

Update on Wyoming Activities Related to the Missouri River Basin

May 23 and 24, 2012

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Wyoming State Engineer's Office

Presentation to the Powder/Tongue Basin Advisory Group
and the Northeast WY Basin Advisory Group



Topics to cover:

- Missouri River Programs in which the State Engineer's Office is involved
- Recap of water year 2011 in Wyoming and the Missouri River Basin as a whole

MISSOURI RIVER

R E C O V E R Y P R O G R A M

Programs in the Basin



Photo Credit: NEBRASKAland Magazine/Nebraska Game and Parks Commission

Missouri River Basin

Nation's Longest River (2,321 miles)

From Three Forks, Montana to St. Louis, Missouri

Eight Authorized Purposes:

- 1) Fish & Wildlife*
- 2) Flood Control*
- 3) Hydropower*
- 4) Irrigation*
- 5) Navigation*
- 6) Recreation*
- 7) Water Quality*
- 8) Water Supply*



What is the MRRIC?

- *Authorized in Section 5018 of the 2007 Water Resources Development Act (WRDA) and established by the Assistant Secretary of the Army (Civil Works).*
- *Makes recommendations and provides guidance on a study of the Missouri River and its tributaries, and on the existing Missouri River recovery and mitigation program.*
- *Helps guide the prioritization, implementation, monitoring, evaluation, and adaptation of recovery actions.*
- *Includes a broad stakeholder representation to ensure a comprehensive approach to Missouri River recovery implementation while providing for congressionally authorized Missouri River project purposes and to ensure public values are incorporated into the study and the recovery and mitigation plans.*

Role of MRRIC

Water Resources
Development Act
(WRDA) of 2007

2003 Biological
Opinion (BiOp)
(Amended)

Bank Stabilization
and Navigation
Project (BSNP)
Mitigation Plan

MRRIC

Provide Recommendations

Missouri River
Recovery Program
(MRRP)
(Existing Recovery &
Mitigation Plans)

Missouri River
Ecosystem
Restoration Plan
(MRERP)
(Study)

Water Resources Development Act

WRDA 2007 Section 5018

Part (a)

The Secretary of the Army, in consultation with the MRRIC, shall conduct a study of the Missouri River and its tributaries to determine actions required to:

- mitigate losses of aquatic and terrestrial habitat*
- recover federally listed species under the Endangered Species Act of 1973*
- restore the ecosystem to prevent further declines among other native species*

Part (b)

Recovery Implementation Committee to be established by Secretary

Committee membership includes:

- Federal Agencies*
- States*
- Tribes*
- Non-Governmental Stakeholders*

Committee duties include:

- Provide Guidance to Secretary, Federal Agencies, Tribes, & State Agencies on the Study*
- Provide Guidance and Recommendations to Secretary on Missouri River Recovery and Mitigation Plan*

Missouri River Recovery Program

- *Habitat Construction*
 - *Shallow Water Habitat*
 - *Emergent Sandbar Habitat*
 - *Cottonwood Reforestation*
- *Propagation/Hatchery Support*
- *Research, Monitoring, & Evaluation*
- *Flow Modifications*
- *Public Involvement*



Threatened & Endangered Species



Interior Least Tern
(E)

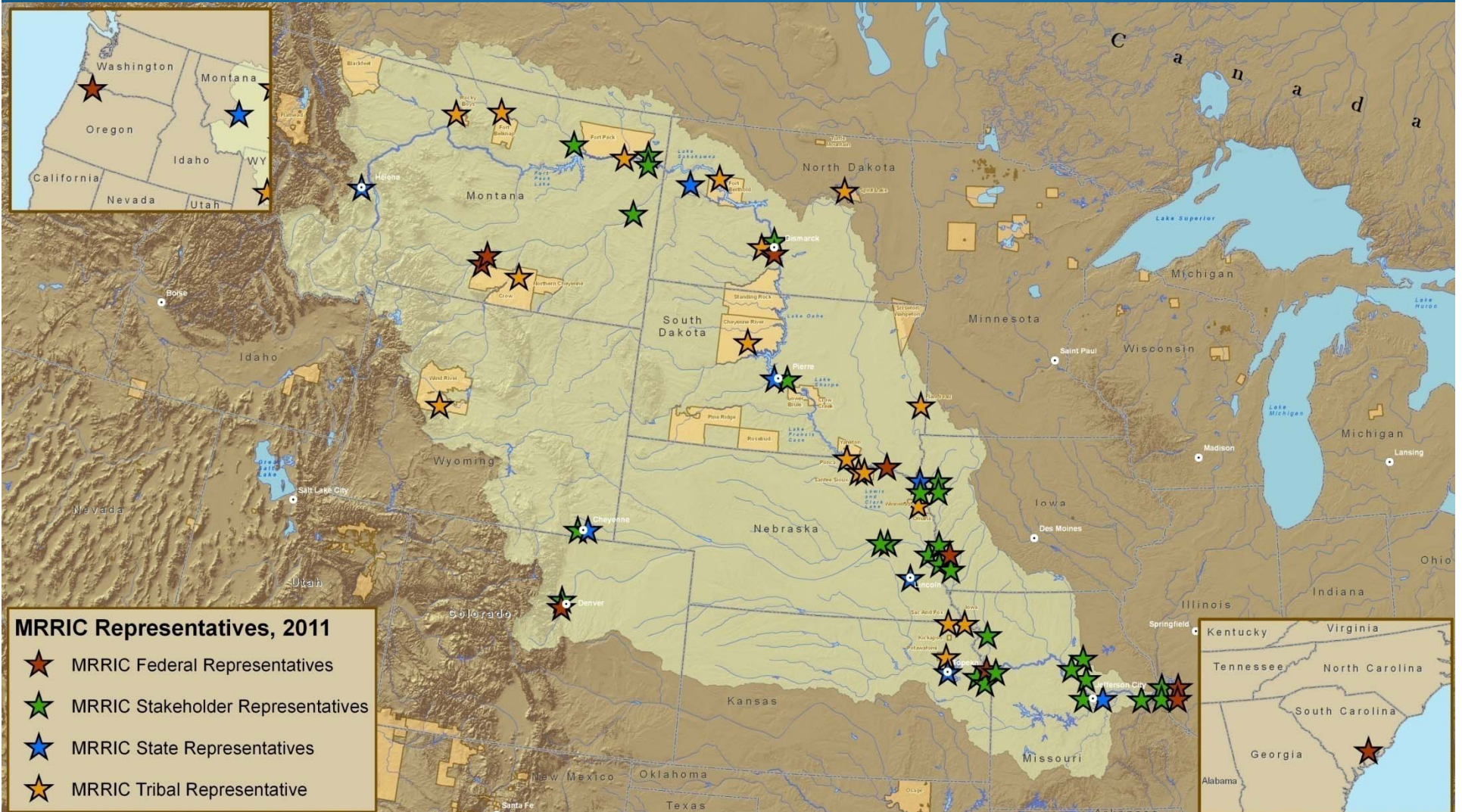


Piping Plover
(T)



Pallid Sturgeon (E)

Shared River, Shared Interests



Missouri River Basin States

MRRIC

- *Iowa*
- *Kansas*
- *Missouri*
- *Montana*
- *Nebraska*
- *North Dakota*
- *South Dakota*
- *Wyoming*



Unique Features/Opportunities

Charter drafting team was a collaborative effort

Interaction with basin leaders and decision-makers

Mutual learning opportunities

➤ *Missouri River Recovery Program*

➤ *Social, economic, cultural*

Contributing to Missouri River Recovery Program

Relationship building

Committee recommendations are made by consensus



MRRIC Meetings

Approximately every three months - four per calendar year

Meeting sites alternate

Monday afternoon - optional tours and information sessions

Formal meeting - Tuesday through mid-day Thursday

One-day video-conference (VTC) webinar scheduled each Spring

Information sharing webinars between meetings

Frequent work group telephone conferences between meetings

***Note: Members are not reimbursed for travel
or lodging under statute***



MISSOURI RIVER ECOSYSTEM RESTORATION PLAN (MRERP)

- Authorized by Congress in WRDA 2007, Sec. 5018
- Effort led by USACE in partnership with the USFWS to develop a plan to mitigate, recover, and restore the Missouri River ecosystem
- Provides a scientific focused analysis of restoration, mitigation and recovery needs and alternatives for the Missouri River for the next 50 years (NEPA and Amended BiOP)
- Considers impacts and benefits to existing social, cultural, and economic resources in the basin
- MRERP targeted by MO congressional delegation
- Introduced amendments to the FY12 budget that halted spending
- HR 2354 eliminated spending in FY12
- Prior to suspension, MRERP had completed 4 years of a multi-year cooperative effort

MISSOURI RIVER AUTHORIZED PURPOSES STUDY (MRAPS)

- Intended to provide a comprehensive review of the eight Missouri River mainstem system authorized purposes and infrastructure to determine if 1944 Flood Control Act continues to meet contemporary needs
- \$25 million authorized by Congress in 2009
- Only scoping and initial steps have been completed
- On Feb. 19, 2011, House Amendment 53 was passed which eliminated funding for MRAPS
- MRAPS targeted by MO congressional delegation
- Introduced amendments to the FY12 budget that halted spending
- HR 2354 eliminated spending in FY12

MISSOURI RIVER ASSOCIATION OF STATES AND TRIBES (MoRAST)

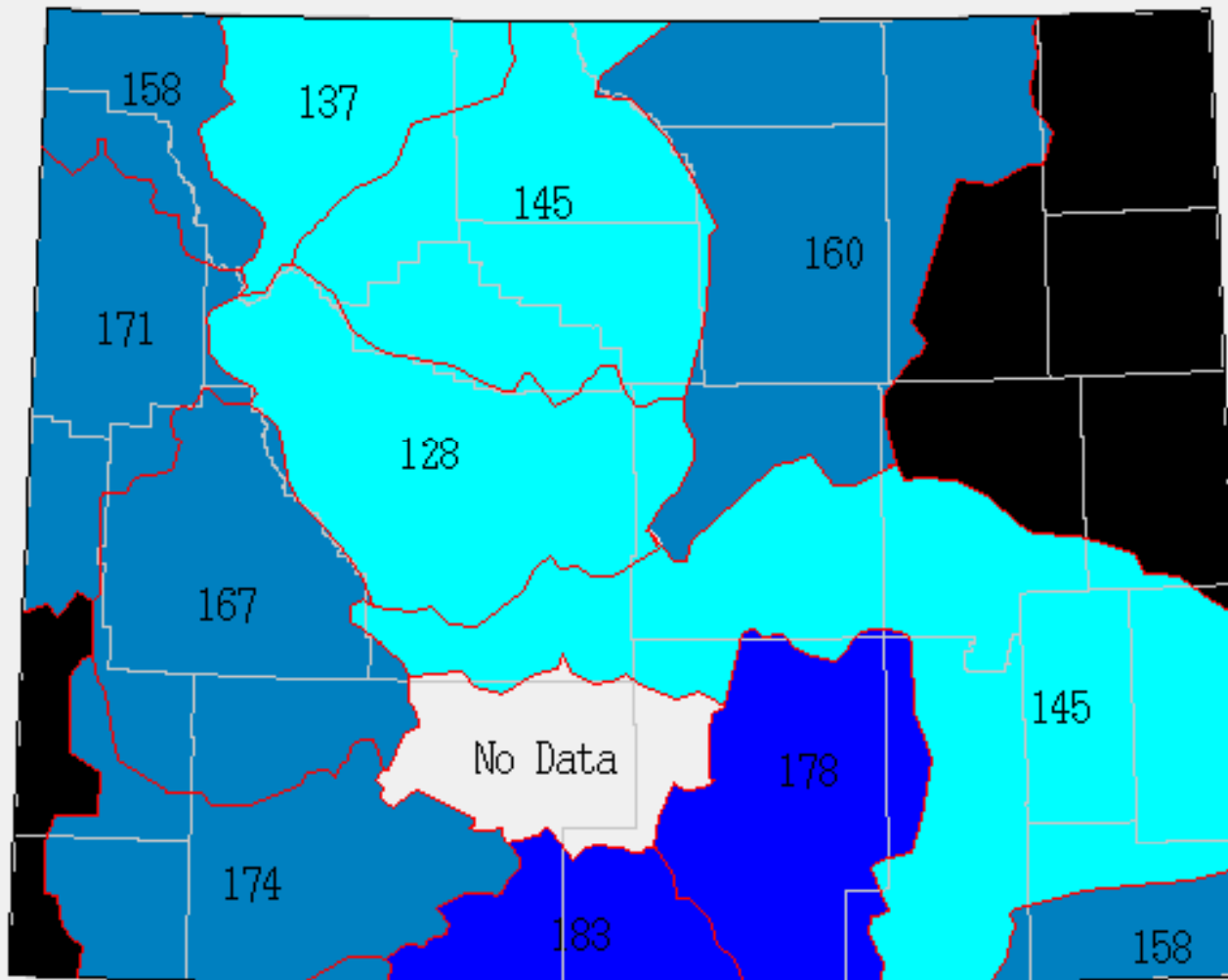
- Regional interstate organization formed by joint resolution of the Governors of Wyoming, Montana, North Dakota, South Dakota and Kansas and the Mni Sose Intertribal Water Rights Coalition
- Formed to help resolve issues of concern to the basin states and tribes
- Serve as a forum to foster communication and information exchange among the member states, tribes and various other governmental units
- Facilitate the management of the natural resources of the Missouri River Basin, including water resources, fish and wildlife while considering the impacts to the economic, historical, cultural, and social resources
- Issue paper on Congressional funding for MRAPS and MRERP

Recap of Water Year 2011

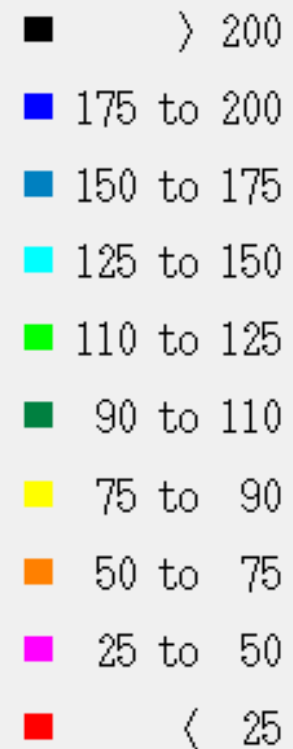


Snowpack continued to increase due to May storms

SWE % of Average as of Friday, 06 May 2011



Percent
of Average



* = Data may not provide a valid measure of conditions

Grassy Lake SNOTEL—May 2011



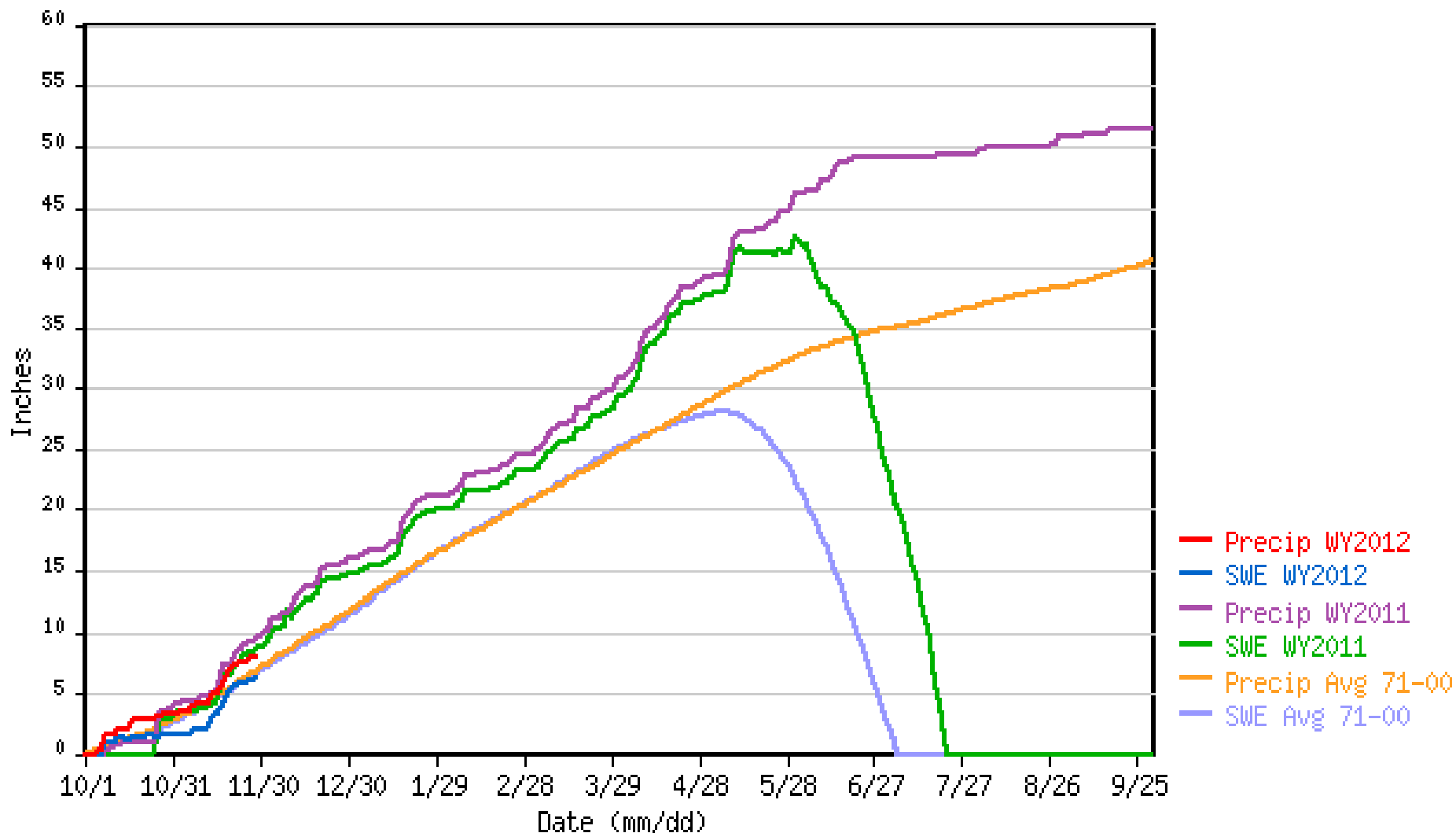


Wind/Big Horn System

- Snow continued to build due to May and June events
- Fortunately June remained cool and the large snowpack released fairly slowly

TOGWOTEETEE PASS SNOTEL as of 11/28/2011

*** Provisional Data, Subject to Change ***



US 14A-Bighorn Mountains



Opening Hwy 14A



Shell Falls

over 50 mudslides impacted highways in WY (May-July)



Approach to Wigwam Fish Hatchery



US 26 Flooding



US 26 after the flood waters have gone down



Debris above causeway Bighorn Reservoir

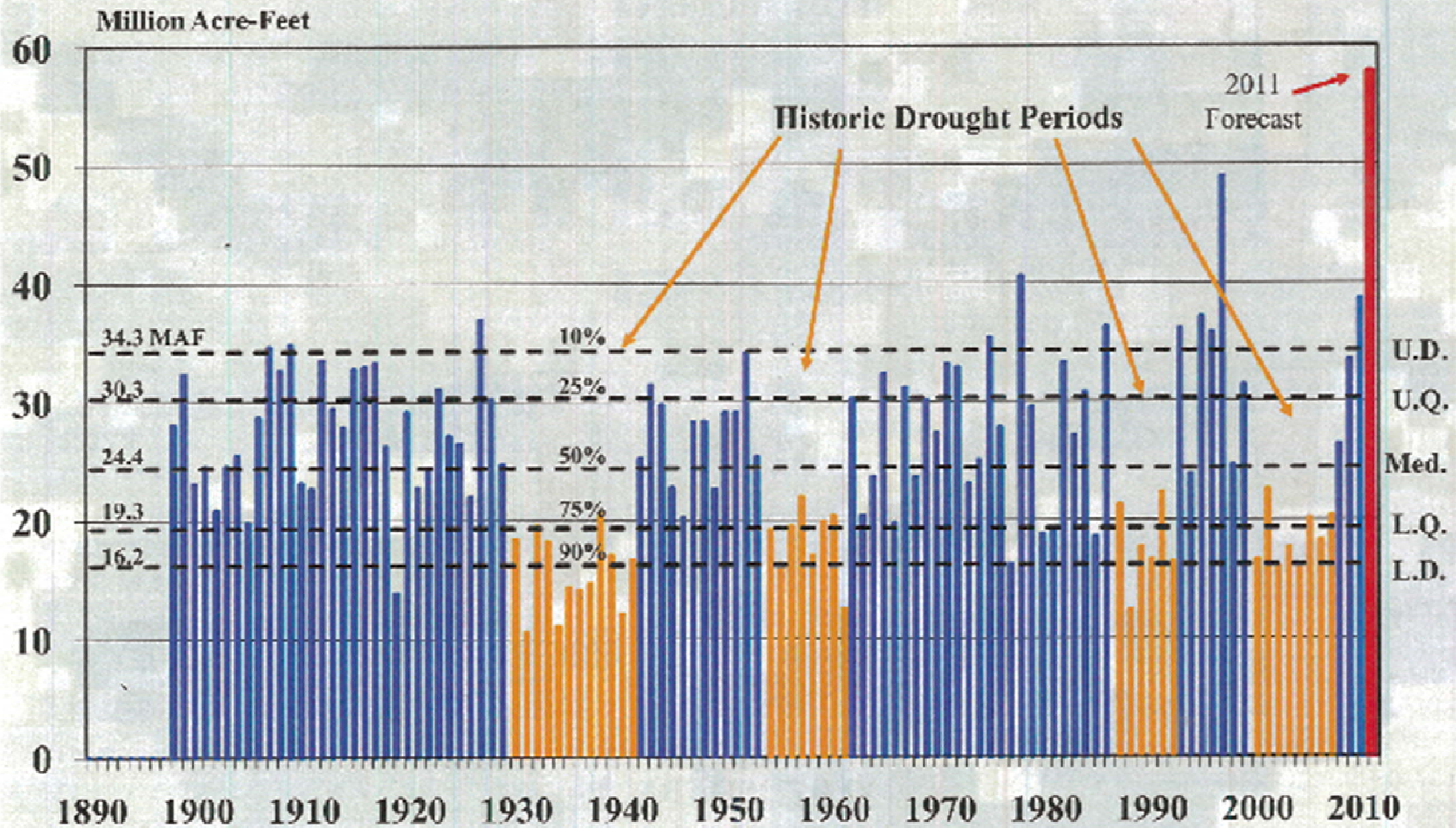


Six mainstem facilities operated as designed

Although the inflows in 2011 far surpassed the design flows for the system, it performed well. The highest previous release at Garrison Dam above Bismarck and Oahe Reservoir above Pierre had been 65,000 cfs. In 2011, flows of 150,000 cfs were released.



Missouri River Mainstem System Annual Runoff above Sioux City, IA





Flood of 2011

- 2010 Runoff = 38.7 MAF (3rd highest)
- 3 consecutive years above average
- 2010 was also a lower basin flood year
- All flood control storage space was available prior to 2011 runoff season
- Downstream flood control operations in March and early April 2011



2011 – What Actually Happened

- 2011 runoff was 61.2 million acre-feet (MAF)
 - 247% of normal and the highest runoff in 114 years
 - May, June and July 2011 were 3 of top 5 highest months of runoff in 114 years of record
 - 2011 March – July runoff (48.4 MAF) exceeded the reservoir storage design flood (39.7 MAF)
 - System storage peaked at 72.8 MAF on July 1

Flooding in Montana near Hardin, MT after May, 2011 rain event



AP



Hamburg, IA
levee breach

Photos from western Iowa taken by a MRRIC member's daughter, Maddison Sieck



Union Township
Southeastern Nebraska

Holt County, Northwestern MO

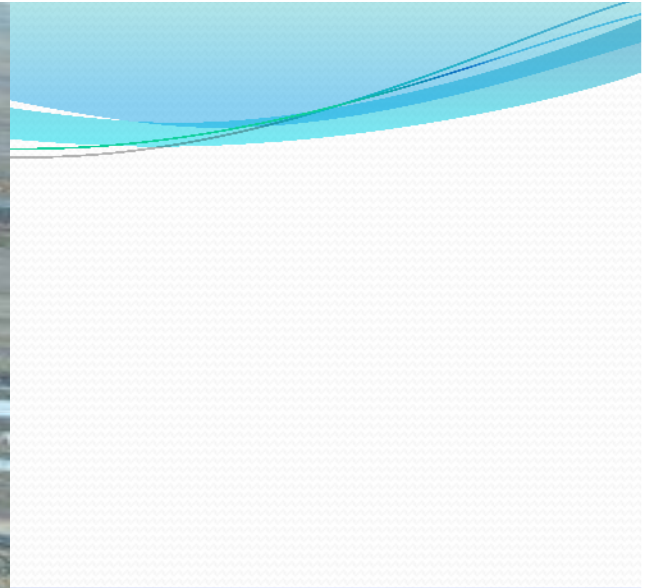


NRCS offices are actively involved with the Flood Recovery Task Force to aid farmers in dealing with Sedimentation removal/remediation





Woltemath Farms
Hamburg, IA

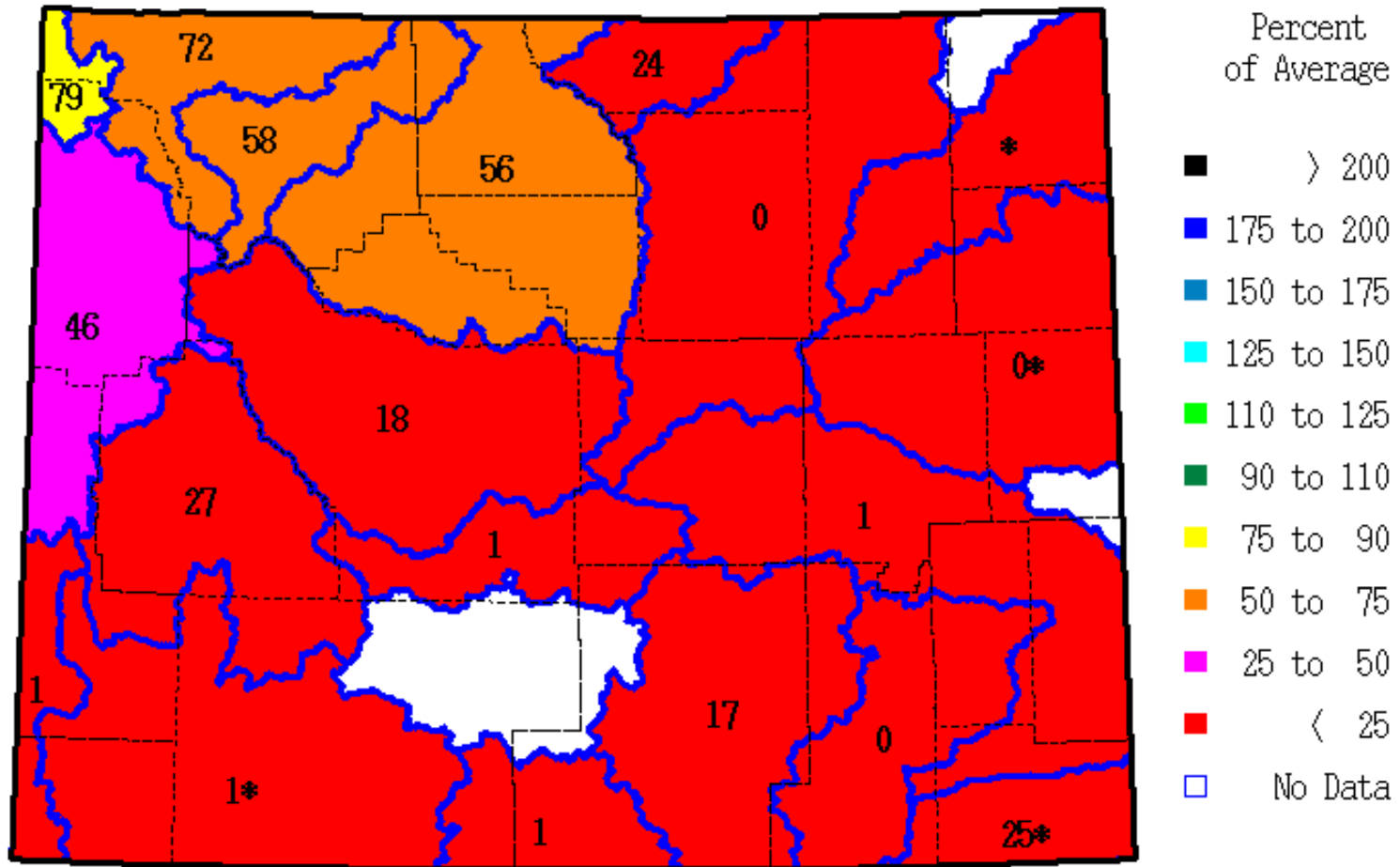


Monday Morning Snow Report

DRAINAGE BASIN	5/21/2012	5/14/2012	5/7/2012	5/21/2011	5/14/2011
SNAKE RIVER	50	60	70	196	182
MADISON	78	94	103	186	176
YELLOWSTONE	73	82	91	165	156
WIND RIVER	19	24	41	195	141
BIGHORN BASIN	57	68	71	224	165
SHOSHONE RIVER	60	72	80	145	144
POWDER	4	26	39	296	184
TONGUE	25	42	64	242	168
BELLE FOURCHE	0	11	0	0	344
CHEYENNE	0	0	0	0	522
UPPER N. PLATTE	17	27	34	211	186
SWEETWATER	0	3	25	162	116
LOWER N. PLATTE	0	0	16	217	162
LARAMIE	0	7	16	233	186
S. PLATTE	0	20	38	190	164
LITTLE SNAKE RIVER	0	31	37	215	190
UPPER GREEN	28	34	46	226	192
LOWER GREEN	14	18	29	228	181
UPPER BEAR	0	1	19	317	244
Weighted State Average	22	32	44	220	172

Map of Percent of Average Snow Water Equivalent

SWE % of Average as of Wednesday, 23 May 2012



* = Data may not provide a valid measure of conditions

Questions?

No. 3062.

