Update on Land Acquisition Monitoring Program

O&M Subcommittee

July 2017
Wildlife Mitigation Summary
Wildlife Settlement Agreements

• Libby and Hungry Horse Dams
  – State of Montana—1988

• Dworshak Dam

• Willamette Dams: Big Cliff, Foster, Green Peter, Dexter, Detroit, Hills Creek, Lookout Point, and Cougar
  – Willamette Wildlife Agreement- 2010 with State of Oregon for all federal dams in Willamette; includes operational impacts

• Southern Idaho Dams: Anderson Ranch, Minidoka, Palisades, and Black Canyon
  – Southern Idaho Wildlife Agreement—2014 with State of Idaho (for half of C&I and operational impacts, including the operational impacts for Deadwood)
# Regional HEP Team Final Analysis

Table 4 FCRPS HU crediting summary by sub-region

<table>
<thead>
<tr>
<th>Sub-region</th>
<th>Hydro Facilities</th>
<th>Total HU Losses</th>
<th>Mitigated HUs</th>
<th>Unmitigated HUs</th>
<th>Over-mitigated HUs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Columbia</td>
<td>Bonneville, McNary, The Dalles, and John Day Dams</td>
<td>72,304</td>
<td>107,878</td>
<td>0</td>
<td>35,574</td>
</tr>
<tr>
<td>Upper Columbia (Washington)</td>
<td>Grand Coulee and Chief Joseph Dams</td>
<td>120,543</td>
<td>136,263</td>
<td>0</td>
<td>15,720</td>
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<tr>
<td>Upper Columbia (Idaho)</td>
<td>Albeni Falls Dam</td>
<td>28,658</td>
<td>16,686</td>
<td>11,972</td>
<td>0</td>
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<tr>
<td>Southern Idaho</td>
<td>Minidoka, Palisades, Black Canyon, and Anderson Ranch Dams</td>
<td>58,830</td>
<td>44,676</td>
<td>14,154</td>
<td>0</td>
</tr>
<tr>
<td>Lower Snake River</td>
<td>Ice Harbor Dam, Lower Monumental, Little Goose, and Lower Granite Dams</td>
<td>26,774</td>
<td>37,467</td>
<td>0</td>
<td>10,693</td>
</tr>
</tbody>
</table>

Subtotal: 307,109  342,970  26,126  61,987
Land Acquisition Monitoring
Land Acquisition Monitoring Program

• Over 700,000 acres protected for fish and wildlife to date
  – For the majority of these properties, BPA holds a CE or a third-party right of enforcement on behalf of the U.S.
• Through the Monitoring Program, we hope to:
  – Complete BPA inventory of F&W land acquisitions, including maps and updated contact information
  – Verify condition of federal real-property assets
  – Ensure compliance with legal agreements (i.e. MOAs and CEs) and land management plan
  – Identify any issues that land owner/manager is having and identify potential solutions
Two-pronged Approach to Monitoring

Remote sensing

• Before and after imagery
  – Satellite imaging and aerial photography
• Analysis conducted in-house (BPA Geospatial Services Analysis)
• Completed before site visit
• Documents all changes
Two-pronged Approach to Monitoring

Follow-Up Site Visits

• Can be an on-the-ground visit or a phone call
• Great opportunity to check-in and hear about any issues or concerns
• Uses remote sensing findings as a place to start the conversation
• Very important for acquisitions that are not associated with annual contracts
Next Steps

• Finish monitoring each acquisition for the first time
  – Through this process, finalize land acquisition inventory and related maps

• Identify improvements in the land acquisition monitoring program, such as:
  – Monitor adjacent or related tracts at the same time
  – Identify categories of risk (i.e. working lands easements might be monitored more frequently)
  – Identify programmatic issues and potential solutions