



IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

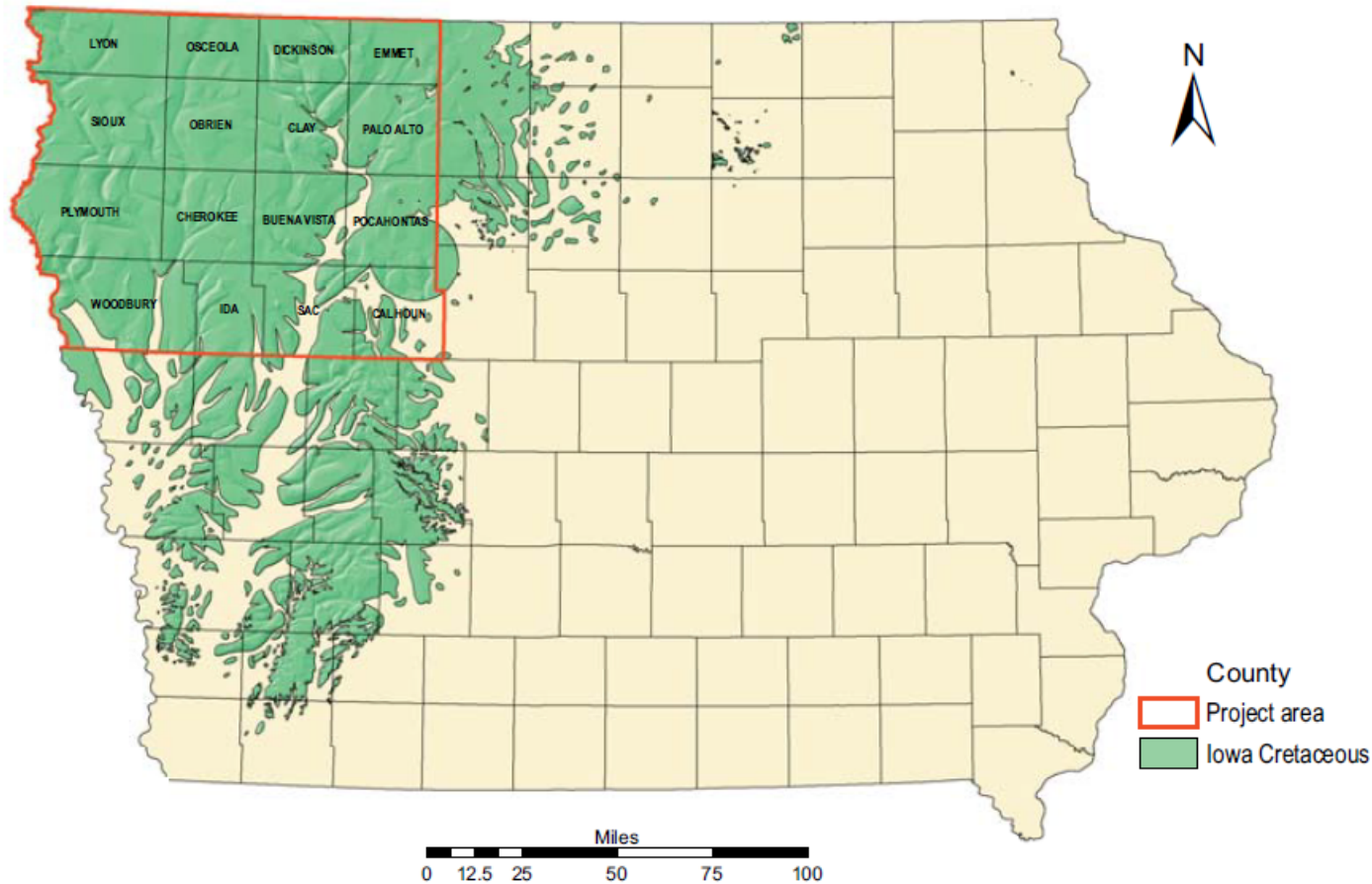
State of Iowa Drought Planning

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Mike Gannon, Iowa Geological Survey

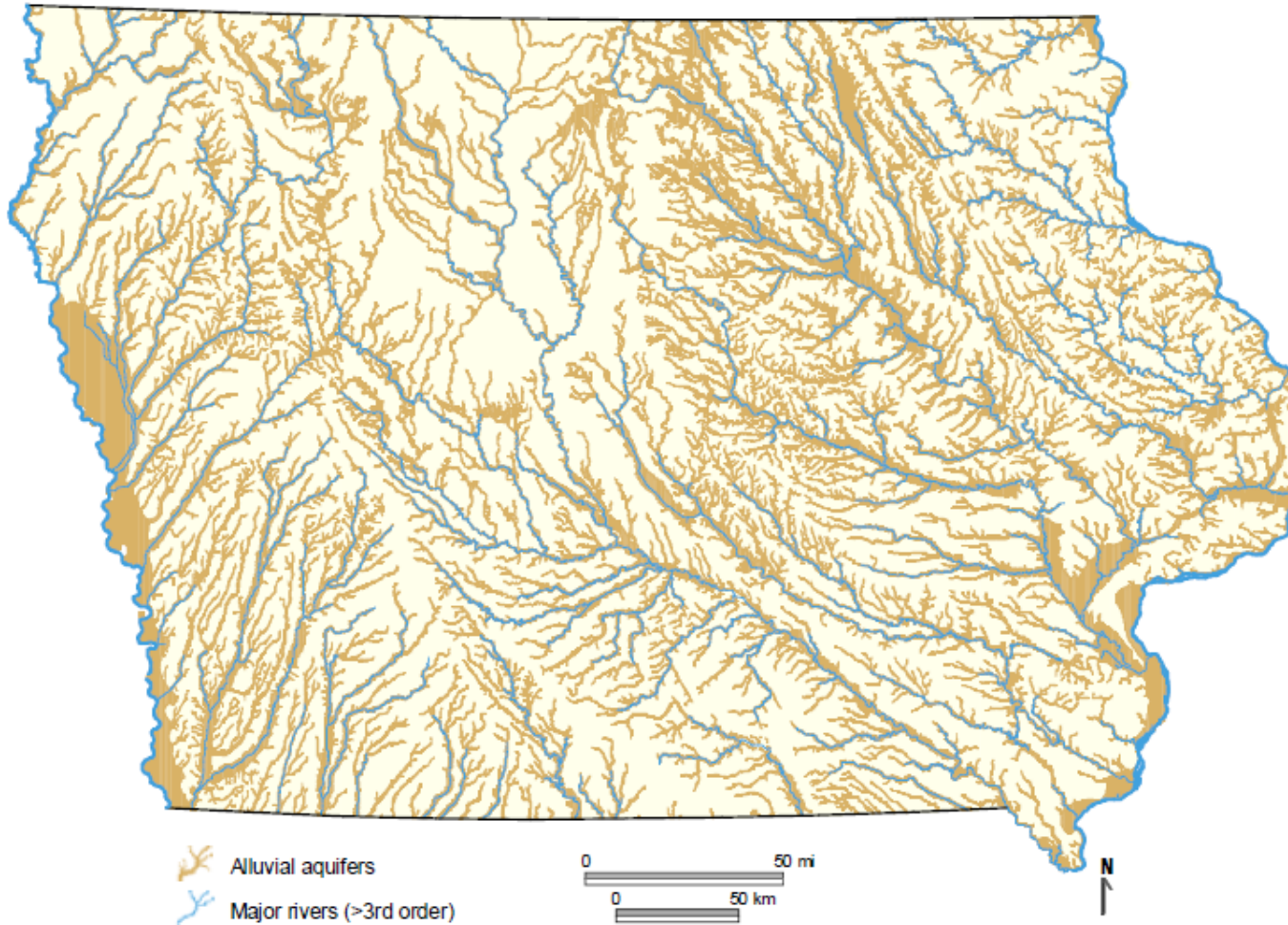
Midwest Drought Early Warning System (DEWS)
Regional Workshop – November 9, 2016



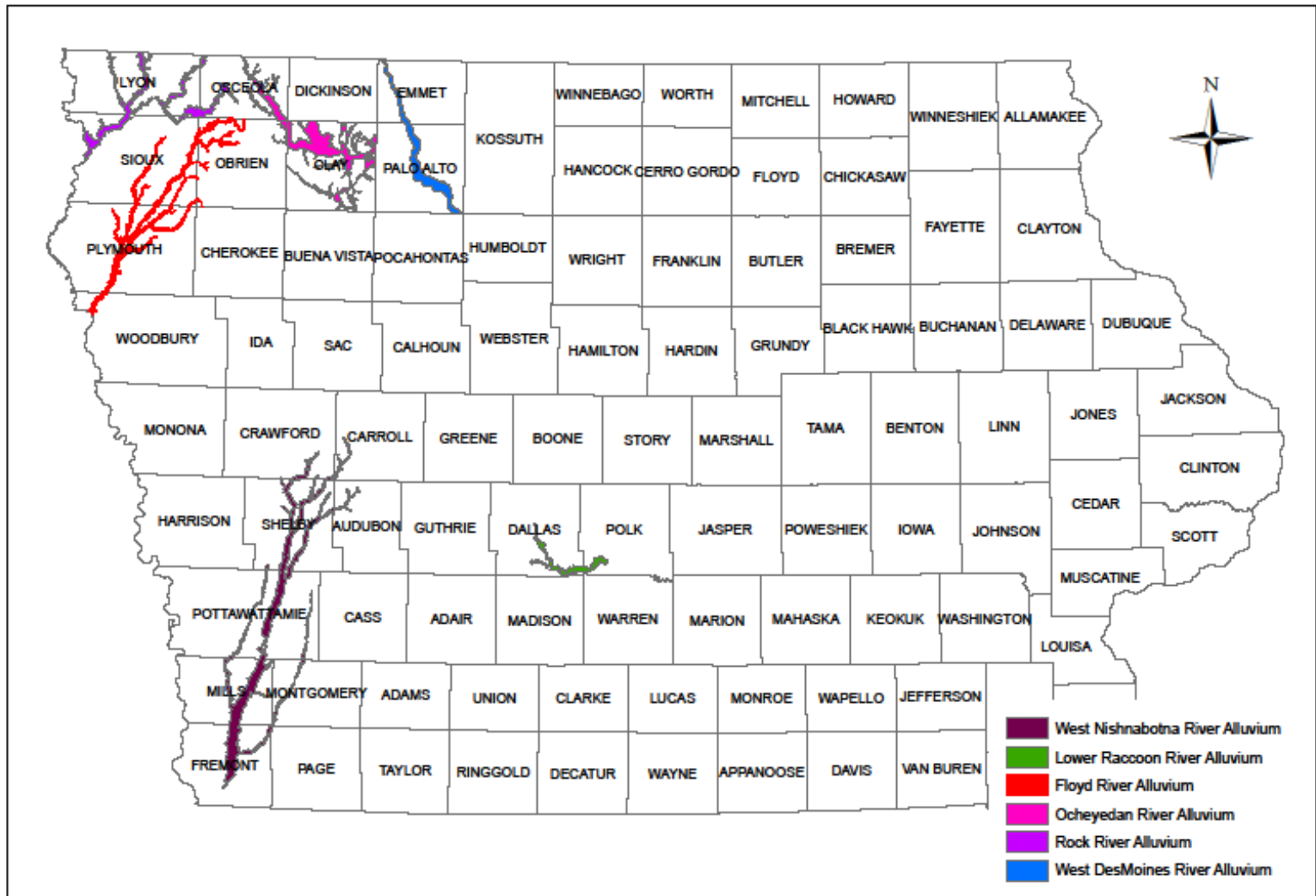
Dakota Aquifer – most frequent problem area in Iowa, both in the Dakota sandstone and in the overlying alluvial formation/s



Alluvial Aquifers of Iowa

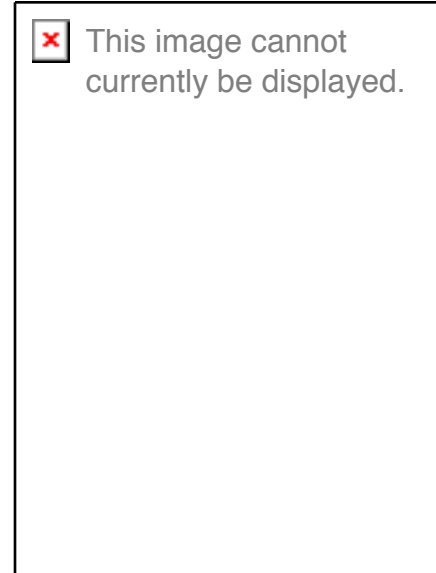


Most Drought Vulnerable River Systems in 2012



How Do We Allocate Water?

- Iowa Code
 - All waters are “*public waters and public wealth*” of Iowa citizens. Iowa statute provides an allocation system based on “*beneficial use*”.
 - Waste, unreasonable use, unreasonable methods of water use are prevented.
- Permit System
 - Withdrawals in excess of 25,000 gallons/day from streams or aquifers require a permit from IDNR.
- Permit Reviews and Evaluations



WHY PERMITS?

- Goal is to maintain level to satisfy demand.
- All permits must consider “effect on the natural flow” and the river’s established “average minimum flow”.
- Also must consider effects on landowners with “prior or superior rights”. How this is done is ambiguous. IDNR’s role. Use of an agency is common in “Western” States.

It is likely that we will see situations where the demand for water exceeds the supply of water . . . In practice, what happens then?

Drought Planning in Iowa

- Governor's Proclamation?
- Water Use Prioritization System
(never used)
- After 2012 – no legislative support for soil moisture network
- Planning has become a Local Effort – supported by science and data provided by the state.

Drought Planning is LOCAL

Short term

Long-term

Tools and resources

Short-Term Planning for Water Utilities

- Monitor Conditions
 - Supply and Demand
- Pay close attention to the Drought Monitor, local streamflow and precipitation, or other available data.
- Write, review, and/or update a Drought Preparedness and Response Plan
 - Two Primary Elements
 - What will you ask your users to do?
 - When will you ask them to do it?

- **When do you ask them to do it?**
 - Decide Ahead of Time
 - Objective and Measurable
 - Based on demand?
 - Based on infrastructure limitations?
 - Based on supply limitations?
 - This may be the most difficult element of the plan – very community/system specific.

- **Questions**

