Update from the Idaho Water Resource Board

Roger Chase, Chairman

Presentation to the Legislative Natural Resources Interim Committee

September 17, 2014
Updates

1) State Water Plan

2) Water Sustainability & Aquifer Stabilization Initiative
   • Progress on projects included in $15M appropriation
   • Progress on Eastern Snake Plain Aquifer recharge
State Water Plan

• During 2013 hearing on State Water Plan in House Resources & Conservation Committee some members raised concerns about certain policies in State Water Plan

• Water Resource Board committed to review concerns

• Over the past year the Board’s Planning Committee held numerous public meetings to receive input on these concerns
State Water Plan

Concerns raised Committee members focused on three main issues:

1. Future funding
2. Whether fish & wildlife and water quality policies creates additional regulatory requirements
3. Instream flow issues
State Water Plan

Future funding:

• State Water Plan recognizes additional funding needs for water resources
• State Water Plan recognizes Board will explore options for securing funding from variety of sources
• Board’s review confirms State Water Plan cannot bind legislature to future appropriations
State Water Plan

Whether policies regarding fish & wildlife and water quality create additional regulatory requirements:

• State Water Plan expresses support for voluntary programs to conserve fish & wildlife and preserve water quality

• Board’s review confirms that neither Idaho Constitution or Idaho Code grants Board authority to establish regulations without legislative authorization
State Water Plan

Instream flow issues:

• State Water Plan expresses support for Board project actions in Upper Salmon River Basin

• Board’s review confirms that these actions are brought taken pursuant to legislative direction and Idaho Code

• Board’s review confirms that actions assist local water users cope with economic, environmental and regulatory challenges associated with endangered species
State Water Plan

• Board agrees that additional edits and clarification of many policies would be beneficial

• The cost and effort of conducting statewide public hearing prior to adoption of changes outweighs any benefit

• Results and conclusion of this review were documented in letter to the Co-Chairs of the Interim Natural Resources Legislative Committee and legislative leadership

• Board values legislative input and wants your feedback
## Water Sustainability Initiative Funding HB479

$15 Million in one-time funds

<table>
<thead>
<tr>
<th>Project</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Mt. Home AFB Water Rights &amp; Supply</td>
<td>$4 Million</td>
</tr>
<tr>
<td>ESPA Managed Recharge Infrastructure &amp; Expenses</td>
<td>$4 Million</td>
</tr>
<tr>
<td>Northern Idaho Future Water Needs Studies</td>
<td>$500,000</td>
</tr>
<tr>
<td>Water Storage (Galloway, Arrowrock, Island Park)</td>
<td>$6 Million</td>
</tr>
<tr>
<td>Water Supply Bank Computer Infrastructure &amp; Costs</td>
<td>$500,000</td>
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Included in Governor’s Budget and approved by 2014 Legislature
<table>
<thead>
<tr>
<th>Project</th>
<th>Status</th>
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<tbody>
<tr>
<td>Mt. Home AFB Water Rights &amp; Supply</td>
<td>Water rights purchased</td>
</tr>
<tr>
<td>ESPA Managed Recharge Infrastructure &amp; Expenses</td>
<td>Engineering and test drilling underway at numerous locations</td>
</tr>
<tr>
<td>Northern Idaho Future Water Needs Studies</td>
<td>Contract executed with Rathdrum Prairie water utilities and U of I</td>
</tr>
</tbody>
</table>
| Water Storage (Galloway, Arrowrock, Island Park)                       | **Galloway** – completed operations analysis, starting trail relocation study  
Arrowrock - $1M from feds in Water & Energy Appropriations bill to complete study  
Island Park – completing agreements with BOR for engineering/environmental work |
| Water Supply Bank Computer Infrastructure                               | Expect to issue RFP in October                                          |
Eastern Snake Plain Aquifer Recharge

Why do we need to recharge the ESPA?

1. Assist with resolving water use conflicts and their potential impact to Idaho’s economy
2. Ensure Idaho can maintain minimum flows established under Swan Falls Agreement
Eastern Snake Plain Aquifer Conjunctive Administration Delivery Calls

1) Rangen Aquaculture Facility
   • Order requiring curtailment of 157,000 acres and 11 cities if not mitigated
   • Chilling effect on economic development efforts – how can our economy grow if we can’t sustain water supplies for existing uses?

2) Surface Water Coalition

2) Several additional calls from Hagerman Valley
ESPA and Swan Falls Agreement

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)

However, 180 miles Upstream at Milner Dam

- Water planning, policy, and practice provides for full development of Snake River above Milner Dam
- At times this reduces Snake River flow at Milner Dam to zero
When flow is zero at Milner, flow at Murphy Gage is made up almost entirely of spring flows from the ESPA Thousand Springs Discharge from ESPA.
The problem: Declining aquifer storage

Aquifer storage and flows from the Thousand Springs are directly correlated

1912 – 1952 Change  +17,000,000 AF
1952 – 2012 Change  -12,000,000 AF

Average annual 1952-2012 loss of aquifer storage is about 200,000 AF
Swan Falls Dam

Near minimum flows
Flow augmentation

SNAKE RIVER NEAR MURPHY
Swan Falls Dam

Minimum Instream Flow (3900 cfs Apr - Oct, 5600 cfs Nov - Dec)
50% Exceedence (1981-2012)
90% Exceedence (1981 - 2012)
Minimum of Record (1981-2012)
2013 Flow (3 day average, +/- 10% error bars)
Implications of Swan Falls Agreement Combined with Milner Zero Flow Policy

ESPA must be managed to sustain spring flows sufficient to meet the Murphy Gage minimum flows

- Relatively Few junior-priority trust rights in river that could be curtailed
- Curtailment of junior trust rights in ESPA not preferred solution – delayed timing means effects don’t reach river when needed and causes economic damage in process
Goal: Stabilize ESPA

- HB 547 passed by 2014 Legislature allocates $5 million annually from cigarette tax to Water Resource Board for “statewide aquifer stabilization”
- ESPA is high priority
- ESPA CAMP and State Water Plan goals
- HB 479 allocates $4 million one-time to Water Board for ESPA recharge infrastructure

Operations at Shoshone Recharge site
## ESPA Recharge – what has been done?

Since ESPA CAMP Approval in 2009

<table>
<thead>
<tr>
<th></th>
<th>Below American Falls</th>
<th>Above American Falls</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>2009</td>
<td>46,708</td>
<td>77,828</td>
<td>124,536</td>
</tr>
<tr>
<td>2010</td>
<td>5,595</td>
<td>55,913</td>
<td>61,508</td>
</tr>
<tr>
<td>2011</td>
<td>77,614</td>
<td>40,430</td>
<td>118,044</td>
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<tr>
<td>2012</td>
<td>54,671</td>
<td>70,147</td>
<td>124,818</td>
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<tr>
<td>2013</td>
<td>3,867</td>
<td>0</td>
<td>3,867</td>
</tr>
<tr>
<td>2014</td>
<td>10,435</td>
<td>0</td>
<td>10,435</td>
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<tr>
<td>Average</td>
<td>33,148</td>
<td>40,720</td>
<td>73,868</td>
</tr>
</tbody>
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Location Matters for Recharge Water Availability

American Falls Reservoir:
- 1.6 million AF
- 1921 priority

Unsubordinated hydropower rights at Minidoka Dam:
- 2,700 cfs
- 1909/1912 priority

**American Falls Reservoir**
- 1.6 million AF
- 1921 priority

**Unsubordinated hydropower rights at Minidoka Dam**
- 2,700 cfs
- 1909/1912 priority

**Eastern Snake Plain**

- **Henrys Fork**
  - Ave vol. for recharge = 117KAF
  - 50% exceedence = 4 KAF

- **South Fork**
  - Ave vol. for recharge = 253KAF
  - 50% exceedence = 4 KAF

- **Snake @ Blackfoot**
  - Ave vol. for recharge = 283KAF
  - 50% exceedence = 6 KAF

- **Milner – Minidoka**
  - Ave vol. for recharge = 1 MAF
  - 50% exceedence = 500 KAF
  - Winter spill past Milner

(2000-2012 data)
Progress on ESPA Recharge

- Water for recharge available all winter long at Milner Dam under Water Board’s recharge water right – have not used this available water to significant degree

- Adopted winter recharge water delivery payment plan to incentivize those canals that divert at Milner to deliver available recharge water

- Negotiating delivery agreements with several canals that divert from Milner with expectation of significant recharge this winter
Progress on ESPA Recharge

• Infrastructure improvements needed for winter recharge in these canals will be underway shortly (ice loading on gates, winter-time access, etc.)

• Additional infrastructure improvements in these canals being studied for cost vs. additional recharge capacity
Progress on ESPA Recharge

- Investigating pump-to-recharge projects from the Milner pool – develop additional delivery capacity to utilize available water

- Test drilling and injection tests underway or planned at a number of locations around the Milner Pool
Progress on ESPA Recharge – Upper Valley Issues

• Water availability for recharge:
  ✓ Available every year all winter long at Milner Dam
  ✓ In Upper Valley available water occurs as large flows for short periods of time in about ½ of years
  ✓ Complicates delivery and payment arrangements

• Working with water users in Upper Valley to identify potential recharge infrastructure needs
Questions?