



Western State Water Resources Infrastructure Needs and Strategies Idaho's Approach

Western States Water Council

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November 14, 2012



Idaho Constitution, Article XV, Section (as approved in 1964, later amended in 1984)

There shall be constituted a Water Resource Agency, composed as the Legislature may now or hereafter prescribe, which shall have power to formulate and implement a state water plan for optimum development of water resources in the public interest; to construct and operate water projects; to issue bonds, without state obligation, to be repaid from revenues of projects; to generate and wholesale hydroelectric power at the site of production; to appropriate public waters as trustee for Agency projects; to acquire, transfer and encumber title to real property for water projects and to have control and administrative authority over state land required for water projects, all under such laws as may be prescribed by the Legislature.





Director

Appointed by Governor

- Water rights administration
- Delivery of water per water rights
- Other regulatory functions

Water Resource Board

Members appointed by Governor
& confirmed by Senate

- Water planning
- Water projects and project financing
- Water Bank
- Minimum stream flow water rights
- Problem solving

Shared Staff



Important State Water Management Goals Requiring Infrastructure Financing and Construction

- Address water supply/demand imbalance in the Eastern Snake Plain Aquifer
 - ✓ 214,000 AF/yr average loss from aquifer storage since 1952
 - ✓ Severe water use conflicts
 - ✓ Growing cities
- Ensure water availability for rapidly growing areas:
 - ✓ 80,000-to-170,000 AF/yr of additional supply needed for Treasure Valley/Boise area
 - ✓ 27,000-to-89,000 AF/yr of additional supply needed for Coeur d'Alene area
- In Upper Salmon River Basin, provide flows needed for recovery of ESA-listed salmon and steelhead while keeping agricultural economy intact
 - ✓ "re-plumb" irrigation delivery systems



Important State Water Management Goals Requiring Infrastructure Financing and Construction

- Address water supply/demand imbalances and potential water use conflicts in other areas of the state
 - ✓ Mountain Home Aquifer
 - ✓ Wood River Valley
 - ✓ Palouse Basin
- Rebuild and improve aging water storage and delivery infrastructure
- Position Idaho for challenges created by climate change
 - ✓ Less winter snow and more winter rain – less water stored in snowpack
 - ✓ More variability – drier dry years and wetter wet years – need to capture and hold increased wet year flows for use in dry years
 - ✓ Conjunctive administration and downstream flow requirements have used up excess capacity in many areas

Water Resources Infrastructure – Idaho's Approach

Multi-pronged strategy to achieve state objectives - partnerships with federal government, local governments, canal companies/irrigation districts, utilities, private companies, and others



Reconstruction of the Lower Payette diversion structure on the Payette River

Water Resources Infrastructure – Idaho’s Approach New large surface water storage projects

Studies of 4 major projects in partnership with U.S. Bureau of Reclamation or U.S. Army Corps of Engineers



Geotechnical investigations at the potential Weiser-Galloway Dam site in western Idaho



Water Resources Infrastructure – Idaho's Approach

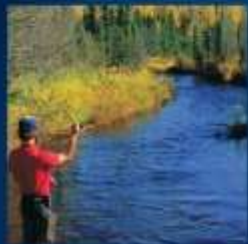
New large surface water storage projects

Potential projects:

- ✓ Boise River Arrowrock Enlargement – 317,000 AF – flood control and water supply for Boise area
- ✓ Weiser-Galloway – 900,000 AF – meet downstream delivery requirements now met by storage releases from Eastern Idaho/Upper Snake and Boise reservoirs to provide additional supplies in those basins; flood control; power; irrigation
- ✓ Minidoka Enlargement – 67,000 AF – additional supplies for Eastern Idaho/Upper Snake areas
- ✓ Teton Rebuild or Alternative – up to 288,000 AF – additional supplies for Eastern Idaho/Upper Snake areas

Arrowrock
Dam on the
Boise River



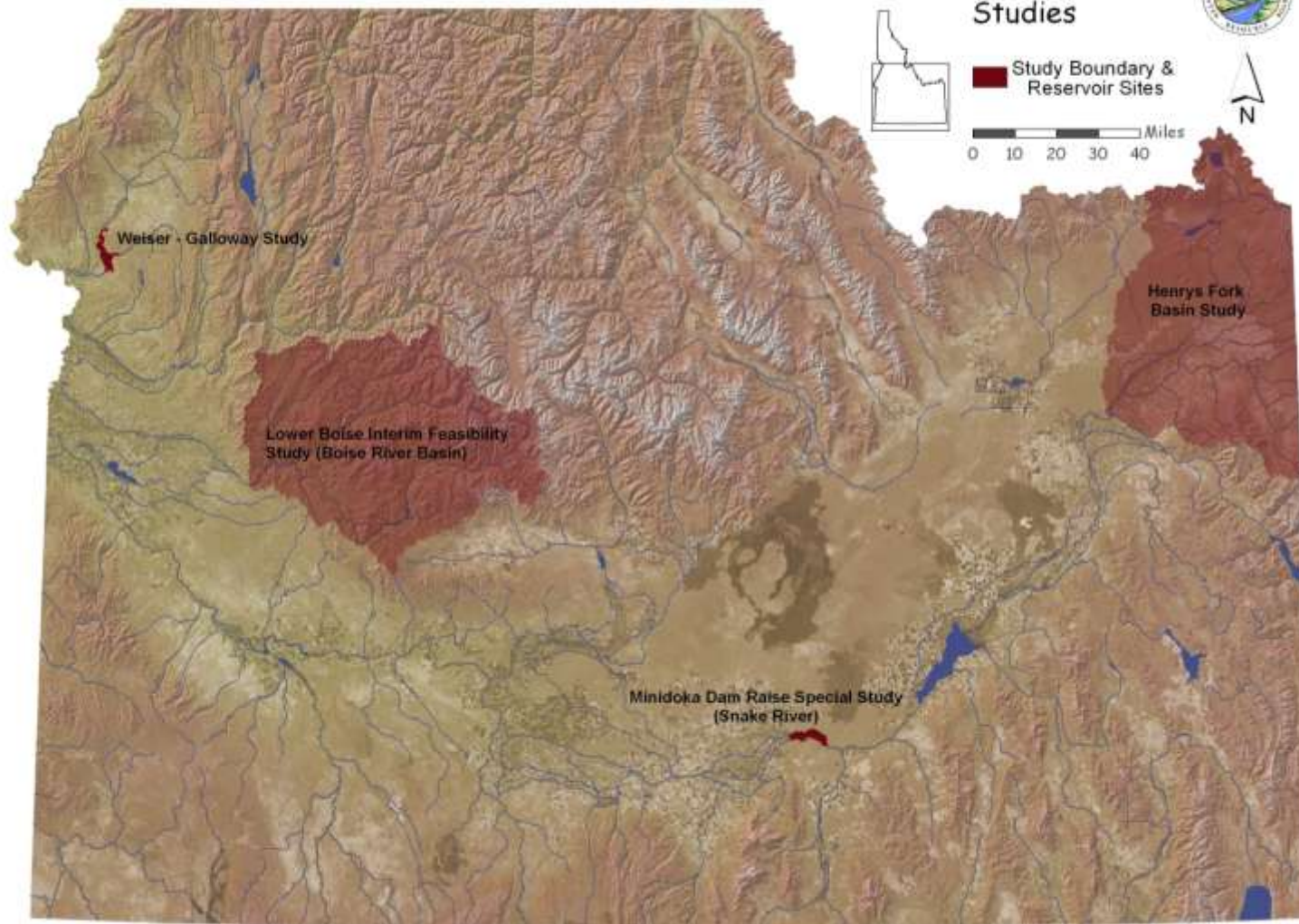


Surface Water Storage Studies



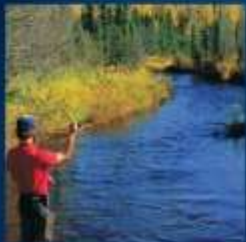
■ Study Boundary & Reservoir Sites

0 10 20 30 40 Miles



Water Resources Infrastructure – Idaho’s Approach Address Water Supply/Demand Imbalance in Eastern Snake Plain Aquifer

- Through 2019 – stabilize aquifer by offsetting 214,000 AF/yr average annual loss of aquifer storage
- After 2019 – begin recovering some aquifer storage lost in previous decades
- Mix of strategies:
 - ✓ Managed aquifer recharge – 100KAF/yr
Phase 1 goal being accomplished through delivery agreements with canal owners
 - ✓ GW-to-SW conversion projects – just completed 5,400 acre project through arrangements with federal NRCS and local water users
 - ✓ Demand reduction – financed \$34M voluntary water right purchase
 - ✓ Cloud seeding – established a program through arrangements with Idaho Power and local water users



Water Resources Infrastructure – Idaho's Approach Address Water Supply/Demand Imbalance in Eastern Snake Plain Aquifer

Managed Recharge Operations at Shoshone Site,
Spring 2012



Water Resources Infrastructure – Idaho’s Approach Provide Flows in Upper Salmon River Basin to Recover ESA-Listed Salmon & Steelhead While Keeping Agricultural Economic Base Intact

- Use funds from Bonneville Power Administration and others
- Avoids conflicts between ESA water needs and agricultural water needs
- Helps meet BPA’s habitat goals under FCRPS Biological Opinion
- “Re-plumb” water delivery systems; some dry-year easements

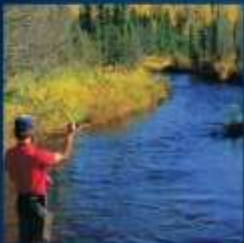


Chinook
Salmon
spawning in
previously
de-watered
tributary



Water Resources Infrastructure – Idaho’s Approach Rehabilitate and Improve Aging Water Storage and Delivery Systems

- Provide financing necessary to accomplish this goal at attractive terms
- Helps to leverage federal funds such as BOR WaterSmart grants or NRCS funds to further accomplish this goal



Outlet gate
replacement and
automation at
Payette Lake Dam

Water Resources Infrastructure – Idaho’s Approach Financial Resources

- Water Resource Board has revenue bonding authority
 - ✓ \$207M issued for numerous projects - \$36M in past year
- Three dedicated Water Board accounts - \$129M since 1970
 - ✓ Revolving Development Account
 - Direct loans
 - Water Board may use funds for its own projects
 - ✓ Water Management Account
 - Grants
 - Underfunded
 - ✓ Secondary Aquifer Management Fund
 - Aquifer management projects



Water Resources Infrastructure – Idaho’s Approach Financial Resources

- Legislative appropriations into Water Board accounts have not been sufficient to address needs so Board strives to develop other revenue streams
- Sources of funds for Water Board accounts
 - ✓ Loan repayment principal and interest
 - ✓ Interest earnings on undisbursed funds
 - ✓ Legislative appropriations - project by project basis
 - ✓ Revenues from state water projects
 - ✓ Surcharge on stored water marketing operations in major river basins
 - ✓ Funds from others for specific projects

Dworshak Small Hydro
Plant owned by Idaho
Water Resource Board



Water Resources Infrastructure – Idaho’s Approach Observations

- We are very good at accomplishing a lot with limited resources
- However, more resources are needed to address water infrastructure needs – need for new projects and rehabilitation will increase faster than available funds
- Revenue bonding is available but provides “market rate” funds – good fit for some projects but not for all necessary projects
- Idaho is at a crossroad – we either decide to pay for new projects and rehabilitations or we accept that not all needs will be met, and in some parts of the state existing uses will not be met in the future

Idaho dam in need
of rehabilitation





Thank You

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