

STREAM GAGING AND RIVER MANAGEMENT UPDATE

Wind – Big Horn Basin Advisory Group

Loren Smith

Superintendent Water Division III

State Engineer's Office/State Board of Control

April 7, 2008



STREAM GAGING AND RIVER MANAGEMENT UPDATE

- State Engineer's Office Automated Gaging Efforts:
 - Currently operating approximately 176 Continuous recording stream gages statewide.
 - Currently operating approximately 76 Continuous recording Canal/Ditch gages statewide.
 - Of these 252 gages approximately 65 are transmitting near real-time data via satellite or similar technology.



STREAM GAGING AND RIVER MANAGEMENT UPDATE

Where the data is retrieved from today

U.S. Department of the Interior | Bureau of Reclamation | Great Plains Region Contact Us | Site



RECLAMATION

Great Plains Region *Managing Water in the West*

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USGS
science for a changing world



National Water Information System: Web Interface

[USGS Water Resources](#)



National Weather Service

Advanced Hydrologic Prediction Service



STREAM GAGING AND RIVER MANAGEMENT UPDATE

State Engineer's Office Approved Exception

Budget Request includes: (Excluding Green River Basin)

- Instrumentation \$868,360
 - Automation of 105 existing critical stream gaging sites.
 - Automation of 42 existing important canal gaging sites.
- Purchase of backup equipment \$48,000
- Professional assistance with installation, training and set-up. \$50,000
- Stream gage records computation software package \$72,534
- Cheyenne downlink equipment and professional installation. \$40,000



STREAM GAGING AND RIVER MANAGEMENT UPDATE

Green River Basin Funding:

Approved under Colorado River Compact
Administration Program.

- Includes \$434,000 for instrumentation of 100 critical stream and canal sites.
- \$50,000 for Professional services and training.
- All gaging efforts statewide are dovetailed to provide consistent data, transmission and records.



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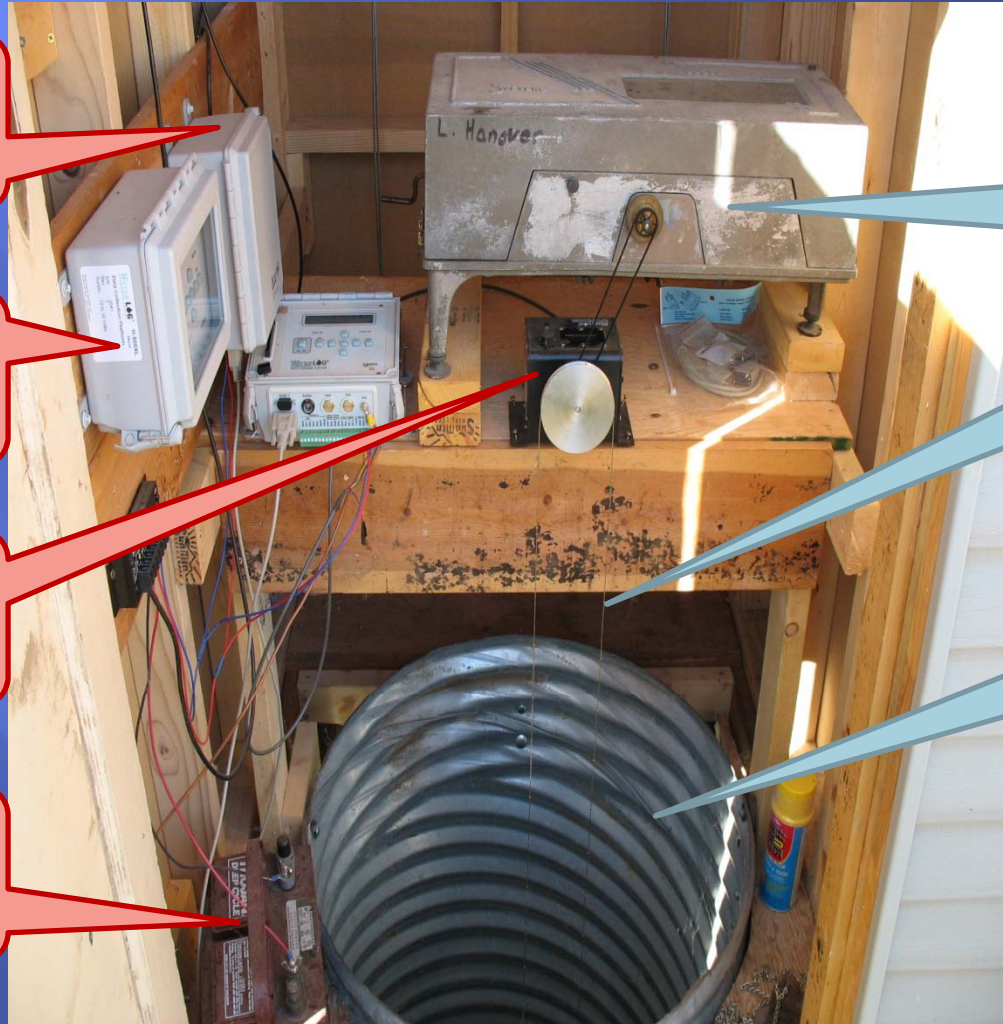
Upgrade Equipment

GOES Satellite Transmitter

Digital Data Recorder

Digital Encoder senses change in water level

12 volt power supply



Existing Equipment

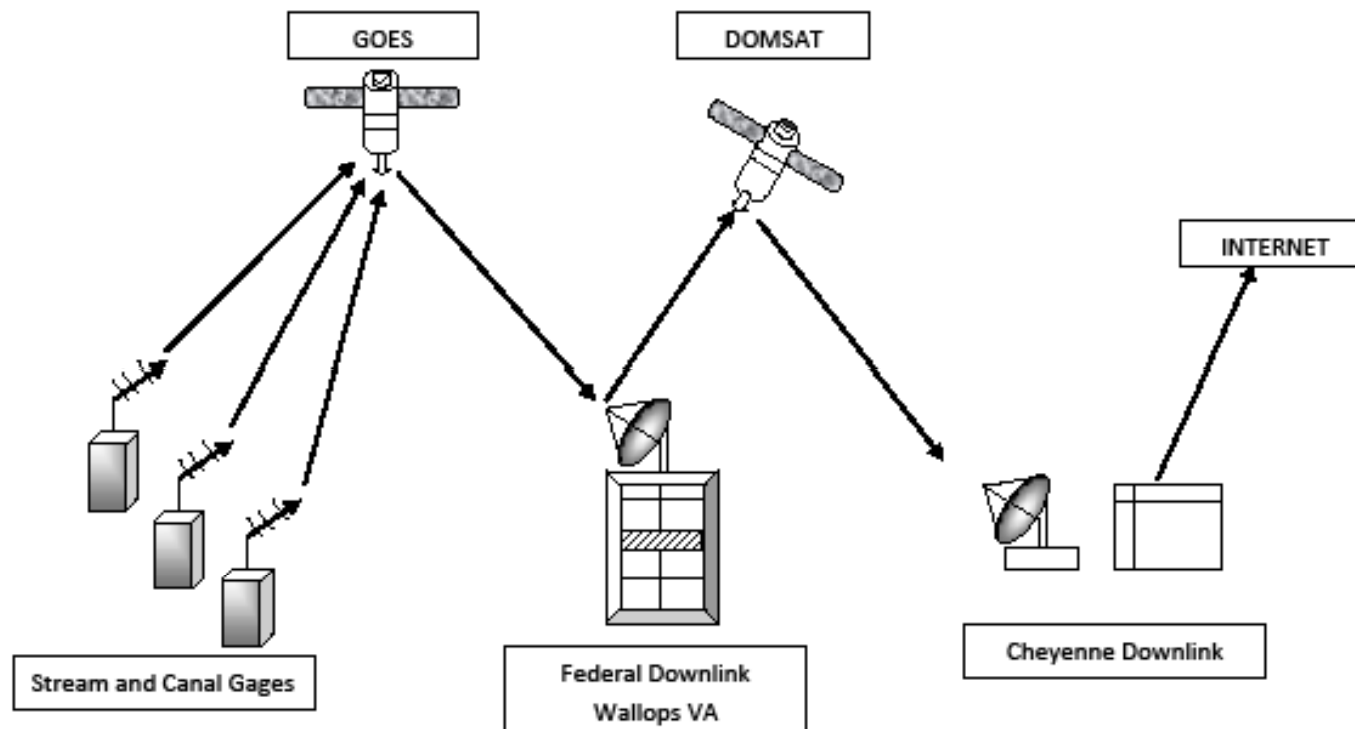
A-35 paper chart recorder vintage 1935-1950's

Cable and Float system to measure water level

Stilling Well to buffer changes in level



STREAM GAGING AND RIVER MANAGEMENT UPDATE



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Serving the Data to the Public:



WYOMING STATE ENGINEER'S OFFICE
STATE BOARD OF CONTROL



RIVERTON FIELD OFFICE

WIND RIVER AND BIG HORN RIVER DAILY FLOW SUMMARY

To contact us: 715 E. Roosevelt, Riverton, WY 82501
Phone: 307-856-0747
Automated River Info: 307-856-2912
Fax: 307-856-4837

Information provided on this page is done so as a service to the water users of the Wind River and Big Horn River system. All data is to be considered preliminary and is subject to change. The values entered for Today are projected flows, the values entered in the Yesterday column have been corrected to reflect the actual measured daily mean flow, where available.

	Today 4/7/2008	Yesterday 4/6/2008	
Wind River above Red Creek	n/a	n/a	c.f.s.
Dinwoody Creek above Dinwoody Lakes	3.80	9.20c.f.s.	
Wind River near Crowheart	322.84	352.76c.f.s.	
Bull Lake Creek above Bull Lake	0.00	0.00c.f.s.	
Bull Lake Reservoir Volume	56,633	56,701acre-feet	
Bull Lake Creek below Bull Lake	194.32	194.14c.f.s.	
Wyoming Canal (Midvale)	3.78	3.78c.f.s.	
Pilot Butte Reservoir Volume	28,118	28,185acre-feet	
Wind River at HWY 26 Bridge	0.00	0.00c.f.s.	
Johnstown Canal	0.00	0.00c.f.s.	
Wind River near Kinnear	65.00	129.88c.f.s.	
Lefthand Canal	0.00	0.00c.f.s.	
LeClair-Riverton No. 2 Canal (LeClair)	8.46	9.60c.f.s.	
Wyoming No. 2 Canal (Riverton Valley)	4.31	4.31c.f.s.	
Wind River at Riverton	108.73	138.67c.f.s.	
Little Wind River at Riverton	184.88	184.71c.f.s.	
Wind River above Boysen Reservoir	212.54	222.20c.f.s.	
Fivemile Creek	36.00	38.40c.f.s.	
Boysen Reservoir Volume	448,946	448,689acre-feet	
Boysen Reservoir Calculated Average Inflow	442.44	466.83c.f.s.	
Wind River below Boysen Reservoir	395.58	400.28c.f.s.	
Kirby Canal	0.00	0.00c.f.s.	
Upper Lucerne Canal	0.00	0.00c.f.s.	
Lower Lucerne Canal	0.00	0.00c.f.s.	
Upper Hanover Canal	0.00	0.00c.f.s.	
Bluff Canal	0.00	0.00c.f.s.	
Highland Hanover Canal	0.00	0.00c.f.s.	
Big Horn Canal	0.00	0.00c.f.s.	
Big Horn River near Worland	503.38	500.95c.f.s.	
Lower Hanover Canal	0.00	0.00c.f.s.	

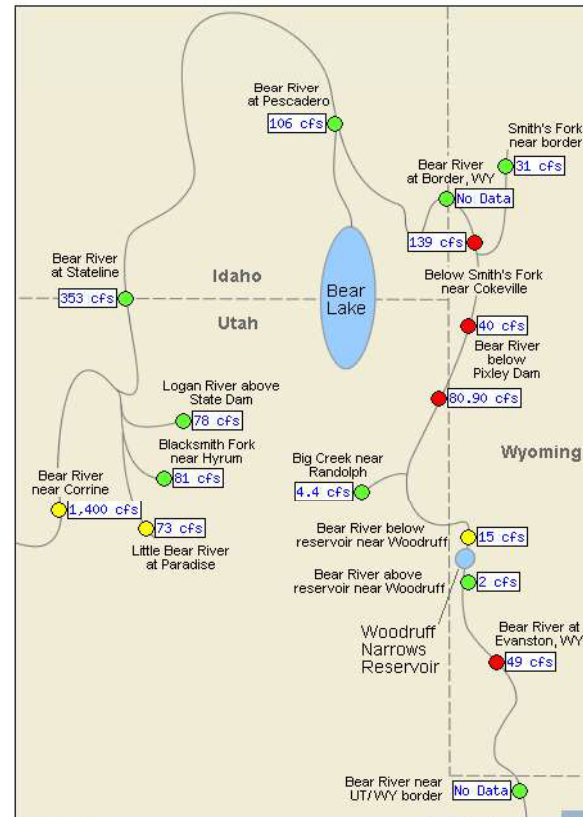
Bear River Basin

Reservoirs - Rivers - Canals - Weather - Multimedia - Diagnostics - About - Home

Rivers

Click a number on the map for a graph of that data

Bear Lake Water Level



Name (Click for more information)	Last Reading	Value
Bear River at Pescadero, ID (USGS)	10:45 AM, Apr 7	106 cfs
Smith's Fork near Border, WY (USGS)	10:30 AM, Apr 7	31 cfs
Bear River at Border, WY (USGS)	10:30 AM, Apr 7	No Data
Below Smith's Fork near Cokeville, WY (USGS)	11:45 PM, Mar 31	139 cfs
Bear River at UT/ID Steteline (USGS)	10:45 AM, Apr 7	353 cfs
Bear River below Pixley Dam, near Cokeville, WY	12:30 PM, Oct 11	40 cfs
Steteline	8:00 PM, Dec 25	80.90 cfs
Logan River above State Dam, near Logan, UT (USGS)	11:00 AM, Apr 7	78 cfs
Blacksmith Fork near Hyrum, UT (USGS)	10:45 AM, Apr 7	81 cfs
Big Creek near Randolph, UT (USGS)	10:45 AM, Apr 7	4.4 cfs
Bear River near Corinne, UT (USGS)	9:15 AM, Apr 7	1,400 cfs
Little Bear River at Paradise, UT (USGS)	7:45 AM, Apr 7	73 cfs
Bear River below reservoir near Woodruff (USGS)	8:30 AM, Apr 7	15 cfs
Bear River above reservoir, near Woodruff, UT (USGS)	10:45 AM,	
Bear River at Evanston, WY		
Bear River near UT/WY Steteline (USGS)		



STREAM GAGING AND RIVER MANAGEMENT UPDATE

- Benefits to the State Engineer's Office:
 - Stream Accounting Accuracy and Timeliness
 - North Platte River Accounting
 - Laramie River Accounting
 - Basin Electric/Grayrocks Accounting
 - Sand Creek Agreement Administration
 - Upper North Platte Reservoir accrual compliance
 - City of Cheyenne Accounting
 - Ringsby Transfer Accounting and Administration
 - Boughton Transfer Accounting and Administration
 - LaPrele Creek Administration
 - Wind River Accounting
 - BigHorn River/Boysen Accounting
 - Shoshone River Accounting



STREAM GAGING AND RIVER MANAGEMENT UPDATE

➤ Additional Benefits to the State Engineer's Office Continued:

- Water Delivery Timing and efficiency
- Recognition of Storm event impacts
- Time Savings in administration and problem solving
- Mileage Savings in administration and problem solving
- Water Conservation
- Water Theft Protection



STREAM GAGING AND RIVER MANAGEMENT UPDATE

- Benefits to the General Public and private entities:
 - Allows us to redirect staff time to more pressing matters
 - Information is available 24 -7
 - Informed decisions regarding water use
 - Conservation of available supply
 - Better water use records
 - Historical data retention



STREAM GAGING AND RIVER MANAGEMENT UPDATE

Data Usage:

Wyoming Water Development

US Bureau of Reclamation

Natural Resources Conservation Service

National Weather Service

Homeland Security

Engineering and Consulting Firms

Irrigation Districts, Companies and Assoc.

County Governments

Law Firms

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Questions ????

