

CARLTON COUNTY SOIL AND  
WATER CONSERVATION DISTRICT

COMPREHENSIVE  
PLAN  
FOR

2015 THROUGH 2019

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## **DEFINITION OF PURPOSE FOR THE CARLTON COUNTY SOIL AND WATER CONSERVATION DISTRICT**

The Carlton County Soil and Water Conservation District (SWCD) is a subdivision of state government, created by the state under MN Statute Chapter 103C in 1961. The State charged the SWCD with assisting land occupiers with implementation of practices that conserve the soil and water resource of the State. A board of five (5) supervisors, elected at the general election, governs the District with terms of office being four (4) years.

The Carlton County SWCD was formed in 1961 through a petition for the creation of the district filed with the State Soil Conservation Committee pursuant to the provisions of the State Soil Conservation District Law.

The mission of the Carlton County SWCD is to **“Assist land occupiers in protecting and enhancing the natural resources of Carlton County.”** The Carlton SWCD works to fulfill this mission in Carlton County by providing leadership in water quality and soil erosion issues including: Environmental and Conservation Education, Resource Planning, Project Planning and Implementation, and Financial Assistance Programs for Conservation Practice Implementation.

The Comprehensive Plan is a tool for the SWCD to effectively carry out this mission. It is also a requirement for receiving state funds as well as assistance from the United States Department of Agriculture. The Plan is developed for a 5-year period, and adopted by the SWCD board. All lands within the jurisdiction of the SWCD, which is all of Carlton County, are included in this plan.

## **INTRODUCTION**

The Carlton SWCD has a standing Long Range Planning Committee that meets when necessary to review plan accomplishments and update the plan every 5 years. SWCD staff also has the opportunity to provide input into goals for the plan update. Along with this information the committee also considers goals found in the Carlton County Water Plan (amended 2014) in revising the SWCD’s Comprehensive plan for 2015-2019. Existing resource assessments in various plans and programs were also consulted for this Comprehensive plan.

The Carlton SWCD will continue to work with its Federal, State, and Local conservation partners to implement resource protection and enhancement in Carlton County. Technical and financial assistance for both water quality and erosion/sediment control best management practice implementation in all resource areas of the county will continue to be a high priority for the SWCD. The SWCD will use the practices in the Natural Resource Conservation Service (NRCS) “Field Office Technical Guide,” as well as develop other practices as needed, to address resource protection in Carlton County.

The Carlton SWCD is governed by multiple sets of policies. The general SWCD Board Policies define operations of the SWCD and are reviewed as needed by a standing policy subcommittee. Some operational policies are also reviewed at the January Board Reorganization meeting. In addition to these board policies the board has adopted a separate Employees Handbook which defines policies related to employees. These policies were just updated in 2014 and are

reviewed annually at the reorganization meeting in January. Either of the policy documents is available by contacting the Carlton SWCD office.

## **ACCOMPLISHMENTS TOWARDS PRIORITY GOALS AND OBJECTIVES FROM THE 2010 SWCD COMPREHENSIVE PLAN**

In addition to Appendix A: “Accomplishments Towards Goals and Objectives from the 2010 SWCD Comprehensive Plan”, annual SWCD project accomplishments are documented in an Annual Report that is produced in the first months of each year. These reports are available for review on the SWCD’s website at [Carltonswcd.org](http://Carltonswcd.org)

## **RESOURCE INVENTORY**

### Soils

The district has a NRSC published Soil Survey completed in 1978. The data in this survey has been updated and is available to resource professionals and landowners through the NRCS’s Web Soil Survey on line at <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

The SWCD also consults the information contained in the Carlton County Geologic Atlas available online at [http://www.dnr.state.mn.us/waters/programs/gw\\_section/mapping/platesum/carlcga.html](http://www.dnr.state.mn.us/waters/programs/gw_section/mapping/platesum/carlcga.html)

The soil of priority concern in Carlton County is “Red Clay”, a soil series that includes glacial till and glacial lake laid sediment consisting of fine grained soils that are highly erodible, and prone to mass wasting. Once eroded, these soil particles stay suspended for long periods of time until the flow slows enough that they deposit. These soils are present primarily in the Nemadji River Watershed (HUC 04010301) and the St. Louis River Watershed (HUC 04010201) significant information is available about these soils. In the Nemadji River Basin Report (NRCS 2000), the sediment budget identified that 89% (117,000 tons) of the erosion comes from stream banks and bluff erosion along the streams and river of the Nemadji Watershed and 92% of that erosion occurs in the “Red Clay” portion of the watershed. Only 8% of this erosion (10,000 tons) is deposited in the uplands of the watershed and another 4% (5,000 tons) is deposited in the floodplains of the watershed. The vast majority of eroded materials, 88% (117,000 tons) in the Nemadji River Watershed stay in suspension all the way to Lake Superior. This is the basis for extensive concentration on the Nemadji River Watershed by the SWCD.

Another soil priority area is the Kettle River Watershed. Through extensive soil sampling by the Carlton County By-Products Program for lime and wood ash spreading on private land, high parent levels of phosphorous have been documented throughout the watershed. With the Kettle River Watershed being part of the St. Croix Basin TMDL for Phosphorous, soil erosion from these high phosphorous soils is a primary concern as the SWCD works with private landowners to meet load allocations developed for the watershed in the 1998 listing.

### High Priority Areas Identification

Priority areas in Carlton County are as varied as the watersheds, land uses, and soils that are found in the county.

Several other priorities are encompassed by the SWCDs Comprehensive Plan.

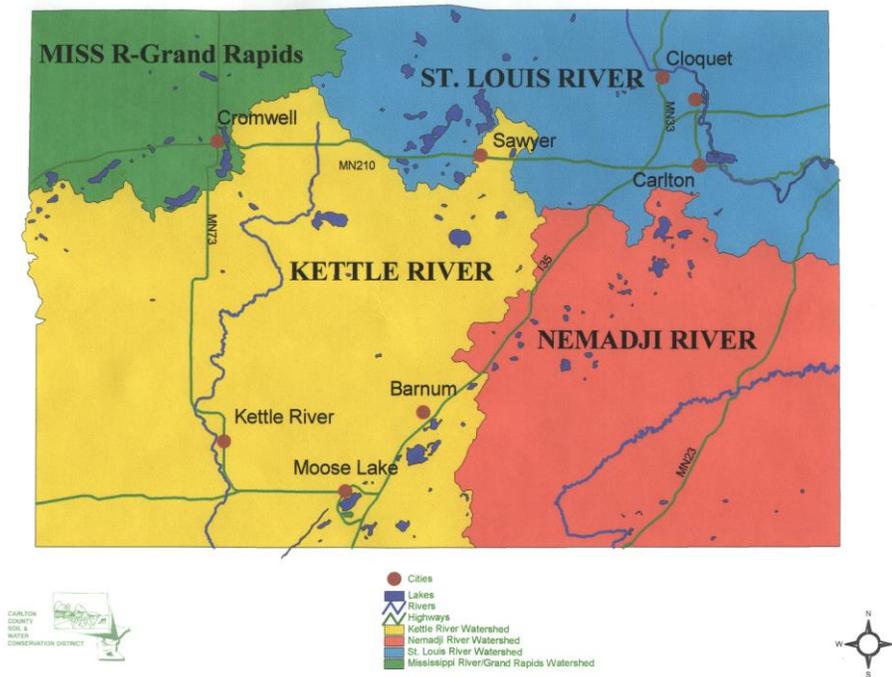
1. Wild Rice Lakes Shoreline Protection

The SWCD has begun to participate in the Reinvest in Minnesota (RIM) program by securing perpetual conservation easements of sensitive Wild Rice Lake shore line as identified by MN DNR.

2. Impaired Waters

Every acre of land in Carlton County is involved in a special project of either impaired waters or an Area of Concern (AOC). Carlton County is comprised of 4 major (HUC8) watersheds as indicated below.

### CARLTON COUNTY MAJOR WATERSHEDS



The Carlton SWCD is very engaged in the various stages of these watershed impairment listings including assessment, modeling, civic engagement, and implementation to address the listed impairments.

3. Great Lakes Restoration Initiative (GLRI)

Special funding for conservation practice implementation has been received and will continue to be a priority area for the district.

4. Cisco Lake Protection

The SWCD cooperates with the MN DNR on the only Cisco Lake in the county by providing forest stewardship planning and cost share for conservation practice implementation within the Hanging Horn Lake Watershed.

## RESOURCE ASSESSMENT

The following resource assessments consist of three points: 1. Assessment of Issues 2. Conservation Measures Needed and 3. Effectiveness of Past Efforts. This was completed for all of the high priority areas identified above.

### 1. Wild Rice Lakes

#### Assessment of Issues

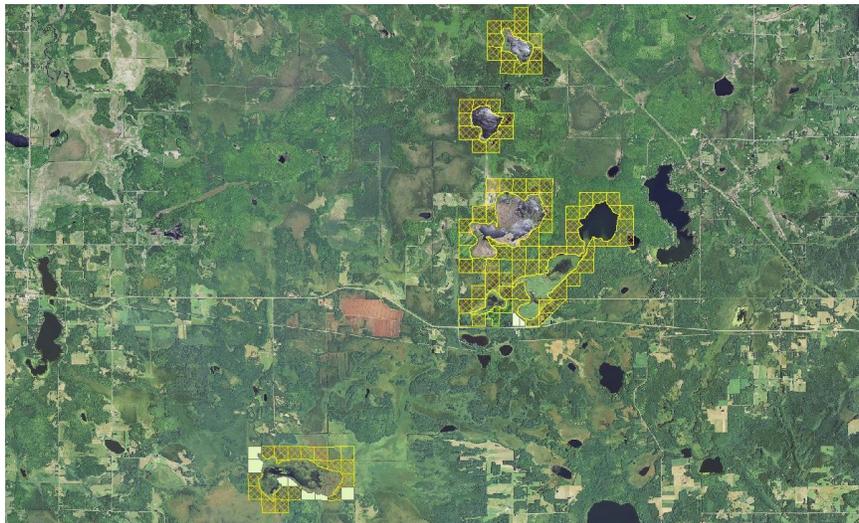
Shallow wild rice lakes are some of the most important and unique wildlife habitats in Minnesota. Protected, undeveloped shoreland is important to preserving sensitive wild rice lakes for both future generations of wildlife and outdoor enthusiasts. Restricting development minimizes boat traffic that can devastate wild rice crops in certain stages of their growth.

#### Conservation Measures Needed

The goal of this easement program is to protect these lakes by preventing development in a permanent conservation easement through the Re-Invest In Minnesota (RIM) program.

#### Effectiveness of Past Efforts

After applying to the Lesard Sams Outdoor Heritage Council (LSOHC) for three consecutive years, a pilot program was funded in 2012 including 8 Counties. In Carlton County, 6 shallow rice lakes were eligible for the 2012 program: Dead Fish, Miller, Rice Portage, Perch, Jaskari, and Kettle (see map).



As part of Phase I, an analysis of private ownership on these lakes found five private landowners and one private industry had direct shore line and another four private landowners had second tier or minimal frontage shore line. A letter was sent to the five direct shore line landowners. Negotiations between the private industry and the State on MN were ongoing to add those parcels to the state land holdings on Kettle Lake so no attempt was made to engage the private industry in a RIM easement. As a result of work completed in Phase I, two easements were secured protecting 190 acres and 1.2 miles of shore line.

During phase 2 of this program, the list of Wild Rice lakes in the county was prioritized by a joint meeting of MN DNR and the district. The results are listed below.

<b>List of Wild Rice Waters for the Wild Rice Shoreland Protection Project</b>						
<i>26 August 2014 DNR Wildlife meeting results</i>						
County	Water Name	Priority	Reason	Rice Information		
				Acres	Date	Location
7	Carlton	Flower	High	Part of Tatarack River Chain	10	
25	Carlton	Tamarack	High	Part of Tatarack River Chain	11	
26	Carlton	Tamarack River	High	Part of Tatarack River Chain		
3	Carlton	Cedar	Medium		10	
9	Carlton	Hay	Medium	Some Developed - Some potential	1	
13	Carlton	Kettle (Atkin Co. Line)	Medium			
10	Carlton	Island	Medium	South and North Bay focus	46	
19	Carlton	Moose Horn River	Medium	3 landowner below City of Moose Lake		
14	Carlton	Little Kettle	Medium			
30	Carlton	Venoah	Medium	one owner -awaiting DNR survey 2014		
31	Carlton	Walli	Medium		9/3/97	north shore of the lake
33	Carlton	Woodbury	Medium		10	
1	Carlton	Bang	Low	Minimal Rice Potential	1	
2	Carlton	Bob	Low	Minimal Rice Potential	1	
4	Carlton	Cross	Low	Minimal Rice Potential	6	
12	Carlton	Kettle	Low	Minimal Rice Potential	415	
18	Carlton	Moose	Low	Minimal Rice Potential		
5	Carlton	Dead Fish	Done	Fully Protected by Public and Tribal	115	
8	Carlton	Hardwood	Done	Fully Protected by Public and Tribal	25	
17	Carlton	Miller	Done	Fully Protected by Public and Tribal	156	
21	Carlton	Perch	Done	Fully Protected by Public and Tribal	597	
11	Carlton	Jaskari	Medium	1 small Private parcel left after Phase I	74	
23	Carlton	Rice Portage	Low	1 small Private parcel left after Phase I	120	
15	Carlton	Long / Tamarack River	Done	Phase II Easements	4	
22	Carlton	Railroad (west of Woodbury)	Done	Phase II Easements		8/20/97 north shore of the lake
27	Carlton	Unnamed (east of Lac Lake)	Drop	Minimal Rice Potential		9/4/97 shores of small lake
28	Carlton	Unnamed (southwest of Torchlight)	Drop	Minimal Rice Potential		8/26/97 east end of the lake
6	Carlton	Eagle	Drop	Fully Developed		
16	Carlton	Merwin	Drop	Too Deep Minimal Rice Potential		
32	Carlton	Wild Rice	Drop	Bog Fringe limits threat	36	
20	Carlton	Moosehead	Drop	Fully Developed		
24	Carlton	Sterile Pool	Drop	Fully Protected by WMA	2	
29	Carlton	Unnamed / Sawyer Pool	Drop	Fully Protected By WMA		

An additional 3 easements have been secured in phase 2 on a targeted stretch of the Tamarack River between Woodbury Lake and Tamarack Lake.

## 2. Impaired Waters

### Assessment of Issues

The Nemadji River Watershed (HUC 04010301) contains several impaired streams and stretches for Turbidity.

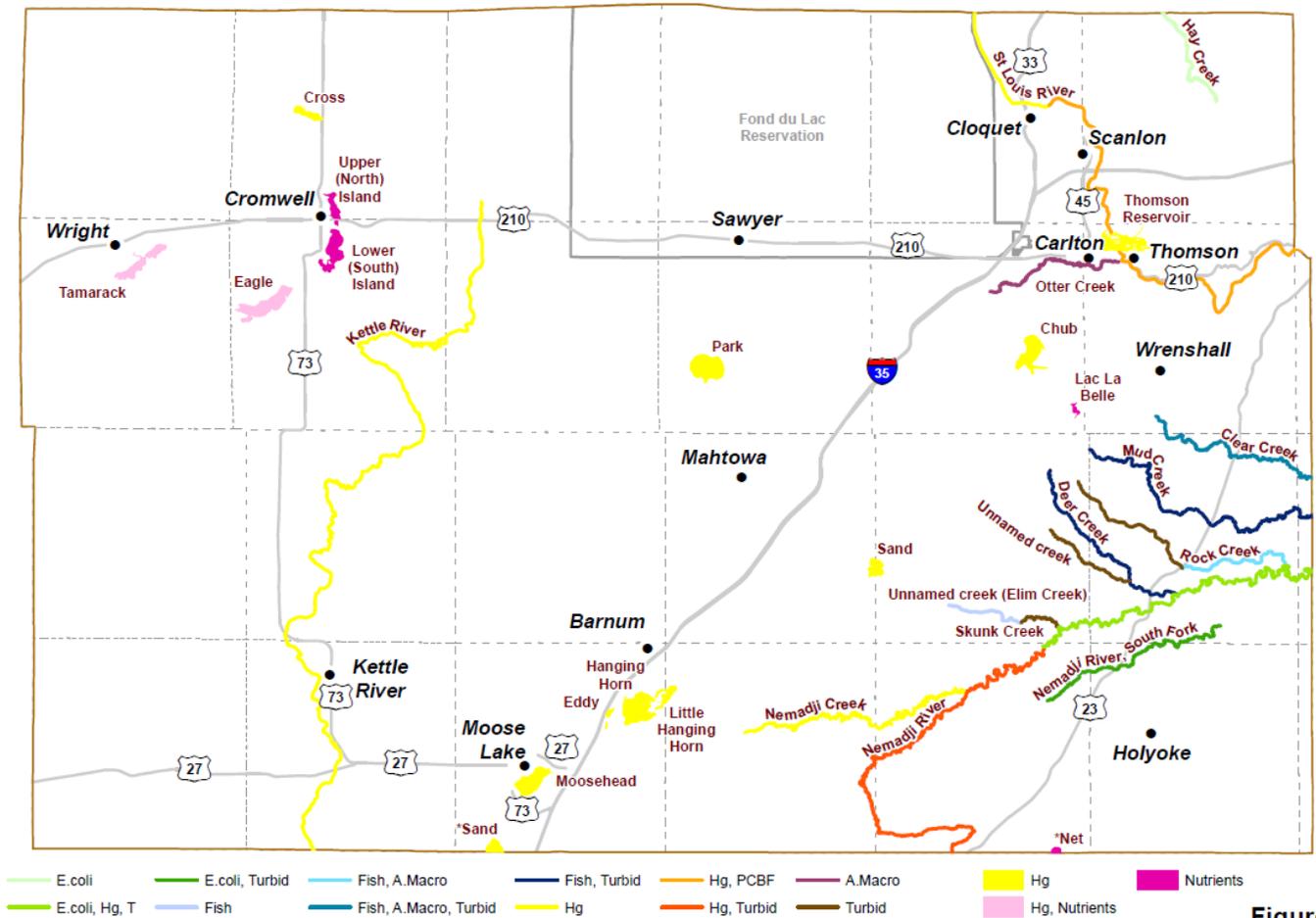
The St. Louis River (HUC 04010201) was named a Great Lakes Area of Concern (AOC) in the Great Lakes Water Quality Agreement of 1987. Areas of Concern are specifically designated geographic areas within the Great Lakes basin that have experienced severe environmental degradation, largely due to the impact of decades of uncontrolled pollution. When the St. Louis River was designated an AOC, one of the nine environmental impairments identified was “excessive loading of sediment and nutrients”.

The Kettle River ( HUC 07030003) is part of the St. Croix Basin impaired water listing for excessive phosphorous.

The Upper Mississippi – Grand Rapids ( HUC 07010103) is part of the Big Sandy Area Lakes listed as impaired for excessive phosphorous.

Following is the impaired waters of Carlton County from the Carlton County Comprehensive Water Management Plan 2010-2020 amended 2014.

## Location of 2014 Impaired Waters in Carlton County



**Figure 3**

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**TABLE 5 - IMPAIRED WATERS OF CARLTON COUNTY**

WATER BODY	AFFECTED USE	POLLUTANT/STRESSOR
St. Louis River (several reaches)	Aquatic Consumption	PCB, Hg
Kettle River (several reaches)	Aquatic Consumption	Hg
Thomson Reservoir	Aquatic Consumption	Hg
Sand Lake	Aquatic Consumption	Hg
*Sand Lake	Aquatic Consumption	Hg
Park Lake	Aquatic Consumption	Hg
Moosehead Lake	Aquatic Consumption	Hg
Hanging Horn Lake	Aquatic Consumption	Hg
Little Hanging Horn	Aquatic Consumption	Hg
Eddy Lake	Aquatic Consumption	Hg
Cross Lake	Aquatic Consumption	Hg
Chub Lake	Aquatic Consumption	Hg
Tamarack Lake	Aquatic Consumption, Aquatic Recreation	Hg, Excess Nutrients
Upper Island Lake	Aquatic Recreation	Excess Nutrients
Lower Island Lake	Aquatic Recreation	Excess Nutrients
Eagle Lake	Aquatic Recreation	Excess Nutrients
Lac La Belle	Aquatic Recreation	Excess Nutrients
*Net Lake	Aquatic Recreation	Excess Nutrients
Rock Creek	Aquatic Life	Turbidity, Aquatic Macroinvertebrate Bioassessments, Fish Bioassessments
Deer Creek	Aquatic Life	Turbidity, Fish Bioassessments
Nemadji River	Aquatic Life, Aquatic Consumption	Turbidity, Hg
Nemadji River	Aquatic Recreation	Escherichia coli
Nemadji River (South Fork)	Aquatic Life, Aquatic Recreation	Turbidity, Escherichia coli
Nemadji Creek	Aquatic Consumption	Hg
Clear Creek	Aquatic Life	Turbidity, Aquatic Macroinvertebrate Bioassessments, Fish Bioassessments
Mud Creek	Aquatic Life	Turbidity, Fish Bioassessments
Skunk Creek	Aquatic Life	Turbidity, Fish Bioassessments
Hay Creek	Aquatic Recreation	Escherichia coli
Otter Creek	Aquatic Life	Aquatic Macroinvertebrate Bioassessments

\*Located in Carlton County and Pine County.

Hg = Mercury

PCB = Polychlorinated biphenyls

Conservation Measures Needed

Conservation measures needed to address these water impairments are varied but because of the impairments relation to soil (phosphorous travels tied to soil particles and turbidity is directly related to sediment) erosion control measures are a priority across the county and in all land uses.

MPCA is conducting WRAPS or the Watershed Restoration and Protection Strategy studies on all of these waters in a phased approach. WRAPS has four major steps:

Step 1. Monitor water bodies and collect data

Step 2. Assess the data

Step 3. Develop strategies to restore and protect the watershed's water bodies

Step 4. Conduct restoration and protection projects in the watershed

The Schedule for Carlton County watersheds follows:

<b>Watersheds in the Cycle</b>	Upper Mississippi – Grand Rapids	St. Louis River	Kettle River	Nemadji River
Intensive Monitoring Start Year	2015	2009	2016	2011

This systematic approach will help the SWCD identify priority areas and implement measures for high impact restoration and protection efforts. The SWCD is also providing monitoring data to feed the modeling work in this process.

Effectiveness of Past Efforts

The Carlton County has a long history of implementing practices with Carlton County landowners to improve water quality and control soil erosion. As Carlton County Watersheds move through the MPCA WRAPS process, the district has continued to work with county landowners on implementing conservation practices. Increasingly, individual projects or as they are now referred to “random acts of conservation” are difficult to prioritize. So much of the district workload is related to bigger projects and consists of grants and contracts for specific deliverables. Projects that develop are often put on a list for inclusion in the next big project and the SWCD has lost its flexibility to implement conservation practices with landowners when they are ready to do so.

Large watershed scale projects take 4-6 years from the project development stage through funding, designs and construction or implementation. Here are some specific big projects that have been completed and the water quality/erosion control accomplishments from these efforts.

1. Red Clay Dams Phase I – Funded by BWSR Clean Water Funds in 2012, this project began work on this long standing priority issue in the Carlton SWCD. Results include:
  - Draft designs for 3 dam sites in the Deer Creek Watershed
  - Priority assessment of 13 dams for future erosion control planning
  - Restoration of 1/3 mile of Brook Trout habitat with removal of three dam series on Elim Creek

2. Private Forest Management - Over 1/3 of Carlton County is privately managed forestland and considering that every acre in the county lies in an impaired watershed, some pollutant or sediment reduction will be required from forestland to meet the overall goals for reductions in each of these watersheds. Forest Stewardship plans are a great first step, but implementation of the projects in these plans is key to realizing water quality improvements for cleaner waters. Project funding provided by MN Forest Resource Council's NE Landscape Plan Program. Project results include:
  - 10 plans completed on 2,662 acres
  - Access Database of 313 plan holders developed
  - 1 targeted mailing to 110 plan holders with Forest Stand Improvement (FSI) practice identified in plan using the database
  - 25 landowners interested in pursuing FSI projects.
  
3. Flood Projects – During June 19–20, 2012, heavy rainfall, as much as 10 inches locally reported, caused severe flooding across northeastern Minnesota. The floods were exacerbated by wet antecedent conditions from a relatively rainy spring, with May 2012 as one of the wettest Mays on record in Duluth. The June 19–20, 2012, rainfall event set new records in Duluth, including greatest 2-day precipitation with 7.25 inches of rain. The heavy rains fell on three major watersheds: the Mississippi Headwaters; the St. Croix, which drains to the Mississippi River; and Western Lake Superior, which includes the St. Louis River and other tributaries to Lake Superior. Widespread flash and river flooding that resulted from the heavy rainfall caused evacuations of residents, and damages to residences, businesses, and infrastructure. In all, nine counties in northeastern Minnesota were declared Federal disaster areas as a result of the flooding. (USGS By Christiana R. Czuba, James D. Fallon, and Erich W. Kessler) Resulting erosion control projects:
  - 13 projects completed for \$87,820 using BWSR Special Cost Share from MN Flood Relief Fund
  - 6 projects planned for additional \$70,389 using BWSR Special Cost Share from MN Flood Relief Fund
  - 6 contaminated private water wells were sanitized or sealed using MDA Special Cost Share from MN Flood Relief Fund
  
4. Culvert Assessment - During the summer of 2013 and 2014, the Carlton County Soil and Water Conservation District conducted a fish passage inventory of the culverts acting as road/trail- stream crossings in the Nemadji Watershed in Carlton County. This project inventoried and assessed perennial stream-road and trail crossings in the Nemadji River watershed located in Carlton County, MN. The inventory will aid in prioritizing future culvert restoration efforts. Funded by US Fish and Wildlife – Fish Passage Program. Project results:
  - 86 crossings assessed
  - 2 sites classified as Complete Barriers
  - 11 sites classified as Significant Barriers
  - 0 met Passable Criteria
  
5. County Wide Erosion Control and Water Quality Projects ( not related to big projects) – The SWCD receives about \$7,000 of State Cost Share from the BWSR annually. This funding is critical to the successful implementation of water quality and erosion control practices that are not part of a larger project. With only \$7,000, the SWCD's ability to

address any project is limited to smaller projects. These project implementation numbers are average from 2010-2014 and do not reflect cost share projects, just Technical assistance provided:

- 10 erosion control projects
- 2 storm water management projects
- 2 pollinator habitat projects
- 4 public education events
- 2 stream bank lakeshore projects

6. Water Monitoring –The SWCD leads “local” water monitoring efforts in Carlton County. Through funding from watershed project grants in the early 2000’s, to Surface Water Assessment Grants (SWAGs) in the late 2000’s, to current day contracts for watershed water quality monitoring in preparation for MPCA WRAPS and following WRAPS, the SWCD has assessed many lakes, rivers, and streams including:

- 2002 – 2009 Nemadji Watershed Grants
  - North Fork Nemadji at HWY 23 Bridge – grab sample
  - Deer Creek up stream of HWY 23 – grab sample and flow
  - Rock Creek up stream of HWY 23 – grab sample and flow
  - Clear Creek II Sec. 10 T.46N R. 17W– grab sample and flow
- 2009 – 2010 Lakes SWAG
  - Hay
  - Chub
  - Park
  - Little Hanging Horn
  - Bear
  - Flower
  - Net
  - Woodbury
  - Cole
  - Tamarack River
- 2010 - 2011 Nemadji SWAG
  - Nemadji River North Fork Hwy 23
  - Nemadji River South Fork Hwy 23
  - Hunter Creek
  - Mud Creek
  - Spring Creek
  - Clear Creek 1
  - Silver Creek
  - Net River
  - Little Net River
- 2011 – 2012 Lakes SWAG
  - Venoah Lake
  - Bear Lake
  - Spring Lake
  - Lac La Belle
  - Torchlight Lake
- 2012 MPCA Event Based Grant:
  - Deer Creek Hwy 23

- South Fork Nemadji
- North Fork Nemadji River Upper at Hwy 8
- Net River
- South Fork Nemadji River
- Skunk Creek CR 103
- North Fork Nemadji Hwy 23
- Blackhoof River
- Deer Cr. Downstream Hwy 23
- North Fork Nemadji Hwy 23
- North Fork Nemadji River Upper Hwy 8
- Net River
- South Fork Nemadji River
- Skunk Creek CR 103
- 2012 Citizen Monitoring Program Sites
  - Net R @ CR-145
  - Net R @ CR-145
  - Net R @ Co Rd 8 in Holyoke Park, Holyoke, MN
  - Nemadji R @ CR-103
  - Clear Ck @ CR-103
  - Hunters Ck @ CSAH-6
  - Nemadji Ck @ CSAH-11
  - Little Net R @ CSAH-8
  - Little Net R @ DNR Trail BR near Bley Rd
  - Blackhoof R near Valley View Rd, T47N R17W S10
  - Stateline Creek at CSAH-8, 9.4 MILES SOUTH SOUTHEAST OF WRENSHALL, MN
- 2014 Tamarack River Pre WRAP monitoring at outlets of:
  - Cross
  - Cole
  - Island
  - Eagle
  - Tamarack
  - Woodbury

### **3. Great Lakes Restoration Initiative GLRI**

#### Assessment of Issues

Hydrologic modification through vegetation management continues to be a primary factor in slowing spring melt and high volume rain event runoff. This affects volume and frequency of bank full flows, the primary erosive force in forested watersheds. (Doctor Sandy Verry 2001)

#### Conservation Measures Needed

Tree establishment in “open” areas (old unused ag fields, pastures, etc.) and riparian corridors.

#### Effectiveness of Past Efforts

Carlton SWCD planned and oversaw 12 tree planting projects from 2010-2014 totaling 121 acres planted and 9340 feet of bank protected.

- 42 GLRI tree establishment projects were referred to the SWCD in 2010.
- 12 landowners ultimately completed projects.

#### **4. Cisco (Tullibee) Lakes Protection through Forest Stewardship**

##### Assessment of Issues

Tullibee, or Cisco as they are also known, can only survive in deep, cold water lakes. They are a major forage fish for Lake Trout, Muskies, Northerns, and walleyes. Resource managers well know that forest stewardship provides benefits that extend well beyond the wood products industry, they extend all the way to the 1.4 million people who fish Minnesota's waters.

Members of the trout family, Tullibee require cold, oxygenated water to survive. That's a problem for this species in late summer because the water near the surface becomes too warm and the water at the bottom contains too little oxygen. As a result Tullibee become trapped in a narrow band of habitat somewhere in between, sometimes only a few feet in depth. If the water warms too much from the top down or oxygen depletion extends too high from the bottom up, the fish die.

Healthy forests can help prevent this from occurring by keeping nutrients on the land, which minimizes their oxygen-depleting impacts. When Tullibee disappear from a lake, the quality of other game fish populations can suffer as they have to shift to less suitable prey of lower nutritious value. Tullibee exemplify the complex ecological relationship among forests, lakes, fish species, and fishing quality. (Mike Duval, MN DNR Fisheries)

##### Conservation Measures Needed

Trees – even trees far from the water's edge, contribute mightily to making Minnesota one of the nation's top five angling destinations. That's because tree roots hold soil in place, thereby reducing erosion and minimizing unwanted nutrient-laden runoff. Sky blue water healthy habitat itself is the product of soil being bound to the land rather than bound toward a lake, river or stream by erosive forces. (Mike Duval, MN DNR Fisheries)

##### Effectiveness of Past Efforts

The SWCD contracted with MN DNR to provide technical and financial assistance targeted to landowners in the Hanging Horn Lake (a Cisco Lake) Watershed. Results included:

- 12 new stewardship plans
- Mailing to 230 watershed residents offering assistance
- 4 FSI projects implemented in the watershed

## **PRIORITY LONG RANGE GOALS**

The Carlton County SWCD has identified the following priority goals, objectives to be addressed in this Comprehensive Plan.

### **Goal 1: Sustain and enhance SWCD Operations to deliver technical and financial assistance to landowners implementing water resource protection and restoration projects:**

#### Objectives:

- A. Seek additional funding and long term space for SWCD operations.
- B. Continue results based planning and budgeting.

### **Goal 2: Participate in watershed based water management opportunities:**

#### Objectives:

- A. Cooperate in implementation of the Carlton County Comprehensive Local Water Management Plan.
- B. Encourage discussions and projects regarding Flood Mitigation and Drainage issues.
- C. Remove Red Clay Dams and restore natural stream channels.

### **Goal 3: Continue providing technical and financial assistance for private forest management:**

#### Objectives:

- A. Lead Forest Management service delivery to private forest managers.

### **Goal 4: Participate in agriculture management initiatives:**

#### Objectives:

- A. Increase awareness of Agriculture Certification and Soil Health Initiatives.

### **Goal 5: Participate in wildlife management opportunities to promote conservation:**

#### Objectives:

- A. Participate in habitat management programs and projects.

### **Goal 6: Expand civic engagement opportunities:**

#### Objectives:

- A. Increase civic engagement in all age groups throughout the county.

## **PRIORITY GOALS AND OBJECTIVES WITH ACTION ITEMS**

### **Goal 1: Sustain and enhance SWCD operations to deliver technical and financial assistance to landowners implementing water resource protection and restoration projects:**

#### **Objective A. Seek additional funding and long term space for SWCD operations.**

Background - In 2014 SWCD staff includes: Manager, Conservation Technician, Water Resources Technician, and part time Administrative Assistant. Since 2009 update the SWCD has lost the full time temporary NRCS technician, but gained an NRCS DC presence one day a week as well as a shared Wildlife Biologist housed in Aitkin and funded by Pheasants Forever. Technical Services Area 3 staff has expanded to meet engineering needs of the involved SWCDs. The SWCD continues to rely heavily on grants and contract work to support the SWCD's operating budget.

#### Actions:

- a. Expand grants and contracts for services to sustain SWCD operations.
- b. Work with the MN Legislature, the Governor, MASWCD, and other partners to secure a sustainable funding source for SWCD operations.
- c. Continue cooperation with NRCS to provide a base for Carlton County NRCS staff presence.
- d. Continue to lead local technical assistance to landowners through SWCD staff for wise use of Carlton County Resources.
- e. Explore options for space for the SWCD to conduct operations.
- f. Explore ways to build up SWCD reserve funds to meet state guidelines.

#### **Objective B. Continue results based planning and budgeting**

Background - To be competitive in the Clean Water era the SWCD is required to show results of grant expenditures. While there are still initiatives that are worth doing funding them is challenging in this results based approach. To better align the SWCD with Legislative targets, state agency grant programs, and the governors funding proposals, the SWCD has made decisions to not pursue some in order to focus available resources on other initiatives resulting in more worthwhile outcomes.

#### Actions:

- a. Continue to develop and apply for grants based on priority conservation concerns in the county.
- b. Develop GIS prioritizing tools as needed and funding allows.

### **Goal 2: Participate in watershed based water management opportunities:**

Background - Carlton County contains the headwaters of 4 major Hydrologic Unit Code (HUC) 8 watersheds: St Louis River, Nemadji River, Upper Mississippi Grand Rapids, and Upper St. Croix - Kettle River. Many SWCD programs are based in this watershed setting and trends in resource protection continue to point in that direction.

**Objective A. Cooperate in implementation of the Carlton County Comprehensive Local Water Management Plan.**

Background - The 2014 amended water plan includes 3 Priority Concerns common to Carlton County and the SWCD.

Priority Concern #1: Water Quality in County Lakes, Rivers and Streams

Priority Concern #2: Development Impacts and Land Use

Priority Concern #3: Promote and Educate the Public about the County's Water Resources

Actions:

- a. Continue cooperation with Carlton County Water Planning staff on implementation of the amended plan.
- b. Continue discussions regarding the best home for the water plan that is best for the resources of Carlton County and beneficial to the county and the SWCD.
- c. Explore One Watershed – One Plan opportunities through BWSR as appropriate.
- d. Work with conservation partners to secure funding, designs, permits, and landowners cooperation to implement soil and water resource protection and restoration projects in impaired watersheds of Carlton County.

**Objective B. Encourage discussions and projects regarding Flood Mitigation and Drainage issues.**

Background - The 2012 flooding throughout Carlton County re-emphasized the need for better flood management coordination for natural resource protection. Some flood mitigation could enhance preparedness for future flood events.

Actions:

- a. Work with partners to establish healthy balance between storing runoff and allowing for natural flood water transport through the stream network.
- b. Promote "Slow The Flow" concepts with municipalities and townships.
- c. Coordinate with Carlton County Disaster Response to incorporate conservation issues relating to flooding.

**Objective C. Remove Red Clay Dams and restore natural stream channels.**

Background - 2014 saw the first project to address aging "Red Clay Dams" in the Nemadji River Watershed by removing three failing structures and restoring a stream channel designed to natural stream standards. The SWCD will continue to work with landowners who have aging dam structures to seek funding for structure removal and stream restoration.

Actions:

- a. Work with partners to secure funding, designs, permits and landowner cooperation to address failing sediment control structures in the Nemadji River Watershed.

**Goal 3: Continue providing technical and financial assistance for private forest management:**

**Objective A. Lead forest management service delivery to private forest managers.**

Background - The SWCD has developed a useful database of landowners with forest management plans and the practices identified in those plans. Past grants have helped the SWCD prioritize this workload and brought financial resources for program expansion. Wood products from private lands continue to be underutilized and small sales typical to conservation work are hard to market.

Actions:

- a. Cooperate with state and federal partners to maintain a forest management database of forest stewardship plan holders in Carlton County and to coordinate implementation of practices with those landowners.
- b. Work with regional forest products markets, MN Logger Association, and Forest Industry representatives to market wood products from conservation projects with private landowners.
- c. Consider options to develop a small volume utilization site where wood products from private lands are managed for highest use.
- d. Continue to work with MN DNR in the Private Forest Management (PFM) program including Cisco Lakes, and other special watershed initiatives.

**Goal 4: Participate in agriculture management initiatives:**

**Objective A. Increase awareness of Agriculture Certification and Soil Health Initiatives.**

Background - Programs for certifying sustainable farming practices continue to evolve in the state. An expansion of the current Ag Certification program being piloted in several MN counties is being discussed. SWCDs could have a significant role in this certification program. At the same time, Soil Health initiatives are also continuing to evolve in the state, region and in Carlton County.

Actions:

- a. Monitor the Agriculture Certification program for participation opportunities for Carlton County Farmers.
- b. Build nutrient management and feedlot management practices into future watershed implementation plans to allow more resources for these practices to landowners.
- c. Continue cooperation with regional partners in Soil Health initiatives. Build on current grants to establish a long term soil health program.
- d. Continue to support current and potential Community Supported Agriculture (CSA) operations and work with Carlton County economic development staff to connect more markets as an outlet for locally grown products.

## **Goal 5: Participate in wildlife management opportunities to promote conservation:**

### **Objective A. Participate in habitat management programs and projects.**

Background - Many wildlife habitat initiatives exist for specific species habitat improvement or preservation. Bees, Bats, trout, wild rice, turtles, Golden Winged Warbler, and Sharp Tailed Grouse are a few of the current initiatives. Many of these habitat projects have positive conservation effects, too. Invasive species - like Buck Thorn, Eurasian Water Milfoil, Spotted Knapweed, Canadian Thistle, Wild Parsnip, and Purple Loosestrife - threaten native species and habitats and often have detrimental conservation impacts. Land use changes and new utility transmission corridors can also have detrimental impacts to wildlife habitat as well as negative conservation impacts.

#### **Actions:**

- a. Monitor habitat programs for participation in projects with conservation benefits, such as the RIM Wild Rice Lakes program.
- b. Continue cooperation with partners for monitoring and control of invasive species.
- c. Cooperate with utilities, mining companies, county landowners, and land use regulators to provide potential conservation impact information of proposed facilities.

## **Goal 6: Expand civic engagement opportunities:**

### **Objective A. Increase civic engagement in all age groups throughout the county.**

Background - Building on past success, the SWCD will work to engage more citizens and interest groups in conservation in the county through multi-media channels and over the range of age groups.

#### **Actions:**

- a. Hold conferences for target groups to disseminate program information.
- b. Work with Environmental Educator contacts in local schools to expand participation in the area Envirothon and other educational opportunities for students.
- c. Continue apprenticeship opportunities for students to help with technical work at the SWCD while providing real world experience to interns.
- d. Build on 2012 Nemadji River Contract for civic engagement in that watershed and take that effort county wide.
- e. Consider a “Carlton County Clean Water Council” to advise the SWCD on Water Resource issues.

## WORKLOAD ANALYSIS

The SWCD currently employs three full time staff (Manager, Water Resources Technician, and Conservation Technician) and a part-time Administrative Assistant. The 5 member elected board is also active in committee work, education and outreach activities, and various topics of interest within their specific district. Together this team carries out the mission of the SWCD through activities aimed at implementing this 2015 – 2019 Comprehensive Plan framework. For the purpose of this workload analysis, here are the available staff years for implementation of this plan.

Staff	Staff Years
SWCD Board	.3
Manager	1
Water Resource Technician	1
Conservation Technician	1
Administrative Assistant	.7
<b>TOTAL</b>	<b>4</b>

Some of the work in this plan is ongoing from past plans and is accomplished within the current staffing capacity of the staff and board. Other initiatives in this plan require an expansion of primarily staff to accomplish full anticipated implementation of this plan. Below is the projected workload analysis for the life of the 2015 - 2019 Carlton SWCD's Comprehensive Plan.

Plan Goal	Staff Years Needed to Implement Plan				
	2015	2016	2017	2018	2019
1. SWCD Operations	1.5	1.7	1.7	1.7	1.7
2. Watershed Management	1.2	1.4	1.5	1.6	1.6
3. Forest Management	.6	.9	.9	1	1
4. Agriculture Management	.4	1.4	1.4	1.5	1.5
5. Wildlife Management	.3	.5	.5	.6	.6
6. Civic Engagement	.6	.8	.8	.8	.8
Total staff years needed	4.6	6.7	6.8	7.2	7.2
Available staff years	4	4	4	4	4
<b>Additional staff years needed</b>	<b>.6</b>	<b>2.7</b>	<b>2.8</b>	<b>3.2</b>	<b>3.2</b>

This analysis indicates the need for nearly three additional staff positions within the term of this plan to project full implementation. This is consistent with the additional FTE (Full Time Equivalent) identified in the Carlton SWCD's Biennial Budget Request (BBR) for 2016/2017.

## BUDGET FORECAST

The Carlton SWCD operates on a calendar year budget. Funding sources include: Carlton County, direct annual state funding through the Conservation Delivery Grant and Cost Share Grant, and indirect project funding, and fee for service funding. The primary expense for the SWCD is personnel. Below is a projected budget for SWCD operations for the time period of this plan. It includes the increase to operation and project budget the SWCD identified in the 2016 – 2017 BBR (page 11). **The growth in project and program funding and expenditures represents a projection to fulfill this comprehensive Plan and the Biennial Budget Request.**

SOIL AND WATER CONSERVATION DISTRICT  
CARLTON, MINNESOTA  
**Long Term Budget**

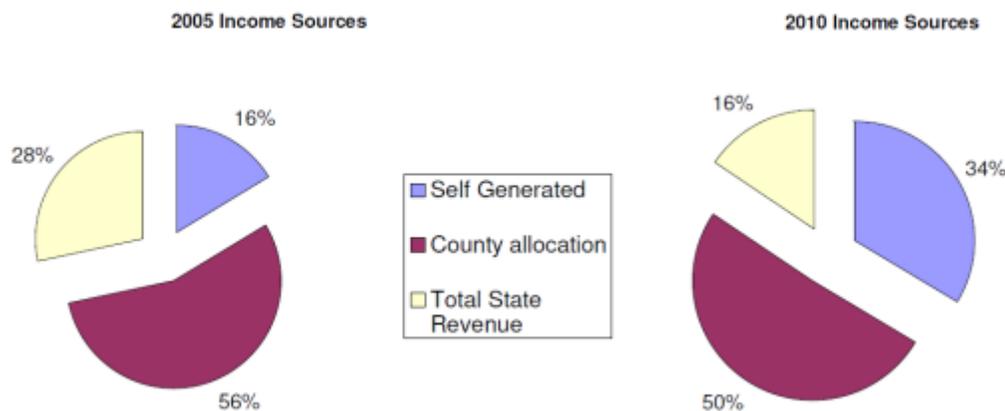
	Actual		Projected				
	2013	2014	2015	2016	2017	2018	2019
<b>Revenues</b>							
Intergovernmental County	\$112,839	\$108,300	\$128,300	\$128,300	\$128,300	\$128,300	\$128,300
Intergovernmental State	\$212,628	\$357,752	\$360,000	\$360,000	\$360,000	\$360,000	\$360,000
Capacity increase (new BBR)				\$265,000	\$300,000	\$300,000	\$320,000
Charges for services	\$55,025	\$9,159	\$7,000	\$9,000	\$9,000	\$10,000	\$10,000
Investment earnings	\$1,974	\$848	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Cost Share	\$10,401	\$8,001	\$8,001	\$18,000	\$18,000	\$20,000	\$20,000
Project Funds (new from BBR)				\$705,000	\$705,000	\$750,000	\$750,000
<b>Total Revenues</b>	<b>\$392,867</b>	<b>\$484,060</b>	<b>\$504,301</b>	<b>\$1,486,300</b>	<b>\$1,521,300</b>	<b>\$1,569,300</b>	<b>\$1,589,300</b>
<b>Expenditures</b>							
Personnel	\$211,924	\$223,226	\$225,000	\$520,000	\$520,000	\$550,000	\$550,000
Board Expenses	\$18,545	\$18,865	\$23,515	\$23,515	\$23,515	\$23,515	\$23,515
Capital Outlay	\$3,246	\$0	\$1,500	\$8,000	\$8,000	\$8,000	\$8,000
Office Operation	\$31,844	\$33,208	\$40,000	\$75,000	\$75,000	\$80,000	\$80,000
Cost Share Projects	\$10,401	\$8,001	\$8,001	\$18,000	\$18,000	\$20,000	\$20,000
Project expenditures	\$109,600	\$148,982	\$196,000	\$705,000	\$705,000	\$750,000	\$750,000
<b>Total Expenditures</b>	<b>\$385,560</b>	<b>\$432,282</b>	<b>\$494,016</b>	<b>\$1,349,515</b>	<b>\$1,349,515</b>	<b>\$1,431,515</b>	<b>\$1,431,515</b>

## ADJUSTMENTS NEEDED IN DISTRICT AUTHORITIES

MN Statute 103c, the governing statute for SWCDs, is very encompassing of the projects, partnerships, and programs the SWCD can be involved in. The missing authority is funding. Sustainable funding for SWCD operations has been a goal of the Carlton SWCD Comp Plan for many years. It is the one limiting factor in carrying out the mission of the SWCD and the charge to the SWCDs from the MN State Legislature. Funding is at the root of many issues facing SWCDs in the state and specifically the Carlton SWCD.

1. Competitive salary and benefits package for employee retention
2. Match to grants
3. Cost of Living increases for staff
4. Technology updates
5. Vehicles

Some expenses can be built into contract and grants but not all administrative expenses and cost of doing business can be accounted for in this way. The Carlton SWCD relies on base funding from Carlton County and the State Legislature to exist at a basic level. While grants and contracts make up an increasing percentage of the SWCDs operating income, State funding for base operations has declined and Carlton County has been left to pick up that slack. See the 2005 and 2010 comparison below.



Although Carlton County supports the SWCD very well, in the 2015 budget process for the county, the SWCD was left short of funding by \$100,000.

Funding is the primary factor in keeping the Carlton SWCD from reaching its optimum operating potential. Sustainable statutory funding for SWCDs has been an issue the Minnesota Association of SWCDs (MASWCD) has been working towards but as yet those efforts have not been successful.

# Appendix A

## ACCOMPLISHMENTS TOWARDS PRIORITY GOALS AND OBJECTIVES FROM THE 2010 SWCD COMPREHENSIVE PLAN

2010 PLAN PRIORITY GOALS AND OBJECTIVES (Accomplishments highlighted in yellow)

### 1. Seek funding to sustain SWCD operations and deliver technical and financial assistance to county landowners.

#### Objectives:

- A. Continue TMDL contracts to sustain Water Resources Coordinator.  
**Water Resource Tech position has continued through change of staff. Position has expanded into Cromwell lakes and Kettle River Watershed from a previous mainly Nemadji TMDL Focus.**
- B. Continue cooperation with NRCS to provide a base for Carlton County NRCS staff presence.  
**The New DC for the Duluth Field office spends at least one day a week working from the Carlton SWCD office.**
- C. Continue forestry programs including tree sale, stewardship planning, and planting services and develop new sources to fund forestry assistance program.
  - **The two primary forestry program funding sources right now are the Cisco Lakes Stewardship planning and project implementation cost share project and the NE Landscape Grant for Stewardship planning and practice implementation. Both contracts have been applied for to renew.**
  - **NRCS GLRI tree planting project has wrapped up and funding has dried up. Some good tree planting projects were implemented but tree establishment on some sites is still challenged by dry summers and 2012 flooding.**
  - **Tree sales have been suspended after the 2012 sale year. This workload has been replaced with focus on forest stewardship planned practice implementation database. Planting management continues with CCM assistance on an as needed basis.**
  - **With the creation of the joint Pheasants Forever position with Aitkin, the position works on young forest initiatives for both counties, such as Gold Winged Warbler and Sharp-tail habitat projects.**
- D. Continue to lead local technical assistance to landowners through SWCD staff for wise use of Carlton County Resources.  
**Multiple levels of tech assistance tapping various cost share funding have continued in all land uses throughout the county.**
- E. Track carbon sequestration programs and lead local coordination of verifying credits as appropriate.  
**No local verification program has materialized yet**
- F. Develop Biomass utilization programs with local, state, and federal partners.  
**Some coordination in the past 5 years with RC&D and MN DNR. Most regional users seem maxed out on procurement for new sources so supply & demand issues limit development of new utilization programs.**

## **2. Develop long term space for SWCD operations.**

### Objectives:

- A. Search for properties to meet the SWCD needs.
- B. Develop funding strategies for purchase of property.

**Significant effort by staff and supervisors has gone into both objectives on a new building project. After pursuing the USDA Loan without success, the SWCD is working directly with the county to proceed with a building project.**

## **3. Support Carlton County in implementation of its Water Plan.**

### Objectives: (from Carlton County Water Plan)

**Goal 1:** Promote programs currently in place to enhance our water resources.

#### Actions:

1. Promote Carlton County SWCD programs including state cost share and low interest loan program for water quality improvement and implementation of soil erosion control best management practices.
2. Promote Carlton County SWCD planning efforts through other state and federal agencies including forest stewardship, farmland, and shoreland re-vegetation planning as important first steps in land and water best management practices implementation.
3. Promote available Carlton County SWCD technical assistance resources for water quality improvement and soil erosion control practices implementation.
4. Support and advocate increased resources for Carlton County SWCD to address the growing planning and technical assistance workload for water quality improvement and soil erosion control practice implementation.
5. Promote the Carlton County Planning and Zoning office's program for private well testing.

**Goal 2:** Educate the public on how to be good stewards of the land and water.

#### Actions:

1. Educate both landowners and contractors on the Wetland Conservation Act, including workshops for realtors, contractors and developers.
2. Educate both landowners and contractors on erosion control and stormwater best management practices, including workshops for contractors and developers.
3. Educate the public that health and septic systems are tied together.
4. Develop presentations and brochures that focus on land and water stewardship.
5. Educate the public on shoreland best management practices including restoring and maintaining buffers, fix eroding shorelines and healthy aquatic vegetation.
8. Educate landowners on BMPs including reducing soil erosion, proper application of fertilizers and pesticides, livestock management, shoreland buffers and aquatic vegetation.
9. Continue the momentum of the 2008 Carlton County Waters Summit by holding annual workshops or seminars for shoreland property owners.

**Many efforts have been completed on these goals.**

- **Waters Summit II in 2011.**
- **Inclusion of Carlton County Water Planner in the current and past Nemadji River grants, The Fish and Wildlife Service, Culvert assessment grant, and Red Clay dams assessment projects.**
- **Joint presentation to Tamarack Lake Association on Wild Rice RIM program**

**Primary interaction between the SWCD and the Water plan activities falls with the SWCD's Water Resources position and the Carlton County Water Planner. But joint group and single landowners visits happen regularly in the course of regular business.**

**The SWCD has also been involved in the Water Plan five year update in the past 6 months along with a BWSR – PRAP study involving the Water Plan.**

**4. Support Carlton County in marketing and technical assistance for implementation of tax incentive programs to landowners.** The Sustainable Forestry Incentives Act and Green Acres and Rural Preserves tax programs define roles for the SWCD.

Objectives:

- A. Coordinate with Carlton County in the required technical assistance for landowners enrolling in property tax programs.
- B. Promote conservation through planning requirement for landowner enrolling in property tax programs.

**The primary workload here has evolved into the Sustainable Forest Incentives Act (SFIA) and the tax class of 2C forestland. Both of these tax based programs have a forest stewardship plan requirement that the SWCD promotes and fulfills.**

**A procedure was developed between the County Assessors office and the SWCD to meet the SWCDs obligation in the Rural Preserves and Green Acres programs. Both were not a significant workload for the SWCD and both have since been changed, eliminating the SWCD obligation.**

**5. Build on the existing SWCD education program to engage Carlton County youth in the responsible use of natural resources.**

**SWCD staff continue to participate in Area Envirothon and Arbor day tree planting. SWCD participation in the Con Ed days has been limited by design allowing other entities to step up and share in that workload.**

Objectives:

- A. Develop ways to utilize Carlton School Forest for Carlton School District students and surrounding district students.  
**Not a lot of new efforts have been initiated by the SWCD on this and not much new interest by schools. South Terrace Elementary use continues.**
- B. Work with Environmental Educator contacts in local schools to expand participation in Area Envirothon, and other educational opportunities for students.

**School participation is consistent, primarily driven by other high school grad requirements. Where an interested teacher takes the Envirothon into their class and works it into their curriculum, participation continues.**

- C. Explore apprenticeship opportunities for students to help with technical work at the SWCD. **Good use of the apprenticeship program has been a significant gain for the SWCD. We have had two apprentices in three years and we are in line to receive a placement for 2014. The program really came full circle when the SWCD hired a past apprentice for the Water Resources Tech Position in Neva Widner.**

## 6. Civic engagement.

### Objectives:

- f. Hold conferences for target groups to disseminate program information.  
**Water Summit II 2011**  
**Volunteer training**  
**Forest management issues through Woodland Council work SWCD technician**  
**Wild Rice RIM with Tamarack Watershed Association.**  
**Trout fishermen Blackhoof River Flood Restoration discussion**
- C. Use information and education resources such as web site, newsletters, and direct mailings to update target groups on program information.  
**Lead by Administrative Assistant position and strongly supported by Water Resources Tech, Web site has been redesigned and Facebook presence established.**
- D. Develop a SWCD calendar as a SWCD promotion tool.  
**Not implemented. Some restrictions on selling advertising have derailed this effort. It can be done but the project needs an outside vendor such as printer to sell advertising to pay for the project.**
- E. Develop local clean water council to advise the SWCD on conservation priorities.  
**Also not implemented. Idea still there just not a priority.**

**Civic engagement has occurred specifically through the Nemadji TMDL project in the current contract with MPCA.**

**Water Resource position has an ongoing civic engagement group meeting through the Nemadji River TMDL Contract.**

## 7. Continue results based planning and budgeting.

### Objectives:

- A. Continue to develop and apply for grants based on priority conservation concerns in the county.  
**Several priority projects have received funding including:**
- **Red Clay Dams Phase I**

- **Kettle River Watershed Accelerated Implementation**
- **Red Clay Dams Phase II**
- **Cisco Lakes-Hanging Horn Lake Stewardship Planning and Cost Share Implementation Project**
- **Fish Passage Assessment in the Nemadji**
- **Tamarack River Monitoring**

**Applied for two BWSR Clean Water Fund grant in October**

- **GIS priority mapping project**
- **Contractor Natural stream restoration training project**

B. Continue outcome budgeting.

**Outcomes sometimes dictate program elimination such as the tree sale program. On examination of cost vs benefits the outcomes realized from that program did not justify the continued expenditure of funds.**

# Appendix B

## 2016 – 2017 BIENNIAL BUDGET REQUEST TO THE BWSR

2016 - 2017 BBR summary						
Activity		New Full Time Equivalent Positions		Funding Source	Projected funding for the bienium	New Money needed
Conservation Delivery	Conservation Delivery funds used for SWCD expenses including board member per diems, rent, and office supplies.		Carlton SWCD Board Members and staff will engage in planning and technical assistance activities to fulfill the SWCD's mission of "Assisting landowners in protecting and enhancing natural resources of Carlton County"	Conservation Delivery	\$37,340	\$350,000
Cost Share Program	Priority implementation of projects approved by SWCD Board for maximum water quality or soil erosion benefit.		Carlton SWCD will use the State Cost share funds to provide incentives for priority conservation practice implementation across all land uses. Design Assistance will be provided by existing staff, TSA 3 engineering staff or NRCS technical staff as appropriate.	State Cost-Share	\$16,002	\$10,000
Conservation Easements--	RIM Conservation Easements on priority Wild Rice waters in Carlton County		Carlton SWCD will continue to seek priority easements through the RIM program on priority wild rice waters for maximum conservation benefit	Lessard-Sams Outdoor Heritage	\$150,000	
Admin & Coordination-	Partnerships and programs to sustain the SWCD operations	0.50	Carlton SWCD Board Members and staff will engage in partnerships and programs to supplement budget income for SWCD operations while developing projects to fulfill the SWCD mission. Activities include: reporting, grant writing, and legislate lobbying.	Other		\$60,000
Forestry Practices--	Tullibee Lake Stewardship planning and practice implementation Phase II 2015-2016 and Phase III 2017-2018		Existing SWCD staff will complete Forest Stewardship plans for landowners in the Hanging Horn Lake shed. Cost share will be used for priority implementation projects in the Hanging Horn Lakes shed, approved by the SWCD board and using SWCD staff existing staff, TSA 3 engineering staff or NRCS technical staff for design as appropriate.	DNR	\$40,000	
Forestry Practices--	NE Landscape program partnership for Stewardship planning and practice implementation with PFM data base refinement and utilization.		Existing SWCD staff will complete Forest Stewardship plans for landowners in the Hanging Horn Lake shed. Cost share will be used for priority implementation projects in the Hanging Horn Lakes shed, approved by the SWCD board and using SWCD staff existing staff, TSA 3 engineering staff or NRCS technical staff for design as appropriate.	DNR	\$0	\$60,000
Project Development-	Gully stabilization in the upper Deer Creek Watershed	0.00	The SWCD will work with a group of landowners to design and implement erosion control practices on a eroding gully at the headwaters of Deer Creek	BWSR Clean Water Fund		\$100,000
Groundwater--	Develop alternatives for controlling Mud Springs on Deer Creek		The SWCD will seek solutions to ground water sediment inputs to deer creek	BWSR Clean Water Fund		\$500,000
Streambank or Shoreland Protection--	Red Clay Dams phase II 2014-2016		The SWCD will work with landowners of failing 1970 red clay dams to develop and implement solutions for sediment inputs	BWSR Clean Water Fund	\$81,791	
Streambank or Shoreland Protection--	Red Clay Dams Phase III 2017 -2019		The SWCD will work with landowners of failing 1970 red clay dams to develop and implement solutions for sediment inputs	BWSR Clean Water Fund		\$500,000
Ag Practices: Sheet & Rill--	Kettle River practice implementation following Identified projects in 2012-2014 Accelerated Implementation project	1.00	The SWCD will follow the 2012 Accelerated Implementation project on in the Kettle River Watershed that identified willing landowner to implement phosphorous reducing projects to meet St. Croix Basin TMDL load reduction targets.	BWSR Clean Water Fund		\$300,000
Monitoring & Data Collection-	Continue monitoring in the Big Sany Watershed of Carlton Co. to model needed phos reductions for the Upper Miss TMDL and WRAP	0.20	The SWCD will utilize existing staff to continue water monitoring in support of the Upper Mississippi Basin WRAP	MPCA	\$15,000	
Monitoring & Data Collection-	Continue monitoring in the Upper Kettle Watershed of Carlton Co. to model needed phos reductions for the St. Croix Basin TMDL and WRAP	0.20	The SWCD will utilize existing staff to continue water monitoring in support of the Upper Mississippi Basin WRAP	MPCA		\$20,000
Forestry Practices--	Accelerate forestry practice implementation in targeted areas of the county	0.30	The SWCD will accelerate forestry practice implementation in the Kettle river watershed for TMDL Load Reduction goals	BWSR Clean Water Fund		\$25,000
Forestry Practices--	Accelerate forestry practice implementation in targeted areas of the county	0.30	The SWCD will accelerate forestry practice implementation in the Deer Creek and Nemandji watershed for TMDL Load Reduction goals	BWSR Clean Water Fund		\$25,000
Forestry Practices--	Accelerate forestry practice implementation in targeted areas of the county	0.30	The SWCD will accelerate forestry practice implementation in the Tamarack watershed for TMDL Load Reduction goals	BWSR Clean Water Fund		\$25,000
					<b>Total Projected Funding for the Bienium</b>	<b>Additional Funds needed to implement this plan</b>
		<b>Total new FTEs in this plan 2.8</b>			<b>\$340,133</b>	<b>\$1,975,000</b>