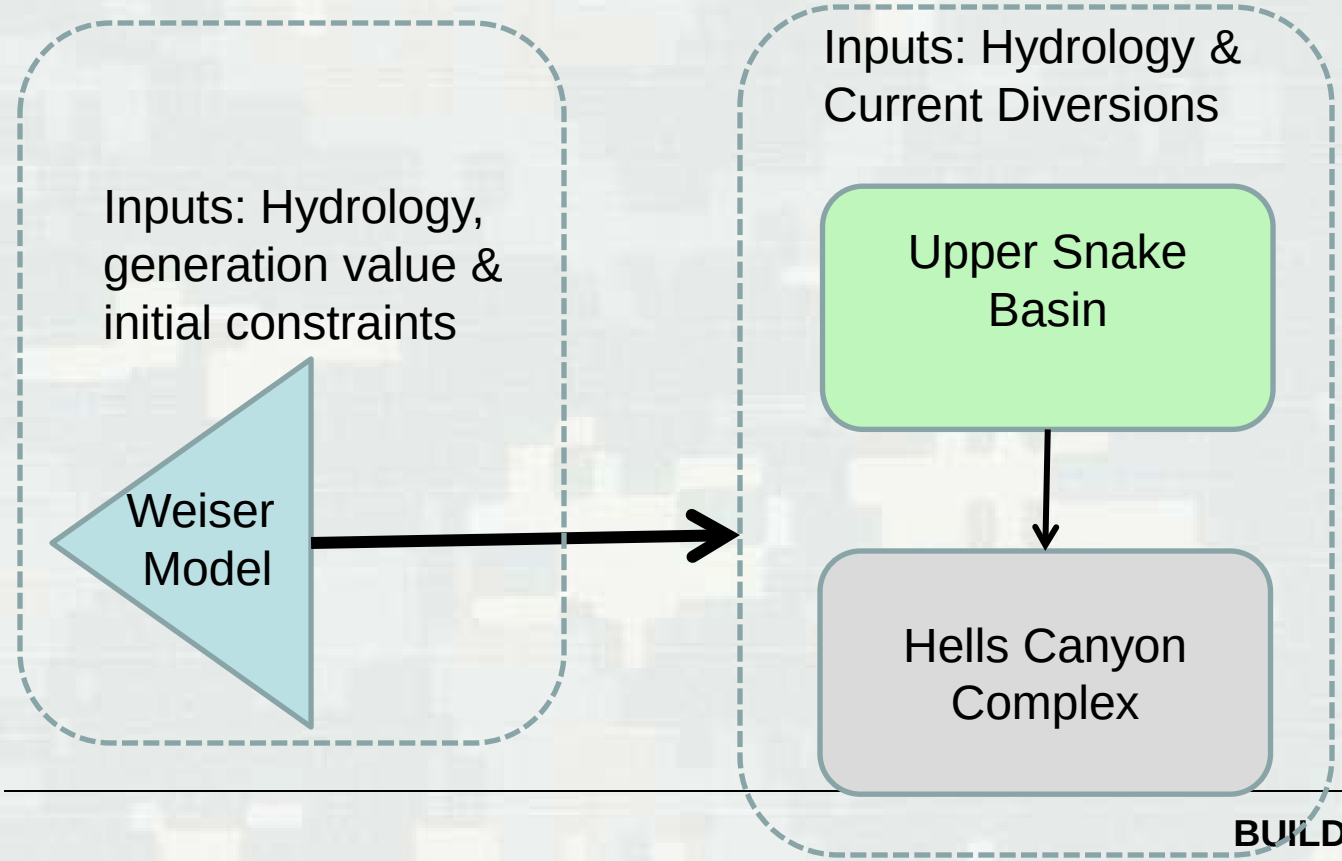
Collaborative Process

RIVERWARE OPTMIZATION:

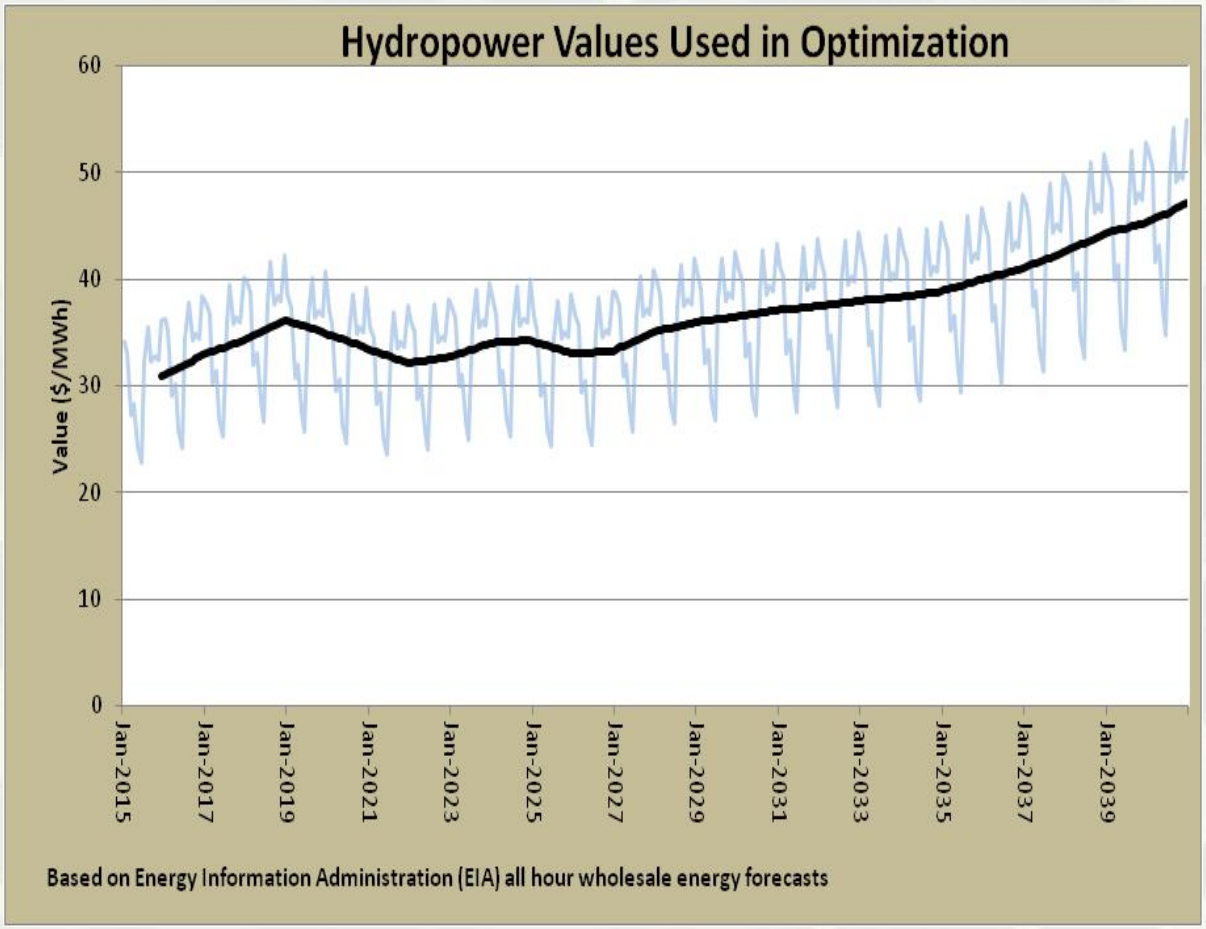
- Rule development for maximizing hydropower
- Iterative process for constraints

SRPM:

- Utilized Existing Model
- Current Operations
- Combined with ESPA groundwater Model

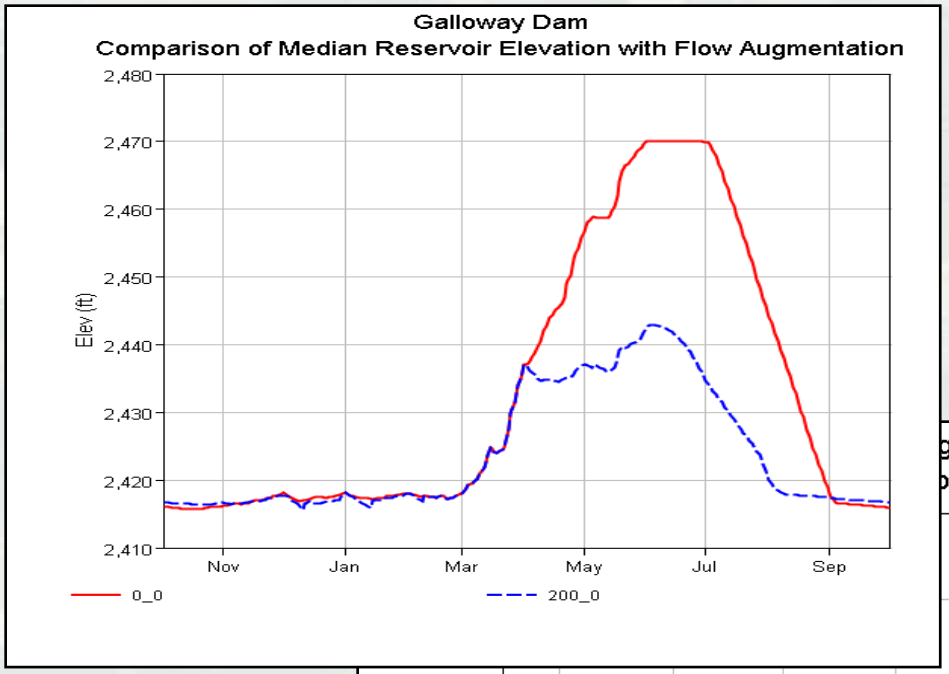


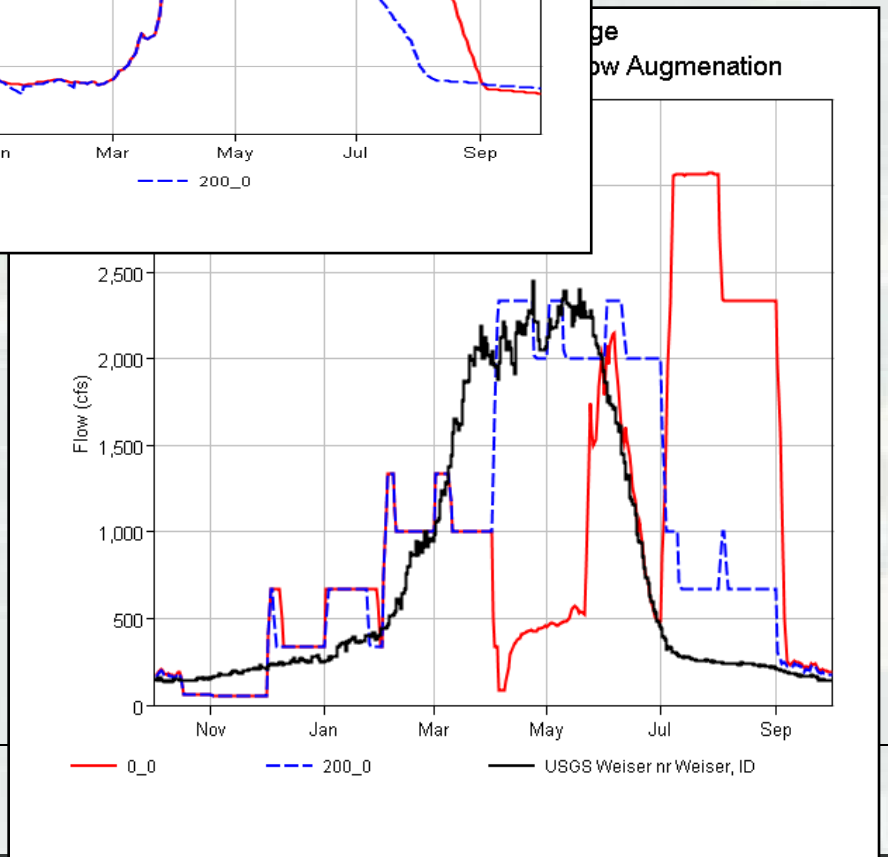
Example Input-Hydropower Valuation



- Other inputs included historical hydrology, evaporation, and irrigation demands
- Existing data was used when possible; some inputs were derived from analysis

Weiser-Galloway Project

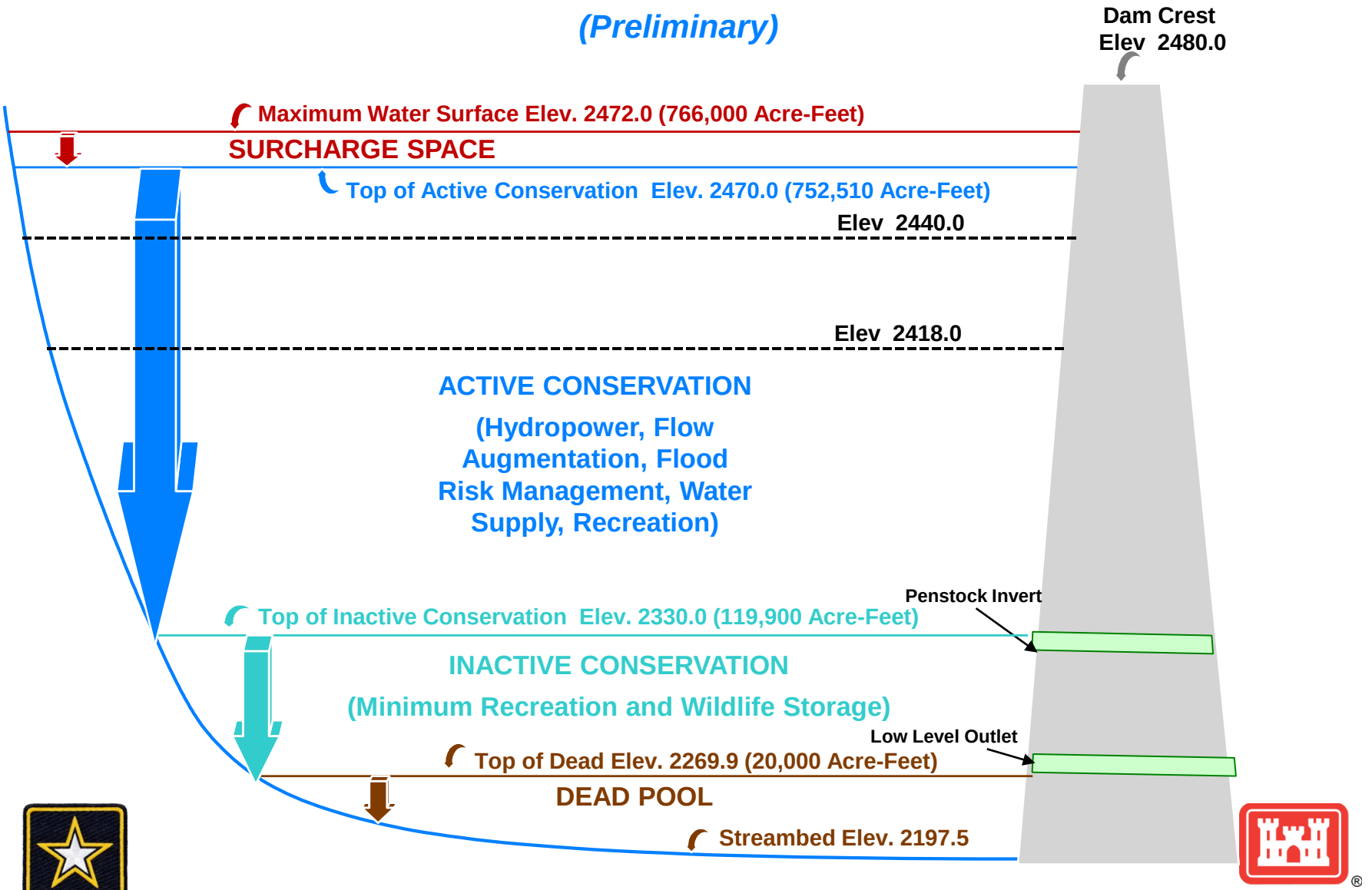




- 200 kaf Flow Augmentation can be delivered reliably; does impact refill & generation
- Potential Annual Generation 120-130 GWh (60 MW powerhouse)
- Benefits Weiser River with higher summer flows and cooler water

GALLOWAY RESERVOIR ALLOCATIONS

(Preliminary)



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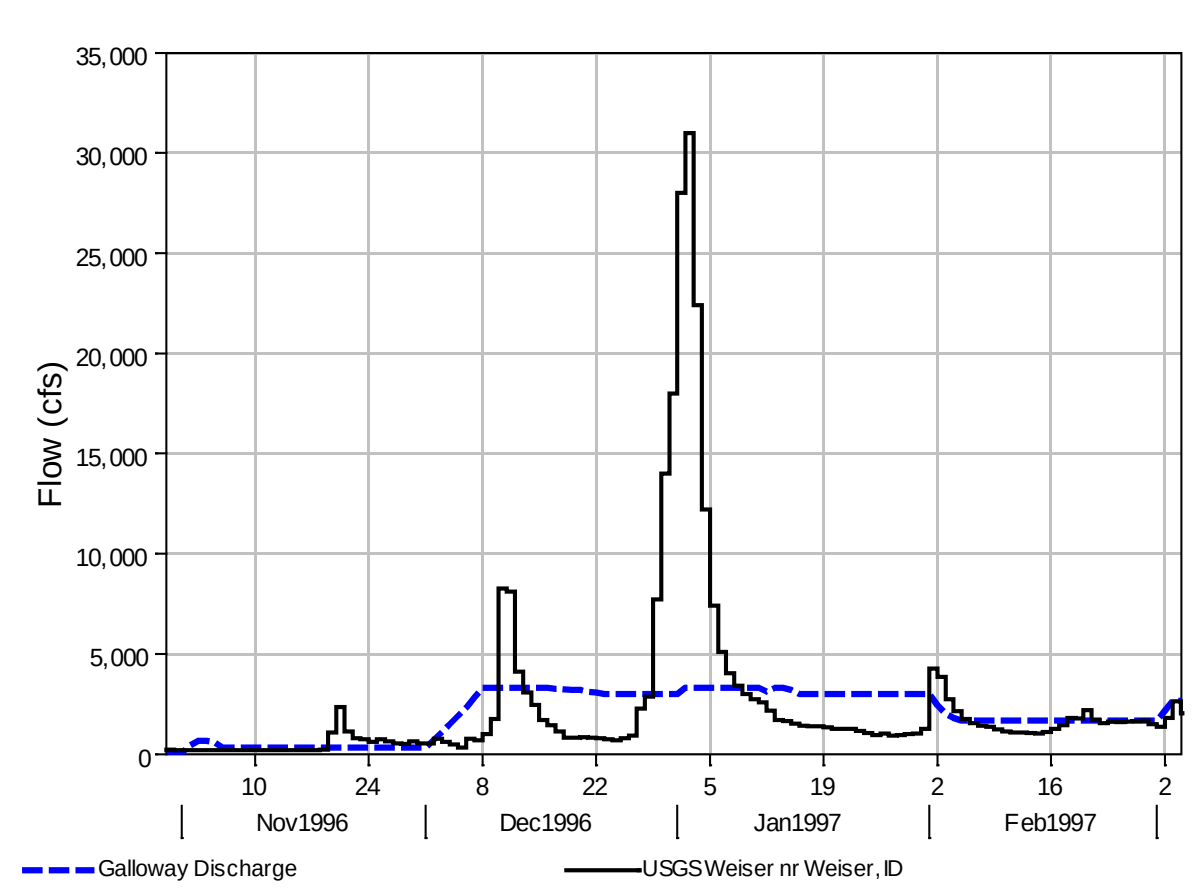
Weiser-Galloway Project

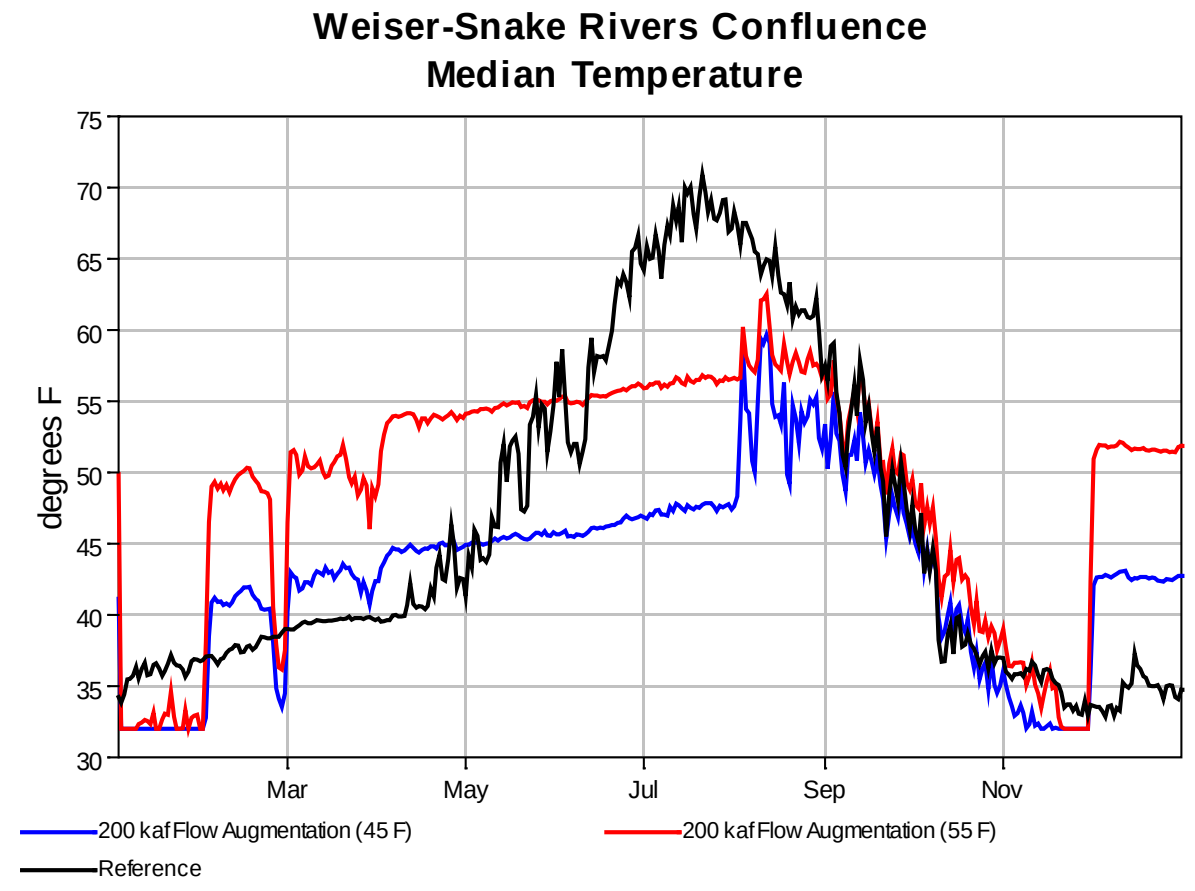
Flood Risk Reduction



- Existing 50% chance exceedance is 9,700 cfs
- Maximum Regulated Discharge <4,000 cfs
- Significant peak flow reduction during high runoff

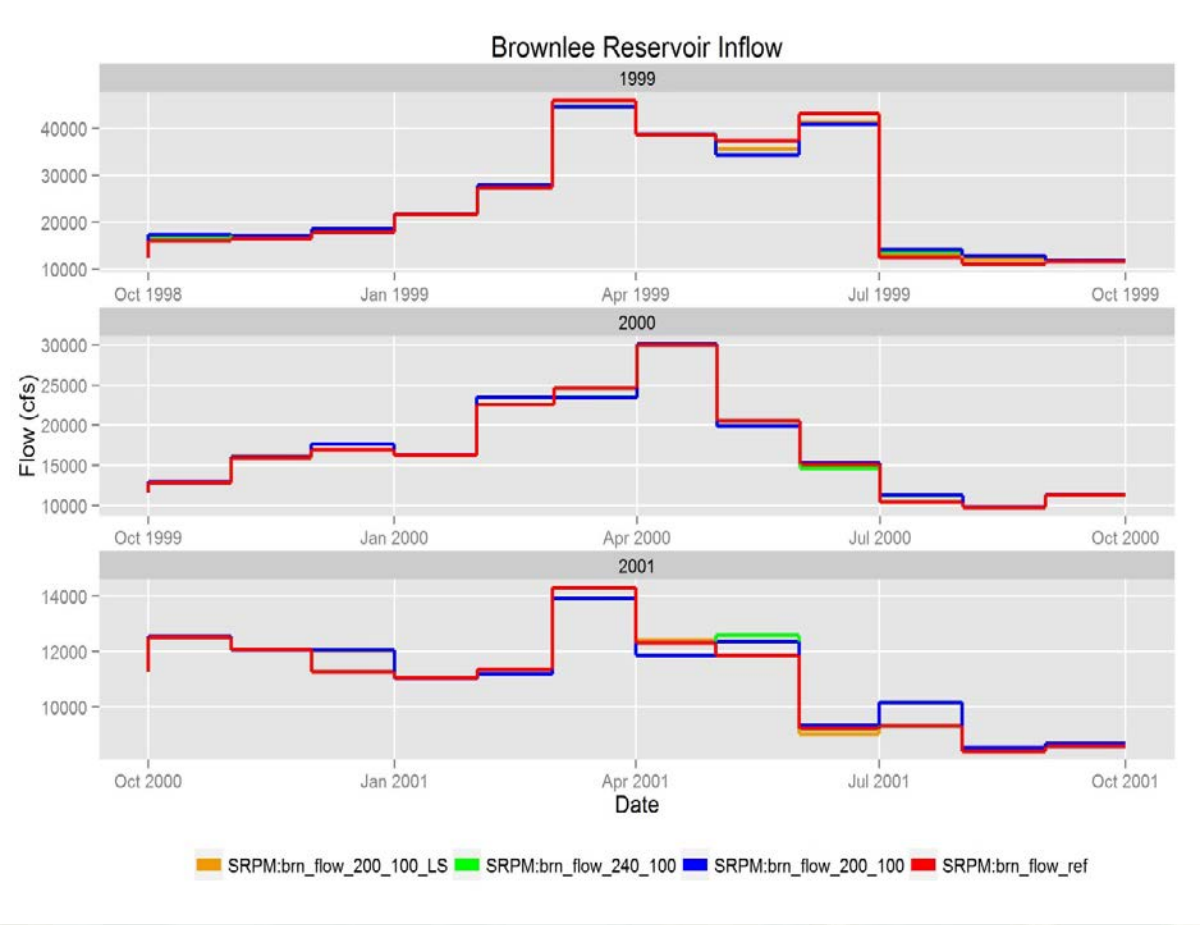
Weiser-Galloway Project

River Temperature Modeling



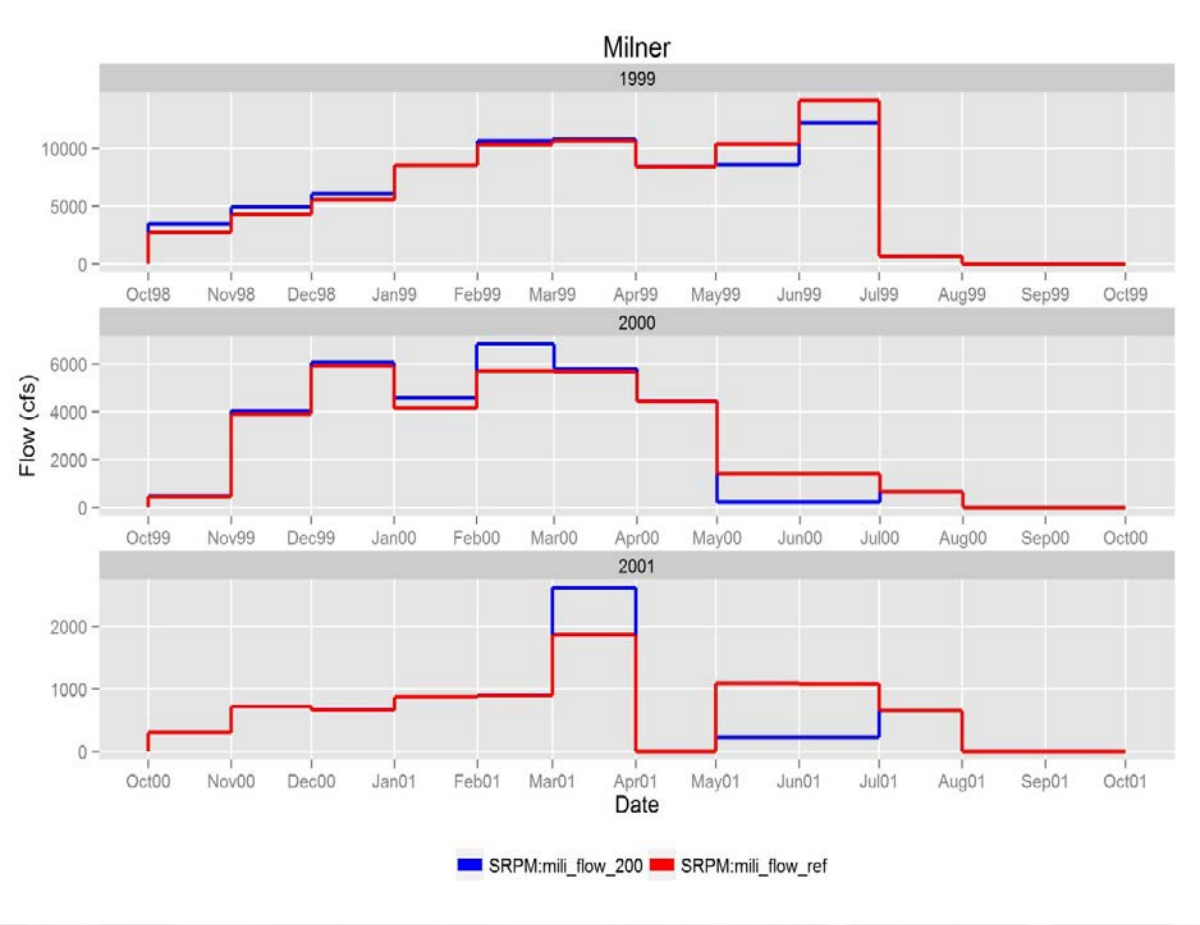
- Investigation based on using Hydraulic Model
- Significant temperature reduction for the Weiser River in summer
- Potential temperature benefit overall

Hells Canyon Complex



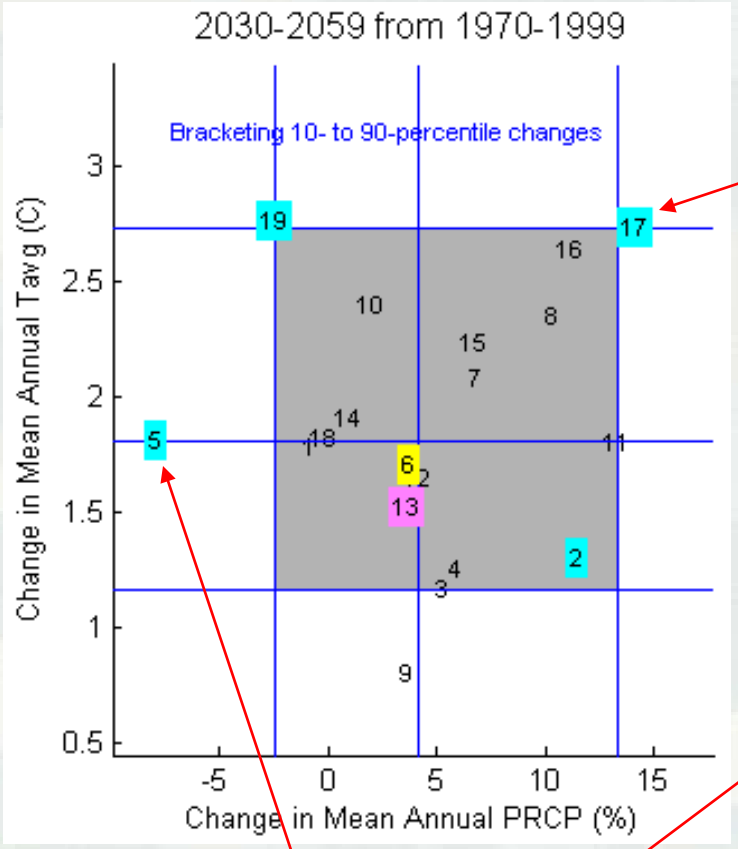
- Higher inflows during summer
- Reduced inflows during lower generation value periods
- Generally benefits HCC with better timing of inflows for generation

Upper Snake River

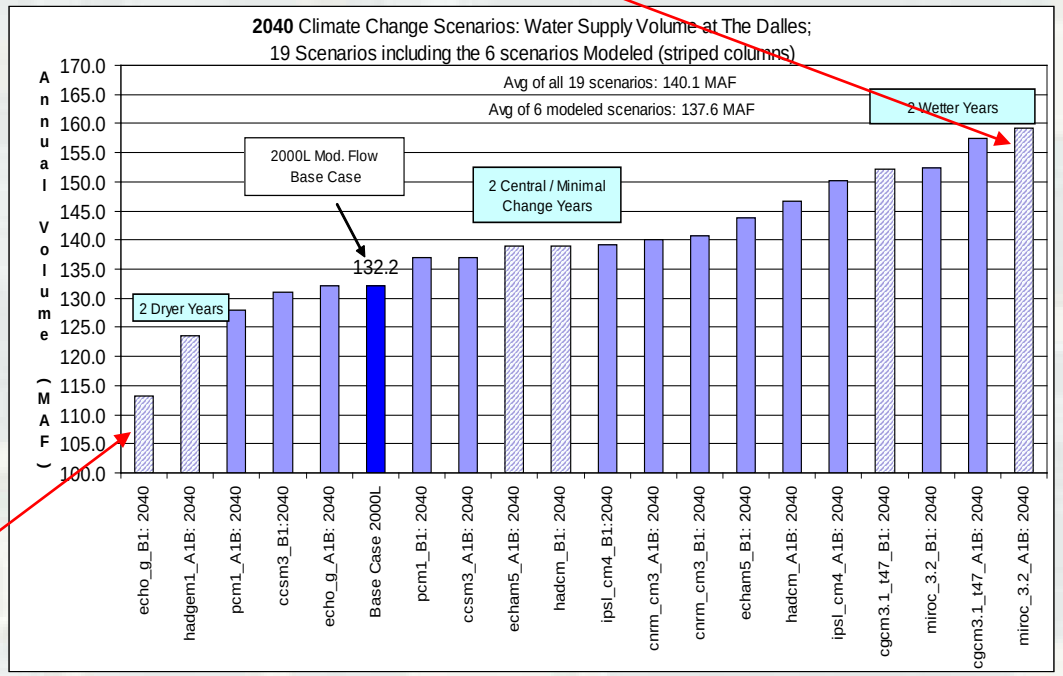


- Most significant change to flows below Milner due to exchange of flow augmentation volume
- Reduced flows in May-June; water released in in other months
- Potential impacts to generation in middle-Snake River

Climate Change Projections



Wet Scenario



Dry Scenario

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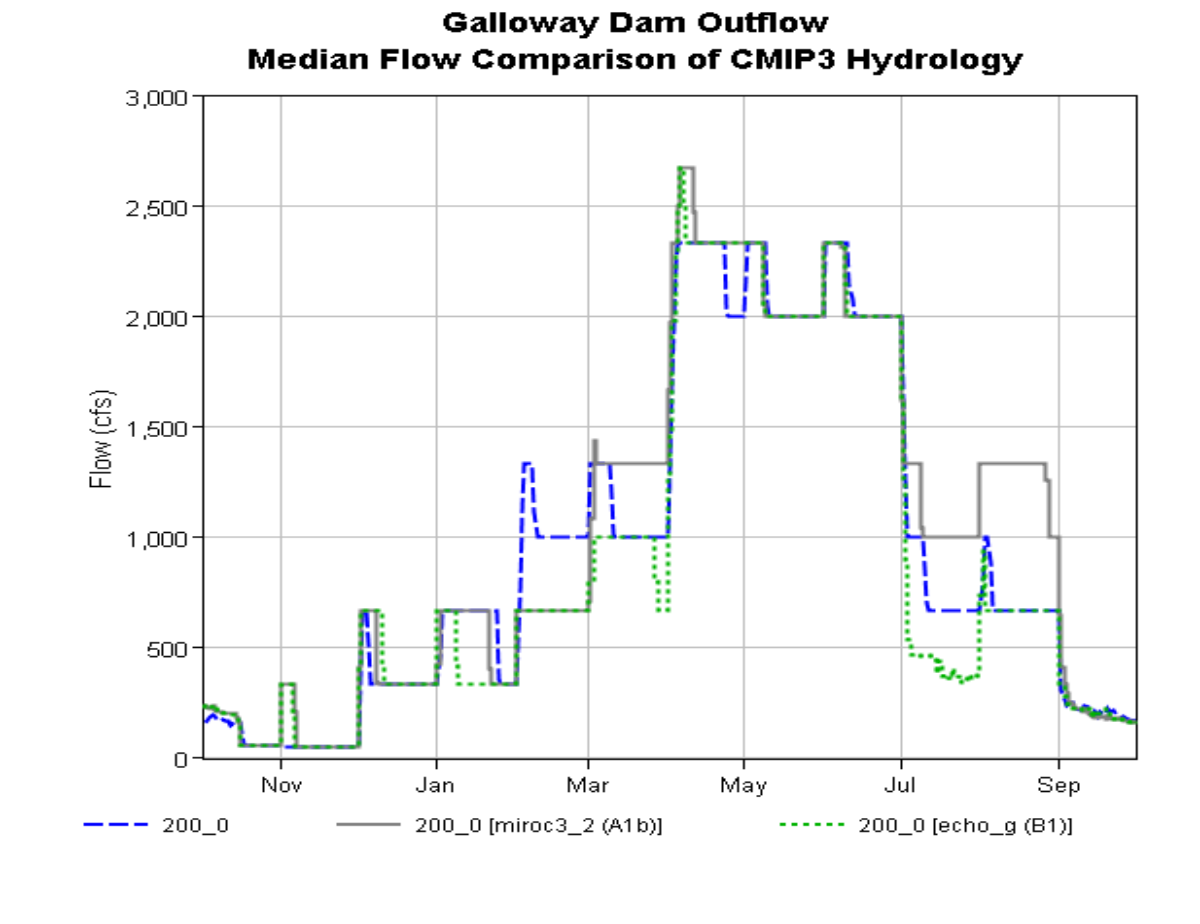
Climate Change Regulated Flows



- Some overall change to median discharge
- Most of the change is during February or July
- Minor change to reservoir elevations
- Operating criteria have flexibility to adapt and still meet primary project purposes

Reservoir Simulation

Economic Results

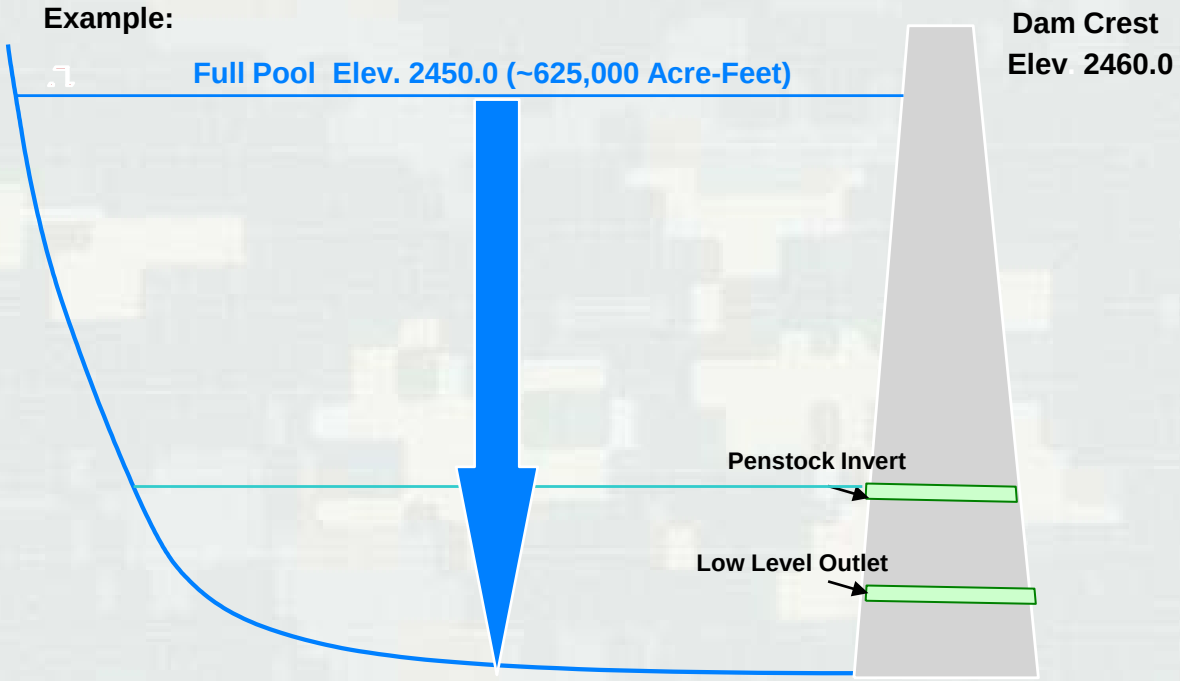
	Average Annual Benefit ($1000s)	
Category	1990 Report	Current
1 FRM	100	877
2 At Site Hydropower	1,396	3,689 -4,206
3 Recreation	183	488
4 System Benefits (system hydropower, flow augmentation, water supply)	25,612	TBD

Conclusions

- Weiser-Galloway Project Could Be Used to Meet Multi-purposes
- Modeling Suggests Smaller Reservoir May Achieve Similar Economic Output
- Initial Impacts to IPC Negligible under current modeling assumptions
- Relatively High Hydropower Potential
- Other System-Wide Implications
  - Groundwater Recharge
  - Water Supply

Ongoing Corps Tasks

- Weiser Hydropower Integration
- Reservoir Size Optimization and Revised Design and Construction Cost Estimate



Acknowledgements

Thank you to the following for their significant contributions:

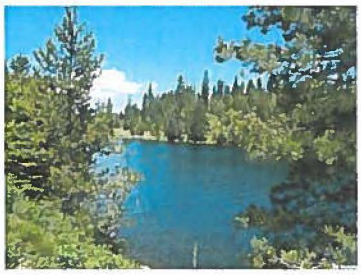
Idaho Power Company

Bureau of Reclamation

IDWR Staff

IDAHO Water Resource Board

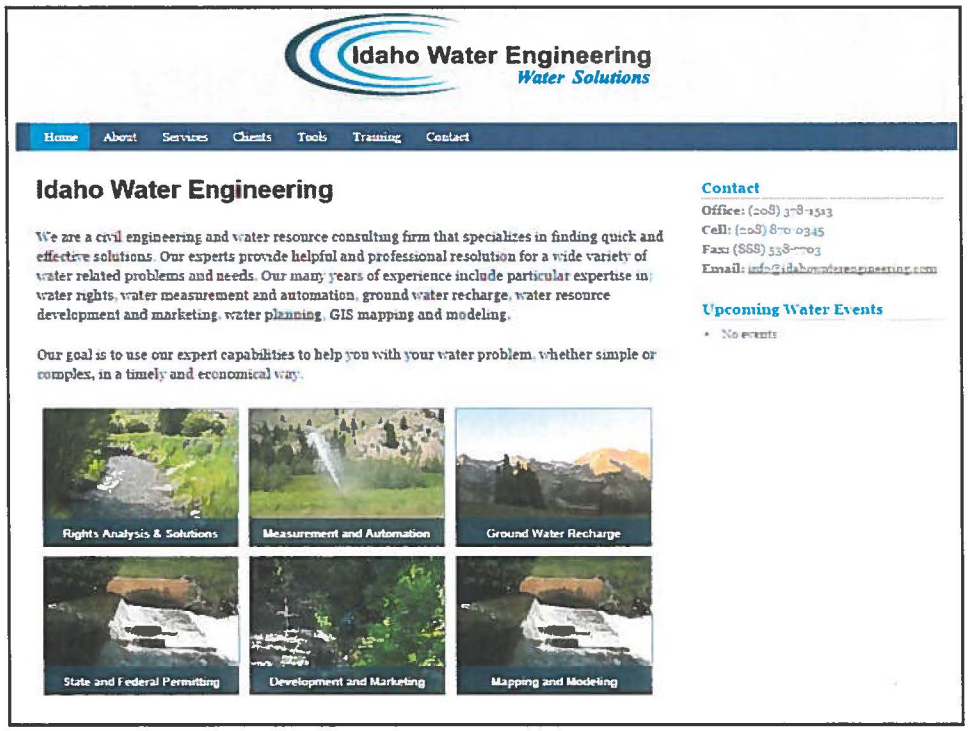
Should Lost Valley Reservoir be Enlarged?



Dave Tuthill, PhD, PE

September 11, 2014

Idaho Water Engineering
Water Solutions



Outline

- Brief History
- Discuss Proposal
- Next Steps

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Water Solutions

Timeline of Lost Valley Reservoir

- Jun 2, 1993 Application filed
- Dec 20, 1993 Protest filed by US Forest Service
- Mar 5, 1999 IDWR Prehearing Conference
- April 1, 2013 Lost Valley Reservoir Company (LVRC) signs Agreement with Idaho Water Engineering (IWE)
- 2013, 2014 Meetings with USFS, Northern Idaho Ground Squirrel Recovery Team and Adams County Commissioners (including one on-site meeting for all, on July 24, 2014)

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Proposed Enlagement

- Raise water level by 30 feet
- Increase storage from 10,000 acre-feet to 30,000 acre-feet
- Provide a minimum pool of 3,000 acre-feet

Idaho Water Engineering
Water Solutions

Form 202
6/85

Ident No 67-7938

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

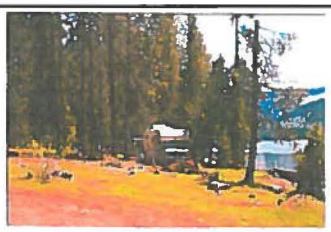
To appropriate the public waters of the State of Idaho

1. Name of applicant Last Valley Reservoir Co. Phone 253-4751 253-1103
   Post office address PO Box 10 Fruitvale ID 83620
2. Source of water supply Lost Creek. which is a tributary of Weiser River West. Fr
3. Location of point of diversion is ____ ¼ of SE ¼ of NW ¼, Govt. Lot ____
   Sec. 28 Township 19N Range 1W B.M. Adams County; additional
   points of diversion if any: ____
4. Water will be used for the following purposes:
   Amount 20,000 (cfs or acre feet per annum) for Irrigation Storage purposes from 1/1 to 12/31 (both dates inclusive)
   Amount 20,000 (cfs or acre feet per annum) for Irrigation from Storage. purposes from 4/15 to 10/15 (both dates inclusive)
   Amount 20,000 (cfs or acre feet per annum) for Recreation Storage. purposes from 1/1 to 12/31 (both dates inclusive)
   Amount ____ (cfs or acre feet per annum) for ____ purposes from ____ to ____ (both dates inclusive)
5. Total quantity to be appropriated is (a) ____ (cubic feet per second) and/or (b) 20,000 (acre feet per annum)

Images from the Water Right Application File

Images of Lost Valley*

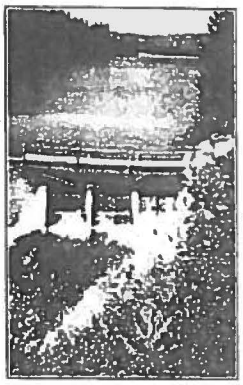
The existing dam at Lost Valley was built in 1910 to provide irrigation water to the orchards in nearby Mesa



Lost Valley Reservoir is a popular recreation spot, with good fishing, although camping around the lake is lacks the facilities of developed campgrounds

A winning plan to help farmers, fish

Tracy Widner / Argus Observer / August 3, 1999



Fish, farmers and officials concerned with water quality, all have the opportunity to benefit from the proposed expansion of a dam located in Adams County.

Lost Valley Reservoir, located approximately 20 miles north of Council in Adams County, is the target of a project proposed jointly by the Lost Valley Reservoir Co. and Weiser Irrigation District, in cooperation with the Idaho Department of Fish and Game. Under the plan, the height of the 89-year-old dam would be doubled to 60 feet, tripling its storage capacity.

Joe Hinson of Northwest Natural Resources Group, a consulting firm which has been asked to help with the project, said it is not often a project has the ability to benefit so many varied interests.

"Key here, of course, is with the increased storage capacity irrigators have the ability to capture the spring runoff in April, May and June and store it as insurance against dry years," Hinson said. "Lost Valley will also be deeper, which will cool the temperature of the water. When water is released from the dam into the Weiser River during late summer, the increased flows of cooler water into the river will benefit trout, bass and other fish there."

Studies show, he said, in most years the project would increase flows in the lower Weiser River by about 75 percent, with an additional 11,740 acre feet flowing during July, August and September.

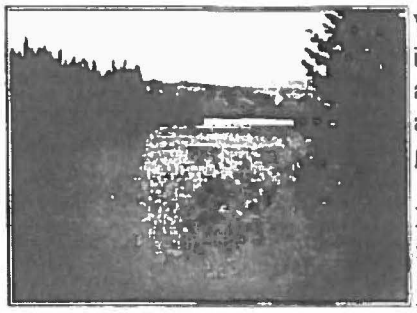
Hinson noted Adams County will also benefit because it will have a larger reservoir with a longer shoreline to attract recreationists.

The largest group of beneficiaries from the project are the shareholders in the Weiser Irrigation District, Hinson said, who depend on water from the Weiser and Snake rivers for their livelihood. In short water years, such as 1994, it will ensure water can be delivered through the end of the growing season.

Jay Edwards, spokesman for the Weiser Irrigation District said by increasing the height of Lost Valley, the irrigation district can release water from Crane Creek Reservoir, which is naturally muddy and warm, earlier in the irrigation season and allow them to rely on the cooler, cleaner Lost Valley water later in the season.

"Most years, we will not need water from Lost Valley Reservoir for irrigation along the lower reaches of the river," Edwards said. "But there have been years 1994, for example when we sure could have used it."

A secondary benefit of the project, Edwards said, is it will help the irrigation district meet its court-ordered obligation to lower the total daily maximum load of sediment in the Weiser River.



While there has been previous discussions about increasing the height of Lost Valley Dam, Hinson and Edwards said now the time appears ripe to actually pursue because of the interest from government agencies to help with the project.

Hinson said the Bureau of Reclamation has indicated it would be interested in leasing excess water, the Division of Environmental Quality and Environmental Protection Agency are interested in the potential for improved water quality in the Weiser River as a result of the expansion, and IDFG and Idaho Fish and Wildlife Foundation want to pursue improvements in fish habitat at the close of the work.

Hinson said the irrigation board will pursue those as well as other sources of funding, such as agency or foundation grants, for the project which is estimated to run near the $3 million mark. The boards hope to obtain one-half to two-thirds of the total funding from these agencies and foundations.

Once other sources of funding have been secured, the shareholders of the district will be asked to enter into a financial arrangement to fund the remaining cost of the project. According to the Weiser Irrigation District, the district's share would likely be financed over 10 years, at an additional estimated annual cost to each shareholder of $12 to $20 per irrigated acre.

Hinson said even if the members of the irrigation district approve the plan, there are many hoops to jump through, permits to obtain and environmental concerns to address.

He said if the height of the dam is increased, it will flood some of the campsites, roads and timber ground around the reservoir, which are concerns the boards will have to work out with the forest service.

Another hurdle, he said, involves relocating the population of Northern Rocky Mountain Ground Squirrels which inhabit the area. The government is considering a proposal to list the squirrels as "threatened" under the Endangered Species Act.

Even with all of the concerns, government officials are ready to pursue the plan if the irrigators give their stamp of approval.

"It isn't everyday the needs of farmers and irrigators coincide so nicely with those of fish in the river," Don Anderson of IDFG said, "and I think we should move ahead to fully explore what appears to be a true win-win situation."

Assuming there is support from the public and the irrigators, backers of the project anticipate construction could start as early as the summer of 2001.

Questions Regarding the Lost Valley Project

How do we know additional water will actually reach the lower portion of the Weiser River?

As part of making sure this project is worth further consideration, the Board commissioned a hydrologic study of the Weiser watershed and how expansion of the reservoir might effect flows. This study showed that in most years, flows in the lower Weiser River (below Galloway Dam) would increase by about 75 percent with an additional 11,470 acre/feet flowing down the river during July, August and September.

Will junior right holders actually have access to more water during drought years?

The same study considered very dry years as well as the more normal, wetter ones. The year 1994 typified the very driest when only about 14,000 acre/feet flowed into the reservoir. So, even if it were expanded, the reservoir would not fill during extremely dry years, unless water from the previous year was retained in it.

This means that far less water is available to be released during the summer months. While flows in the lower Weiser would approach that of a small stream, there would be about 3,000 acre/feet available from the drawdown of the 6,000 acre/feet reserve pool. This amount of water, not now available during the driest months, would be available for Weiser Irrigation District shareholders. Since senior right holders have always had sufficient water even in the driest years, it is anticipated that holders of more recent rights would use this water.

How will flows and usage for irrigation be measured and accounted for?

Right now, water use and flows in the Weiser drainage are not measured, at least not very accurately. There are gauging stations, but they seem to have stopped operating, and there are insufficient working devices to measure irrigation use. Quite frankly, that would have to change if the Bureau of Reclamation were to lease excess water. Part of that lease would call for careful measuring and certification by the Dept. of Water Resources that water promised to the BOR is actually delivered. However, in completing that part of the lease, all the irrigators along the Weiser River would know precisely how much water is flowing down the river, how much is being used and where.

Who can be expected to help fund this project? What if they don't?

Several public and private entities have expressed interest in the project, including a willingness to consider helping pay for it. The Division of Environmental Quality along with the EPA is interested in the improvements to water quality that would come from greater flows in the summer. The Department of Fish and Game and the Idaho Fish and Wildlife Foundation want to pursue the improvements in fish habitat that the expansion would provide. The Board will explore these as well as other sources of funding for the project. There will be no obligation on the part of WID shareholders to agree to their share of the project until all other funding sources are committed and everyone understands how the project will be paid for.

How can we be assured that the Bureau of Reclamation will want to lease excess water? What if their policy on leasing changes?

In truth, we can't. The Bureau has expressed interest in leasing the water and there is a strong history of past leases between the Bureau and those with excess water. However, the Bureau also pointed out that their future ability to lease water is dependent upon: (1) legislative renewal of authorities for doing that (to be considered this coming session), (2) the National Marine Fisheries Service's continuing need for water to help salmon migration, and, (3) sufficient funds to continue the lease program.

It is likely that the Bureau would honor long-term leases already finalized. However, if any of the three conditions mentioned by the Bureau changed, the ability to lease water on a year-to-year basis would change. If that happened, there would be no lease revenue to offset payment of the construction loan.

What hurdles must be overcome in securing the necessary permits and clearances necessary to complete the project? How much will that cost?

Since the expanded reservoir will flood national forest land, the Forest Service will require an environmental analysis upon which to base a decision to grant a special use permit for the flooded land. This will likely be an environmental impact statement, since there are northern rocky mountain ground squirrels in the area and they have been petitioned to be listed as "threatened" under the Endangered Species Act. Preparing this for the Forest Service would require a significant effort.

In addition, the Idaho Department of Water Resources and the U.S. Army Corp of Engineers will require permits for flooding wetlands and for work in the streambed. There will also be a need for a construction permit and granting of the storage rights, also from the Department of Water Resources. Finally, some state land may be flooded and a lease with the Land Board will be necessary to compensate the Endowment Fund for the use of that land.

All told, the work to secure the necessary permits would take at least a year and likely cost over $100,000.

When could construction actually begin?

If all went well with the necessary permits and funding partners, work could start on the project as early as the summer of 2001.

How can the Weiser Irrigation District's share be financed and what will be the increase in my irrigation costs?

Either the Weiser Irrigation District alone or by working with the the Board of Water Resources could issue a bond to finance the work. The bond might constitute a note payable over ten or fifteen years at approximately 8 percent. If additional funding partners will provide one-half to two-thirds of the cost, then the Board estimates that the cost of the project to individual shareholders will be from $12 to $19 per acre annually, in addition to the normal bill for irrigation water. Lease payments from the Bureau of Reclamation could reduce this additional cost to $5 - $10 per acre.

Will Fish and Game or other agencies want too much water for fish, leaving an insufficient amount for irrigation?

The timing of the releases of the stored water, as well as minimum flow requirements will have to be negotiated with Fish and Game if they or the Fish and Wildlife Foundation want to be financial contributors. However, they have indicated their need for water coincides with the irrigators' needs, so there shouldn't be any insurmountable problems.

Who will hold the right to the additional water to be stored in the expanded reservoir?

This, too, will have to be negotiated between Lost Valley Reservoir Company that has applied for the new storage right, the Weiser Irrigation District and other funding partners that may want a share of the right in return for their financial participation. Generally, though, everyone agrees that holders of the right to the additional water in the expanded reservoir should share in the costs and revenues from leasing it in an amount proportionate to their share of the water.

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Projected Flows in Weiser River From the Lost Valley Expansion

Average Water Year

Location of Measurement*	July		August		September	
	Current	*Proposed*	Current	*Proposed*	Current	*Proposed*
Lost Creek	43	***109***	60	***129***	41	***93***
Cambridge	195	***262***	84	***154***	86	***138***
Mouth of Crane Cr.	381	***448***	264	***334***	203	***255***
Below Galloway***	185	***252***	85	***154***	74	***126***

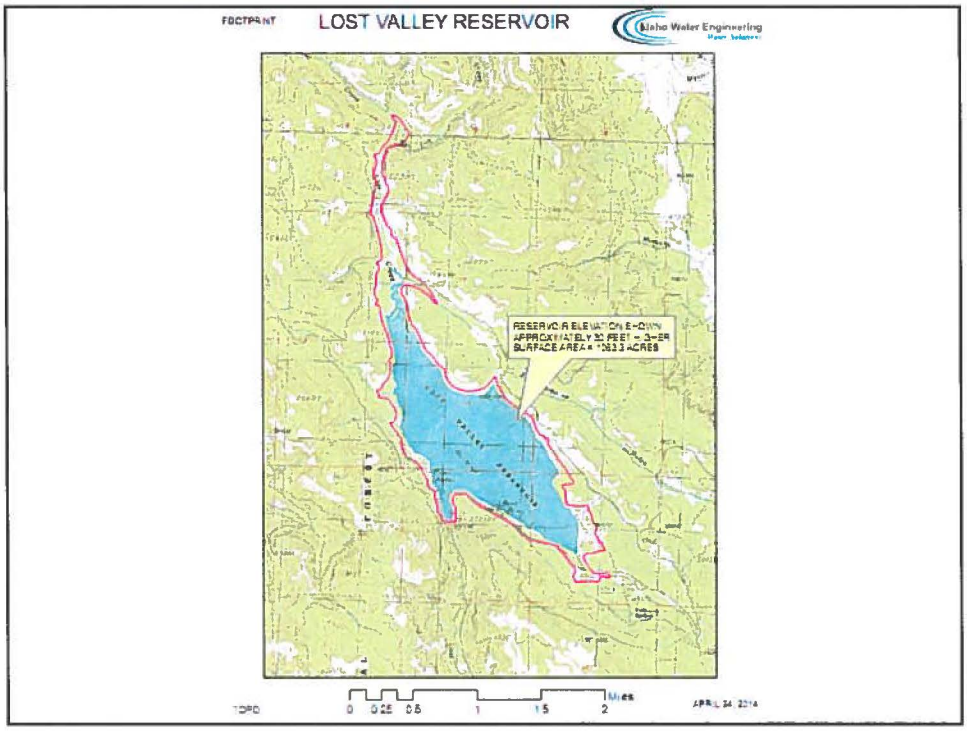
Very Low Water Year**

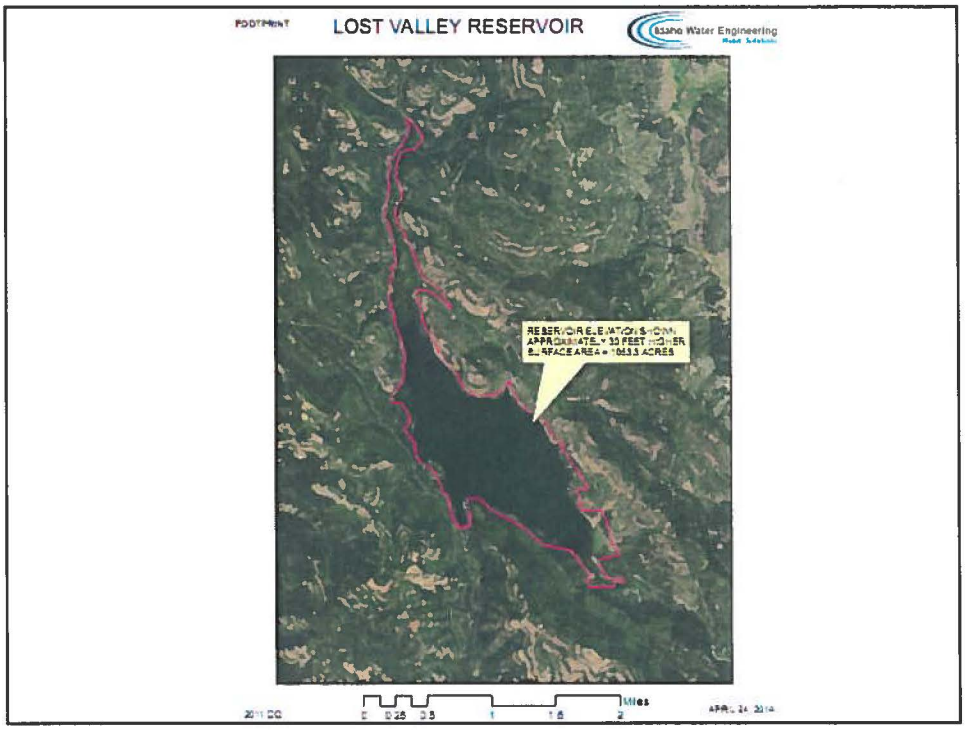
Location of Measurement*	July		August		September	
	Current	*Proposed*	Current	*Proposed*	Current	*Proposed*
Lost Creek	45	***48***	50	***56***	48	***47***
Cambridge	43	***48***	12	***19***	35	***35***
Mouth of Crane Cr.	104	***109***	62	***68***	46	***46***
Below Galloway***	4	***9***	0	***7***	2	***2***

* All flows are expressed in "cubic feet per second" (cfs)

**1937 for Lost Creek and 1977 for Cambridge and Mouth of Crane Cr. Apparently, 1977 was drier than 1939, but there is no '77 data for Lost Creek and no '39 data for Cambridge or Mouth of Crane Cr.

***Below Galloway flows do not reflect any irrigation returns





Next Steps

- Initiate a joint process to review reservoir enlargement.
- Discuss recreation, wildlife, fishery and infrastructure alternatives if reservoir is expanded.
- Discuss tradeoffs between moving recreation areas and providing an increased water supply.
- Discuss potential mitigation strategies for Northern Idaho Ground Squirrels.
- Results in a proposal for USFS.

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Water Solutions

Composition of Proposal Team

- Lost Valley Reservoir Company
- Weiser Irrigation District
- Idaho Water Resource Board
- Adams and Washington Counties
- USDA – Rural Development
- In consultation with USFS
- Facilitated by Idaho Water Engineering

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Potential Timeline

- Oct 2014 – Feb 2015 Develop Proposal
- March 2015 – Submit Proposal to USFS for review
- Summer 2015 – Seek commitments from funders for EIS
- Fall 2015 -- Initiate Environmental Impact Statement

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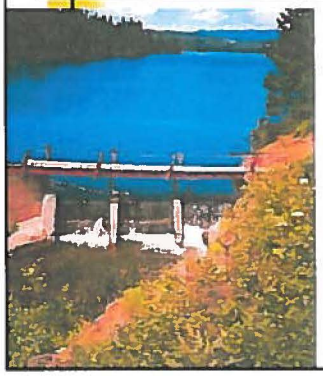
Thank you.



208-378-1513
Website:
Idahowaterengineering.com
Email:
info@idahowaterengineering.com

Opinion

your view

Long-sought Galloway project a bad idea by a dam site

According to the recent 150th anniversary special edition, the number one story reported in the *Idaho Statesman* newspaper between 1864-2014 was the Teton Dam collapse of June 5, 1976. The wall of water killed 11 people and 18,000 head of cattle. It destroyed hundreds of homes, and the property damage totaled $2 billion in 1970s dollars.

Teton was the last large dam to be built in Idaho. Today, the Idaho Water Resource Board is in the advanced stages of planning another large structure at the current Galloway diversion dam on the Weiser River.

Like Teton, the proposed dam is approximately 300' high, like Teton it will require a "grout curtain" to compensate for the poor geology at the site, like Teton it is 13 miles upstream of an Idaho city. In spite of the high risks to Rexburg and the relatively low benefits to that town, they did not object to the construction of the Teton dam assuming that the engineers and construction company would not do anything that would endanger them. We must make sure our concerns are heard and our families and property are protected.

Make no mistake, this is a massive project. The dam, depending on which alternative is chosen would be up to 300 feet high, the reservoir would be 15-18 miles long and contain up to 900,000 acre-feet of water (Cascade Reservoir contains 800,000). And, as Rexburg experienced, the risks are massive, the benefits to our community are few and the impacts to our lifestyle and natural resources are substantial.

I have been involved in and opposed to efforts to build a large Galloway dam since the 1980s. Previous attempts have always failed. It just isn't a good dam site. It relies on high risk geology for the abutments. It is too expensive at $500 million (Teton cost $100 million). There is too little benefit to the local area because the operation of the dam requires the reservoir to be drastically drawn down from early summer until the next runoff thereby greatly diminishing recreation values.

Flood control will be minimal because the lower Weiser River lacks the channel capacity to contain the huge flows required for salmon flushing. Flood-like flows would be prolonged into early summer. Ice jams at the upper end of the reservoir could threaten Midvale. More than 4,600 acres of private land including nine ranches would be inundated, more than 2,000 acres of public ground would be flooded, 15 miles of free flowing river and 15 miles of river-grade trail would be lost.

There are other concerns that need to be addressed. The reservoir would rise to the toe of the Almaden Mercury mine and flood other deposits of mercury ore. The extent of mercury contamination of the Weiser River and Brownlee Reservoir is unknown. Many landslide areas were found within the reservoir's footprint and could be activated by the rising and falling water levels.

Local infrastructure such as sewers, schools, police and roads will be stressed during dam construction. Many small towns have experienced Boom then Bust economic cycles as a result of dam construction.

There are alternatives. The State of Idaho-funded geotechnical report showed competent basalt at the base of the proposed site and extending about 85 feet up the abutments on both sides. The Idaho Water Resource Board should evaluate a dam of this height as fully as it does the much more risky and costly 300-foot dam.

Alternatively, Lost Valley Reservoir is being considered for expansion. Increasing the height of this existing dam by 30 feet would more than provide the additional irrigation water needed for the Weiser River basin.

It would reduce flood damage all the way to the Snake River and improve the water quantity and quality for 85 miles of river. Additionally, it would add to the recreation benefits of a free-flowing river without affecting the Weiser River Trail.

An enlarged Lost Valley Reservoir would provide greater benefits to all the Weiser River communities with virtually no increased risk. And, it could do all of this for less than 1 percent of the cost of the proposed Galloway Project.

We will have very limited opportunity to voice our concerns. We all need to become better informed about this advancing project and be ready to tell the Idaho Department of Water Resources and the Idaho Water Resource Board that we don't want this dam and we don't want them spending hundreds of millions of taxpayer dollars to partnership with private industrial money for a dam we don't need and fear.

The IDWR and the IDWR Board are planning a public hearing to present the findings of another wasteful $2 million study which they have just completed. We need to request they have that public meeting in Weiser so we can tell them again the benefits to the lower Weiser River area are way too low and the risks are far too high. It is still a bad dam.

Don Anderson is a retired biologist with the Idaho Department of Fish and Game and NOAA Fisheries. He is also a member of the Weiser River Resources Council

Letters

Read and learn your own Constitution ...

A previous letter to the editor explained, "Read your constitution article IV, section 3, clause 2. You find it is congress that makes the laws for the public lands … "

Section 3 does not authorize the feds to establish or control federal public lands. It requires congress to "dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States." The words "public lands" do not appear in our constitution.

The U.S. Supreme court 1845 decision in Pollard vs. Hagan ruled against the federal government's land claims in Alabama. The court indicated, "The United States never held any municipal sovereignty, jurisdiction or right of soil in and for the territory, of which Alabama or any of the new states were formed, except for temporary purposes."

This court also indicated "to maintain any other doctrine, is to deny that Alabama has been admitted into the union on an equal footing with the

continued on Page 5

WEISER SIGNAL AMERICAN
Proudly serving the Weiser River Valley since 1882

The only paper in the world that really cares about Weiser and Washington County

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We strive to cover all the news and entertainment important to the people of Washington County, Idaho. Our entire staff takes part in the decision-making process of what appears in these pages and all content is locally generated. If you have a story idea please contact any of the people you see here. The personal columns and letters appearing elsewhere on this page, and others, represent the opinions of single individuals and do not necessarily reflect the position of the newspaper. The WSA welcomes and encourages your Letter to the Editor. We will print all signed, original letters of local interest. Please provide a phone number for verification. We will not publish letters that are libelous or scurrilous in nature and reserve the right to edit all material for spelling, grammar, length and content. Letters of thanks are offered at a reduced price in our classified section.

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The Weiser River: Idaho's Free-flowing Gem

A Heritage Resource

Waiting silently in the mountains, canyons, and river valleys of Idaho are the remnants of past cultures that remind us of the centuries-old relationship between people and the land. These heritage resources hold clues to past ecosystems, add richness and depth to our landscapes, provide links to living traditions, and help connect us to our past.

The Weiser River in west central Idaho is a heritage resource. The river still echoes with the voices of the native tribes that fished and hunted there for thousands of years, of the 19th century homesteaders who worked the land and founded the communities of Weiser, Cambridge, Midvale and Council, of the work crews that built the railroad, of the loggers that harvested the timber and of the fisherman that pursued the abundant salmon.

Ranching and farming continue to support the rural communities in the pastoral Weiser River valley. Today the free-flowing Weiser River also supports Idaho native fish and wildlife, including endangered bull trout and two species being considered for listing under the Endangered Species Act, greater sage grouse and southern Idaho ground squirrel.

Large Dam Proposed

A 300-foot-high dam is proposed on the free-flowing Weiser River just upstream of Weiser. The dam would flood farmland, block fish migration, bury the whitewater of the Galloway Canyon, destroy habitat for the bald eagles and other birds and wildlife, drown ground squirrels and inundate more than 15 miles of the Weiser River Trail - at 84 miles the longest rails-to-trails non-motorized trail in Idaho. More than 6,000 acres of productive land would be lost.

Attend!

Idaho Water Resource Board Meeting

Sept. 11, 1:00 p.m.

Vendome, Weiser

Send Comments!

Idaho Water Resource Board

Mandi.pearson@idwr.idaho.gov

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www.idahorivers.org

(208) 343-7481

The purpose of the Weiser-Galloway project is to replace water from the upper Snake River that's now dedicated to meeting obligations of the Nez Perce salmon flow agreement in the Snake River. Instead of being purchased from irrigators and released down the Snake River to help Idaho's endangered salmon and steelhead, reduce serious pollution in the Middle Snake River and produce hydropower, upper Snake River water will be used to irrigate alfalfa in the Arco desert, expand industrial dairies in the Magic Valley, and do experimental aquifer recharge.

Photos - front, Weiser River. Back Left - Weiser River Right - Middle Snake River, Magic Valley irrigated crops, dairy cows. Photo credits: Don Anderson, Friends of the Weiser River Trail, Greg Syme.

Pearson, Mandi

From: Ryan McGill [ryan.mcgill@gmail.com]
Sent: Tuesday, September 09, 2014 4:46 PM
To: Pearson, Mandi
Subject: Do not dam up the Weiser River

TWIMC,

I am fifth generation Idahoan. My two children are sixth generation. I expect my children to see wild runs of salmon and steelhead in the tributaries of the Snake River. We need to be making efforts to restore the damage we have done; not increasing the destruction by building more impoundments on Idaho rivers. I do not support the construction of a dam on the Weiser River.

Please respond to this email as confirmation that it has been read/submitted to the proper group/person.

Sincerely,

Ryan McGill
Idaho
208-301-3816

Pearson, Mandi

From: Borg Hendrickson [chicory@wildblue.net]
Sent: Tuesday, September 09, 2014 4:01 PM
To: Pearson, Mandi
Subject: For: ID Water Resources Board Members

Regarding: proposed Weiser-Galloway Dam

Idaho Water Resources Board Members,

At a time when damage caused over decades by the nation's hundreds of dams is better known than ever, your consideration of the proposed 300'-high Weiser-Galloway Dam must be underlaid by knowledge of damage likely to, or sure to, be caused by the proposed dam.

Here's what we know the W-G Dam would do:

- destroy habitat for bald eagles, other birds, and other wildlife
- flood farmland and cause the loss of 6000 acres of productive land
- flood 15+ miles of the Weiser River Trail (an 84-mile Rails To Trails recreational treasure)
- obliterate another recreational delight: Galloway Canyon whitewater
- drown ground squirrels and other 'incidental' wildlife
- block fish migration and reduce viability of native fish, including bull trout
- reduce viability of greater sage grouse

Any one of the above could be reason enough to challenge the proposed dam's construction. Taken in combination, there is more than enough reason for you to say 'no' to the W-G Dam proposal.

Causing -- and if YOU approve of this dam, it will be YOU 'causing' -- all of the above damage is unconscionable. You'll be causing that damage in order to support Magic Valley industrial dairies, dairies that themselves already cause serious damage by polluting the Snake River.

Please, have a conscience. Don't consider the proposed Weiser-Galloway Dam without deliberatively considering the damage it will cause. Deliberative consideration should lead you, conscience intact, to opposing the proposed dam.

Please do oppose it.

Borg Hendrickson
borghendrickson@gmail.com
Kooskia, Idaho

Pearson, Mandi

From: Josh Laughtland [josh@jtree.net]
Sent: Tuesday, September 09, 2014 3:25 PM
To: Pearson, Mandi
Subject: Galloway Dam (2)

To Whom It May Concern,

Please do not move forward with plans to build the Galloway Dam on the Weiser River for the following reasons:

1. The negative effect the dam will have on fish and wildlife in the region

2. The usage of high risk geology for abutments

3. Blocking fish migration... hasn't enough damage already occurred?

4. No more whitewater in Galloway Canyon

5. Destruction of bald eagle and other bird and wildlife habitat

6. The inundation of more than 15 miles of Weiser River Trail (the longest rails-to-trails non-motorized trail in Idaho)

7. It's a DAM!? Holy crap, I know Idaho is often in the dark ages... but really? This kind of land management is why Idaho is frequently the laughing stock of the country...

If you need more reasons (and there are plenty) please study other dams in Idaho and beyond - and their resulting effect on wildlife and the environment.

The building of yet another dam is the last thing Idaho needs. Beautiful places like the Weiser River are the reason why people choose Idaho as their home (see urbanization of economics), the damage resulting from the Galloway Dam goes against this and all environmental principles. All so dairy farms (who already pollute the Weiser River) can expand at the expense at one the nation's last strongholds of wildlife and land.

Please do not build the Galloway Dam.

Thank You.

Josh Laughtland

Josh Laughtland
Founder/Lead Consultant

Pearson, Mandi

From: Kate Malone [Katem19514784@aol.com]
Sent: Tuesday, September 09, 2014 3:42 PM
To: Pearson, Mandi
Subject: Galloway Dam

It would be a devastating loss if the Galloway Dam is allowed to destroy the beautiful Weiser River. Please do not let this valuable and necessary pristine river be ruined.
Kate Malone

Sent from my iPad

Pearson, Mandi

From: Mahler, Debi [Debi.Mahler@redcross.org]
Sent: Tuesday, September 09, 2014 3:09 PM
To: Pearson, Mandi
Cc: Liz Paul
Subject: no new dams

Mandi Pearson

September 9, 2014

We don't need new dams (learn from past mistakes!), we need to learn to use water wisely, clean up the polluters/pollutants of the Snake River area and control population!

Thank you for your consideration in this matter!☺

Debi Mahler
Boise, Idaho

Pearson, Mandi

From: mark anderson [mfa20021960@yahoo.com]
Sent: Tuesday, September 09, 2014 3:51 PM
To: Pearson, Mandi
Subject: Proposed Galloway Dam

Dear Sir or Madam:
this proposed study for a dam is a bad idea. Wildlife, recreation, future water storage and use, as well as riparian areas around the river will all be impacted or destroyed. The reason for this dam is to get around the proper reservation of Nez Perce treaty rights for salmon water into the Snake River. A better idea would be to hold back water or increase the volume of water flows from existing reservoirs.

Please consider the incredible costs and small benefit to be gained. The Weiser River is too great to destroy.

mark anderson
3974 oak park place
boise, id 83703
208-336-8539

Pearson, Mandi

From: Mary Butler [mjbutler66@yahoo.com]
Sent: Wednesday, September 10, 2014 12:34 PM
To: Pearson, Mandi
Subject: Stop the Galloway dam

As a kayaker on the Weiser river, a biker along the trail, and a long time Idaho resident I am strongly opposed to the proposed dam on the Weiser river. This dam will have little benefit and a high negative impact on Idaho.

Mary Jo Butler

2088598705
Boise, Idaho

Pearson, Mandi

From: Paul Collins [collins04@cableone.net]
Sent: Tuesday, September 09, 2014 5:21 PM
To: Pearson, Mandi
Subject: Weiser Dam

I know you have heard the reasons, so I will not repeat them. I just want you to know that I, like many long-term Idahoans, do not want to see a dam at the Galloway site. It is a bad plan, a bad location, with bad geology, among many other "bad" things. The ones that want it will not have to take the risk, nor loose the existing benefits of an open and viable river.
It is just a very bad idea.
Please do not allow it to move any further than paper.
I am happy to chat on this if you desire.
Thanks.
Paul Collins MD
208-861-8257

Pearson, Mandi

From: Ken Lagergren [lagergren@cs.com]
Sent: Tuesday, September 09, 2014 4:22 PM
To: Pearson, Mandi
Cc: liz@idahorivers.org
Subject: Weiser River

Dear Board Members,

The Weiser River should be left FREE FLOWING!!
We hope you will comply with the recommendations put forth by Idaho Rivers United for this natural river in Idaho..

Sincerely,

Ginna and Ken Lagergren
Hailey, ID

Pearson, Mandi

From: Don Mansfield [DMansfield@collegeofidaho.edu]
Sent: Tuesday, September 09, 2014 10:44 PM
To: Pearson, Mandi
Subject: Weiser-Galloway dam

Dear Idaho Water Resource Board representative,

I write to you to express my opposition to the construction of the Wieser River Galloway dam. It is a bad idea to support the dairy industry by building this dam. It is a bad idea to inundate the Galloway canyon. It is a bad idea to destroy the riparian communities of the free-flowing Wieser River. It is a bad idea to inundate the stretch of the Wieser River trail that currently runs through the canyon. It is a bad idea to construct this dam at this place at this time.

Donald H . Mansfield
Professor of Biology
Citizen of Ada County, Idaho

Weiser-Galloway Dam Proposal September 11, 2014

My name is Gayle Buhrer Poorman, vice-president of the Friends of the Weiser River Trail Board of Directors. I would like to thank you for this opportunity to speak with you this afternoon.

As some of you may be aware from my previous comments before the Idaho Water Resource Board, the Friends of the Weiser River Trail, Inc., is a non-profit corporation formed to protect and preserve the Union Pacific Railroad right of way from the city of Weiser to Rubicon, which is just south of New Meadows. The property was deeded to the Friends of the Weiser River Trail (FWRT) after the railroad was decommissioned. In 1997, the Surface Transportation Board, an agency of the United States Department of Transportation, transferred management and title of the rail corridor to FWRT under The National Trails System Act, often called the "Rail Banking Act", which was enacted by Congress in 1983. The rail banking law provides that, should rail service be reactivated by Union Pacific or its successor, FWRT would have to transfer the rail corridor back to the railroad in such condition that trains could resume use of the corridor. Today, the 84-mile long Weiser River Trail is a beloved, non-motorized, recreational pathway maintained and protected by FWRT for public use.

We, the FWRT board of directors, would like to express our concerns regarding the Weiser-Galloway Dam proposal. Because of the transfer of title of the rail corridor to FWRT as I have just discussed, our obligation under the rail banking agreement with the railroad requires that we maintain the rail corridor. This means that the approximately 15 miles of trail corridor which is proposed to be inundated with reservoir water would have to be relocated and rerouted to railroad standards. This rerouting would have to include maximum grade and minimum curve radius, rail continuity and corridor right of way. For the dam proposal to move forward, there would be a cost of land acquisition required to meet FWRT's obligation under federal law. This cost of land acquisition to reroute the Trail and survey maps of where the new route could be located must be incorporated into the cost/benefit analyses of the proposed Galloway dam project.

In the "Weiser Basin Benefits" analysis report prepared by the US Army Corps of Engineers, no mention has been made of the recreational values of the Weiser River Trail that would be lost should the canyon be inundated. These benefits include non-motorized recreational activities such as hiking, cycling, equestrian use, hunting, access to the Weiser River for rafting, kayaking, fishing, and camping at the Presley Trailhead with its new improvements of a water well, toilet, picnic tables, graveled parking area and kiosk.

Personally, I am very much opposed to this dam proposal that is very expensive and potentially dangerous to the citizens below it. The Weiser river is one of the few remaining unimpeded, free-flowing rivers in west central Idaho. It is Idaho's 25th longest river. The Weiser River's remote basins and drainages harbor the threatened Greater Sage Grouse and the Southern Idaho Ground Squirrel. Bull Trout exist in some streams within the Weiser River Basin. The U.S. Fish and Wildlife Service considers the Sage Grouse, the Southern Idaho ground Squirrel and Bull Trout as candidate species for listing under The Endangered Species Act. The Weiser River Basin also serves as important winter range for deer and elk. The reservoir behind the proposed Weiser-Galloway dam would inundate critical habitat for all of these species.

The Weiser River and Trail offer access to whitewater rafting and kayaking, fishing, birds of prey viewing and overnight camping in the roadless Galloway Canyon section of the lower Weiser River. Fishermen will find a variety of fish including brook trout,

largemouth bass, sunfish, small mouth bass, rainbow trout, redbreast sunfish, channel catfish, smelt, sucker, yellow perch and bluegill here.

I do not believe this dam proposal makes any sense for the following reasons:

- The unstable basalt breccia geology of the Galloway Canyon is not suitable to the construction of a dam. The steep sides of the canyon may be an issue for landslides into a potential reservoir.
- There is evidence of possible cinnabar (mercury ore) in the river basin, which could lead to the mineralization of mercury in the water of a future reservoir. Mercury is a health concern as it accumulates in fish and can be passed along in the food chain to humans.
- There are not enough irrigators in the Weiser River Basin to benefit from the water rights within a new dam system. A new dam would cost taxpayers millions of dollars and not pay for itself.
- Conflicting uses make it very difficult to build a dam for both flood control where the reservoir must be kept empty for river flow pulse events, and also a dam for agriculture, where the reservoir must be kept full for use to water crops. Added to these considerations is the challenge of calculating flow augmentation requirements for anadromous fish recovery, a stated goal for the project.

I am here today to ask you to fully recognize the formidable obstacles before the Weiser-Galloway Dam proposal. The Friends of the Weiser River Trail are staunchly committed to maintaining a recreational corridor for everyone to enjoy, and will rigorously defend our obligation to ensure that the railroad corridor meets railroad grade and curvature requirements in case the railroad resumes. The Trail continues to be a *critical* transportation corridor today and should remain so for future generations. The Weiser River and the Weiser River Trail are Idaho gems that are too precious to be lost in the backwaters of a nonsensical dam.

Thank you for your time and consideration of our concerns.

Gayle Buhrer Poorman
3240 Rush Creek Rd.
Cambridge, ID 83610

Comments presented to The Water Storage Committee of the Idaho Water Resource Board

September 11, 2014 in Weiser, Idaho

My name is Don Anderson and I am a resident of and product of Weiser, Idaho, My ancestors settled a fair bit of the Weiser River basin starting in 1868. I am a retired fishery biologist having served 30 years with the Idaho Department of Fish and Game managing the fishery resources in and around McCall, Idaho, including most of the Weiser River. I was also a program leader for NOAA Fisheries dealing with ESA listed fish species throughout Idaho. I have been involved with the many studies and reports on the Galloway projects since the 1980's.

I am opposed to the high dam proposed on the main stem of the Weiser River at the current Galloway diversion site. I am not opposed to all dams, in fact, I am a strong proponent for enlarging the Lost Valley Reservoir dam and I have been working with Dave Tuthill to see this accomplished. And, I might support a much smaller and safer dam at the Galloway site.

I am opposed to the proposed high dam for several reasons but foremost is dam safety. I attended the IWRB meeting in Boise when the U S Army Corp of Engineers presented the results of their geotechnical studies and I have thoroughly studied the published *Foundation Investigation and Evaluation* report. The report calls attention to the complex geology of both the east and west abutments. The most recent core samples revealed that the abutments are not composed of the expected Columbia Basalts but are interbedded layers and lenses of far weaker rock types, including clay, tuff, breccia, and tuff breccia. Surprisingly, USACE stated the proposed site is not suitable for a rolled concrete construction (RCC) dam because the abutment geology is too unstable, but they stated it was "suitable" for a rolled earthfill construction (REC) dam. They further provisioned their assessment of Galloway being a suitable site only if the builders employed more costly and risky "special construction techniques" to mitigate the weak and unstable geology at the Galloway site. And, that any final assessment should await additional investigations and analyses.

Among the special construction techniques, the USACE identified the need for a grout curtain to seal the extremely fractured basalt and the seams between layers of unlike rock types. The failure of the grout curtain used in the Teton Dam has been identified as the cause for the collapse of the Teton dam on June 5, 1976 which killed 11 Idahoans and destroyed hundreds of homes in Sugar City and Rexburg. The dam failure caused literally billions of dollars in property damage.

The report also identified the need to use moisture retaining construction techniques, immediately covering exposed rock to prevent even short-term drying of the tuff rock types. Drying, for even one day, will completely weaken this prevalent tuff rock type by air-slaking causing it to "almost immediately disaggregate when the rock is rewetted". When it comes down to it, the fate of thousands of Weiser area residents would be left in the hands of construction workers and equipment operators. The need for these costly and risky construction techniques confirms that the Galloway location is not a safe site for a high dam.

Other concerns were highlighted in the geotechnical report. The reservoir would rise to the toe of the Almaden Mercury Mine and flood other deposits of mercury ore. The extent of mercury contamination of the Weiser River and Brownlee Reservoir is unknown. Many landslide areas were found within the reservoir's footprint and could be activated by the rising and falling water levels.

I oppose the proposed Galloway Project because of its extreme cost and the structure of its funding. The estimated cost for construction of only the dam is approximately $500 million, the last dam built in Idaho, Teton Dam, cost $100 million and Lost Valley Reservoir could be expanded for less than 1% of the cost of Galloway. This is a very expensive dam.

The project is to be funded by a "Public-Private Partnership" with $500 million coming from the State of Idaho and partnering with private funds to add the hydroelectric turbines, transmission lines and other features. Since an estimated 76% of the benefit in the benefit:cost analysis comes from hydroelectric production I cannot see how the State of Idaho would get a reasonable return on this investment. I can easily see where a private electric utility would see profits. If the State of Idaho chooses to spend $500 million on the Galloway Project, one must wonder what other State of Idaho needs will not be met as a result of building the dam. Improved schools and roads come to mind.

The State of Idaho has over appropriated the water available in the Snake River basin and the Idaho Aquifer, and junior ground water rights have been curtailed. Additionally, the State of Idaho is required by an agreement with the Nez Perce Tribe to annually release 427,000 ac-ft of stored water from the Upper Snake Basin to aid ESA listed salmon and steelhead. One stated reason to build the Galloway Project is to allow transfer of these water obligations currently stored in the Upper Snake River reservoirs to the proposed Galloway Reservoir, thereby freeing up water in the Upper Snake for experimental and risky recharge of the Idaho Aquifer. This transfer of water would allow continued and expanded aquifer pumping to irrigate to the dairy-linked farms in the Arco desert. Idaho citizens would pay for this expensive transfer by paying $500 million for construction of the Galloway Dam. But, we would accrue only a small fraction of the economic benefits that will go to the multi-national corporate farms and diaries. The

proposed "public-private partnership" turns out to be nothing more than a subsidy to international industrial agribusiness.

I oppose the Galloway Project because of the loss of current and future values. The reservoir would inundate 4600 acres of private land, including as many as nine ranches. It would flood 2000 acres of public land and 15 miles of free-flowing river. Current and future recreation opportunities of a free-flowing river will be lost. The Weiser canyon, proposed for inundation by the Galloway dam, supports many fish and wildlife species. It contains critical winter range for deer and elk, it is a stronghold for sage grouse, chukars, quail, turkeys and waterfowl. It currently supports an excellent, but underappreciated, smallmouth bass fishery. Whitewater floating on the river from Midvale to Weiser is becoming more recognized as a special outing. The 22 miles of roadless canyon can be floated early in the spring when other rivers are waiting for their boatable flows.

About 15 miles of the Weiser River Trail would be flooded. This trail is recognized as part of the National Recreational Trail System. It follows the Weiser River for nearly its entire length from Weiser to Rubicon. It is becoming more popular after 18 years of hard work and improvement, hosting pedestrian, cycling, equestrian and wagon train events throughout the year. Its future is bright. But it has values other than as a trail; it is an unbroken Right of Way from Weiser nearly to New Meadows. This intact Right of Way has enormous potential value as a future railroad, a road, a pipeline, a fiber optic route or whatever the future brings. Extended rights of way are very difficult to secure. The Friends of the Weiser River Trail bylaws identify protection of wildlife habitat as a top priority. The trail/ROW protects basically one half of the vitally important riparian (streamside) habitat for 85 miles of river.

I oppose the Galloway Project because the benefits to the local area are too few. Recreation opportunities from the Galloway Project will be far less than hoped for. As proposed, the created reservoir will be drawn down more than 100 feet to aid threatened salmon and steelhead. The drawdown will continue from early summer until the reservoir refills during the following spring runoff, then it will almost immediately be drawn down again. Boat ramps and campgrounds will be inaccessible. The drawn down shorelines will not look like the sandy shores of the granite-based Lucky Peak, but will be mud-covered rocky slopes due to the Weiser River's volcanic origins and the large amount of silt that the Weiser River transports. And, the reservoir's water will have the cloudy, muddy appearance of the neighboring Crane Creek Reservoir.

Flood control will be little different than it is now. The Weiser floods nearly every year and no homes are lost. We have all adapted to that regime accepting relatively minor damage even in a 500-year event like 1997. Even if the dam is built, the Weiser River will experience flood-like

flows as the required "salmon flushing flows" will exceed the river's channel capacity to contain those flows.

Local infrastructure such as sewers, schools, police and roads will be stressed during dam construction, and when the construction workers leave, the remaining citizens have to pay the bills. Many small towns have experienced Boom then Bust economic cycles as a result of dam construction. Witness Orofino after Dworshak dam was built.

I oppose the Galloway Project because there are safer and more reasonable alternatives. The geotechnical report showed Columbia basalts at the base of the proposed site and extending about 85 feet up the abutments on both sides. The IWRB should evaluate a dam of this height as fully as it does the much more risky and costly 300-foot dam. Alternatively, Lost Valley Reservoir is being considered for expansion. Increasing the height of this existing dam by 30 feet would more than provide the additional irrigation water needed for the Weiser River basin. It would reduce flooding and improve the water quantity and quality for 85 miles of river. Additionally, it would add to the recreation benefits of a free-flowing river without affecting the Weiser River Trail. An enlarged Lost Valley Reservoir would provide greater benefits to the Weiser River communities with virtually no increased risk. And, it could do all of this for less than 1% of the cost of the proposed Galloway Project.

In summary, there are too many risks, too much cost and too many damages to current and future values to support this dangerous Galloway dam project. And there are far too few benefits to justify the $500 million price tag.

Respectfully submitted,

Donald R. Anderson Jr

Donald R. Anderson Jr
1125 E Court Street
Weiser, Idaho 83672

MIDDLE VALLEY DITCH CORP. (MVDC)
% Terry Horton
2574 School Road
Midvale, Idaho 83645

September 9, 2014

Idaho Water Resource Board --- Water Storage Projects Committee
Committee Members – Chuck Cuddy (Chairman), Bert Stevenson, Jeff Raybould, Al Barker, Pete Van Der Meulen

Dear Sirs:

This letter is to inform the IWRB of the Middle Valley Ditch Corporation's concerns about and reasons for objecting to the proposed Lost Valley Enlargement Project. We know that much has been said in favor of it, as well as the widespread falsification that there is no opposition to this project. As the largest shareholder in the existing reservoir, we wish to set the record straight: **we are forcefully opposed to the enlargement of the Lost Valley Reservoir.**

Firstly, we are concerned about the likelihood that the reservoir at the proposed 30,000 acre-feet would ever fill. David Tuthill of Idaho Water Engineering stated in his presentation at the Lost Valley Reservoir Stockholders meeting in March 2014, *"we already know it won't fill every year."* Knowing at the onset that the drainage for the reservoir cannot be relied upon to fill the reservoir is distressing enough, but when added to this is the knowledge that the Forest Service will impose bypass flow requirements (as they stated in a letter to Mr. Tuthill dated August 28, 2014) means even less water being impounded in the reservoir. If all the water in that drainage won't fill the reservoir, and the Forest Service requires that water be continually released from the reservoir *"for the multiple use objectives of the National Forest downstream of the reservoir for the Snake River Basin Adjudication,"* then we are performing the equivalent of drilling a dry well. All that money, all that risk, and no water to show for it.

Of great concern to us is the cost of the project, as well as the additional costs resulting from the project. The cost of constructing the dam is substantial, and then there is the additional costs (including but not limited to): environment analysis, land ownership survey, permitting, timber removal, reconstruction of the many roads and campsites which would have to be moved above the new water level…the list goes on. Currently, the reservoir is privately owned and operated, and cannot fund this project itself, therefore funding must be sought, putting Lost Valley Reservoir Company in financial risk.

In summation gentlemen, the Middle Valley Ditch Corporation feels that the benefits, if any, cannot outweigh the risks that would result from this project. And we wish to reiterate: we are forcefully opposed to the enlargement of the Lost Valley Reservoir. We thank you for your attention to our concerns.

Thank you,

The Middle Valley Ditch Corporation

_____, President

_____, Vice President

_____, Director

_____, Director

_____, Director

Cc:
Harmon Horton
John Bonner
John Davis
Brian Boyle
Aaron Barnett
Amy Shumway-Lost Valley Reservoir Company
Dave Tuthill-Idaho Water Engineering
John Westra-Idaho Dept. Water Resources
Kim Pierson, District Ranger-Payette National Forest New Meadows R.D.

ICL Comments for IWRB Storage Committee meeting—Weiser, ID—September 11, 2014

Chairman Cuddy, members of the committee, thank you for hosting this meeting and providing the opportunity for public comment on this very important topic.

My name is Marie Kellner and I am the Idaho Conservation League's Water Associate. As you may know, ICL is Idaho's oldest and largest, state-based non-profit conservation organization. We are headquartered in Boise with field offices in Sandpoint and Ketchum, and we are proud to represent the interests of our more than 20,000 supporters from across the state, many of whom have a deep personal interest in ensuring that water management projects are compatible with preserving our free flowing rivers, wildlife, and quality of life. It is on behalf of these supporters that I speak to you today.

As a precursor, I want to say that ICL understands that the Water Board is constitutionally charged with responsibility for the conservation, development, management and optimum use of Idaho's water resources and waterways, and that the Board must do its work in the public interest. ICL also understands that the Board was legislatively directed to study water storage projects.

Understanding all of that, ICL encourages this committee and the Board to focus its considerable resources on creating more efficient water use across the state as opposed to focusing so much effort on new or enlarged dams. Whether in the form of grants, loans, or partnerships, taxpayer dollars would be better spent helping those who rely on Idaho's water to be as efficient as possible with this public trust resource instead of spending hundreds of millions of dollars on dams. Diversion automation, other irrigation infrastructure upgrades, and the latest in soil and agricultural science would go further faster toward situating Idaho to successfully face an uncertain water future, than putting our proverbial eggs in the basket of new dams.

Not only are new dams prohibitively expensive, they are politically and socially divisive, they are potentially dangerous, and they cause irreversible environmental harm. Placing so much effort on a new Weiser-Galloway Dam seems irresponsible in the face of the many other things that can be done to set us up for success in the face of an uncertain water future.

According to the U.S. Geological Survey, Idaho ranks third out of the 50 states in total water withdrawals. More than 85% or our water use is for irrigation. While we are and should be proud of our agricultural economy and heritage, neither of these statistics is necessarily something to be proud of. On the bright side, they represent the vast opportunities for improvement. But, if we continue to primarily focus on large scale storage via new or larger dams, we fail to take this opportunity to take a hard look at how we could be smarter with our water use. We must take that hard look in order to set ALL Idahoans up for a healthy water future.

In sum, there are alternatives to building this dam. Alternatives that would provide water security far more quickly than building dams. Alternatives that would be beneficial to fish, wildlife, and recreation, as opposed to harmful to all of those things. ICL encourages this committee and the Board as a whole to investigate ways to make Idaho water use more efficient, so that those who rely on Idaho's water resources are set up for success in the coming century.