READ THE LATEST ISSUE
FALL 2016

In this issue of Rural Connections authors discuss topics ranging from leveraging federal land management investments, mapping mine waste impoundments, and access to rural health care to Oregon’s WealthWorks Northwest, a drought curriculum for the Great Basin, arts in Nevada, federal forest land compensation to rural communities, and the energy boom in the West. Plus, discover irrigation alternatives for growing processing tomatoes.

Read or download the issue today!

INTRODUCTION
In this issue...
BY DON E. ALBRECHT, Western Rural Development Center

The issues and problems confronting the residents and communities of rural America are severe. A partial list of these concerns includes health care provision, the availability of a quality education, the creation of more and better jobs, and coping with significant resource and environmental issues. In my opinion, the best way to address these issues is to share ideas and learn from one another.

Sharing and learning from each other is made possible because throughout the country there are capable, dedicated professionals developing innovative and effective programs that help rural residents tackle difficult problems. These individuals represent a number of agencies and organizations. The primary objective of Rural Connections is to enable these ideas to be shared more efficiently. This issue of Rural Connections presents nine articles that we are convinced will be of assistance to others as they seek to cope with troubling problems in their own community.

Read the article.

ON THE COVER...
MAKING EVERY DOLLAR COUNT
Leveraging Federal Investments in Land Management to Benefit Local Communities

BY CHELSEA McIVER, ALEXANDER METCALF, AND ELIZABETH DODSON, University of Montana - Missoula

In many parts of the forested western United States, rural communities—as compared to their urban counterparts—have been disproportionately impacted by forest industry restructuring, federal land policy changes, and more recently the Great Recession (Abrams et al., 2015; Istrate, 2015). Timber harvest volumes have declined, and catastrophic wildfires and insect outbreaks are increasing the need to manage our forests while changing the types of businesses needed to do the work (Vaughan and Mackes, 2015).

Public land managers rely on private sector forestry contractors to conduct needed fuels reduction, insect mitigation, and other restoration and maintenance activities. Unlike traditional forestry work, these activities are not tied to volatile commodity markets, and have become a focus of management on public lands.

Many rural forest communities traditionally dependent upon commodities such as lumber and plywood are struggling to find new ways to maintain or build their communities and economies in the wake of mill closures and curtailments (Woodall et al., 2011).

This article presents two case studies that use federal contracting data to understand: 1) the value and types of activities being procured by the US Forest Service to accomplish forest maintenance and restoration objectives, and 2) the degree to which forest communities are currently benefiting from this work. We then discuss the potential of existing legislative authorities to encourage utilization of local businesses, thereby reducing leakage and helping struggling rural communities build the capacity to retain more of the dollars invested by land management agencies within their local economy.

Read the article.

USDA PROVIDING QUALITY HEALTH CARE IN RURAL COMMUNITIES
Bringing Healthcare Closer to Home for Rural Wyomingites

BY CONNIE BAKER WOLFE, USDA Rural Development

Wyoming is the least populated state in the nation, and second only to Alaska in its low population density. Long distances between towns and remote locations without healthcare care are detrimental to the well-being of residents.
the sustainability of rural communities. Considering these geographic obstacles, it is important that Wyoming is able to attract rural health practitioners and provide quality healthcare to its rural residents. Aspen Mountain Medical Center in Rock Springs is an excellent example of how U.S. Department of Agriculture (USDA) Rural Development is meeting these needs through its Business and Industry Loan Guarantee Program.

Read the article.

STATE AND LOCAL REVENUE NEGATIVELY IMPACTED BY SECURE RURAL SCHOOLS TERMINATION
A Fiscal Impact Analysis of Western Rural Counties

BY JOEL GRIFFITH, National Association of Counties

Enjoyed recreationally by many and economically utilized by others, federal lands such as the National Forest System present unique challenges to the state and local relationship with the federal government. This is particularly apparent in the West (defined as the 13-state region covered by the Western Rural Development Center), containing the bulk of federal lands. Ninety-eight percent of Western rural counties (with less than 50,000 residents) have federal land within their boundaries, and 74% have National Forest land (NACo analysis of U.S. Department of Interior data, 2015). Counties and states cannot constitutionally tax federal landholdings. This is a major opportunity cost for Western counties, given that property taxes are the main general revenue source for counties overall.

Read the article.

A WEALTH CREATION APPROACH TO ECONOMIC DEVELOPMENT
WealthWorks Northwest Adapts Program for Oregon Communities

BY MALLORY RAHE, Oregon State University

Wealth creation is a relatively new but growing approach to economic and community development (Pender et al., 2012b). Rural wealth creation has been practiced in a number of regions through work funded by the Ford Foundation under the program title WealthWorks. Building on this work, Rural Development Initiatives, Oregon State University Extension, and other partners launched a wealth creation program in Oregon in 2014 that was funded by three different foundations in the state. Seventeen rural regions across Oregon submitted proposals and six regions were chosen to participate in a pilot program to explore applying these concepts to their regional economy.

Read the article.

SILVER CITY, NEVADA
A Linchpin in a Wheel of Arts and Culture Economies

BY QUEST LAKES, Healthy Communities Coalition

The tiny mountain community of Silver City, located in Northern Nevada a few miles from Virginia City and about 30 miles from both Lake Tahoe and Reno, is an unusual case study in "Recreational Economies." Unlike the nearby towns that offer full schedules of outdoor recreation possibilities and tourist attractions, Silver City is a linchpin in the region's production of arts and cultural resources. Situated in one of the country's largest federally designated historic districts, Silver City has its roots in the mining boom of the 1860s. Historians estimate that by 1861, Silver City had at least a dozen stores, four hotels, three blacksmith shops, two butcher shops, and a post office, serving a population of more than 1,000 people. However, by the 1940s, the town had become a very quiet place that passing tourists saw as a ghost town.

Read the article.

ADDRESSING WATER MANAGEMENT ISSUES IN THE DROUGHT-STRICKEN GREAT BASIN
Tools and Training Tackle the Challenge of Remaining Profitable with Less Water

BY STACIE CLARY, Western SARE

In Nevada’s Walker River Basin, agricultural water rights have been over allocated. At Walker Lake, a rare freshwater terminal lake in northern Nevada, water has been diverted from the lakes inflows for irrigation purposes at five major agricultural areas along the tributary rivers for over 150 years (Partners, 2007). Results from these diversions include a 145-feet drop in lake level and increases in lake salinity. These outcomes are reducing the habitat and populations of various threatened and endangered species. In addition to the environmental impacts, farmers and ranchers in the Great Basin of the western region find it challenging to remain profitable with less water, as more water is allocated to residential, municipal, and industrial uses.

Read the article.

THE ENERGY BOOM AND RURAL COMMUNITIES OF THE INTERMOUNTAIN WEST
Economic Trends in Nonmetropolitan Counties in Colorado, Utah, and Wyoming

BY SHAWN K. OLSON-HAZBOUN, Utah State University; and DOUGLAS JACKSON-SMITH, Ohio State University
In the mid-2000s, communities across the US West experienced a significant "boom" in a variety of energy extraction activities (Downen et al., 2009), including natural gas, oil, coal, and renewable energy. Advances in technology, such as hydraulic fracturing and directional drilling, spurred the boom in gas and oil development by allowing previously unavailable resources to be extracted in a more cost-effective manner. Coal extraction also witnessed modest growth over this decade. In Utah, Colorado, and Wyoming (the focus of this article), natural gas production rose by 101% from 2000 to 2011, while oil production rose 27%, and coal production rose 20%. Over the same time period, renewable energy - especially wind energy - also saw a significant expansion. Between 2000 and 2011, the installed capacity for wind energy production across Utah, Wyoming, and Colorado grew from 202 to 3542 Megawatts, a 16-fold increase, (US DOE, 2012).

**MAPPING MINE WASTE IMPOUNDMENTS IN THE WESTERN U.S.**
Understanding Community Context and Risk

BY PIERCE GREENBERG, Washington State University

Mining companies operate more than 200 mine waste impoundments in 52 counties across the West, according to data obtained from the federal Mine Safety and Health Administration (MSHA). This count only includes active impoundments related to metal and coal mining that are large enough to fall under MSHA's regulation. Impoundments are most commonly found at coal (63), copper (73), gold (37), and molybdenum (18) mining operations in the Western U.S. Other impoundments are related to zinc (2), platinum (3), silver (5), and uranium (4) mining.

**IRRIGATION ALTERNATIVES LEAD TO REDUCED WATER USE WHILE MAINTAINING CROP YIELDS**
Sustainable Water Use for Processing Tomatoes

BY STACIE CLARY, Western SARE

In an average year, California agriculture irrigates 9.6 million acres using roughly 34 million acre-feet of water (California Department of Water Resources, 2014). The conventional belief is that agriculture accounts for 80% of human water use in the state. Furrow irrigation is the principal irrigation method in California, representing about 50% of all irrigated acreage in the state. Californias tomato growers, who produce more than 90% of the nation’s processed tomatoes (those used for pastes, sauces, and canned tomato products) and nearly half of the world’s total processed tomato tonnage (California Tomato Growers Association), rely on furrow irrigation, and according to UCCE it is the largest before-harvest cost of field operations in processing tomato production. As competition for limited water increases, improving water-use efficiency will become ever more critical to farmers' long-term productivity.

**RuralCONNECTIONS CALL FOR ARTICLES**
Spring 2017 Issue

We are currently soliciting abstracts for the Spring 2017 issue of Rural Connections. Don’t miss this opportunity to inform the region and the nation of your community development related research and programs. Learn more.