

**Wind/Bighorn Basin Advisory  
Group Meeting  
Riverton, WY  
April 24, 2014  
Jodee Pring  
WY State Engineer's Office**

# Topics:

- Yellowstone River Compact Commission meeting – April 10, 2014 – recap
- Other SEO activities
- Water Outlook

# Yellowstone River Compact Commission

- Full Commission met December 5, 2013 in Cody, WY
- TAC met April 10, 2014
  - Highlights:
    - Upper Missouri Basin Soil Moisture & Snow Monitoring
      - Response to post-2011 flood independent panel call for monitoring (soil moisture/snow) in the plains (SD, ND, MT, WY)
      - WRDA bill passed the Senate with language Sen. Barrasso had inserted

# Highlights (cont.)

- Sen. Barrasso on conference committee; we remain hopeful that Program will be in final version of the bill
- <http://yrcc.usgs.gov/>
- MT v WY
  - Trial began October 16, 2013 and ended December 4, 2013
  - Post-Trial briefs filed March 31<sup>st</sup>
  - Oral arguments in front of SM on May 1<sup>st</sup> in CA
  - <http://www.stanford.edu/dept/law/mvn/>

# Other SEO Activities

- NIDIS Missouri Basin Project Kickoff Meeting – February 26-27, 2014
  - Held to bring together stakeholders, federal, state, tribal, and local partners to discuss and understand needs for drought, climate, weather, and water-related information
  - More than 70 entities represented
  - Good meeting; discussed State drought plans (if any), better understanding of drought as a hazard, societal vulnerabilities, and coping strategies; developing networks for regional drought monitoring and planning

# Other SEO Activities (cont.)

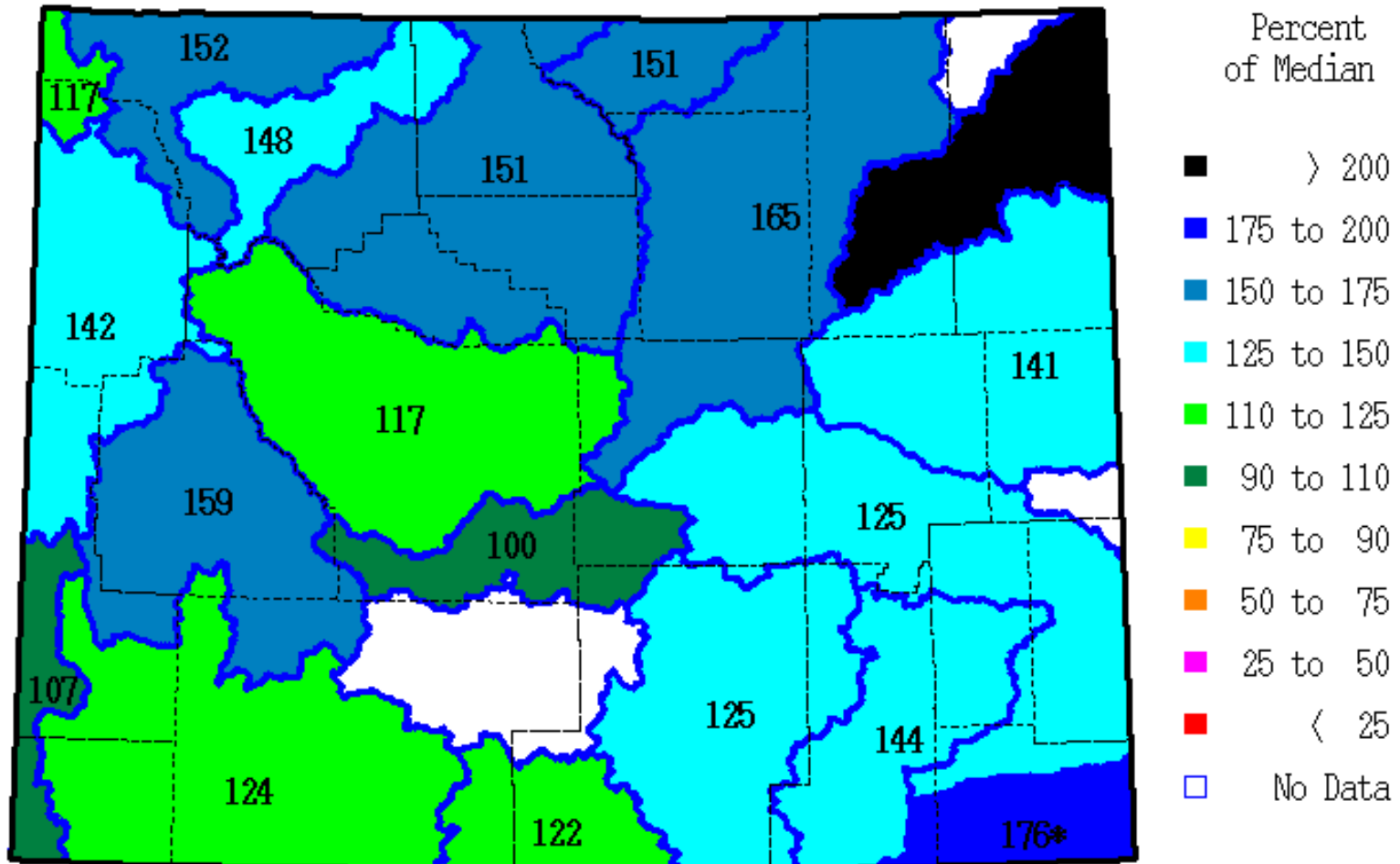
- Learned about USDA Northern Plains Regional Climate HUB
  - Multi-agency effort( ARS, FS, NRCS) being led by Justin Derner (ARS, Cheyenne)
  - Hub will deliver science-based knowledge and practical information to farmers, ranchers, forest landowners that will help them adapt to climate and weather variability
    - Provide support for land managers to respond to drought, heat stress, flood, pests, and changes in growing season
    - Provide regional assessments and forecasts for hazard and adaptation planning
    - Provide outreach and education for land managers on ways to mitigate risks and thrive despite change

# Other SEO Activities (cont.)

- Participating in monthly Missouri River Basin Climate Update webinars
  - Next one scheduled for May 1<sup>st</sup> at 12:00 pm to 1:00 pm
  - Public invited to participate
- Review NIDIS reports
  - Quarterly Climate Impacts and Outlook – Western Region -
  - National Drought Outlook
  - <http://www.drought.gov/drought/content/resources/reports>

# NRCS Monday Morning Snow Report - April 21, 2014

SWE % of Median as of Monday, 21 April 2014

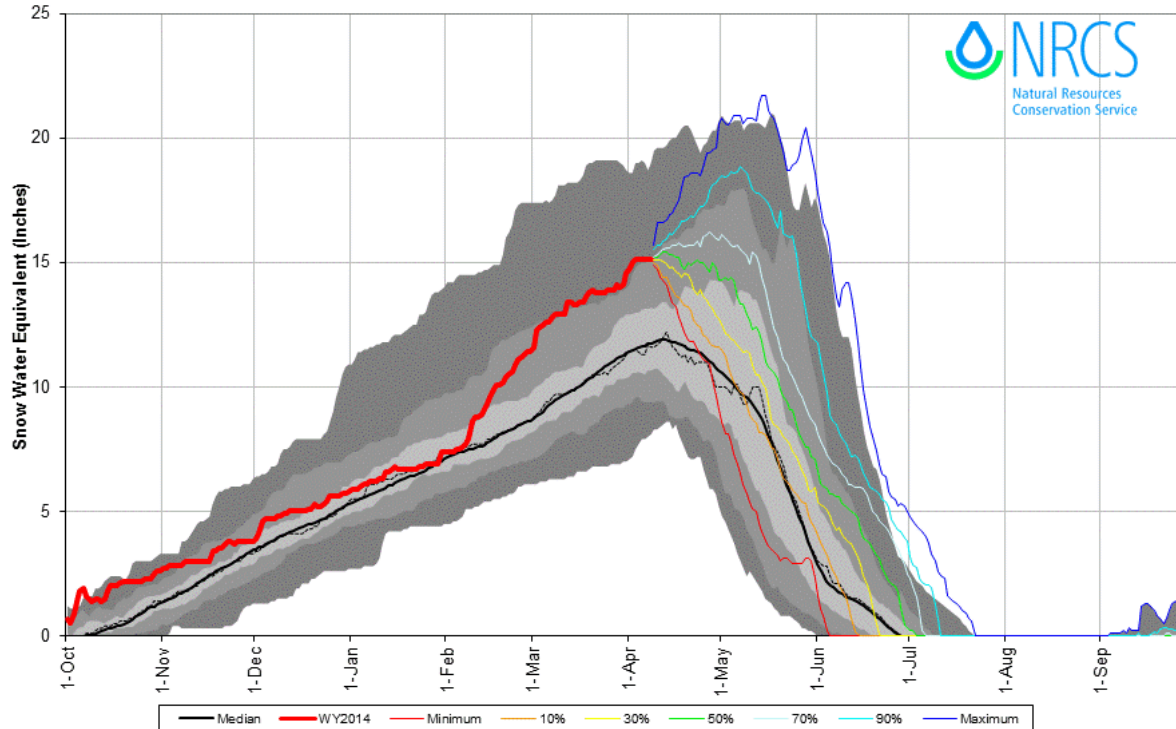


\* = Data may not provide a valid measure of conditions



# Wind River Basin (April 9<sup>th</sup>, 2014)

**Wind River with Non-Exceedence Projections**  
Based on Provisional SNOTEL Data as of Apr 08, 2014



Current SNOTEL SWE varies from 80 to 196% of median

Median SWE to date

- @ 128%
- Average Peak - April 12<sup>th</sup>

Precipitation to date

- @ 116%

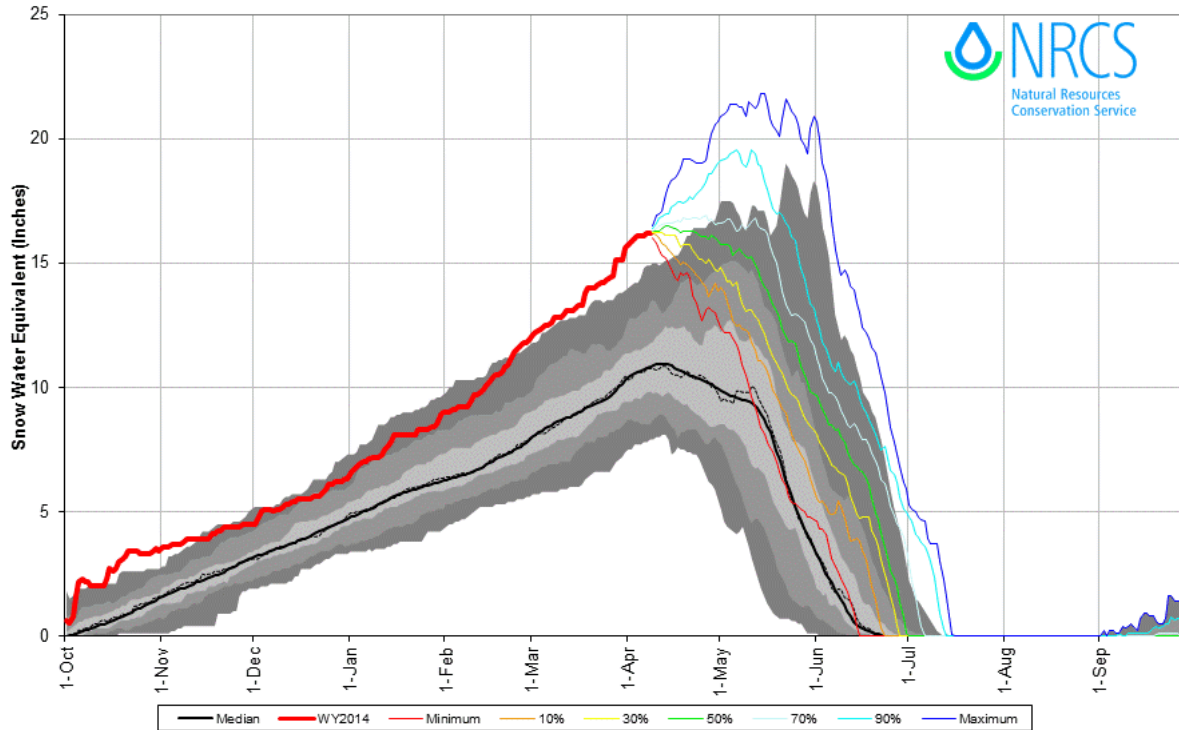
April 1<sup>st</sup> (Apr-Sep) streamflow forecasts for Boysen Reservoir Inflow

- 90% 670,000 ac-ft
- 50% 1,040,000 ac-ft
- 10% 1,410,000 ac-ft

Forecast Point	PER	KAF	Avg	PER	KAF	Avg
WIND RIVER abv Bull Lake Cr	APR-JUL	660	145%	APR-SEP	710	145%
WIND RIVER at Riverton	APR-JUL	700	147%	APR-SEP	810	147%
BOYSEN RESERVOIR Inflow	APR-JUL	945	155%	APR-SEP	1040	156%
BULL LAKE CR near Lenore	APR-JUL	165	119%	APR-SEP	200	118%
LT POPO AGIE RIVER nr Lander	APR-JUL	37	88%	APR-SEP	43	88%
SF LT WIND nr Fort Washakie	APR-JUL	83	115%	APR-SEP	93	113%
LT WIND RIVER nr Riverton	APR-JUL	255	94%	APR-SEP	285	97%

# Big Horn River Basin (April 9<sup>th</sup>, 2014)

**Bighorn with Non-Exceedence Projections**  
Based on Provisional SNOTEL Data as of Apr 08, 2014



Current SNOTEL SWE varies from 131 to 240% of median

Median SWE to date

- @ 149%
- Average Peak - April 12<sup>th</sup>

Precipitation to date

- @ 128%

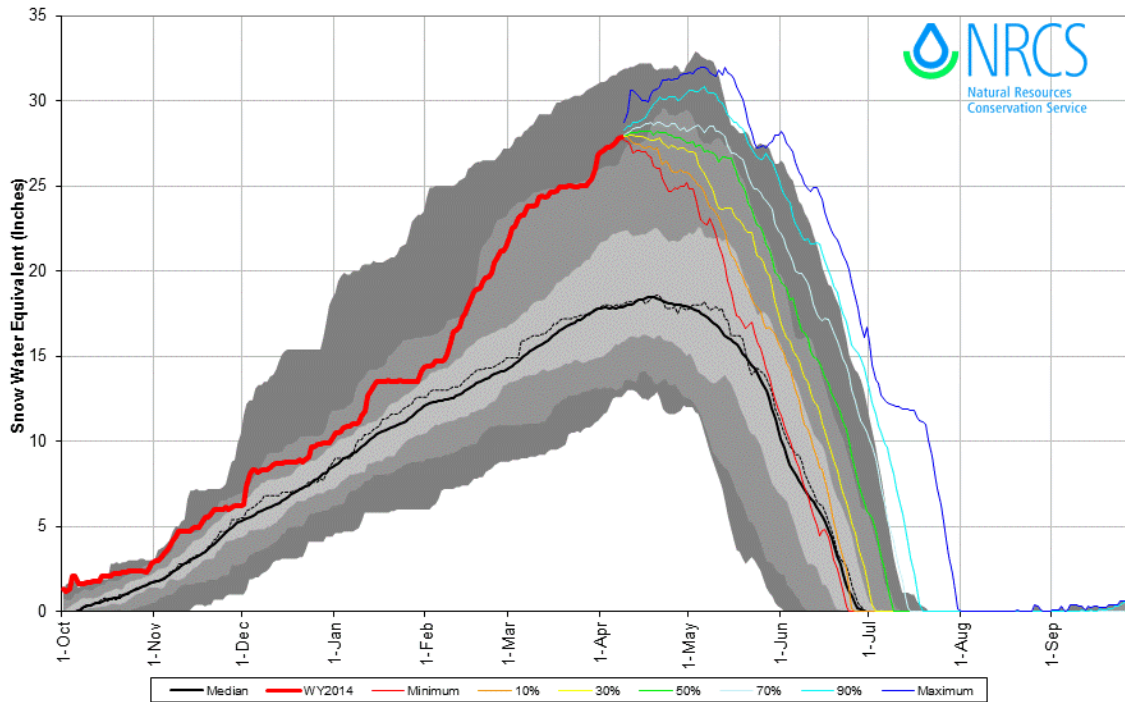
April 1<sup>st</sup> (Apr-Sep) streamflow forecasts for Bighorn River at Kane

- 90% is 995,000 ac-ft
- 50% is 1,570,000 ac-ft
- 10% is 2,140,000 ac-ft

Forecast Point	PER	KAF	Avg	PER	KAF	Avg
BOYSEN RESERVOIR Inflow	APR-JUL	945	155%	APR-SEP	1040	156%
GREYBULL RIVER nr Meeteetse	APR-JUL	195	149%	APR-SEP	265	150%
SHELL CREEK nr Shell	APR-JUL	71	129%	APR-SEP	83	126%
BIGHORN RIVER at Kane	APR-SEP	1430	170%	APR-SEP	1570	173%

# Shoshone River Basin (April 9<sup>th</sup>, 2014)

Shoshone River with Non-Exceedence Projections  
Based on Provisional SNOTEL Data as of Apr 08, 2014



Current SNOTEL SWE varies from 144 to 166% of median

Median SWE to date

- @ 155%
- Average Peak - April 18th

Precipitation to date

- @ 144%

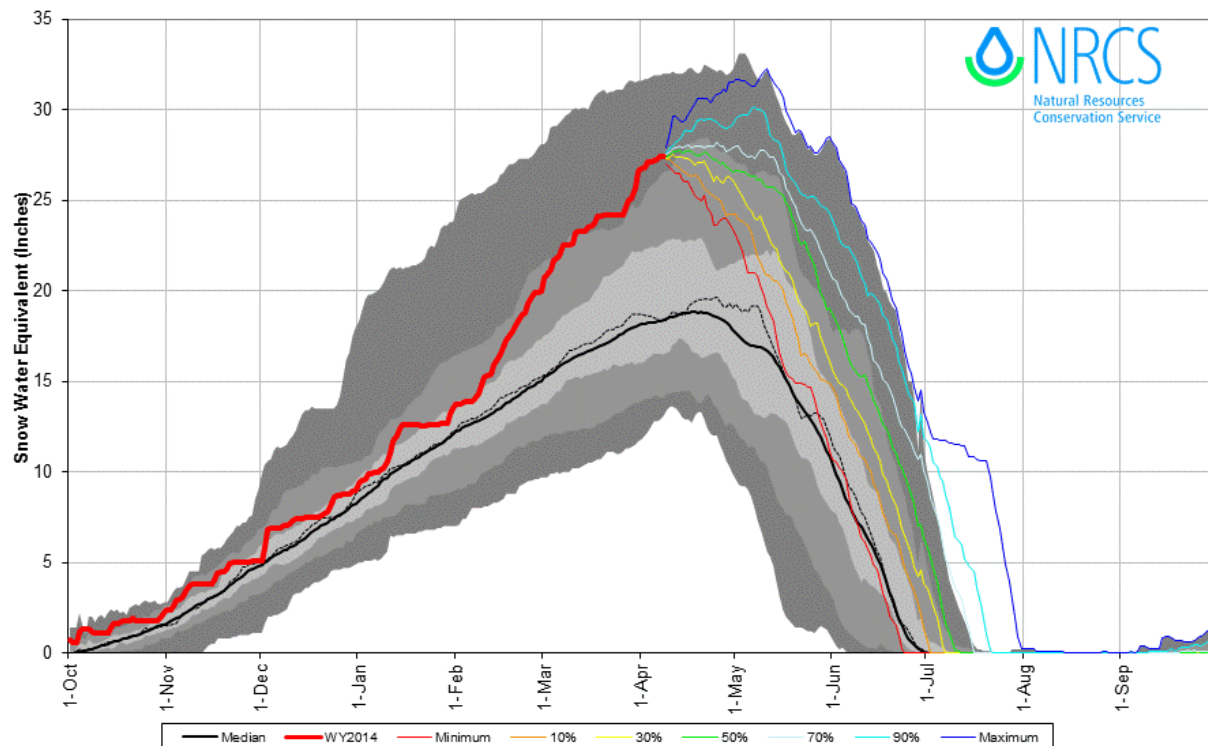
April 1<sup>st</sup> streamflow forecasts for Buffalo Bill Dam Inflow

- 90% is 935,000 ac-ft
- 50% is 1,090,000 ac-ft
- 10% is 1,250,000 ac-ft

Forecast Point	PER	KAF	Avg	PER	KAF	Avg
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NF SHOSHONE RIVER at Wapiti	APR-JUL	645	140%	APR-SEP	715	139%
SF SHOSHONE RIVER nr Valley	APR-JUL	305	142%	APR-SEP	350	143%
SF SHOSHONE abv Buffalo Bill	APR-JUL	335	174%	APR-SEP	350	175%
BUFFALO BILL DAM Inflow	APR-JUL	1000	148%	APR-SEP	1090	146%

# Yellowstone River Basin (April 9<sup>th</sup>, 2014)

**Yellowstone with Non-Exceedence Projections**  
 Based on Provisional SNOTEL Data as of Apr 08, 2014



- Current SNOTEL SWE varies from 125 to 175% of median
- Median SWE to date
  - @ 153%
  - Average Peak-April 22<sup>nd</sup>
- Precipitation to date
  - @ 134%
- April 1<sup>st</sup> runoff forecasts for the Yellowstone River at Lake
  - 90% is 820,000 ac-ft
  - 50% is 945,000 ac-ft
  - 10% is 1,070,000 ac-ft

Forecast Point	PER	KAF	Avg	PER	KAF	Avg
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Yellowstone R at Lake Outlet	APR-JUL	715	124%	APR-SEP	945	123%
Yellowstone R at Corwin Springs	APR-JUL	2130	134%	APR-SEP	2500	133%
Yellowstone R at Livingston	APR-JUL	2430	135%	APR-SEP	2850	133%
CLARKS FORK RIVER nr Belfry	APR-JUL	725	142%	APR-SEP	805	146%

USDA United States  
Department of  
Agriculture

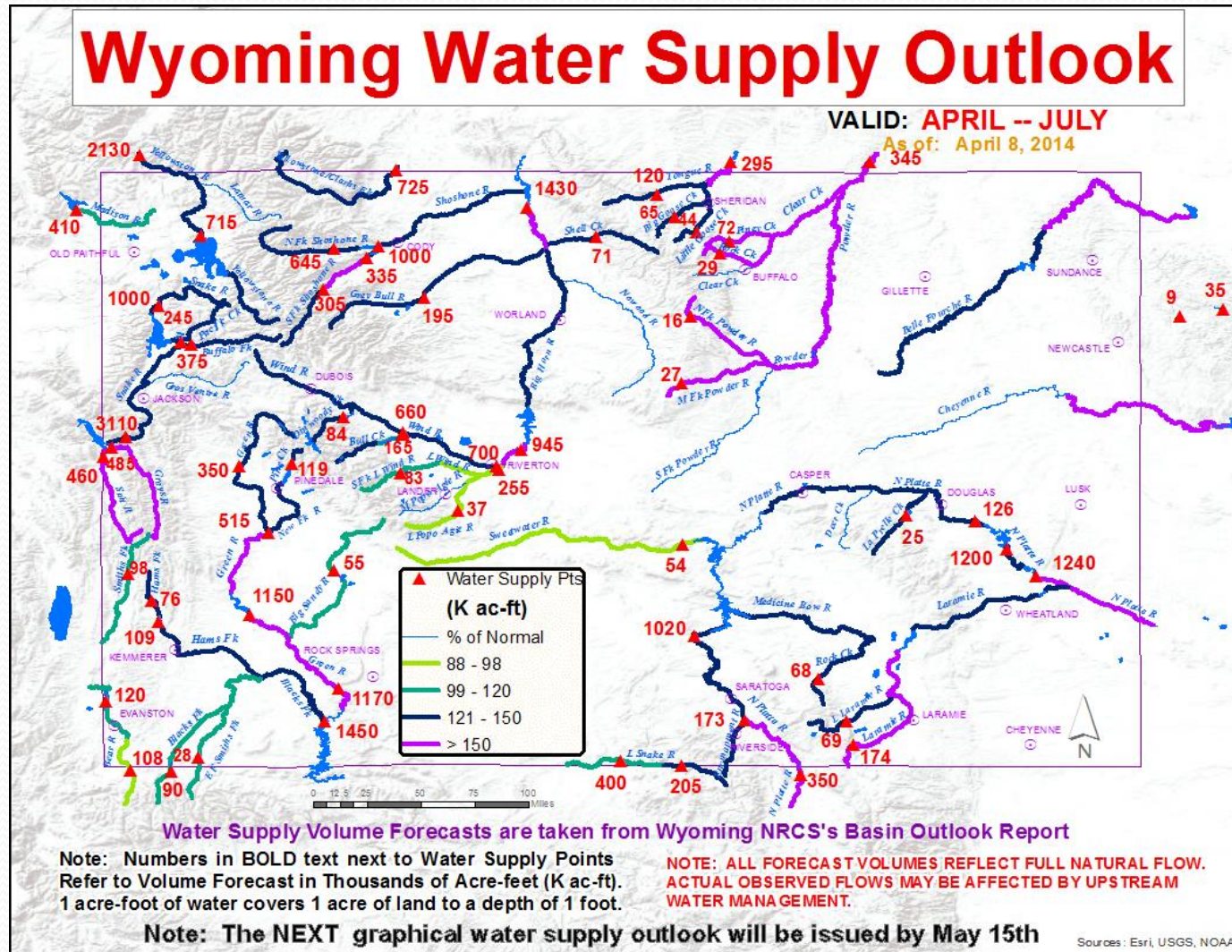
Natural  
Resources  
Conservation  
Service

## Wyoming Basin Outlook Report April 1, 2014



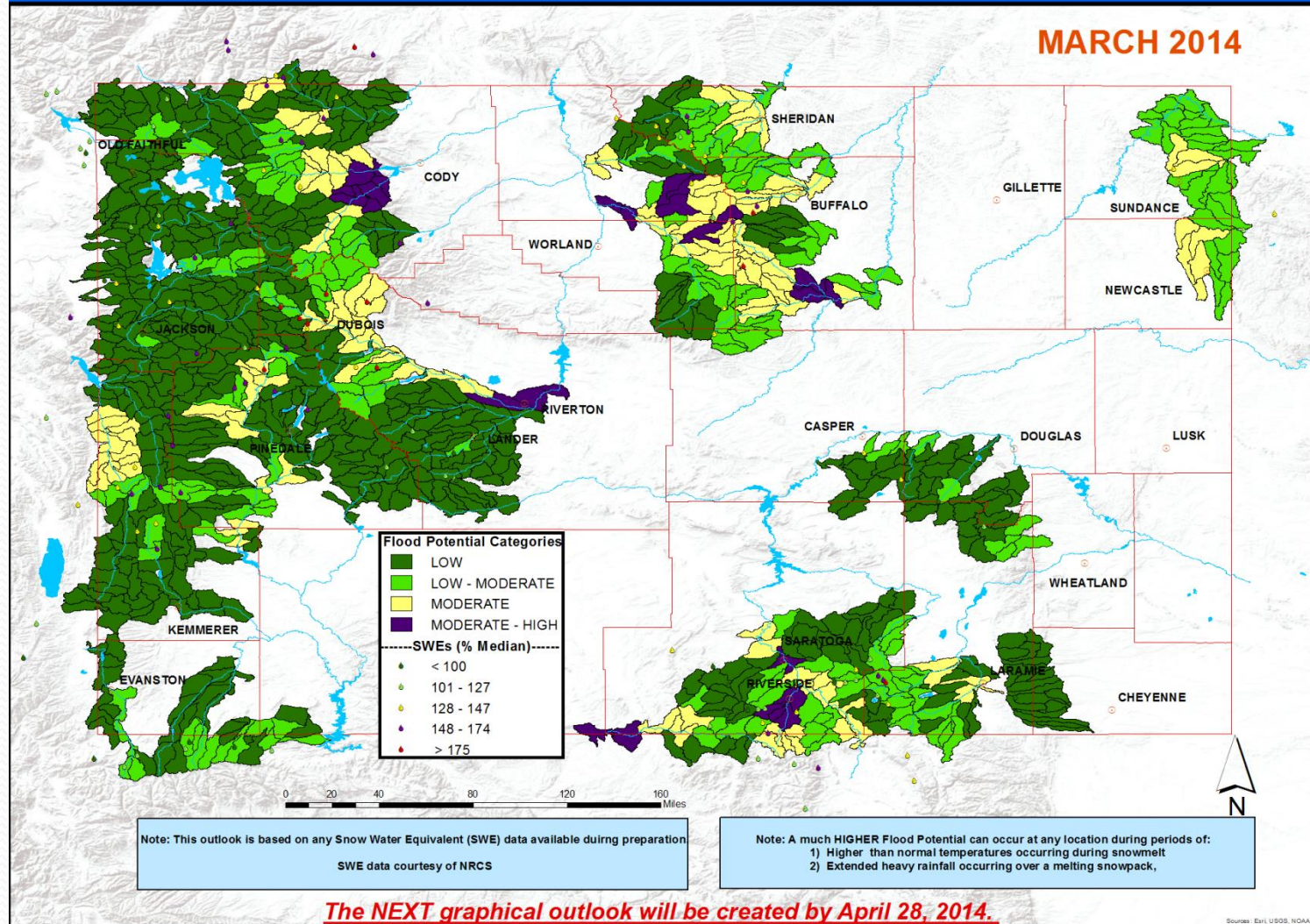
Gros Ventre Summit SNOTEL (Gros Ventre Range)

# Information from NOAA - NWS



# Information from NOAA – NWS (cont.)

## Wyoming Spring Snowmelt Flood Potential Outlook



<http://www.crh.noaa.gov/images/riw/hydro/floodoutlook.png>

# Information from NOAA – NWS (cont.)

- Wyoming Hydrologic Summary
  - Monthly report
    - [http://www.crh.noaa.gov/images/riw/hydro/hydro\\_report.pdf](http://www.crh.noaa.gov/images/riw/hydro/hydro_report.pdf)
- Wyoming Drought Information Page
  - Monthly report
    - <http://www.crh.noaa.gov/riw/?n=drought>
- Current and Forecast Wyoming Streamflows and/or River Stages
  - <http://water.weather.gov/ahps2/index.php?wfo=riw>
  - <http://waterdata.usgs.gov/wy/nwis/rt>



# John Shields retirement – Mar. 3, 2014

## 30+ years of service to the State of Wyoming



# Questions?



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