



# Water News

## Gillette Regional Madison Pipeline Project

The City of Gillette Regional Water Project will supply the City of Gillette and approximately 45 districts within the regional water supply designated service area with water from the Madison well field north of Moorcroft. The Wyoming Water Development Commission Level III funded construction project has a total budget of \$217.6M with a grant appropriation of \$145,792,000 and a loan appropriation of \$44,328,358. The City of Gillette is providing \$27,479,642 in matching funds through the Campbell County Capital Facilities Tax. Due to the project costs, the project was phased and grant and loan funding came from several different state accounts. The 2009 Wyoming Legislature approved \$16.75M in initial project funding to the City of Gillette for the design of the regional water supply project. The 2009 appropriation also included funding to construct two Madison formation test wells. The 2009 grant appropriation was from the Budget Reserve Account and the loan appropriation was from the Permanent Mineral Trust Fund account. Additional project funding was approved by the Wyoming Legislature in 2010 through 2015. Over this period the Wyoming Legislature appropriated grant funds from Wyoming Water Development Account III, Wyoming General Fund, Abandoned Mine Lands Funds, and the Strategic Investments and Project Accounts. Loan funds were appropriated from the Permanent Mineral Trust Fund account. The project was fully funded in 2015.

nell, Centennial, CO, was hired by the City of Gillette to design and perform construction management services. The Gillette Regional Water Supply project includes twenty construction contracts including approximately 45 miles of transmission pipelines, a sodium hypochlorite disinfection facility, 5 Madison formation wells, a 300,000 gallon water storage tank, a high capacity pump station and electrical facilities.



**Sodium Hypochlorite Disinfection Facility**

To date Burns and McDonnell and the city have completed design on 13 of the construction projects. The City of Gillette will construct seven future Madison formation wells as regional water demands increase. The long-term buildout of the Madison formation well field will ultimately supply 16,800-gpm of water to the regional water system. The Gillette Regional Water Supply project is designed to meet the anticipated regional water demands for the next 30-years.

The City of Gillette currently has three projects under construction, the Pine Ridge Disinfection Facility, the Donkey Creek Pump Station and twenty-two miles of 42-inch pipeline between the WYODAK power plant and Moorcroft. The contract total for these three projects is approximately \$56M, or

25% of the total project budget. These projects are scheduled to be completed by the summer of 2016.

The City of Gillette anticipates bidding two projects later this year; twelve miles of 42-inch pipeline from Moorcroft to the Pine Ridge Disinfection Facility and three additional Madison formation wells. The City anticipates bidding the remaining construction projects, including well field collection piping, well pumps and well houses, a 300,000 water storage tank and an 18-inch blending line from Pump Station No. 1 in town to the WYODAK power plant next year.

To date, the City of Gillette has expended approximately \$95M on the project with ap-



**Source Water Supply Blending Facility**

proximately \$122M under contract. The City of Gillette anticipates water delivery to regional water system users in 2017.

Please contact Bryan Clerkin, WY Water Development Office 307.777.7626, or Levi Jensen, City of Gillette 307.686.5262 with any questions about the project.

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The newsletter is available online at:

<http://wwdc.state.wy.us/newsletter/>

In 2009 Burns and McDon-

## New Wyoming Weather Modification Projects

### Medicine Bow/Sierra Madre Ranges:

The 2015 Wyoming State Legislature has funded a project intended to “jumpstart” the transition from weather modification research to an operational cloud seeding program in the Medicine Bow/Sierra Madre Ranges (MBSM). These ranges were part of the Wyoming Weather Modification Pilot Program (WWMPP), and as such, a rich dataset of information exists for these ranges from the past nine years of study. The Wyoming Water Development Office (WWDO) hosted two final design scoping meetings during the month of September 2015 to inform stakeholders about final planning activities needed to get an

operational winter cloud seeding program up and running in the MBSM. The National Center for Atmospheric Research (NCAR), is leading a team of collaborators that includes Weather Modification, Inc. (WMI) and Heritage Environmental Consultants, to help develop the final operational design, and conduct National Environmental Policy Act (NEPA) permitting activities for the project.

### Big Horn and Laramie Ranges:

Interest in weather modification operations in the Big Horn and Laramie Ranges represent new areas not previously studied for winter cloud seeding potential, and as such, the 2015 Wyoming State Legislature has

also elected to fund two separate Feasibility Studies focused on these ranges. The determination whether or not to initiate cloud seeding projects in the Big Horn and Laramie Ranges requires a preliminary assessment of project parameters that would lay the foundation for an operational program in those target areas. A conceptual design and siting study for each of the target areas has begun. This study includes taking a look at climatology, hydrology, permit procurement, seeding mechanisms and siting, weather forecasting, operational costs and potential funding collaborators for each individual target area. Two different consultants have been awarded the projects. NCAR

will be leading a team investigating the potential for cloud seeding feasibility in the Big Horn Range, and the Desert Research Institute (DRI) will investigate the potential for cloud seeding feasibility in the Laramie Range. Each group brings with them a wealth of knowledge and experience in the field of weather modification planning and implementation. The WWDO recently hosted two preliminary siting and design scoping meetings for each project. Final reports outlining the feasibility of initiating winter cloud seeding programs in the Big Horn and Laramie Ranges is expected to be completed in the fall of 2016.

## Watershed Fire Information and the WWDO

In 2013, Wyoming Governor Matt Mead created the Task Force on Forests to study the benefits that Wyoming forests provide and analyze and consider new response strategies and recommendations for both active and passive management. The Task Force met on five occasions for three days at a time and focused on three major themes: 1. Fire and other disturbance 2. Forest management and 3. Economic opportunities and innovations. Members of the task force include Director Harry LaBonde as well as others from state, local, federal and county government and private organizations. These members represent diverse interests and experience related to forest use and management.

The January 2015 Final Report: Governor’s Task Force on Forests (Report) highlights 12 recommendations brought forward by the Task Force for the Governor’s consideration

to aid in decision making and policy implementation.

Recommendation 3 states, “The State of Wyoming should proactively reduce the threat and occurrence of destructive wildfires by managing vegetation and fuels; protecting homes, communities, and other values at risk; and effectively and efficiently responding to wildfire.” The Report recommends that, in order to protect homes, communities, and other values at risk, the State consider the “development of cross-jurisdictional watershed protection plans for municipal water supply drainages that focus on proactive management to preserve and enhance water quality and to avoid catastrophic effects large-scale fires have on municipal watersheds.”

The Wyoming Water Development Office is currently developing a project, the Cheyenne Municipal Watershed Wildfire Hazard Assessment

Project, which will seek to address the issues brought forth in recommendation 3. This project will identify, in close coordination with the Wyoming Water Development Office (WWDO), the Wyoming State Forestry Division, the City of Cheyenne Board of Public Utilities, and the United States Forest Service, specific and strategically located forest health treatment opportunities in the forested watersheds that contribute to the City of Cheyenne’s municipal water supply in order to mitigate the risk associated with the effects of catastrophic fire in said watersheds. The project will build on previous work completed with a focus on characterizing, location specific, preemptive management efforts designed to limit hazardous effects of fire to the municipal water supply.

To further address recommendation 3, one of the tasks in the update of the Powder/

Tongue/Northeast River Basin Plan directs RESPEC, the consultant on the project, to identify forested watersheds that contribute to reservoirs for municipal and irrigation water supplies that may be at risk due to the effects of catastrophic forest fires.

RESPEC completed this task and developed datasets to help identify water supply reservoirs and their associated drainages that are the most vulnerable to water quality degradation. Further, a method was identified to quantify potential impacts. As cross-jurisdictional planning efforts get underway, RESPEC provided a list of several items that are recommended for consideration. A few of these recommendations are: review and complete soil surveys across the state; identify water quality constituents of concern and develop relationships between these and sediment and/or discharge, (Fire cont’d pg 3)

*Fire - continued*

particularly for reservoirs that provide drinking water; develop disaster preparedness plans and incorporate that information into cross-jurisdictional watershed protection planning.

In recent history, municipal water providers across the west have faced enormous expenditures to mitigate the effects of catastrophic wildfire in watersheds that supply their reservoirs. Subsequent to multiple fires in the South Platte drain-

age, Denver Water spent slightly more than \$27.6M to mitigate the result of heavy rains that fell on charred lands moving debris downstream which settled in their reservoirs. In 2009, the City of Santa Fe, NM established the Municipal Watershed Management Plan. The Plan was estimated to cost a total of \$5.1M to implement. In contrast, it was also estimated that post fire mitigation

costs (without preemptive treatment), would range between \$80M and \$240M not including increased water treatment and water utility costs. The WWDO's current effort seeks a similar end result cost savings by focusing on what can be done now versus after the fact. For more information regarding either of the the Watershed Wildfire projects please contact Tony Rutherford or Jodee Pring

at 307.777.7626, or: Tony.Rutherford@wyo.gov Jodee.Pring@wyo.gov.



## News from the Water Resources Data System (WRDS)

The Water Resources Data System (WRDS) is pleased to announce the launch of The Wyoming Water and Climate Web Atlas located at: (<http://www.wrds.uwyo.edu/wcwa.html>). This new, online web-mapping tool explores and delivers climate, weather, snowpack, streamflow, and State water development information. This Web Atlas allows water users, managers, and their consultants to examine numerous aspects of Wyoming water and climate systems simultaneously for access to important sources of data and information.

The Web Atlas allows users to visualize different water and climate data resources in spe-

cific geographic regions, and then retrieve information related to that area. For example, if a water user is interested in applying for funding for a water development project from the Wyoming Water Development Commission, they can zoom-in to their area of interest, click on the map and find out what reports, studies, or construction projects have been completed in the vicinity. They can also find information related to area water rates, well depths and yields, stream gages, and where the nearest National Weather Stations are located to get information about the regions precipitation. The goal of this mapping portal is to allow Wyoming's water

users and managers to find as much information as they can, in one spot, regarding one of our state's most precious resources.

The Web Atlas features Water Development Commission Reports and Products such as:

- Online Level I and Level II Reports
- River Basin Plans
- Information on Construction (Level III) Projects
- Irrigated Lands Information
- Public Water System Information

We encourage everyone to take a look at this tool and

share it with whomever you think may find it helpful. For any question, comments, or suggestions please feel free to contact WRDS at [cnichol5@uwyo.edu](mailto:cnichol5@uwyo.edu) or 307.766.3741.

**Find the**  
**Wyoming**  
**Water and Climate**  
**Web Atlas**

at:  
[http://  
 www.wrds.uwyo.edu  
 /wcwa.html](http://www.wrds.uwyo.edu/wcwa.html)

## WWDC/SWC Summer Meeting & Tour

The summer joint meeting of the Wyoming Water Development Commission (WWDC) and Legislative Select Water Committee (SWC) was held August 19-21 in Worland, WY. The workshop and meeting was held at the Washakie Museum and Cultural Center in Worland, Wyoming and included a Thursday tour of current water development projects within the Bighorn Basin. Morning tour stops included Leavitt Reservoir and a proposed reservoir site on

Alkali Creek. After a picnic lunch at Medicine Lodge State Park, the group loaded up again and headed for stops near the Lower Nowood Improvement and Service District and



Kelli & Martin Mercer at Meadowlark Lake

South Circle Estates to discuss project progress and future opportunities. The last stop of the day was at Meadowlark Lake to discuss the enlargement of the reservoir to reduce late-season irrigation shortages in Ten Sleep Creek and the Lower Nowood River Watershed. Throughout the day, tour participants were afforded the opportunity to listen to presentations about each of the projects and ask questions of landowners, WWDO project managers, sponsors, and project

engineers. The day's events ended with dinner in Ten Sleep. The summer meeting concluded mid-day Friday. The next meeting of the WWDC and SWC will be in Casper, WY, November 4-6, 2015. A big thanks to all who facilitated, participated and made the tour informational and successful.

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**Calendar of Water Events**

Oct 26-27, 2015 - Colorado River Basin Salinity Control Work Group Meetings, Tucson, AZ

Oct 28-29, 2015 - Upper Colorado River Basin Water Forum, Grand Junction, CO

Oct 28-30, 2015 - Wyoming Water Association, Evanston, WY

Nov 3-5, 2015 - Wyoming Association of Conservation Districts, Laramie, WY

**Nov 4-6, 2015 - WWDC/SWC Joint Meeting, Casper, WY**

Nov 10, 2015 - SEO, Water Forum, Cheyenne, WY

Will be held 2nd Tuesday of each month

<https://sites.google.com/a/wyo.gov/seo/interstate-streams/water-forum>

Nov 17, 2015 - Bear River Commission, Salt Lake City, UT

Nov 30– Dec 2, 2015 - Wyoming Stockgrower’s Winter Roundup, Casper, WY

Dec 2, 2015 - Upper Colorado River Commission Meeting, Albuquerque, NM

Dec 3, 2015 - Yellowstone River Compact Commission meeting, Sheridan, WY

Dec 4, 2015 - Belle Fourche River Compact Meeting, Sundance, WY

Dec 9-11, 2015 - Upper Missouri Water Association, Bismarck, ND

Dec 16-18, 2015 - Colorado River Water Users Assoc., Las Vegas, NV

**Dec 31, 2015 - Small Water Project Program Applications due**

**Jan. 1, 2016 - Wyoming Basin States Program Applications Due**

**Jan 6-7, 2016 - WWDC Meeting, Cheyenne, WY**

**Jan 8, 2016 - SWC Meeting, Cheyenne, WY**

Feb 8, 2016 - Wyoming Legislative Session Begins

Feb 8-11, 2016 - Colorado River Basin Salinity Control Work Group Meetings, Phoenix, AZ

**March 3-4, 2016 - WWDC Meeting, Cheyenne, WY**

**April 1, 2016 - Wyoming MOA Applications Due**

May 2016 - Colorado River Basin Salinity Control Work Group Meetings, Durango, CO

**May 6, 2016 - WWDC Meeting, Cheyenne, WY**