



# Wyoming Water Flow

*Water is Wyoming's Gold!*

**Mark your Calendars now!**

**Joint WWA/UMWA  
Annual Meeting and  
Educational Seminar  
October 28-30, 2009  
Sheridan, Wyoming**

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Looking for an old Wyoming Water Flow article? How about an updated Water Planner? Both can be found on the Wyoming Water Association's website, at <http://www.wyomingwater.org>. The website also contains information on the WWA scholarship and schedules for the upcoming Summer Tour and Annual Meeting. Check it out!

## Summer Tour Just a Few Weeks Away!

If you haven't reserved your spot on the WWA Summer Tour, now is the time! We are very excited about this year's tour, as it highlights efforts to enhance watershed function and sustainability in the Bighorn Basin and more specifically in the Cottonwood / Grass Creek Watersheds.

The tour will take place on July 15th, starting at the Hot Springs County Fairgrounds in Thermopolis, WY. After a pre-tour introduction by our hosts Marvin Andreen and Dee Hillbery, Hot Springs County natives, we will hop on a bus for the first tour stop.

A half hour northwest of Thermopolis is Whales Place. Once there, we will look at the Tamarisk and Russian Olive removal efforts. We will discuss the importance of removing these non-native, invasive, and thirsty species to restore and enhance watershed functions.

Next we will travel to Hamilton Dome and Whales Reservoir. Hamilton Dome is an old active oil field with a high water yield. The water discharged from the field makes its way into Cottonwood Creek and then to Whales Reservoir. At



these stops we will talk about the importance of Whales Reservoir as an irrigation supply dam and reservoir to the local irrigators. The possibilities in enlarging Whales Reservoir to capture additional Hamilton Dome discharge water will also be talked about.

One last stop before lunch will examine the Grass Creek Weed Management Area. Again, we will discuss the importance in removing non-native, invasive species to maintain and promote watershed health.

Lunch will be enjoyed at the 4-H youth camp on Grass Creek. Chubby Cheeks BBQ will cater the lunch and will serve steaks and ribs, baked potatoes, and sides. Drinks and desert will also be provided. The lunch will conclude with two presentations. One on the pyric treatment

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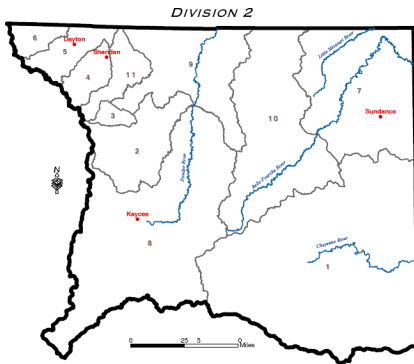
## Division II's New Superintendent

Division II of the State Engineer's Office has a new Superintendent, Carmine LoGuidice. While Carmine has a long history with the SEO, only since April has he filled the shoes of Superintendent.

His career at SEO

started in 1988, first as a Hydrographer and then for 10+ years as Assistant Superintendent for Division II. This area in Northeastern Wyoming includes the Powder/Tongue and Northeast Wyoming River Basins.

As Superintendent, Carmine is a member of the board of control and is responsible for adjudications of water rights and changes or petitions of adjudicated rights for his area.



## WWA Board Member Receives Gamma Sigma Delta Award

WWA board member Klodette Stroh and her husband Rick of Powell, WY recently received an honorary award from the University of Wyoming Chapter of Gamma Sigma Delta (GSD). On February 28, 2009, at the organizations annual luncheon, Klodette and Rick were honored with the award for outstanding agriculturists. They own 200 acres of cropland and lease 1,300 additional acres for their herd of Angus Cattle.



Rick and Klodette Stroh (front) with Department head Steve Herbert (left) and Dave Wilson, Dept. of Plant Sciences.

Gamma Sigma Delta is the international honor society of agriculture. Congratulations Klodette and Rick!

## Summer Tour (continued)

(continued from page 1)  
program for Juniper and Pinon removal in the Upper Grass Creek area. The second from Larry Bentley to talk about Coordinated Resource Management and the Department of Agriculture's mediation program.

After a delicious and filling lunch, we hop on the bus again to Adam Weiss Peak. This stop will focus on the Little Grass Creek stock water pipeline project. This upland water development project consists of a six mile gravity feed system. This spring and series of tanks is vital to the health of the area by diverting stock and wildlife away from sensitive riparian areas.

After viewing the stock water pipeline project, we will travel to LU Ranch. Here we will look at irrigation projects planned by the landowner with assistance from the NRCS and WWDC.



These include a diversion and ditch rehabilitation and conversion to pivot sprinklers.

Lastly, but not leastly, we will take a tour of the new Wyoming Whisky Distillery in Kirby. Master Distiller, Steve Malley (previously master distiller of Maker's Mark) will show us this new facility. Unfortunately, taste tests will not be available as the product still has four more years to age! We will depart Kirby and return to the Hot Springs County Fair Building by around 5 pm.

To sign-up for this great tour please contact Robin Gray by phone at (307) 286-8614 or by e-mail at robin@wyomingwater.org by July 8th. Lodging has been reserved for the night of July 14, at the Days Inn—Hot Springs Convention Center, (307) 864-3131. Reservations for lodging are requested by June 30th. Make sure to ask for WWA rooms for a group rate discount. There will be a \$35 per person tour fee. We hope to see on July 15th!



## Pathfinder Turns 100!

Just 47 miles southwest of Casper, WY rests an achievement of architectural ingenuity, Pathfinder Dam. Authorized in 1903 and completed on June 14, 1909, Pathfinder Dam is celebrating its 100th year anniversary this year. This was one of the very first projects undertaken by the Bureau of Reclamation and its first masonry dam.

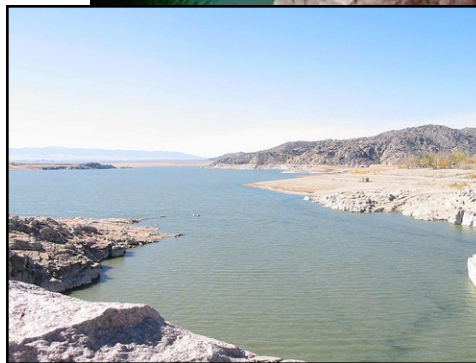
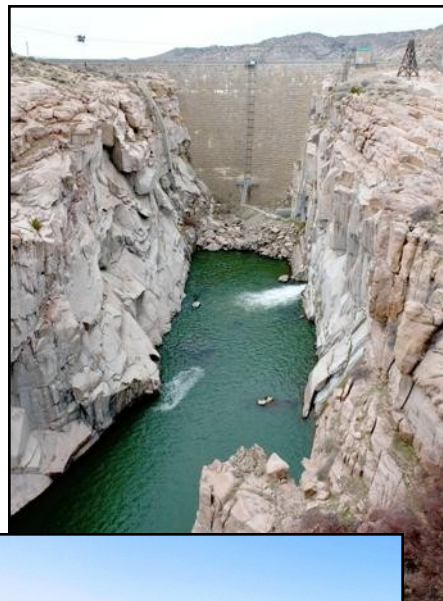
Pathfinder Dam was the first of a series of dams located on the North Platte River and part of the North Platte Project (originally called the Sweetwater Project). Once finished, the North Platte Project extended 111 miles along the North Platte River Valley from Guernsey, WY to Bridgeport, NE. At the time, the primary goal for the project was to provide late season irrigation water to the settlers of the valley. Today Pathfinder Reservoir not only provides water for irrigation, but also for flood control, power generation, and recreation.

Construction on the Dam started in 1905 in a remote, rugged canyon known today as Fremont Canyon. The Dam was built of granite blocks from nearby quarries. The blocks were then hauled to the dam site by mule teams and stacked 214 feet high and 432 feet across using steam engines and operating cables. The style of dam is called a Cyclopean masonry arch gravity. Today, Pathfinder Dam has a storage capacity of over a 1 million acre/feet and provides full service irrigation for around 226,000 acres.

Pathfinder Dam is listed in the National Register of Historic Places because of its "pioneering role in reclaiming arid lands and the innovative engineering required in its construction" (Bureau of Reclamation website).

Plans are currently underway to celebrate Pathfinders' 100 years. An open house is being scheduled for August at the interpretive center (originally the dam tenders house) for self-guided tours. For more information on Pathfinder Dam or its August open house please visit their website at <http://www.usbr.gov> or call John Lawson at (307) 261-5671.

Happy 100 years Pathfinder!



## Wyoming Water Supply Outlook Report

The Natural Resources Conservation Service (NRCS), as a division of the U.S. Department of Agriculture, prepares basin outlook reports for the Western United States. The following is a summary of the **June 1, 2009** Report prepared for Wyoming. For more information, or for the complete Basin Outlook Report, please visit the Wyoming Water Resources Data System (WRDS) website at <http://www.wrds.uwyo.edu/wrds/nrcs/nrcs.html>

In General, the snow water equivalent (SWE) across Wyoming was below average for June 1st, 2009 at 61%. May precipitation varied across the state from 46% to 91% of average. Year-to-date precipitation for Wyoming varied from 90% to 116% of average. Forecasted runoff varied from 51% to

112% with an overall average of 89%. Basin reservoir levels (see chart on page 4) varied across Wyoming from 60% to 145% of average for an overall average of 100%.

As SWE across the state was below average for June 1st, the NW portion of Wyoming fared the best at 71% of average and 49% of last year. NE Wyoming SWE was lowest for the state at 38% of average (17% of last year). SE Wyoming SWE was 57% of average, while SW Wyoming was about 55% of average.

May's precipitation was way below average across Wyoming. The Powder and Tongue River Basins had the lowest precipitation at 46% of average. The Upper Bear River Basin had the highest precipitation at 91% of

average

Stream flow yield for the June through September runoff period is expected to be below average across Wyoming. Most probable yield for the entire state of Wyoming is forecast to be about 89% (ranging from 51% to 112% of average).

Reservoir storage varied widely across Wyoming with reservoir storage across the state at 100% of average. Reservoirs on the North Platte River are well below average at 86% of average. Northeastern Wyoming reservoirs are about average in storage at 98%. Reservoirs in the Wind River Basin are above average at 105%. Reservoirs on the Big Horn are slightly above average at 103% while the Buffalo Bill Reservoir is

*(Continued on pg 4)*

## Wyoming Water Supply Outlook Report (continued)

above average at 135%. Reservoirs on the Green River are about average at 100%. For further information about reservoir storage, see the adjacent table.

### Addendum to the Water Supply Outlook Report

Recent June rains and cooler temperatures statewide are not reflected in the above report. To get a more accurate and timely picture of water supply in Wyoming several additional graphics have been include in this newsletter.

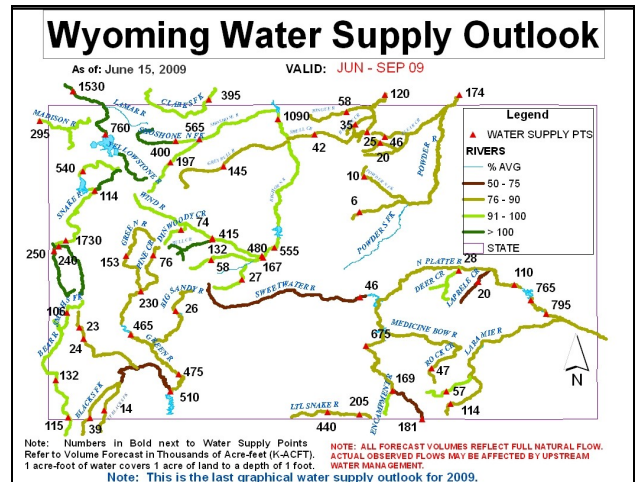
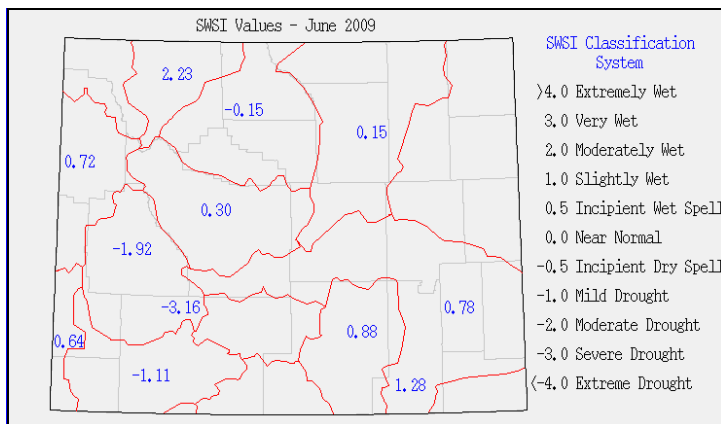
The first is the Surface Water Supply Index (SWSI) map (below). Please refer to the description below the map for a more in-depth explanation of the SWSI. This map shows that both the far Northwest and Southeast are slightly to moderately wet, while parts of the Green River Basin are still grappling with a mild to moderate drought.

The Wyoming Water Supply Outlook map (below right), created by NOAA show the predicted runoff volumes for the June through September runoff period. Notice that the snowmelt runoff volumes are predicted to be slightly below average across Wyoming.

Other helpful graphics are the Wyoming Precipitation Departure from Normal maps. Generated weekly, these (continued on back).

### Major Reservoirs in Wyoming (as of June 1st)

BASIN AREA RESERVOIR	CURRENT %CAPACITY	LAST YR %CAPACITY	AVERAGE %CAPACITY	CURRENT AS %AVERAGE	CURRENT AS %LAST YR
ALCOVA	98	98	97	101	100
ANGOSTURA	70	59	96	73	119
BELLE FOURCHE	96	97	85	113	100
BIG SANDY	71	70	77	93	101
BIGHORN LAKE	66	67	64	103	98
BOYSEN	97	79	95	102	122
BUFFALO BILL	83	74	61	135	112
BULL LAKE	76	42	63	120	181
DEERFIELD	101	84	89	113	120
ENNIS LAKE	85	72	86	99	118
FLAMING GORGE	80	82	81	98	98
FONTENELLE	67	51	53	127	131
GLENDO	86	104	99	87	83
GRASSY LAKE	100	101	95	106	99
GUERNSEY	60	67	79	76	90
HEBGEN LAKE	83	97	89	99	94
JACKSON LAKE	88	71	68	130	124
KEYHOLE	55	43	61	90	127
PACTOLA	100	63	88	113	158
PALISADES	67	62	74	91	109
PATHFINDER	46	24	76	60	190
PILOT BUTTE	90	76	77	117	118
SEMINOE	70	39	65	109	181
SHADEHILL	91	37	84	108	248
TONGUE RIVER	88	104	61	145	84
VIVA NAUGHTON	106	107	92	115	99
WHEATLAND #2	84	49	60	141	173
WOODRUFF NARROWS	100	98	70	142	102
TOTAL OF 27 RES.	75	68	75	100	111
Raw KAF Totals	Current=9726	Last Year=8741	Average=9713		
Capacity=12910					



The Surface Water Supply Index (SWSI) is computed using only surface water supplies for the drainage. The computation includes reservoir storage, if applicable, plus the forecast runoff. The index is purposely created to resemble the Palmer Drought Index, with normal conditions centered near zero. Adequate and excessive supply has a positive number and deficit water supply has a negative values. Soil moisture and forecast precipitation are not considered as such, but the forecast runoff may consider these values. The SWSI image and explanation are taken from the NRCS/WRDS website. For more information please go to <http://www.wrds.uwyo.edu/wrds/nrcs/>

## *The Water Planner*

<b>June</b>	10-13	Wyoming Association of Municipalities 2009 Conference in Gillette, WY
	14-16	Western Governor' Association Annual Meeting in Park City, UT
	18	Wind/Bighorn Basin Advisory Group Meeting in Lander, WY
	18-19	Law of the Colorado River Seminar in Phoenix, AZ
	29-1	AWRA Summer Specialty Conference in Snowbird, UT
<b>July</b>	14	WWA Board Meeting in Thermopolis, WY
	15	WWA Summer Tour in Thermopolis, WY
	15-17	Western States Water Council 160th Council Meeting in Park City, UT
	28-29	Four States Irrigation Council Summer Tour in Ogallala, NE
	29-31	NWRA Western Water Seminar in Santa Ana Pueblo, NM
<b>August</b>	10-14	State Board of Control Quarterly Meeting in Burgess Junction, WY
	15	WWDC New Project Applications Due
	19-21	WWDC/SWC Workshop/Summer Tour/Joint Meeting in Casper, WY
<b>September</b>	1	State Water Forum Meeting in Cheyenne, WY
	14-17	Wyoming Association of Rural Water Systems Fall Expo in Laramie, WY
	21-22	Joint Agriculture, State and Public Lands and Water Resources Interim Committee in Hulett, WY
<b>October</b>	5-8	National Rural Water Association National Training Conference and H2OXPO October 5-8 in Louisville, KY
	6	State Water Forum Meeting in Cheyenne, WY
	27	WWA Annual Board Meeting in Sheridan, WY
	28-30	WWA/UMWA Joint Annual Meeting & Educational Seminar in Sheridan, WY
<b>November</b>	2-6	State Board of Control Quarterly Meeting in Cheyenne, WY
	3	State Water Forum Meeting in Cheyenne, WY
	4-6	WWDC/SWC Workshop/Meeting in Casper, WY
	18-20	NWRA Annual Conference in San Antonio, TX

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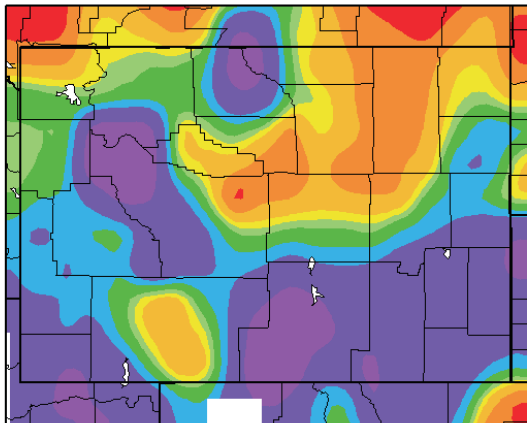
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**Reminder:  
WWA Board Meeting  
Tuesday, July 14th  
Big Horn Federal Bank  
Thermopolis, WY  
6:30 p.m.**

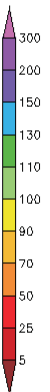
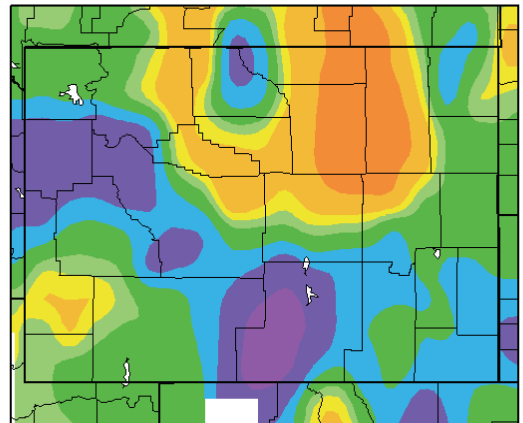
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maps show departures from historical averages (vs. 1971-2000). The maps for 30 days and 90 days are located on the back of this newsletter (below). The 30 day departure from normal map shows most of the state with above normal precipitation with portions of Northeast and Central Wyoming being below normal. The 90 day departure from normal map also shows most of the state with above normal precipitation. For additional information or more recent maps please go to the Wyoming State Climate Website at [http://www.wrds.uwyo.edu/sco/data/wyoprecip\\_crops.html](http://www.wrds.uwyo.edu/sco/data/wyoprecip_crops.html)

Percent of Normal Precipitation (%)  
5/16/2009 – 6/14/2009



Percent of Normal Precipitation (%)  
3/17/2009 – 6/14/2009



Generated 6/15/2009 at HPRCC using provisional data.

NOAA Regional Climate Centers

Generated 6/15/2009 at HPRCC using provisional data.

NOAA Regional Climate Centers

**Past 30 days**

**Past 90 days**