

# IMPACT

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Extension

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## Conserving and managing water supplies in the Big Wood River Watershed

### AT A GLANCE

**UI Extension Blaine County collaborates to bring community-wide water awareness and conservation efforts to address water scarcity for Big Wood River Watershed (BWRW).**

### The Situation

Consecutive years of seasonably low snow-pack levels in Idaho and new *norm* high temperatures in the West have created significant drought circumstances in southern Idaho. As a result of low water availability and the culmination of over allocation of water resources, early water calls are affecting all water users in the Big Wood River Watershed (BWRW). Ground water users are facing sooner water cut-off dates and new implementation of conjunctive water management. Conjunctive water use is the joint management of both surface and ground water for the goal of monitoring and improving overall availability of local water resources. With a lack of water security, producers and small acreage landowners are left unsure how to plan for the summer season. One vegetable producer has temporarily gone out of business because he cannot risk the expense of seeding crops, only to have his water cut-off during the hot and dry summer months. The recent legislation on conjunctive management and multiple years of early water cut-off dates has created a water scarcity concern for producers and local communities.

### Our Response

University of Idaho Extension and the Wood River Land Trust (WRLT) hosted two annual *Climate and Water Conservation Seminars* to educate Idaho water-users on water management policy and water conservation practices. Both seminars brought in agency



UI Extension and WRLT helped educate and facilitate community discussion for water conservation. Photo by Sarah Busdon.

and academic experts to address community questions and concerns. Seminar participants included 150 community members and policy makers, representing all major water-users in the valley. The second seminar featured a climate modeling study funded by NOAA and conducted by Oregon State University (OSU) and Climate Impacts Research Consortium (CIRC). The CIRC climate study for the Wood River Basin explored the impact of differing water and land-use management practices against three climate scenarios that represented an increase in annual average temperature of 4 to 11 degrees Fahrenheit across the basin by 2070. All climate scenarios showed a decline in annual average snowpack and shifts of peak stream flow to earlier in the year. These results also showed that management of land use and water resources has a significant effect on issues around water scarcity, specifically showing that investments in municipal and agricultural water-use efficiency are important strategies in adapting to fu-

ture climate impacts. As a result, the seminars educated participants on water conservation techniques for both homeowners and agriculture producers and created a community platform for discussing water use and priority for the future.

### **Program Outcomes**

From the education provided at the first *Climate and Water Conservation* seminar, survey results indicated that 50% of participants started monitoring home water-use and 20% converted or retrofitted to a conservation home irrigation system. As a result of the second seminar, over 85% of participants had a better understanding of predicted climate and water scenarios for the BWRW. Such that, 80% of the participants plan to implement one form of water conservation with the majority intending to convert to a drought tolerant landscape and conserve water with “smart” irrigation controllers and nozzles. In order to learn what the community prioritizes for water resources, a survey question asked “Knowing the predicted climate scenario, how would you prioritize water-use for the following: recreation/tourism, development, agriculture, and the environment?” The results were evenly distributed with 23% (recreation/tourism), 28% (development), 27% (agriculture), and 22% (environment), indicating that the community views all of the above as vital components to the valley.

The community discussions that resulted from the seminars included the formation of two ground water districts. Ground water districts allow ground water users to tax, plan, hire consultants, and represent the group legally with the state of Idaho. In 2015, ground water districts became the only recognized entity by the Idaho Department of Water Resources to respond to water calls. In addition, a Wood River Water Collaborative Project formed with the goal of developing large-scale solutions for valley-wide water conservation and management. The seminars influenced the large landscaping community that have now teamed with the Wood River Water Collaborative Project to reduce water-use on all clientele home landscapes by 20%.

### **The Future**

The *Climate and Water Conservation* seminar helped community members and policy makers build water management strategies for the future. For example, utilizing the OSU model, an earlier and faster snow melt will require county and city management to plan infrastructure needs for larger fluxes of surface water in the spring. Agriculture producers will also need to anticipate spring water fluxes followed by lower water levels during the typical summer growing months.

In order to help agriculture producers deal with variable water conditions for the future, Extension will help producers research and adopt drought tolerant crops, implement soil-building strategies for improving water-holding capacity, and examine efficient water storage and use practices.

### **FOR MORE INFORMATION**

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