

DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT



COMPREHENSIVE PLAN

2011 - 2015

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I. INTRODUCTION

A. Purpose of Comprehensive Plan

The Dakota County Soil and Water Conservation District (SWCD) have developed this Comprehensive Plan (Plan) to serve as a planning tool to guide programs and activities over the next five years. The Plan identifies accomplishments of past efforts and lists strategies and objectives of the SWCD through the year 2015.

As the SWCD moves into the next five years of doing business, it is anticipated that new governance structures that deal with water quality, flooding, habitat and soil erosion issues will be discussed. The SWCD will evaluate these governance issues as they move forward from concept to potential legislation.

The focus of this Plan is to outline concepts of where and how the SWCD will deliver education, technical assistance and cost share opportunities to landowners of Dakota County for the betterment of our natural resources.

B. Authorization and Jurisdiction

Soil and Water Conservation Districts are local units of government that manage and direct conservation programs. The function of SWCD's is to assist land occupiers and homeowners, in rural and urban settings, to protect soil and water resources. Minnesota currently has 90 SWCD's, each of which is governed by a Board of five elected supervisors. Soil and Water Conservation Districts receive their authority from Chapter 103C of Minnesota Statutes.

In addition to their individual resources, SWCDs use the expertise of the other state and federal organizations, including the Minnesota Board of Water and Soil Resources (BWSR) and the federal Natural Resources Conservation Service (NRCS). BWSR is the administrative agency of SWCD's.

The mission statement of the SWCD is:

Providing high quality assistance to the citizens of Dakota County
for the protection of land and water resources.

C. Organizational History

The SWCD is a governmental sub-division of the State of Minnesota. It was organized in accordance with the provisions, powers, and restrictions as set forth in Minnesota Statutes, Chapter 40. Soil and Water Conservation Districts were formed in response to the conservation movement of the late 1930's and early 1940's and were one of the first legislative attempts to protect our soil and water resources.

The Dakota County SWCD was organized in 1944. The original Dakota County SWCD included all of Dakota County except Douglas, Marshan and Ravenna Townships and the City of Hastings, which at that time were part of the Dakhue Soil Conservation District. On April 13, 1955 the State Soil Conservation Committee passed a resolution to add the land lying in Dakota County that was part of the Dakhue Soil Conservation District, to the Dakota County SWCD.

II. SOIL SURVEY AND LAND COVER

There are 10 general soil associations located within Dakota County as listed in Figure 1. These soils range from nearly level, silty and loamy soils within floodplains to very steep, loamy and sandy soils on uplands and outwash plains. Dakota County has a wide range of soil types with a large percentage classified as prime farmland.

Dakota County also has a variety of land uses including developed land, developing lands and rural lands. The conversion of soils to impervious surfaces or changes from agricultural to alternative land uses has changed the Dakota County landscape considerably over the past decades. However, more recently, as land development has slowed with an economic downturn, changes to the rural landscape have outpaced urban sprawl due to increased demand for cultivation and agricultural production.

Dakota County and its proximity to a more dense population base increases the potential for overall change to existing land cover. It also provides opportunities through zoning and watershed standards for protecting water quality and critical soil types that assist in reducing flooding, recharging groundwater supplies, and buffering our surface waters.

Figure 2 provides a detailed map of the most recent land cover data in Dakota County. Land cover is an important planning tool for the SWCD as it allows us to see on a broad scope potential impacts on water quality due to accelerated changes in the landscape. This data was completed for all of Dakota County in 2000 and has been updated for the Vermillion River Watershed in 2008. It is anticipated that updates will be complete for a portion of the Cannon River Watershed by the end of 2010.

III. SOIL AND WATER CONSERVATION PROBLEMS

A. Nature, Extent, and Severity of Problems

The SWCD has identified three natural resource focus areas over the next five years:

- Soil Loss
- Stormwater Management
- Native Plant Communities

Various programs and activities will be implemented to address these focus areas.

Soil loss issues will concentrate on geographical areas that combine steep slopes and agricultural production, construction activities where greater development pressure is occurring, and where land adjacent to water flow lines are not maintained in a permanent vegetative cover.

Stormwater management issues will concentrate on geographical areas that are planned for new developments and within existing developments that provide retrofit opportunities.

Native plant communities will be protected and restored through development of landowner stewardship plans on locally acquired easements, restoring wetlands, installing native upland vegetation, installing native vegetation along watercourses and restoring shorelines of lakes and streams.

B. Accomplishments

Over the past five years the SWCD has been innovative with programs and services and has significantly increased collaboration efforts with other organizations to address water quality and habitat protection. Some of these accomplishments over the past 5 years include (approximate numbers):

Education, Promotion and Research

- Provided over 50 adult education workshops with over 1,000 participants to demonstrate how landowners can improve water quality on their land and to market cost share opportunities.
- Assisted with 20 workshops for erosion and sediment control certifications and stormwater maintenance practices.
- Provided outdoor education event to over 4,000 area 5th grade students.
- Held a wetland and feedlot education workshop for township officials.

- Generated a sub-watershed approach for identifying, marketing and prioritizing projects.
- Provided press releases and maintained web site to provide public awareness.
- Implemented a database with project “Fact Sheets” for public viewing through our web site.
- Participated in 3 research projects to improve knowledge of conservation management principles.
- Participated in several stakeholder or advisory groups for various State and local governments as well as nonprofit organizations.

Technical Assistance

- Assisted USDA – Natural Resources Conservation Service with design, planning and construction oversight
- Provided administrative services to three watershed management organizations.
- Facilitated the Lower Mississippi River TMDL stakeholders process
- Provided water monitoring services throughout Dakota County.
- Updated land cover data set for portion of Dakota County
- Completed drained wetland inventory for portions of Vermillion River Watershed.
- Completed a feedlot registration process to identify location, number and type of livestock.
- Developed landowner stewardship plans for 30 conservation easements involving over 4,000 acres.
- Assisted over 300 landowners or applicants with regulatory requirements of State wetland rules.
- Assisted over 100 landowners or applicants with State feedlot rules.
- Conducted over 1,000 inspections at active construction sites to evaluate compliance with State erosion and stormwater rules.

Cost Share

- Design and installed over 150 residential raingardens.
- Design and installed over 30 bioretention basins for stormwater runoff improvements.
- Design and installed 25 grassed waterways on agricultural land.
- Design and installed 20 water and sediment control basins on agricultural land.
- Installed 3 miles of vegetated buffers adjacent to streams and watercourses.
- Restored 1 mile of shoreline on area lakes.
- Installed 5 feedlot improvement projects.
- Completed 12 nutrient management plans for landowners

To carry out these program and activities, several partnerships and working agreements were executed. Over the past 5 years the SWCD has had agreements to carryout services and programs with the following organizations:

- USDA – Natural Resources Conservation Service
- Dakota County
- Vermillion River Watershed
- North Cannon River Watershed
- Lower Minnesota River Watershed District
- Gun Club Lake Watershed Management Organization
- Lower Mississippi River Watershed Management Organization
- Black Dog Watershed Management Organizations
- Metropolitan Council
- Metropolitan Conservation Districts Technical Service Area Joint Powers Board

- University of Minnesota
- Minnesota Board of Soil and Water Resources
- Minnesota Department of Natural Resources
- Minnesota Department of Agriculture
- Minnesota Pollution Control Agency
- National Park Service

C. Effectiveness of Past Efforts

Over the past five years the SWCD has generated various customer feedback surveys. Over 200 surveys have been completed by individuals who received education, technical or cost share assistance from the SWCD. Overall feedback obtained has been positive. Surveys are also used to gather input on where improvements can be made and incorporated in programs and services.

The SWCD conducts inspections of cost share projects to ensure operation and maintenance plans are being followed and to evaluate project effectiveness. In general, follow-up inspections of projects that use cost share funds are done twice in the first three years and at least twice more over the 10-year life of a cost share contract.

The strength of the SWCD is the ability to provide conservation planning and technical advice under both urban and agricultural situations. Dakota County has a very diverse set of land uses and therefore a variety of conservation programs is necessary. We continue to build staff credentials and skills to develop solutions that address conservation issues as the demand to change landscapes continues. For this reason, the Dakota SWCD Board of Supervisors and staff continually prioritize resources, develop conservation strategies and review cost share policies.

COST-SHARE PROGRAM REQUIREMENTS

A. Nature and Extent of High Priority Problems

The SWCD has designated all watersheds, both urban and rural, within Dakota County as high priority watersheds for technical and financial assistance. This comprehensive approach is necessary as the SWCD continues to rely on others for all of its funding.

B. Conservation Measures Needed

Some of the conservation practices currently being implemented within Dakota County include the establishment of grassed waterways, water and sediment control basins, vegetated buffers, lakeshore and streambank stabilization projects, feedlot improvements, raingardens, infiltration basins, retention basins, and wetland restorations.

Additional grant funds will need to be sought to adequately assist landowners and LGUs with their conservation planning and implementation needs. The Dakota Board of Supervisors and staff currently have adopted the following policy in regards to executing contracts with landowners:

Practices eligible for cost-share may be approved up to:

- 85% of total cost for projects when federal USDA funding is sought.
- 75% of the total cost for rural land projects that use only State or local funds.
- 65% of the total cost for projects that involve stormwater management.
- 50% of the total cost for projects that seal unused wells (State Policy).

The SWCD currently has five cost share programs for which policy has been established. More detailed information can be found on our web site at www.dakotaswcd.org. The five cost share programs include:

- Blue Thumb Grant (BTG)
- State Cost Share (SCS)
- Community Cost Share (CCS)
- Conservation Initiative Funding (CIF)
- Conservation Partners Cost Share (CCP)

IV. FUTURE STRATEGIES

A. Objectives

The SWCD has continued to seek and obtain increased responsibilities over the last several years with regards to soil and water conservation. We anticipate the need to further our collaboration efforts with other organizations that have similar missions. This may mean working across traditional county boundaries.

General objectives of the SWCD over the next 5 years include:

- Install rural land conservation practices to reduce soil erosion and flooding.
- Partner with cities and townships to evaluate capital improvement projects that create opportunity for improved stormwater management and water quality.
- Work with landowners to restore wetlands and native plant communities along lakes and streams.
- Collaborate with others to provide a systematic approach to water monitoring efforts that provide sound scientific data for future planning.
- Provide educational outreach programs in the county that strive to inform individuals and organizations of present and future conservation needs within the county.
- Provide technical assistance for State wetland and feedlot regulatory programs as funding allows.
- Encourage the private landowners to preserve the county's unique areas, such as wetlands, floodplains, woodlots, and prime agricultural land.

B. Budget Forecast

See Table 1. Due to the uncertainty of budgets, forecasts were provided only through 2012. The SWCD is currently going through its most significant budget challenges in history. Since the SWCD has no way to generate revenue unless it is provided by partnering organizations, our future conservation strategies will need align and be coordinated with those supplying revenue. As County government and local government units such as cities, townships and watershed authorities reduce their budgets, it is anticipated our budget will be reduced accordingly if not additionally. The SWCD Board continues to monitor existing fund balance projections and will work to garner financial support for the administrative and technical assistance tasks needed to carry out programs and activities. However, it is recognized that some current programs and activities will need to be eliminated to balance annual budgets over the next few years.

C. Adjustments Needed in SWCD Authorities and/or Programs

The existing SWCD programs will continue to be flexible in order to address the diversity of land use within the county. Adequate funding and incentives from state, county, and outside sources will be necessary to implement critical natural resource protection and conservation plans.

The SWCD understands the need to be innovative and creative in generating support and promoting soil and water stewardship. Educational events, demonstration plots targeted marketing of cost share programs, and communication with state and local elected officials will be used over the next five years in an attempt to distribute information.

Adjustments to SWCD authorities over the next five years may be predicated on the results of various water governance studies currently underway. If no large scale governance structure changes occur at the State level, the SWCD will need to work directly with Dakota County government and local units of government in order to obtain the revenue needed to maintain current programs and services.

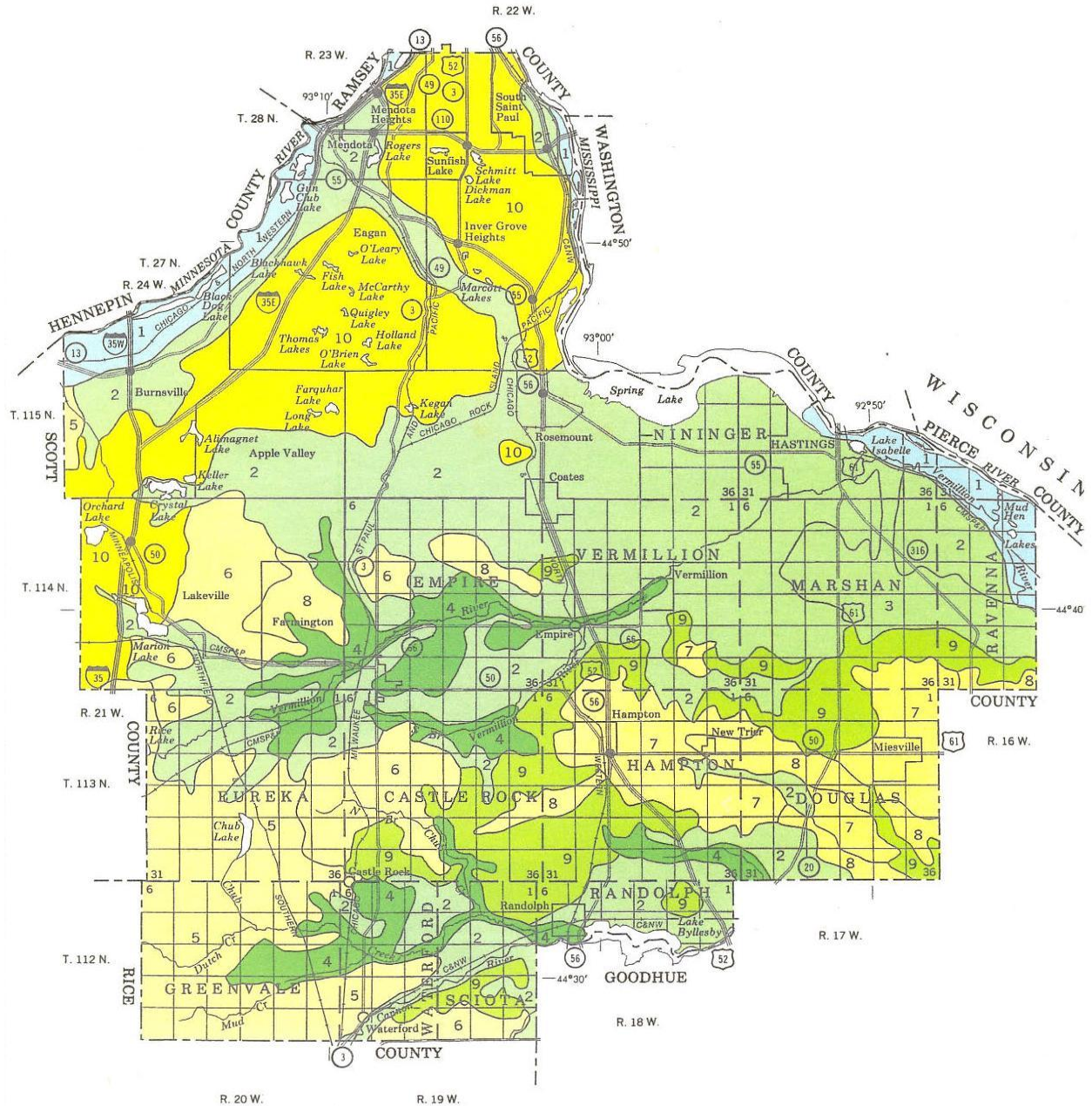
D. SWCD Policies

The SWCD Board has adopted various policies to guide its soil and water conservation programs and will continue to do so over the next five years. Existing and anticipated Board policies include:

1. Establish application, contract and payment policies of existing cost share programs identified above.
2. Executing multiple joint powers agreements with LGU and State agencies on an annual basis to implement programs and services within Dakota County
3. Executing joint powers agreements with Dakota County Departments on an annual basis to establish cooperative working relationships.
4. Renew 5-year joint powers agreement between Dakota County and the SWCD

Figure 1

Soils Identified within Dakota County



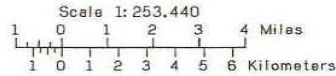
Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.

General Soil Associations within Dakota County



U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
MINNESOTA AGRICULTURAL EXPERIMENT STATION

GENERAL SOIL MAP DAKOTA COUNTY, MINNESOTA



SOIL LEGEND*

- | |
|---|
| 1 |
|---|

NEARLY LEVEL, SILTY AND LOAMY SOILS; ON FLOOD PLAINS
 Colo-Algansee-Minneiska: Nearly level, poorly drained to moderately well drained soils formed in loamy, silty, or sandy alluvium; on flood plains of major rivers
- | |
|---|
| 2 |
|---|

LEVEL TO VERY STEEP, SILTY, LOAMY, AND SANDY SOILS; ON OUTWASH PLAINS AND TERRACES
 Waukegan-Wadena-Hawick: Level to very steep, well drained and excessively drained soils formed in silty and loamy sediments over sandy outwash; on outwash plains and terraces
- | |
|---|
| 3 |
|---|

Hubbard-Sparta-Plainfield: Level to moderately steep, excessively drained soils formed in sandy sediments; on outwash plains and terraces
- | |
|---|
| 4 |
|---|

NEARLY LEVEL, SILTY AND LOAMY SOILS; ON OUTWASH PLAINS
 Marshan-Cylinder: Nearly level, poorly drained and somewhat poorly drained soils formed in silty and loamy sediments over sandy outwash; on outwash plains
- | |
|---|
| 5 |
|---|

NEARLY LEVEL TO STEEP, LOAMY AND SILTY SOILS; ON UPLANDS
 Lester-Blooming-Merton: Gently sloping to moderately steep, well drained to somewhat poorly drained soils formed in loamy and silty sediments and loamy glacial till; on uplands
- | |
|---|
| 6 |
|---|

Ostrander-Klinger-Maxfield: Nearly level to sloping, well drained, somewhat poorly drained, and poorly drained soils formed in silty and loamy sediments and loamy glacial till; on uplands
- | |
|---|
| 7 |
|---|

Ostrander-Carmi-Burkhardt: Gently sloping to moderately steep, well drained and somewhat excessively drained soils formed in loamy sediments and in the underlying loamy or sandy glacial drift; on uplands
- | |
|---|
| 8 |
|---|

Tallula-Port Byron-Bold: Nearly level to steep, well drained soils formed in loess; on uplands
- | |
|---|
| 9 |
|---|

NEARLY LEVEL TO SLOPING, LOAMY SOILS THAT ARE UNDERLAIN BY BEDROCK; ON UPLANDS AND TERRACES
 Etter-Rockton-Copaston: Nearly level to sloping, well drained soils formed in loamy sediments over sandstone or limestone bedrock; on uplands and terraces
- | |
|----|
| 10 |
|----|

GENTLY SLOPING TO VERY STEEP, LOAMY AND SANDY SOILS; ON UPLANDS AND PITTED OUTWASH PLAINS
 Kingsley-Mahtomedi: Gently sloping to very steep, well drained and excessively drained soils formed in loamy and sandy glacial till and sandy glacial outwash; on uplands and pitted outwash plains

*Unless otherwise indicated, texture terms in the descriptive headings refer to the surface layer of the major soils in the map units.

Compiled 1981

| SECTIONALIZED TOWNSHIP | | | | | |
|---------------------------|----|----|----|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

Figure 2

Land Cover in Dakota County

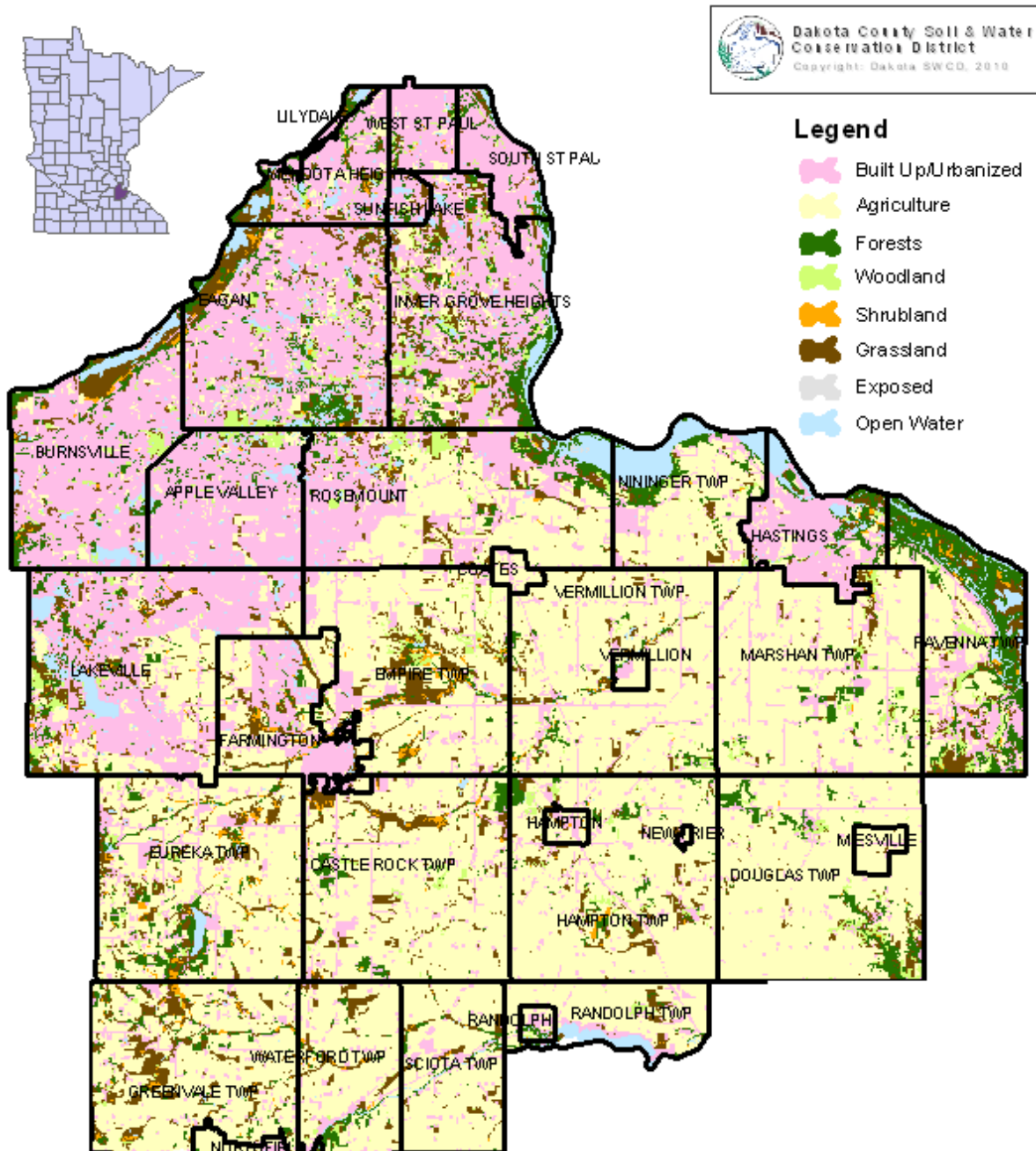


Table 1

| | <u>Budget Forecast</u> | | | | |
|--|-------------------------------|-------------------|---------------------------|---------------------------|---------------------------|
| | 2008 | 2009 | 2010 Projected | 2011 Projected | 2012 Projected |
| <u>REVENUES</u> | | | | | |
| Intergovernmental | | | | | |
| County Funds | 539,522 | 463,001 | 455,340 | 406,190 | 400,000 |
| Local Funds | 180,953 | 331,575 | 276,980 | 247,000 | 275,000 |
| Federal Funds | 18,196 | 5,583 | 5,000 | 0 | 0 |
| State Funds | <u>227,649</u> | <u>219,200</u> | <u>70,017</u> | <u>102,771</u> | <u>75,000</u> |
| Total intergovernmental Revenue | 966,320 | 1,019,359 | 807,337 | 755,961 | 750,000 |
| Charges For Services | 47,698 | 41,782 | 30,390 | 25,350 | 25,000 |
| Other Grant Funds | 56,646 | | | | |
| Interest Earnings | 22,642 | 13,604 | 10,000 | 10,000 | 10,000 |
| Other | <u>1,464</u> | <u>1,763</u> | <u>500</u> | <u>500</u> | <u>500</u> |
| Total Revenues | 1,094,770 | 1,076,508 | 848,227 | 791,811 | 848,227 |
| <u>EXPENDITURES</u> | | | | | |
| District Operations | | | | | |
| Personnel Services | 841,357 | 816,883 | 810,200 | 813,700 | 800,000 |
| Operating Expenses | 33,501 | 37,628 | 41,300 | 41,300 | 41,300 |
| Supplies | 5,758 | 6,574 | 7,200 | 7,200 | 5,000 |
| Capital Outlay | <u>3,968</u> | <u>5,642</u> | <u>6,000</u> | <u>6,000</u> | <u>6,000</u> |
| Total District Operations | 884,584 | 866,727 | 864,700 | 868,200 | 852,300 |
| Project Expenditures | | | | | |
| District | 27,953 | 20,645 | 14,750 | 13,400 | 13,000 |
| Local | 64,048 | 87,623 | 0 | 0 | 0 |
| County | 6,714 | 18,681 | 0 | 0 | 0 |
| State | 68,277 | 98,214 | 4,532 | 0 | 0 |
| Other | <u>41,345</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Total Project Expenditures | 208,337 | 225,163 | 19,283 | 13,400 | 13,000 |
| Total Expenditures | 1,092,921 | 1,091,890 | 883,982 | 881,600 | 865,000 |
| Excess Revenues/Expenditures | \$1,848 | (\$15,382) | (\$35,755) | (\$89,789) | (\$16,773) |
| Fund Balance - January 1 | \$394,627 | \$396,475 | \$381,093 | \$348,883 | \$259,094 |
| Fund Balance - December 31 | \$396,475 | \$381,093 | \$348,883 | \$259,094 | \$242,321 |