

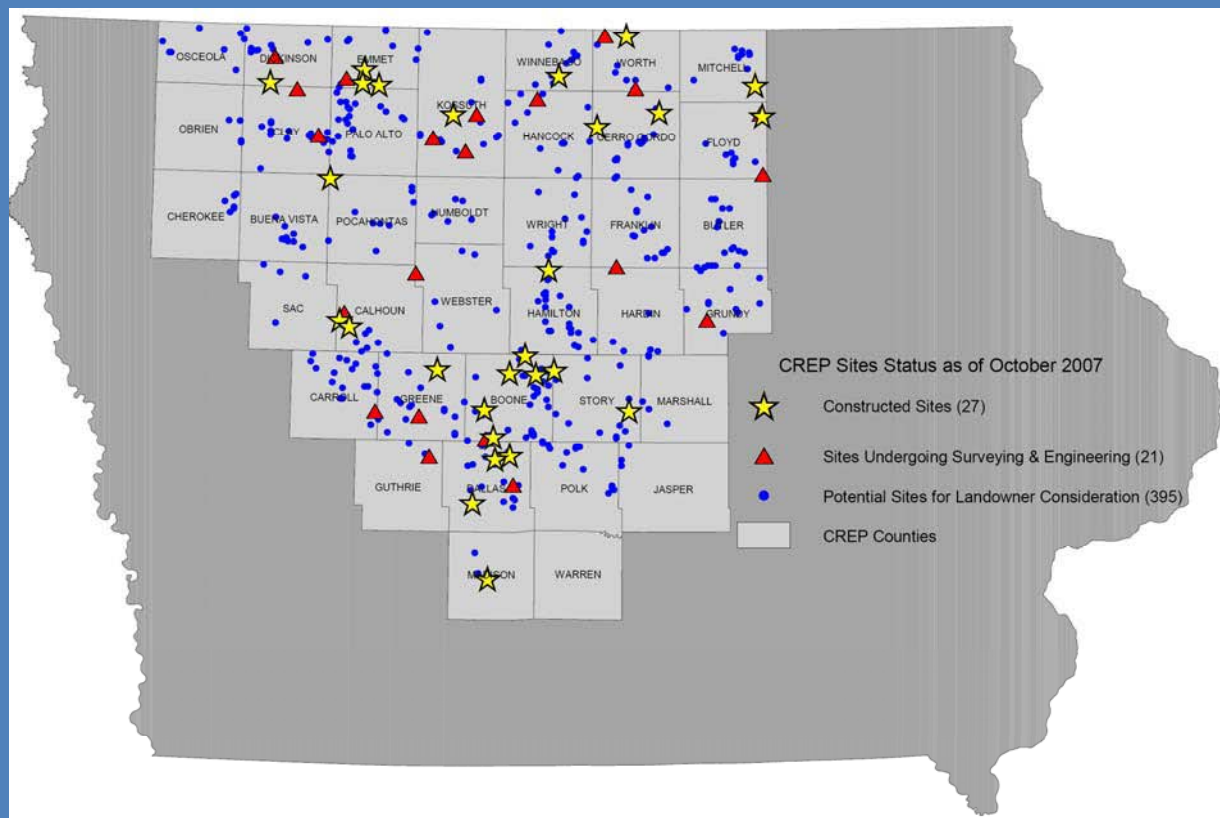
US EPA ARCHIVE DOCUMENT

CP 39 Work Planning for Minnesota

Wayne Anderson, Minnesota Pollution Control Agency
State Level Nutrient Reduction Strategies Workshop—
Agricultural Component
Columbus, OH June 13-15, 2011

CP39 Farmable Wetlands

- National emphasis on constructed wetlands to remove nitrate, based on Iowa effort



CP39 in Minnesota



- Recognize need to remove nitrate
- Other needs as well: phosphorus, sediment, habitat, greenhouse gases...
- How do we optimize to meet multiple goals?
- Could a focus on nitrate alone have unforeseen side effects?

Planning Approach



- EPA Region 5 supported an interagency workshop to address CP39 in Minnesota
- Develop a Plan for Research to evaluate large scale implementation of constructed/restored wetlands in the agricultural landscape of Minnesota
- Plan components contain numerous items that could potentially be funded by a variety of state and federal agencies

Expert and Agency Presentations



- University researchers:
 - Dr. John Nieber (wetland restoration issues)
 - Dr. Jeff Strock (constructed wetland design)
 - Dr. David Mulla (targeting tools)
 - Dr. Susan Galatowitsch (landscape design aspects)
- Agency Perspectives: MPCA, MDA, FSA, BWSR, NRCS, EPA

Work Plan: Short-term Needs

I. MPCA Objectives

- Optimize to reduce nitrogen, phosphorus, and sediment loads
- Acknowledge hydrologic control as key component of sediment reduction
- Recognize tradeoffs between objectives
- Habitat is a potential subsidiary benefit, not a primary objective (may best be addressed by separate wetland restoration projects)



Work Plan: Short-term Needs

2. Siting Tool

- Develop ranking approach using terrain analysis
- Field test and validate approach

3. Design refinement for MN objectives

- Review of research
- Simulation of long-term performance
- Cost-benefit analysis
- Design recommendations



Work Plan: Short-term Needs

4. Pilot Studies and Demonstration

Wetlands are key to understanding the outcomes and should be pursued now

- Targeting and design guidance based on current knowledge
- Intensive monitoring of initial pilot sites to determine performance across multiple objectives



Demonstration Wetlands at Lambert Southwestern Research and Outreach Center



Courtesy of Dr. Jeff Strock










Work Plan: Longer-term Needs

- 
- Ongoing monitoring of CP39 installations
 - Sentinel Wetland program
 - Support to SWCDs for practice rollout
 - Ongoing stakeholder support and research on selling the practice
 - Stakeholder fact sheets
 - Survey of Iowa participants
 - Social Indicators Project