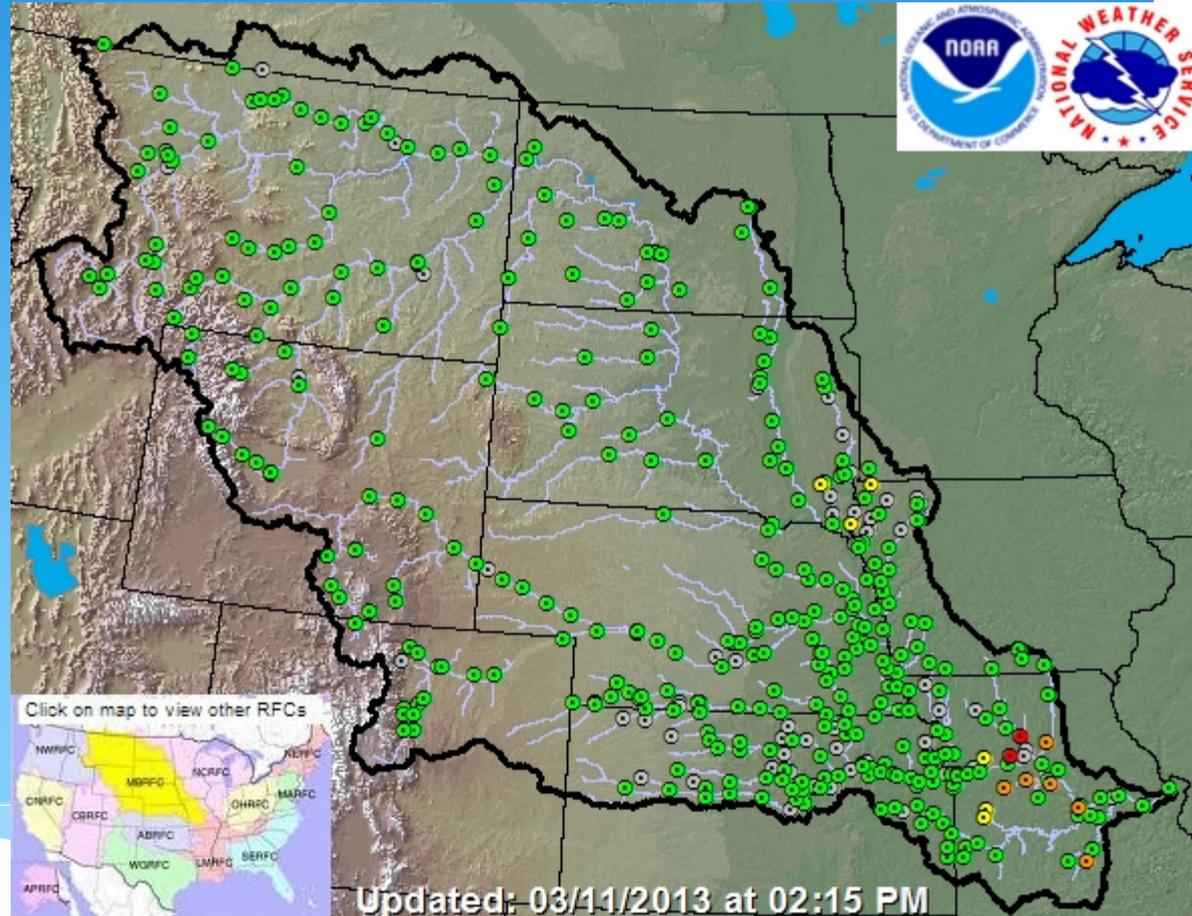


# Missouri Basin Climate Outlook

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## MBRFC Observed River Conditions

- |               |                    |                     |
|---------------|--------------------|---------------------|
| ⊙ No Data     | ● Near Flood Stage | ● Moderate Flooding |
| ● No Flooding | ● Minor Flooding   | ● Major Flooding    |



# Flood 2011 Review

- \* **More soil moisture monitoring**
- \* **Better plains snow pack monitoring**



# Drought 2012

- \* **More soil moisture monitoring**
- \* **Better plains snow pack monitoring**

# Bismarck Meeting Fall 2012

- \* NOAA /NOHRSC
- \* USDA-NRCS
- \* SD/ND State Climate Office
- \* SDSU Extension
- \* USGS
- \* NWS
- \* BIA
- \* USACE
- \* WGA
- \* What would it take and cost to make this happen?

## Upper Missouri Basin:

### Proposal for Enhanced Monitoring for Floods and Drought

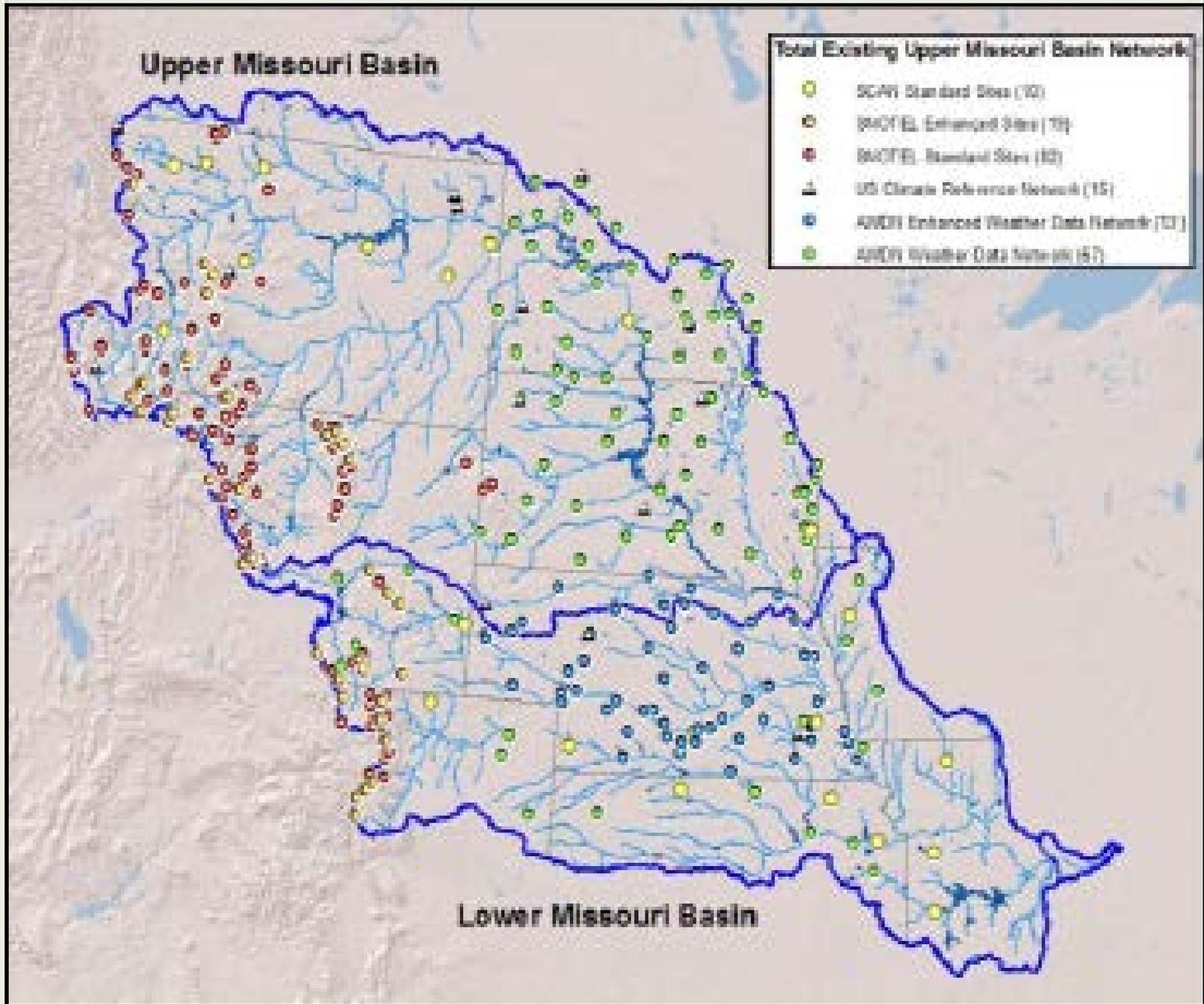
*February 2013 – Prepared by an inter-agency team of monitoring, forecasting and water management experts.*

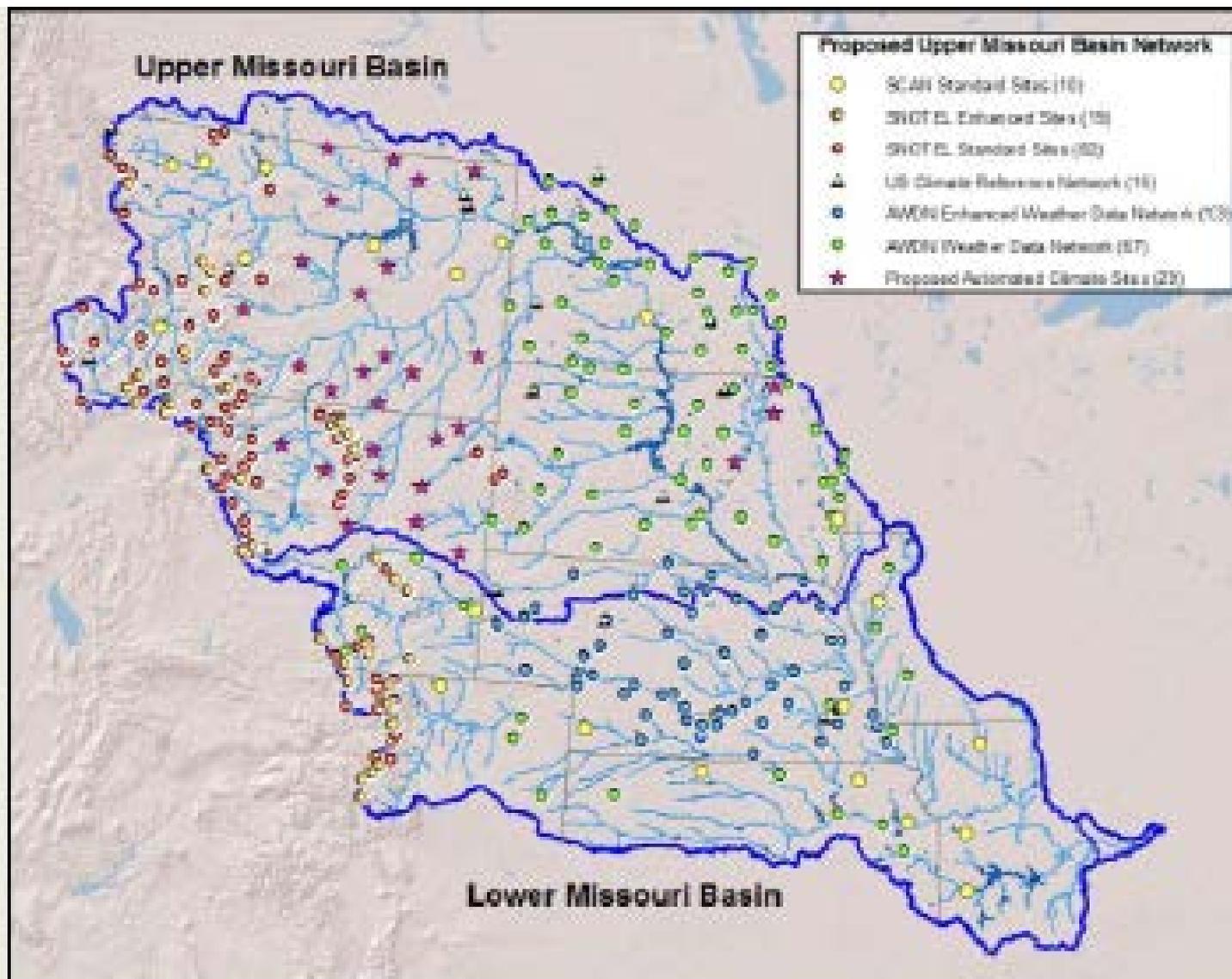
**Summary:** This proposal identifies critical investments in soil moisture and snowpack monitoring in the Upper Missouri River Basin and plains, in order to reduce flood risk and improve river and water resource management in the Basin. This enhanced monitoring network will require a \$6.25 million capital investment and approximately \$1.5 million in annual operations. Decision makers will take the next step by determining funding sources and implementation priorities for the enhanced monitoring network.

# Plan Basics

- \* **Enhance existing automated monitoring SD/ND**
  - \* Upgrade and add soil moisture
- \* **Expand monitoring**
  - \* SD SCO
  - \* MT/WY USDA-NRCS
- \* **Enhance USDA-NOHRSC Snow monitoring**
- \* **Coordinate volunteer plains snow monitoring**
  - \* NWS COOP
  - \* COCORAHS
  - \* Ad hoc snow monitoring – volunteer coordinator

Upper Missouri Basin





*Figure 1: Top, Total Existing Upper Missouri Basin Network. Bottom, Proposed Network.*

# Status

- \* Floated to states initially
- \* Plan added to Water Resources Development Bill
- \* Passed Senate
- \* Not included in House bill
- \* Awaiting conference

# Additional

- \* 2 pagers
- \* National soil moisture network