

Designing CREP for The Lower Mississippi Basin in Minnesota



By Bev Nordby
Mower SWCD

A black and white photograph of two fly fishermen in a stream. They are wearing waders and hats, and are in the middle of casting their lines. The water is rippling, and the background shows a rocky stream bed and some vegetation on the banks.

**Landscape Buffer
Initiative**

**Through the
Basin Alliance for the Lower
Mississippi Minnesota
(BALMM)**

Purpose

Placement of multi-functional vegetated buffer on the landscape to reduce runoff, soil erosion and water contamination while providing high quality habitat of wildlife and abatement of peak stream flows.

Courtesy of DNR

Programs to Implement the Buffer Initiative

USDA – Conservation Reserve Program (CRP)

**Conservation Reserve Program, Wetland Reserve
Program and others**


BWSR – Reinvest in Minnesota (RIM)

DNR – Flood Management and Easement Programs

Pheasants Forever Partnership

CREP – Combination of Federal and State

Funding



How did we design a CREP Program for the Southeast?

What is the interest of the landowners?

&

What are our needs?

Courtesy of Mower SWCD

Landowner Interest

Unfunded Projects:

- 122 RIM Applications
- 60 WRP Contracts
- 53 EWP Contracts

Shortfall in Funding:

\$18,000,000.00

This does not include the landowners that have not submitted applications due to a shortage of program funds.

Flooding Challenges



Courtesy of the City of Austin

An aerial photograph of a rural landscape. A winding road or path cuts through the scene, surrounded by fields and patches of trees. The terrain appears to be a mix of agricultural land and natural areas. The text is overlaid on the upper portion of the image.

Priority Areas Landscape Buffer Initiative

- Highly Erodible Land
- Riparian Zones
- Wetland Restoration Sites
- Groundwater Protection Zones

Courtesy of NRCS SE Area Office

Highly Erodible Land



**60,000 acres are eroding
greater than 4T and
150,000 acres are eroding
between 2T and 4T**

**Resource Need: 210,000
acres**



**Critical Area Seeding &
Contour Buffer Strips
Acreage Goal: 40,230**

Courtesy of NRCS SE Area Office

Critical Area Seeding &

Contour Buffer Strips

Acreage Goal: 40,230

Combination of critical seeding and hardwood establishment on 25% of farmland that is eroding at 4T.

With Contour Strips also implemented, erosion rates will be reduced by:

<i>Rate of Erosion</i>	<i>Before</i>	<i>After</i>
4T	27 Tons/acre	7 tons/acre
2T to 4T	12 tons/acre	6 tons/acre

Riparian Zones



In the western part of the basin, depending on County, vegetated buffers along streams & ditches range from 28% to 40%.

Resource Need – 160,000 acres

DNR Satellite Imagery

Courtesy of NRCS SE Area Office

Riparian Zones

Goal: 50% of land enrolled that is presently cropped with a 100 foot buffer.

Acreage Goal: 25,000 acres of Filter Strips and Riparian Buffers-

Courtesy of NRCS SE Area Office



Wetland Restoration Sites

Challenges Resulting from Land Use Changes:

- Increase Runoff
- Higher Stream Flows
- Reduced Habitat

Resource Need:
100,000 acres

*National Wetland Inventory and GIS mapping by
SWCD's.*

Courtesy of Mower SWCD

Wetland Restorations

**Acreage Goal:
20,000**

**In priority areas to
maximize reduction in peak
stream flows.**

Courtesy of Mower SWCD



Groundwater Protection Zones

3 Priority Areas

- Sinkholes
- Wellhead Protection Areas
- Focused Recharge Zones

Resource Need: 37,600 acres

Acreage Goal: 10,500

Courtesy of Mower SWCD



Sinkhole Protection

Acreage Goal: 1500

An inventory of sinkholes in the basin shows 5990 sinkholes, primarily in the eastern side of the basin.

Land enrolled could range from a 60 foot buffer to whole fields that have several sinkholes.

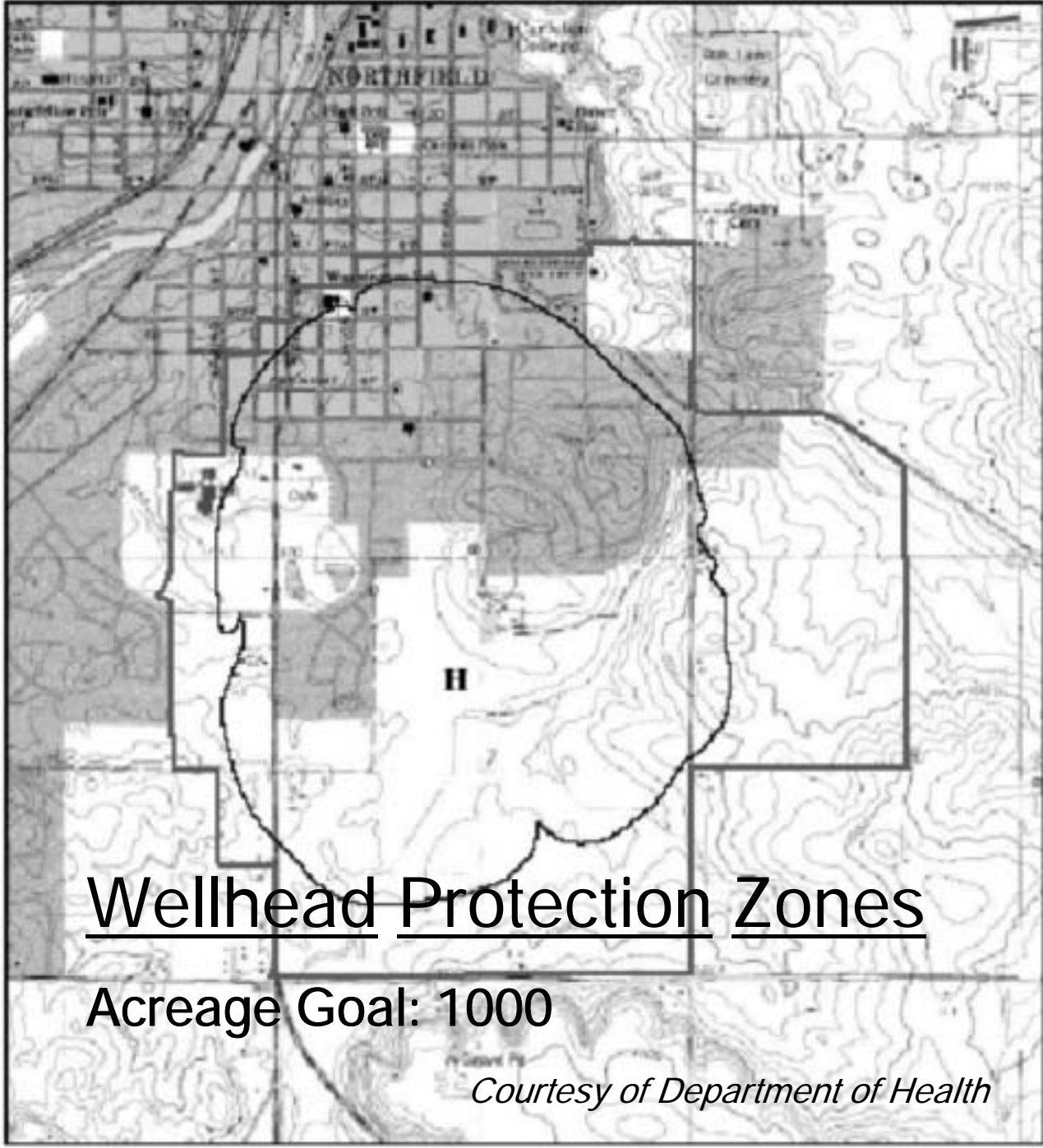
Focused Recharge Zone

At Decorah Shale Outcroppings

This groundwater recharge zone occurs throughout the karst area. Olmsted County has identified & mapped areas. Other Counties are also starting to identify these priority areas.

Acreage Goal: 8000 acres



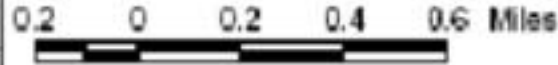


Northfield

*Drinking Water Supply
Management Area
(DWSMA) MN-00036
10 year Time of Travel*

- Public Water Supply Well
- Wellhead Protection Area (WHPA)
- DWSMA

H - High Vulnerability




Approved October 9, 1998

Wellhead Protection Zones

Acreage Goal: 1000

Courtesy of Department of Health



**What is the cost of the SE CREP
Application and how will it be
funded??**

Cost of project: Approximately \$225 million
(Over the Life of the New Farm Bill)

80% Federal Government - 20% State

Courtesy of NRCS SE Area Office

Easement Choice and Flexibility

To make the SE CREP application a successful program in participation and also achieving our environmental goals, BALMM and SWCD's have included the following options as a part of our application.



Easement Choice and Flexibility

Easement Size: 120 acre limit

If project area exceeds 120 acres, approval is needed by the local SWCD Board and the FSA committee.

There will also be an appeal process to the area and state level if denied.

Adopt Steve Taft's, Economist U of MN, Numbers for Cost of Easement, but....



Easement Choice and Flexibility

Practice

Easement Length

Highly Erodible

Contour Strips

15 year CRP contract with CREP Incentives

Critical Areas

20 year easement

Riparian Areas

Choice of 20 year, 50 year and 85 year

Easements

Wetland Restorations

Permanent (State Statue)

Groundwater Protection

Choice of 20 year, 50 years and 85 year



How Many Acres?



Out of the 2,790,060 acres that are cultivated in the basin, the application is addressing 95,730 acres that are marginal and/or are in sensitive karst areas.

An aerial photograph showing a river system. In the foreground, a dense forest covers a large area, with a river winding through it. The river flows from the bottom left towards the center. In the background, a large body of water, likely a reservoir or a wide river section, is visible, surrounded by more forested land and some open areas. The overall scene depicts a natural landscape with significant water and forest resources.

Challenges of our Landscape.....

Root River
Discharging into
Mississippi

August 1999

Courtesy of the MPCA

What a Difference CREP Could Make!!

Courtesy of Mower SWCD

