### A&B Pipeline Project Construction Completed

In 2013, A&B Irrigation District, Rupert, Idaho, was selected under the Idaho Water Resources Board (IWRB) Agricultural Water Enhancement Program (AWEP) project for the construction of the A&B Pumping Plant #2 and pipeline conveyance system. The Bureau or Reclamations’ Northside Pumping Division of the Minidoka Project operated by A&B Irrigation District consists of approximately 82,500 acres of irrigable private land within Jerome and Minidoka counties. The Project is designed to convey irrigation water from the Snake River to roughly 6,000 acres of cropland in Minidoka County that traditionally were served by either surface water through Pumping Plant #1 or by groundwater from the Eastern Snake Plain Aquifer.

Completed in May of 2016, water now travels from the Milner Pool on the Snake River to a pumping plant that supplies water into a pipeline delivery system A&B operates for the benefit of its shareholders.

The A&B District took out a $7 million loan from IWRB to help pay for the cost of the pipeline and pumping station. The Natural Resources Conservation Service in contributed $3.8 million to the project, as well as several years of technical assistance. Believed to be the largest irrigation project un-

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**Pipeline By The Numbers**

<table>
<thead>
<tr>
<th>Pipe-diameter</th>
<th>Feet Installed</th>
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<tbody>
<tr>
<td>54-inch:</td>
<td>7,412</td>
</tr>
<tr>
<td>48-inch:</td>
<td>8,391</td>
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<tr>
<td>42-inch:</td>
<td>338</td>
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<tr>
<td>36-inch:</td>
<td>7,657</td>
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<tr>
<td>30-inch:</td>
<td>13,124</td>
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<tr>
<td>27-inch:</td>
<td>6,411</td>
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<tr>
<td>24-inch:</td>
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<td>21-inch:</td>
<td>7,624</td>
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<tr>
<td>18-inch:</td>
<td>2,470</td>
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<tr>
<td>15-inch:</td>
<td>7,278</td>
</tr>
<tr>
<td>12-inch &amp; smaller:</td>
<td>25,292</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>90,353 feet</strong></td>
</tr>
</tbody>
</table>
From the State Conservationist

Fellow Conservationists and Partners,

It has been a great year for conservation in Idaho thanks to the contributions from our highly trained, motivated and skilled staff, thousands of customers taking advantage of our services, and the support NRCS-Idaho has received from our partners and legislators. Conservation planning and implementation have been a success here in Idaho due to all of us working together as a team and utilizing our different skillsets, talents, and resources. Together we are making a difference! I would like to share with you NRCS-Idaho’s priorities for the coming fiscal year:

**Soil Health and Water Management**
We want to educate all Idahoans on the importance of soil health and water management — not only those directly involved in agriculture or agribusiness, but the 98% of our population who are not familiar or associated with agriculture.

**Strengthening Our Technical Skills**
Our expertise is the key reason our customers come to us. NRCS-Idaho has invested more than $300,000 in training for our staff this fiscal year. It has been an excellent investment. By keeping up with the latest science and technology, we are better able to help our customers and partners put quality conservation practices in place.

**Expanding and Strengthening Our Relationships with Our Customers and Partners**
NRCS cannot do everything on our own. We must have our partners’ help. I want to thank all of you for your confidence in our abilities. Through partnerships, we have been able to leverage an array of resources to get even more conservation on the ground. We welcome all our partners to the table to find common ground. We will not always agree on everything, but that isn’t a reason not to discuss important topics. While working to strengthen our relationships with our current partners in the coming year, I will also be reaching out to agribusiness and commodity groups to explore new opportunities.

**Streamlining Our Internal Processes to Improve Efficiencies**
NRCS-Idaho has recently completed a conservation planning streamlining strategy which will save our conservation planners time while still delivering quality plans to our customers. In addition, we are looking into four contribution agreements with conservation district partners to provide administrative assistance to our offices. This will allow our technical staff to focus more on field operations. Please share your ideas on ways we might find additional efficiencies within our business model. I am always listening.

**Improving the Management of Farm Bill Contracts and Agreements We Have with Partners**
We will continue to explore how to write new contracts in ways that make them easier to manage. We are working toward shorter contracting periods with quicker and more positive outcomes. Conservation planning follow-up and contract follow-up with our customers is also on my radar.

The future is sure to hold many extraordinary challenges, but I know that by working together we will not only rise to the occasion, but find creative and sustainable ways to meet those challenges head on.

Curtis Elke
National Leadership Visits

Tom Christensen, NRCS Associate Chief for Operations, recently brought members of his division to Idaho to speak with some of the agency’s local employees.

In addition to sharing information about how the national office is addressing various operational challenges, Christensen and his team — Melissa Drummond, Chief Human Resources Officer; Jeff Dziedzic, NRCS National Employee Development Center director; Frank Geter, Enterprise Business Initiatives leader, and Geno Bulzomi, Administrative Enterprise Business Initiatives leader — asked for feedback about how the process was going on the local level. They also answered questions about practices and situations that directly affect front-line conservation staff.

The meetings were extremely productive and resulted in Christiansen asking NRCS Idaho staff if they were willing to put together proposals for pilot projects or to serve on national committees that would help to address their areas of concern.

Christensen and his team were not solely focused on the inner working of the agency, though. As part of their visit to Idaho, they met with members of the Farmers Ditch Co. about a Regional Conservation Partnership Program project out at the proposed site, so they could see what conservation in action looks like in Idaho. The meeting revealed a lot about the particular challenges that producers face in Idaho, and their willingness to tackle those challenges with the assistance of organizations like the Natural Resources Conservation Service.

NRCS Releases Technical Note on Fuel Breaks

Large western wildfires remain a pressing concern for conserving the sagebrush sea and the more than 350 species that depend upon it, such as, the iconic sage grouse. In March, the USDA’s Natural Resources Conservation Service (NRCS) published a Technical Note (No. 66) detailing the use of strategic fuel breaks as a tool to help reduce wildfire impacts in sagebrush ecosystems. This note provides conservationists and land managers with the information they need to begin cooperative and proactive landscape planning efforts to minimize the risk of large-scale wildfires that impact wildlife, grazing lands, and communities across the West.

This new publication provides a synthesis of technical information on establishing fuel breaks. A fuel break is a strip of land, typically along existing roads, where the plant life is managed to reduce fire risk and allow firefighters a safe anchor point from which to fight wildland fires. The Technical Note was compiled by an interdisciplinary team from the NRCS and Bureau of Land Management (BLM) made up of specialists in fire/fuels management and ecology, wildlife biology, plant materials and range management. Currently, large-scale wildfires represent one of the greatest threats to conserving sage grouse and sagebrush ecosystems, especially in the Great Basin. The longer, hotter and drier fire seasons and the expansion of invasive cheatgrass have resulted in a dramatic rise in the number of “megafires” — fires that exceed suppression capability and grow exceptionally large.

Fire management experts frequently recommend putting more emphasis on actions taken before fires occur to increase odds of reducing impacts further. Pre-suppression efforts include the proactive installation of fuel breaks in strategic locations. This Technical Note explains how, why, when, and where to use fuel breaks to mitigate impacts from large fires.

People’s Garden

Early May was planting time for the People’s Garden at the NRCS Field Office in Caldwell.

With help from District partners and USDA sister agencies, potatoes, tomatoes, squash and onions, among other tasty veggies were planted in the garden on the western end of the parking lot on a particularly blustery day.

Produce from the garden will be donated to local food banks as the harvest comes in. Last year this People’s Garden gave 392.5 pounds of vegetables to Aging, Weatherization and Human Services Inc. to serve those in need. This year’s garden has already produced 14 pounds of food in just eight weeks that has been donated to the same organization.
Conservation In Action Tour

The 9th annual Conservation in Action Tour is coming to Idaho, Aug. 23 & 24. This national event is conservation agriculture’s #1 event for field, tours, demonstrations insight and networking. To learn more visit the following links:

Information: http://www.ctic.org/CIATours
Agenda: http://www.ctic.org/ciatours/Tour%20Agenda/
Registration: http://www.ctic.org/ciatours/Registration/

Conservation Planning

NRCS has a wide range of responsibilities and depending on the administration, the agency’s area of focus can shift. Recognizing that the core of the NRCS mission is conservation planning, NRCS-Idaho is working to make sure that staff refocus on this critical role we play. To that end, NRCS-Idaho staff have been working on a statewide Conservation Planning Strategy.

The strategy team developed a more streamlined, useful, effective and quality conservation planning process from the field office to the State office. The new strategy is being finalized and will be available to staff going into FY2017.

The State Office is also looking to do more watershed–and landscape-scale planning. A natural outgrowth of typical conservation planning, this “big picture overview” will help illustrate where individual efforts and projects may work against or with each other in a particular area.

Special Projects

The Idaho Special Project opportunity was announced Dec. 17. Curtis Elke, NRCS State Conservationist for Idaho reserved $1 Million in EQIP funding to address local resource priorities.

Thirteen proposals were received by the SNRCS State Office. Each proposal was ranked by several NRCS staff, a representative from the Department of Environmental Quality and from the Idaho Department of Water Resources.

Six projects were recommended for funding. They are:

1. Upper Snake LESA/LEPA Conversion Project — Bonneville, Teton, Jefferson, Clark, Madison and Fremont counties
2. Wildfire Hazard Fuels Reduction Project — Boundary, Bonner, Kootenai, Shoshone, Benewah, Latah, Nez Perce, Lewis, Clearwater and Idaho counties
3. Montevideo Canal Water Conservation Project
4. Lincoln & Blaine Irrigation Project
5. Armoring Our Soil Project
6. Soil Covers Project

This is the pilot year. If it is successful, Elke has indicated he is willing to do another call for Special Projects in the future.
Soil Health

The Soil Carbon Foundation: While there’s a great deal of talk about cover crops, it is important to remember the issues that soil health practices seek to address. Minimizing disturbance, incorporating diversity in crop rotation, leaving residual cover, keeping a live root in the ground and incorporating livestock all have one thing in common — increasing organic matter.

Soil organic matter provides the food and shelter for the microbial communities responsible for transforming carbon-bound Nitrogen (N), Phosphorus (P) and Potassium (K), as well as other nutrients, into plant-available forms. Increases in organic matter also boost available water capacity. Click HERE to see what some of the oldest U.S. experimental agricultural plots tells us about various rotations and crops and their effect on soil organic matter.

Success Stories

Recently, Shawn Nield, NRCS Idaho state soil scientist, ran through some soil health assessment methods out on one of the fields McIntyre Farms had just planted in wheat. A little more than five years prior, that piece of ground had been under conventional tillage. Brad McIntyre took it over at that time, planted alfalfa and managed it with a no-till system. Looking at the field today, the results were apparent. The stand was even, about 20-inches tall, and dark green. Soil pH was neutral (7.0). The soil had an “earthy” smell and a high worm count. It also exhibited moderate, fine, granular structure — all good indicators of soil health.

What surprised Nield, though, was the apparent lack of a plow pan. Could just five years of no-till alfalfa wipe it out? It appeared so. He found several similar stories like this one by searching online, but he would like to hear more about soil health success from your corner of Idaho. Contact him at shawn.nield@id.usda.gov.

Soil Health Assessment

Using some basic tools and methods, our soil health assessment kits are being developed to characterize physical, chemical and biological properties of the soil. All the items fit into a five gallon bucket.

Here’s what’s on our “Bucket List” of properties estimated in an assessment and its importance:

- **Soil structure** - effects resistance to compaction, infiltration, porosity
- **Soil slaking** - measure of resistance to disturbance, presence of organic “glues” that hold soil together
- **Compaction** - functions as measure of ease or difficulty for root penetration, water infiltration
- **Infiltration rate** - indicates susceptibility to flooding and ponding or excessive leaching
- **Soil pH** - effects availability of nutrients, inhibits or promotes various biological processes and life-forms
- **Soil salinity** - effects plant available water and yield
- **N, P, K** - field-based estimate of vital nutrients for plant growth
- **Crop residue** - visual estimation of cover for erosion prevention
- **Crop Condition** - visual estimation of crop health by color, evenness of growth
The Snow Survey team and its data are in high demand again this year. Current and potential partners are looking for ways to get new SNOTEL sites set up at mid-elevations as well as more soil moisture sensors throughout the state.

Team members have had a full slate of presentations and interviews, sharing information about Idaho’s near normal precipitation during the 2015-16 season, along with the record-high April run-off.

They are also in discussions to find ways to work with educators to bring SNOTEL data into the classrooms and get more students into Snow School.
Many people are familiar with NRCS Idaho Snow Survey’s traditional snow pillows which are filled with 150 gallons of an antifreeze-water 50-50 mix. Even though the division uses a non-toxic antifreeze there is growing concern about having this material leaking into the environment. This could follow a bear or a falling tree punching holes in pillow. The National Park Service (NPS) is very concerned because the antifreeze is attractive to bears once they smell it, and they start to associate the SNOTEL structures with a treat. This is especially concerning for the NPS as there are five SNOTEL sites in Yellowstone National Park alone.

NRCS has been and continues to investigate alternative non-fluid technologies for measuring snow water content. Phil Morrisey, hydrologist with NRCS Idaho, noted the state’s Snow Survey division is excited about the “load cell” technology (basically an electronic scale weighing system) now available commercially. They recently purchased three of them and installed the first one last month at the Camas Creek Divide SNOTEL below Bennett Mountain outside Mountain Home.

The cost is comparable to the current snow pillow system, but NRCS Idaho Snow Survey will evaluate the load cells for a number of years side-by-side with the traditional pillows before a radical expansion of this new technology.

Yellowstone National Park managers already require NRCS to haul out the rain gage fluids each year. With that in mind, there is some concern that if a snow pillow goes flat, the NPS may not allow NRCS to replace it. To begin addressing that concern, Snow Survey staff hope to install at least one load cell snow pillow in the park next year. 

Photo courtesy of NRCS—Utah

A new “load cell” type of snow pillow is installed next to a traditional fluid-filled pillow at an NRCS SNOTEL site in Utah. Several years of comparison data will determine if the load cell technology is a good replacement for the traditional pillow.