AGENDA
AQUIFER STABILIZATION COMMITTEE
MEETING NO. 1-15
April 28, 2015 at 9:30 am
Best Western Burley Inn
Minidoka II Conference Room
800 N. Overland Ave., Burley, ID 83318

1. Welcome and Attendance
2. ESPA and spring flow monitoring program
4. Consider separate conveyance rate structure for pump systems
5. Update on on-going capital improvement projects and projects in planning
6. Review ESPA aquifer stabilization funds
7. Consider recommendation on funding allocations to IWRB Finance Committee
   a. 2015-2016 ESPA operations
   b. Capital improvement expenses for recharge capacity expansion
8. Other items

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

Presented by Sean Vincent
April 28, 2015
Talking Points

• Funding sources

• Expenditures since inception of AP&M Fund

• Hydrologic monitoring networks

• Cooperative agreements

• Data collection & analysis issues
Funding Sources

• Trustee and Benefit Payments
  – Annual operating budget
  – Contracted monitoring

• Aquifer Planning and Management Fund
  – Hydrologic monitoring, technical studies, plan development, facilitation services, personnel costs, OE, capital outlays
  – 1-time appropriation = $8 million
  – Eastern Snake Plain, Wood River Valley, Treasure Valley, Rathdrum Prairie
### Aquifer Planning and Management Fund Expenditures for Monitoring and Model Development (Non-Personnel)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Eastern Snake Plain</td>
<td>$334,595</td>
<td>$453,634</td>
<td>$455,326</td>
<td>$388,514</td>
<td>$316,011</td>
<td>$367,074</td>
<td>$98,696</td>
<td>$2,413,850</td>
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<td>Treasure Valley</td>
<td>$44,125</td>
<td>$190,765</td>
<td>$539,985</td>
<td>$468,837</td>
<td>$17,850</td>
<td>$11,011</td>
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<td>Wood River Valley</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$166,849</td>
<td>$10,158</td>
<td>$126,458</td>
<td>$303,465</td>
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<tr>
<td>Rathdrum Prairie</td>
<td>$4,660</td>
<td>$10,360</td>
<td>$3,409</td>
<td>$2,465</td>
<td>$915</td>
<td>$8,353</td>
<td>$5,000</td>
<td>$35,162</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$383,380</strong></td>
<td><strong>$654,759</strong></td>
<td><strong>$998,720</strong></td>
<td><strong>$859,816</strong></td>
<td><strong>$501,625</strong></td>
<td><strong>$396,596</strong></td>
<td><strong>$231,790</strong></td>
<td><strong>$4,026,686</strong></td>
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### Trustee and Benefit Expenditures

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<tr>
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</thead>
<tbody>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$854,500</strong></td>
<td><strong>$560,500</strong></td>
<td><strong>$559,200</strong></td>
<td><strong>$560,500</strong></td>
<td><strong>$554,000</strong></td>
<td><strong>$554,000</strong></td>
<td><strong>$570,600</strong></td>
<td><strong>$4,213,300</strong></td>
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</table>

Personnel, Planning, and Contracted Facilitation = $3,393,040

**TOTAL** $7,419,726

*through March 31, 2015*
Eastern Snake Plain Hydrologic Monitoring Networks
Manual Water Level Measurement
Pressure Transducers
Gage House @ Little Wood Station 10 near Richfield
IDWR Springflow Monitoring Network

- City
- Spring (64)
- Tributary Basin
- ESPAM Model Boundary

[Map of the IDWR Springflow Monitoring Network showing locations like Rexburg, Hailey, Twin Falls, Jerome, Pocatello, and others, with a red circle highlighting a specific area.]
ADCP unit in Box Canyon above diversion
Telemetry Station
Upper Tucker Spring
Relay Tower on Ferry Butte
Ultrasonic Meter @ Black Canyon Bliss/River Road Hatchery (Springs 10 & 11)
METRIC ET is derived from remote sensing (satellite) data.

ET is calculated as a “residual” of the energy balance.

The energy balance includes all major sources ($R_n$) and consumers (ET, G, H) of energy.

$$ET = R_n - G - H$$
Quotes from the Harvard Report

• “Remarkably, METRIC enables Idaho DWR analysts and administrators to measure ET across large expanses of both space and time.”

• “METRIC... is measurably more accurate, fast, and cost-effective than the traditional, cumbersome, slow and expensive methods that were commonly used in the last century.”

• “…it would be practically impossible to adjudicate water rights disputes in the future without [TIRS].”
Memoranda of Agreement (MOA)

- Aberdeen-Springfield Canal Company
- Idaho Irrigation District
- New Sweden Irrigation District
- North Side Canal Company (in progress)
- Shoshone-Bannock Tribes
- Snake River Valley Irrigation District

Informal Agreements

- North Side Canal Company
- Twin Falls Canal Company
- Burley Irrigation District
- Minidoka Irrigation District
- Progressive Irrigation District
MOA Provisions

• Collaboration on planning, site selection, and data gathering

• IDWR purchases and helps to install/maintain equipment

• Water user entity assists in obtaining land owner permissions and shares data w/IDWR
Data Collection & Analysis Issues

• More timely water level data collection and database entry needed for:
  – Assessment of recharge impacts/aquifer health
  – Low-flow period Adjusted Average Daily Flow predictions

• ESP Monitoring System in maintenance mode → additional resources may be necessary for:
  – Designing/implementing monitoring system upgrades
  – Site-specific recharge monitoring
  – Statistical analyses of water level and springflow trends

• Proposed elimination of Rule 50
  – GW and SW resources in tributary basins generally not well characterized
Questions?
ESPA Managed Recharge Update

Aquifer Stabilization Committee Meeting

Wesley Hipke
April 28, 2015
Aquifer Stabilization Committee

- ESPA Managed Recharge 2014-2015 Summary
- Capital Improvement Projects
- Recharge Site Monitoring
- Recommendations

NSCC routing 600 cfs of IWRB’s recharge, Feb. 18th, 2015.

ASCC recharge in canal and Hilton spill on February 26th.
Aquifer storage and flows from the Thousand Springs are directly correlated.
Total Water Board Recharge Rates During 2014 - 2015 Season

Total Volume of Recharge = 75,505 ac-ft as Oct. 27 to Mar. 23

Recharge Rate Limit = 1,200 cfs

Recharge water right "on" only below Minidoka Dam October 24 to February 15

Recharge water right "on" only below and above Minidoka Dam February 16 to March 4

Recharge water right "on" only below Minidoka Dam March 5 to March 24

Total Water Available for Recharge

Dates of Recharge

Preliminary Results
## ESPA Managed Recharge Summary

<table>
<thead>
<tr>
<th>ESPA Area</th>
<th>Canal System</th>
<th>Days Recharged</th>
<th>Median Recharge Rate (cfs)</th>
<th>Volume Recharged (Acre-feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upper Valley</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aberdeen-Springfield Canal Company</td>
<td>10</td>
<td>169</td>
<td>3,322</td>
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<tr>
<td></td>
<td>Great Feeder Canal Company</td>
<td>17</td>
<td>170</td>
<td>5,454</td>
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<td></td>
<td>Fremont Madison Irrigation District</td>
<td>17</td>
<td>170</td>
<td>5,389</td>
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<td></td>
<td><strong>Upper Valley Total</strong></td>
<td>509</td>
<td></td>
<td>14,165</td>
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<tr>
<td><strong>Lower Valley</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>American Falls Reservoir District No. 2</td>
<td>118</td>
<td>153</td>
<td>37,925</td>
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<td></td>
<td>North Side Canal Company</td>
<td>34</td>
<td>127</td>
<td>8,735</td>
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<td></td>
<td>Southwest Irrigation District</td>
<td>47</td>
<td>25</td>
<td>1,928</td>
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<td></td>
<td>Twin Falls Canal Company</td>
<td>148</td>
<td>39</td>
<td>12,752</td>
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<td></td>
<td><strong>Lower Valley Total</strong></td>
<td>346</td>
<td></td>
<td>61,340</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td>75,505</td>
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</table>

Preliminary Data
## ESPA Managed Recharge 2014-2015

<table>
<thead>
<tr>
<th>Fall - Spring</th>
<th>Below American Falls</th>
<th>Above American Falls</th>
<th>Total</th>
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<tbody>
<tr>
<td>2009-2010</td>
<td>18,981</td>
<td>60,912</td>
<td>79,893</td>
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<tr>
<td>2010-2011</td>
<td>25,349</td>
<td>36,239</td>
<td>61,587</td>
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<td>2011-2012</td>
<td>91,112</td>
<td>74,335</td>
<td>165,446</td>
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<tr>
<td>2012-2013</td>
<td>21,129</td>
<td>0</td>
<td>21,129</td>
</tr>
<tr>
<td>2013-2014</td>
<td>10,585</td>
<td>0</td>
<td>10,585</td>
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<tr>
<td><strong>Average</strong></td>
<td><strong>33,431</strong></td>
<td><strong>34,297</strong></td>
<td><strong>67,728</strong></td>
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<tr>
<td><strong>2014 – 2015</strong></td>
<td><strong>61,340</strong></td>
<td><strong>14,165</strong></td>
<td><strong>75,505</strong></td>
</tr>
</tbody>
</table>

* Preliminary Data
ESPAB Managed Recharge - 2014-2015 Season
(Volumes from Oct. 27 to March 24)

Available Water & Recharged Water (af)

- Lower Valley - Total Recharge
- Lower Valley Water Available
- Upper Valley - Total Recharged
- Upper Valley Water Available
- ESPA Goal

ESPAB Goal 250,000 af/yr

Lower Valley Water Available for Recharge

Lower Valley Water Recharged

Upper Valley Water Available for Recharge

Upper Valley Water Recharged

Days

ESPA Managed Recharge Issues

Upper Valley - Surplus Water Supply

Above America Falls Reservoir

- Total Available for Recharge 2000-2012: 3.69 Maf

Recharge Capacity
- Winter: ~ 0 cfs
- Spring: ~ 1,500 cfs
- Irrigation Season: ~ 250 cfs

American Falls Reservoir: 1.6 million AF
1921 priority

Unsubordinated hydropower rights at Minidoka Dam: 2,700 cfs
1909/1912 priority
ESPA Managed Recharge Issues

Upper Valley Surplus Water

• Variable Volume of Water
• Variable Duration of Availability

• Procedures and Processes to Deal with Variability
• Method to Distribute Variable Volumes of Water
• Develop Off-Canal Sites for Irrigation Season Capacity
• Review Pay Scale
Lower Valley – Winter Base Flow

ESPA Managed Recharge Issues

Total Available for Recharge 2000-2012
12.31 Maf

Winter Flow Available (Nov-Mar):

<table>
<thead>
<tr>
<th>Days</th>
<th>Rate (cfs)</th>
<th>Volume (af)</th>
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<tbody>
<tr>
<td>Average</td>
<td>151</td>
<td>5,000</td>
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<tr>
<td>Minimum</td>
<td>151</td>
<td>1,600</td>
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<tr>
<td>Maximum</td>
<td>152</td>
<td>15,800</td>
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</table>
ESPA Managed Recharge Issues

Lower Valley – Base Flow Recharge Capacity

**Milner-Gooding Canal**

- **Irrigation Season Capacity**
  ~ 350 cfs

- **Spring Capacity**
  ~ 500 cfs

- **Winter Capacity**
  ~ 150 cfs
ESPA Managed Recharge Issues

Lower Valley – Base Flow Recharge Capacity

Northside Canal

Winter Capacity
0 cfs

Irrigation Season Capacity
0 cfs

Spring Capacity
~ 150 cfs
ESPA Managed Recharge Issues

Lower Valley – Base Flow Recharge Capacity

Twin Falls Canal

Irrigation Season Capacity
0 cfs

Winter & Spring Capacity
~ 40 cfs
ESPA Managed Recharge Issues

Lower Valley – Base Flow Recharge Capacity

Southwest I.D.

Winter Capacity
0 cfs

Irrigation Season Capacity
0 cfs

Spring Capacity
~ 25 cfs
Aquifer Stabilization Committee

- ESPA Managed Recharge  2014-2015 Summary
- Capital Improvement Projects
- Recharge Site Monitoring
- Recommendations

TFCC’s – Ice Removal at Gates, 2015
AFRD2 – MP31 road work, 2015
<table>
<thead>
<tr>
<th>Canal/Project</th>
<th>Project Type</th>
<th>Funds</th>
<th>Completed</th>
<th>In-Progress</th>
<th>Proposed</th>
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<tbody>
<tr>
<td>Milner-Gooding Canal</td>
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<tr>
<td>Road Improvement</td>
<td>CNST</td>
<td>$177,000</td>
<td>✓</td>
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<tr>
<td>Mile Post 28 Hydro Plant</td>
<td>CNST</td>
<td>$35,000</td>
<td></td>
<td>✓</td>
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<tr>
<td>Flume Repair @ Shoshone</td>
<td>STUDY</td>
<td>$18,571</td>
<td>✓</td>
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<tr>
<td>North Side Canal</td>
<td></td>
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<tr>
<td>Wilson Lake Winter Recharge</td>
<td>STUDY</td>
<td>$122,000</td>
<td></td>
<td>✓</td>
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<tr>
<td>Twin Falls Canal</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Infrastructure Modifications</td>
<td>STUDY</td>
<td>$20,000</td>
<td>✓</td>
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<td>Southwest I.D.</td>
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<td>Injection Well &amp; Test</td>
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<td>✓</td>
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<td>STUDY</td>
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<tr>
<td>Milner Dam Area</td>
<td>CNST</td>
<td>$70,000</td>
<td>✓</td>
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CNST = Construction Project
## ESPA Managed Recharge Projects - Proposed

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<tr>
<th>Canal/Project</th>
<th>Type</th>
<th>Future Cost Est.</th>
<th>Study Contractor</th>
<th>Est. Completion</th>
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<td>Milner-Gooding Canal</td>
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<tr>
<td>Flume Repair @ Shoshone</td>
<td>CNST</td>
<td>$700,000</td>
<td>MWH</td>
<td>Spring - 2016</td>
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<tr>
<td>Dietrich Drop Hydro Plant</td>
<td>STUDY / CNST</td>
<td>TBD</td>
<td>TBD</td>
<td>Winter - 2015</td>
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<tr>
<td>Mile Post 31 Recharge Site - Expansion</td>
<td>STUDY / CNST</td>
<td>TBD</td>
<td>TBD</td>
<td>Winter - 2016</td>
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<td>Northside Canal</td>
<td></td>
<td></td>
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<tr>
<td>4 Hydro Plants</td>
<td>CNST</td>
<td>TBD</td>
<td>CH2M Hill</td>
<td>TBD</td>
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<tr>
<td>Canal Improvements</td>
<td>CNST</td>
<td>$11,700</td>
<td>JUB</td>
<td>Fall - 2015</td>
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<tr>
<td>Point Spill Check Dam</td>
<td>CNST</td>
<td>$700,000</td>
<td>JUB</td>
<td>Spring - 2017</td>
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<tr>
<td>Southwest I.D.</td>
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<tr>
<td>Pipeline Modification</td>
<td>STUDY / CNST</td>
<td>TBD</td>
<td>TBD</td>
<td>Fall - 2016</td>
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<td>Great Feeder Canal</td>
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<tr>
<td>Recharge Conveyance Improvements</td>
<td>STUDY / CNST</td>
<td>$500,000*</td>
<td>TBD</td>
<td>Spring - 2016</td>
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* Estimated cost $1 million to $2 million, IWRB share = $500,000  
CNST = Construction Project

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* Estimated cost $1 million to $2 million, IWRB share = $500,000  
CNST = Construction Project
ESPA Managed Recharge Projects

AFRD2
Milner-Gooding Canal

Cost - $177,000
Completed

MP31 Recharge Site
150 cfs

Legend
Projects
- Funded
- Proposed
- Recharge Sites

The USDA-FSA Aerial Photography Field office asks to be credited in derived products.
ESPA Managed Recharge Projects

Flume Improvement
Cost ~ $700,000 - MWH
Completion ~ Spring 2016

Dietrich Drop Hydro Plant
Completion ~ Winter 2015

MP31 Improvement
(+ 100 cfs)
Completion ~ Winter 2016

AFRD2
Milner-Gooding Canal

Shoshone Recharge Site
200 cfs

MP31 Recharge Site
150 cfs

MP28 Hydro Plant
Cost - $35,000 - Owner
Completion ~ Winter 2015
ESPA Managed Recharge Projects

North Side Canal

Winter Recharge Study
Cost - $122,000
Completion – Fall 2015

Other Structures:
- Milner-Gooding Headworks
- Bypass Structure & Headgates
- I-84 Bridge

Wilson Lake Hydro Plant
~150 cfs

Hazelton A Hydro Plant

Hazelton B Hydro Plant

Bypass Hydro Plant

Legend
Projects
- Funded
- Proposed

The USDA-FSA Aerial Photography Field Office asks to be credited in derived products.
ESPA Managed Recharge Projects

Winter Recharge Study
Cost - $20,000
Completed

Twin Falls Canal

Milner Pool
Canal Radial Gates
Broad Crested Weir & Stilling Well
Cost ~ $11,700 - JUB
Completion ~ Fall 2015

Cost ~ 700,000 - JUB
Completion ~ Spring 2017

Point Spill Structure

TFCC
~40 cfs

Murtaugh Lake Outlet
Radial Gates

Murtaugh Lake

Legend
Projects
- Funded
- Proposed

The USDA-FSA Aerial Photography Field office asks to be credited in derived products.
ESPA Managed Recharge Projects

Southwest I.D.

SWID Injection Wells
- 25 cfs
- Cost ~ $30,000
- Completion ~ Fall 2015

West Cassia Pipeline Study
- Cost ~ $50,000
- Completion: TBD

SWID - Injection Well & Test
- Cost ~ $30,000
- Completion ~ Fall 2015
ESPAA Managed Recharge Projects

IWRB Project

Injection Well & Test - Milner Dam Area

Cost - $30,000
Completion ~ Fall 2015
ESPA Managed Recharge Projects

Great Feeder C.C.

IWRB Share = $500,000 for Construction Completion ~ TBD

Great Feeder Area
~300 cfs

Recharge Conveyance Improvements

Legend
Projects
- Proposed
- Potential Off-Canal Recharge Sites

The USDA-FSA Aerial Photography Field office asks to be credited in derived products.
Off-Canal Recharge Ideas – Upper Valley

- Aberdeen-Springfield C.C.
  - Hilton Spill Basin Expansion

- Fremont-Madison I.D.
  - Egin Bench Recharge Site Expansion

- New Sweden I.D.
  - Expand Recharge Sites
Off-Canal Recharge Ideas – Upper Valley

- Enterprize C.C.
  - Develop Recharge Sites

- Farmers Friend I.C.
  - Develop Recharge Sites

- Snake River Valley I.D.
  - Expand Recharge Sites

- Others
### Winter Base Flow Recharge

**Lower Valley Only**

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<tbody>
<tr>
<td><strong>Winter Base Flow Rate (cfs)</strong></td>
<td>340</td>
<td>350</td>
<td>460</td>
<td>35</td>
<td>650</td>
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<tr>
<td><strong>Winter Base Flow Volume (af)</strong></td>
<td>61,000</td>
<td>85,000</td>
<td>114,000</td>
<td>85,000</td>
<td>157,000</td>
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<tr>
<td><strong>Conveyance Cost</strong></td>
<td>$369,000</td>
<td>$569,000</td>
<td>$811,000</td>
<td>$569,000</td>
<td>$1,060,000</td>
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</table>

* 121 days of Recharge.
Available Water & Recharged Water (af)

Days

Lower Valley 2014-2015 Water Available for Recharge

Lower Valley 2014-2015 Water Recharged

Upper Valley 2014-2015 Water Available for Recharge

Upper Valley 2014-2015 Water Recharged

ESPA Goal 250,000 af/yr

Current Projected Winter Base Flow Capacity 157,000 af/yr

ESPA Managed Recharge - Winter Base Flow Flow Volume

Lower Valley - Total Recharge

Lower Valley Water Available

Upper Valley - Total Recharged

Upper Valley - Water Available

ESPA Goal

Lower Valley Max. Recharge Volume
### Spring Surplus Flow Recharge – When Available*

**Upper Valley - Off-Canal Facilities**

<table>
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<tr>
<th></th>
<th>Current</th>
<th>Potential</th>
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<tr>
<td><strong>Spring Surplus Rate (cfs)</strong></td>
<td>420</td>
<td>1,050</td>
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<tr>
<td><strong>Spring Surplus Volume (af)</strong></td>
<td>37,000</td>
<td>85,000</td>
</tr>
<tr>
<td><strong>Conveyance Cost</strong></td>
<td>$254,000</td>
<td>$607,000</td>
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* Spring surplus flows only available approximately 50% of the years.

** 45 days of recharge
## ESPA Managed Recharge Projections Summary

<table>
<thead>
<tr>
<th></th>
<th>Winter Base Flow Only</th>
<th>Winter Base Flow &amp; Spring Run-off*</th>
<th>10 Year Average**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recharge Rate (cfs)</td>
<td>650</td>
<td>1,500</td>
<td>920</td>
</tr>
<tr>
<td>Recharge Volume (af)</td>
<td>157,000</td>
<td>242,000</td>
<td>204,000</td>
</tr>
<tr>
<td>Conveyance Cost</td>
<td>$1,060,000</td>
<td>$1,667,000</td>
<td>$1,554,000</td>
</tr>
</tbody>
</table>

* Spring run-off recharged in the Upper and Lower Valley at off-canal sites.

** Spring run-off available for half the years.
Aquifer Stabilization Committee

- ESPA Managed Recharge  2014-2015 Summary
- Capital Improvement Projects
- Recharge Site Monitoring
- Recommendations

IBL staff collecting water quality samples at MP31 gate, 2015.

Idaho Power staff & IDWR staff measuring flow rates at MP31, 2015.
ESPA Recharge – Monitoring Program

- **Flow Measurements**
  - Cooperative Effort with:
    - TFCC  Water District 01
    - NSCC  Idaho Power
    - AFRD2  IDWR Staff

- **Water Level Monitoring**
  - Site Specific
  - Regional

- **Water Quality Program**
  - Water Quality Sampling
  - Monitor Wells Off-canal sites

- **Dye Testing**

IDWR and NSCC staff measuring flows at the inlet to Wilson, 2015

IBL staff collecting water quality samples – Shoshone.
Aquifer Stabilization Committee

- ESPA Managed Recharge  2014-2015 Summary
- Capital Improvement Projects
- Recharge Site Monitoring
- Recommendations
Recommendations

ESPA Managed Recharge Operations:

- **Operations**
  - Monitoring
    - Water Quality Labs
    - Water Level & Flow Monitoring
  - Equipment
  - Monitor Wells
    - Lower Valley – 4
    - Upper Valley – 2

Sub-Total = $300,000

- **Conveyance**

TOTAL = $1,000,000
### Recommendations

#### ESPA Managed Recharge Operations:

- $1,000,000

#### ESPA Managed Infrastructure:

- Milner-Gooding concrete flume: $700,000
- Milner-Gooding Dietrich hydro plant bypass: $50,000
- Twin Falls Canal recharge improvements: $700,000
- North Side Canal improvements: $2,000,000
- Egin Bench improvements: $500,000
- Great Feeder Canal recharge improvements: $500,000

Sub-Total = $4,450,000

#### ESPA Managed Recharge Investigations:

- $300,000

**TOTAL = $4,750,000**
Mile Post 31 recharge basin on April 8th, 2013.
March 19, 2015

Representative Bert Stevenson
Idaho Water Resource Board
1099 North 400 West
Rupert, ID 83350

Dear Representative Stevenson:

The Board of Directors of the Southwest Irrigation District (SWID) is very appreciative of the efforts of the Idaho Water Resource Board to facilitate and further the ESPA recharge program. The purpose of this letter is to bring attention to the current pay schedule for recharge provided by the Idaho Water Resource Board.

SWID has been recharging since the early 1990s and has seen the positive results in local water levels. The SWID recharge program began with a cooperative effort between the United States Geological Survey and SWID. Injection wells were drilled and permitted along with existing non-used irrigation wells for recharge. Tributary streams and the Snake River have been utilized by SWID for recharge.

The SWID recharge program more than doubled with the construction of the West Cassia Pipeline (WCP). The WCP utilizes 2,300 horsepower at a headgate near the Snake River and boosts the water with an additional 1,800 horsepower to deliver water more than 13 miles south of the Snake River headgate and approximately 280 feet above the Milner Pool. SWID averages more than 2,500 acre feet of recharge through the WCP annually.

SWID also utilizes Murtaugh Lake for recharge. SWID has 2 pumping stations in Murtaugh Lake that pumps water south to additional permitted injection wells. The distance to recharge wells is four miles from each pumping station and approximately 80 foot rise in elevation.
Cost to pump an acre foot of water from the Snake River to the injection wells through the WCP is $45.00. SWID spends in excess of $100,000.00 per year on electrical bills.

To reduce the pumping expenses SWID, United Electric and the Bonneville Power Administration entered into an agreement to recharge in off-peak hours (11:00 p.m. to 7:00 a.m.) at a reduced power rate. The pressurizing and draining of the pipeline caused separation of the pipe joint; even collapsing the 24 inch pipe during draining. The program was tested for two years and abandoned due to the heavy wear and tear on the pipeline.

SWID is approaching the IWRB to request consideration of changing the pay schedule for recharge to take into account the per acre foot cost to accomplish the recharge. Some systems are designed to easily facilitate recharge with minimal cost, however if the Board's goal is to be met, recharge must occur in locations where costs per acre foot are much higher. SWID desires to complete their responsibility in helping to accomplish the IWRB recharge goals, however, the price is extremely limiting.

Any additional funding to offset the high electric bills would be greatly appreciated.

At the request of the Directors.

Very truly yours,

PARSONS, SMITH, STONE, LOVELAND
& SHIRLEY, LLP

William A. Parsons

WAP/sw
cc: Randy Brown, Craig Searle & David Pickett
ESPA Managed Recharge Finances

IWRB Aquifer Stabilization Committee & Finance Committee

Brian Patton

April 28, 2015
IWRB ESPA Recharge Finances

• Existing Funds

• HB 479 (2014) Funds – One time

• HB 547 (2014) Funds – Ongoing Cigarette Tax

• SB 1190 (2015) Funds – One time
IWRB ESPA Recharge Finances

• Existing Funds in **Secondary Aquifer Fund**
  ✓ Available Uncommitted: $702,429 (April 1, 2015)
  ✓ Estimated remainder of funds committed for delivery costs after 2014-2015 recharge: $806,160

• Existing Funds in **Revolving Development Account** from before Secondary Fund was created
  ✓ Remainder of funds committed for “recharge site preliminary development”: $237,594 (April 1, 2015)

• Total: $1,508,589 in Secondary Aquifer Fund $237,594 in Revolving Development Account
IWRB ESPA Recharge Finances

HB 479 (2014) Funds

✓ One time legislative appropriation for “ESPA recharge capacity”

✓ $4,000,000 appropriation (Secondary Aquifer Fund)
  ($300,000) committed for engineering
  ($177,000) for Milner-Gooding Canal access road
  ($60,000) for Milner-Gooding Canal MP28 hydro plant bypass
  $3,463,000 remaining

✓ Anticipate using remaining funds for capital improvements to increase recharge conveyance and infiltration capacity mostly in lower valley
IWRB ESPA Recharge Finances

HB 547 (2014) – Ongoing Cigarette Tax Funds

• Ongoing disbursement from Cigarette Tax for “statewide aquifer stabilization” to Secondary Aquifer Fund

• ESPA is 1st priority but expectation for spend funds to address declining aquifers in other areas also

• Expect to receive 1st disbursement this July

• Expect to use for:
  ✓ ESPA recharge operations (conveyance, measurement, water quality monitoring)
  ✓ ESPA recharge conveyance and infiltration capacity
  ✓ Other measures to stabilize ESPA
  ✓ Stabilization measures in other aquifers

• Sunset in 2019
IWRB ESPA Recharge Finances

SB 1190 (2015) Funds – One time

✓ One time legislative appropriation for “Aquifer Recharge”

✓ $500,000 appropriation (Secondary Aquifer Fund) for FY16

✓ Expect to use for:

✓ ESPA recharge operations (conveyance, measurement, water quality monitoring)
✓ ESPA recharge conveyance and infiltration capacity
IWRB ESPA Recharge Finances

Total Funds Available for FY2016:

- **Existing Funds:** $1,508,589 in Secondary Fund
  $237,594 in Rev Dev Account
- **HB 479 Funds:** $3,463,000 in Secondary Fund
- **HB 547 Funds:** $5,000,000 anticipated in Sec. Fund
- **SB 1190 Funds** $500,000 in Secondary Fund in July

**TOTAL:** $10,709,183