

# WASECA SWCD

## 2009 ANNUAL PLAN OF WORK



**Encouraging voluntary conservation efforts since 1948**

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## WASECA COUNTY SOIL & WATER CONSERVATION DISTRICT

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### Introduction, Mission Statement

The Waseca County Soil & Water Conservation District is a governmental subdivision chartered by the State of Minnesota under Minnesota Statutes, Chapter 40. The District serves landowners within the boundaries of Waseca County, including incorporated cities. The District is not considered a part of Waseca County, even though the county provides District revenue in the form of an appropriation, it does not retain any control over the operations of the District. The Annual Plan provides guidance and direction to the District staff and supervisors for the goals and mission set forth by the Waseca SWCD. The Waseca SWCD Comprehensive Plan provides direction in determining important program applications, staffing, and financial requirements for District Operations. During the development of the plan, the District tried to set realistic objectives and implementation programs. To carry out the objectives and actions outlined in this plan, it is essential that adequate staff and financial resources be available to the District. Our overall priority is to provide the best service possible to the people of Waseca County.

A Board of five Supervisors, elected countywide by general ballot, oversee and develop the policies of the Waseca Soil and Water Conservation District. The District lacks the power to pass ordinances, tax or condemn and does not receive any direct funding appropriations from the State legislature.

Over the years, the SWCD has successfully adapted to the changing natural landscape and needs of our constituents and promotes inter-agency cooperation and coordination for the preservation and conservation of the natural resource base in Waseca County. The District must be responsive to change throughout the year without losing sight of our mission. The District's Mission Statement is:

The District cooperates with all governmental units to determine, to educate, to assist the implementation of district, state and federal conservation practices and to promote soil, water and environmental stewardship of the Waseca County natural resources.

### Plan Purpose

The plan strives to direct the activities of the District to meet the needs of the citizens within the county while promoting soil, water and sound environmental stewardship of the Waseca county natural resources future.

The Board of Supervisors adopted a five-year Comprehensive Plan in 2008 that provides the general direction and guiding principles for the organization. Periodic review of existing programs, and pursuing potential new programs or opportunities, are essential to effectively deliver services. New programs may be developed or existing programs modified. This work plan will serve as the framework for the Waseca SWCD activities and a mechanism to evaluate the SWCD effectiveness.

The District has developed eight objectives to address priority issues for 2009. Implementation strategies are: Technical Assistance, Financial Assistance, and Educational Assistance. To ensure the District remains effective, staff training and office technology shall be necessary.

## Organizational Chart

### 2009 Waseca SWCD Board of Supervisors



Ron Purcell    Larry Hagen    Jurgen Peters    Wayne Cords    Robert Drager  
 Treasurer    Secretary    Vice-chairman    Chairman    Member

#### District Staff:

Marla Watje, District Manager/Tech.  
 Darlene Kukuozka, Office Assistant

#### NRCS Staff:

Jim Jirik, District Conservationist  
 Todd Piepho, Technician

### 2009 - COMMITTEES AND ASSIGNMENTS

Committee	Member
Finance	Ron, Larry
Personnel	Robert, Jurgen

Wayne, as Board Chair, will serve on all committees as an ex-officio member  
 Staff will join committees as needed

Assignment	Primary	Alternate
GBERBA	Jurgen	Robert
Zone 10 JPB	Robert	Larry
Cannon River Watershed	Ron	Jurgen
Waseca Lakes Association	Ron	Jurgen
Lake Elysian Watershed	Wayne	Larry
NRCS Working Group	Ron	Robert
Three Rivers RC&D	Larry	Robert
Water Planning	Wayne	Ron

## Waseca County SWCD Background

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The District was organized under provisions of the Minnesota State Law, Chapter 40 by local landowners concerned about major erosion problems. The District became a legal subdivision of State Government, operating under a charter issued by the Secretary of State on June 28, 1948.

The purpose of the existence of the District is to assist all interested landowners and governmental agencies in applying conservation practices. This assistance may be in the form of technical, educational, financial, or any form thereof that is authorized. The District has a responsibility to demonstrate a concern in protecting our natural resources.

The physical boundaries of the SWCD are equivalent to those of Waseca County. The county has a total of 277,000 acres, of which 5,067 acres consist of natural bodies of water. The County is situated where the big woods (hardwood forests) gave way to the native prairie grasslands. Transitional areas of scattered oak stands within areas of grassland were also part of the native vegetation. The original prairies no longer exist in the county. A number of remnant woodlots from the original "big woods" still exist.

Waseca County has 83 different soil types. A complete list of the soil types, a brief description, acres and percentile of each soil is included in the Appendix - "Acreage and Proportionate Extent of the Soils". Hydric soils make up approximately 55% of the soils in the county (does not include lakes). A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

Approximately 12.5% of the county consists of highly erodible land. Highly erodible land is defined by the Sodbuster and Conservation compliance parts of the Food Security Act of 1985. Determinations for highly erodible land are based on an erodibility index as defined in the National Food Security Act manual. In Waseca County this includes land with a 6% or greater slope (refer to map in appendix).

Over the years, the District primarily worked with agricultural water quality/quantity issues and erosion concerns. There continues to be a great need for wetland restorations, nutrient and pesticide use reduction, upland wildlife habitat, grass contour strips, rotational grazing, sediment basins, and buffering of water bodies. In more recent years, the District has assisted with urban issues, such as residential lake shore restoration and rain gardens.

In the recent November, 2008 election, Waseca county residents voted (57% to 43%) to approve the passage of the Clean Water, Land and Legacy Amendment, a constitutional amendment for clean water. Minnesotans value clean water, fresh air, fertile soil, abundant fish and wildlife and are willing to pay for conservation, as demonstrated by the vote. We now have a tremendous opportunity to creatively design a sustainable conservation landscape. This is a HUGE benefit for all!

## Partnering with State/Federal Agencies and Others

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**DEPARTMENT OF NATURAL RESOURCES** – The District will work cooperatively with all divisions of the DNR to maximize the benefits of conservation projects installed. Lake shore and stream restoration projects and aquatic invasive species will be coordinated with Fisheries; water permit applications and shore land alteration issues/concerns will be reviewed with Waters; TSI projects, reforestation plantings, buckthorn removal and requests for forestry stewardship plans will be coordinated with Forestry; assist in diversifying native grass seeding and wetland restorations on new and existing WMAs will be coordinated with the Area Wildlife Manager; rain gauge reports will continue to be sent to the State Climatology Office.

**BOARD OF WATER & SOIL RESOURCES** – The District will administer the State Cost Share Program in 2009. Practices that qualify for high priority state cost share funds include: critical area plantings, shelterbelts, waterways, sediment basins, terraces, and Ag-waste management systems. The District will administer the RIM program and identified high priority sites for conservation easements. The District will administer the Native Buffer cost share program. The District will continue to be the LGU (Local Government Unit) and administer the Wetland Conservation Act, through County resolution.

**U.S. FISH & WILDLIFE SERVICE** -The District will prioritize wetland restoration sites for funding and provide necessary field work to complete project.

**NATURAL RESOURCES CONSERVATION SERVICE** – The District will work closely with the NRCS. The District will assist with the survey and design of conservation practices as needed. The District will provide the leadership to promote the Environmental Quality Incentive Program (EQIP) with a local work group meeting. The District will continue to promote the CRP program and work cooperatively to fund RIM/WRP easements.

**MN POLLUTION CONTROL** – The District will continue to cooperate with the MPCA through watershed groups and encourage moving forward on TMDL water basins in Waseca County.

**MN DEPARTMENT OF AGRICULTURE** - The District will actively pursue funding for a controlled drainage site with the MDA. The District will assist the county with the Ag BMP Loan program, eligible practices include Ag waste systems, conservation tillage equipment and SSTS.

**WASECA COUNTY** - The District needs the support of the Waseca County Commissioners to carry out the Comprehensive Plan and Annual Plan of Work for Waseca County. The District will provide technical assistance in implementation of the Local Water Plan. The District will be a member of the feedlot site team. The District will provide technical assistance to the Planning and Zoning office.

There are a number of organizations and associations the Waseca SWCD will be partnering with in 2009 to protect, preserve, repair or enhance water quality.

Waseca Lakes Association  
Lake Elysian Watershed  
Smithmill/Janesville Sportsman Club  
Wilton Long Spurs Turkey Federation  
Ducks Unlimited  
Greater Blue Earth River Basin Alliance  
Association of Soil and Water Conservation Districts

Cannon River Watershed Partnership  
Pheasants Forever  
Southern MN Dark House Association  
Minnesota Waterfowl Association  
Reeds Lake Association  
Three Rivers Resource Conservation & Development

## Natural resources within Waseca County continues to be the focus of the District

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The Waseca SWCD Board has identified the following threatened resources as high priority within Waseca County within the overall mission of the District:

- Wetlands
- Natural Areas
- Prime Farmland
- Rivers
- Lakes
- Woodlots
- Groundwater
- Streams

The Waseca SWCD Board has identified the following as the primary sources of threat to these natural resources:

- Alteration of the natural hydrology, including increased amounts of impervious surfaces
- Alteration of wetlands either directly or indirectly
- Poor erosion control practices
- Destruction or reduction of buffer areas adjacent to natural water bodies/systems
- Loss of woodlots and natural areas by conversion for other uses
- Poor nutrient management and other non-point source pollution
- Lack of conservation ethic or knowledge of proper land use

It is not possible for the District to address all issues of degraded natural resource quantity and quality, because of its limited financial and staff resources.

### "Impaired Waters"

A 303(d) Total Maximum Daily Load (TMDL) is a list of waters that are not meeting one or more water-quality standards. As of 2008, MPCA has listed 3 lakes (Clear, Elysian, Loon) and 1 stream (Cobb river) within Waseca County on the TMDL impaired waters list (refer to maps in appendix).

Assessments still need to be completed on the remaining streams, lakes and wetlands within the county. The District will work with the local sponsor to draft TMDL plans for the impairments.

## 2009 District Objectives

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### Objective - Rural Land

The District shall work with landowners to minimize the adverse impacts of rural land activities on the county's natural resources.

1. Promote conservation practices and stewardship of land through:
  - State cost-share and other incentive programs
  - Wetland restoration and enhancement
  - Implement Buffer and filter strip
  - Wildlife habitat
  - Sheet and rill erosion and gully stabilization
  - Native tree and shrub sales for field windbreaks, shelterbelts and trees for conservation
  - Forest stewardship and timber management plans
  - Invasive weed control
  - Shore land restoration
2. Minimize direct and indirect impacts to wetlands through implementation of the Wetland Conservation Act.
3. Collaborate with conservation partners, identifying high priority sites for enrollment into a conservation easement or acquisition. (500 ac.)
4. Coordinate with DNR to conduct a Biological Survey for Waseca County.

### Objective- Agriculture

The District shall work with landowners to minimize the adverse impacts of agricultural activities on the county's natural resources.

1. Maximize local, state, and federal funds to apply agricultural conservation practices. Strive to ensure agricultural lands have tolerable soil losses. (\$30,000)
2. Submit proposal for a Feedlot Water Quality Challenge Grant in the Lake Elysian watershed. (1)
3. Implement and promote vegetated buffers and filter strips. (45 acres)
4. Promote drainage management. (1 site)

### Objective - Prime Farmland and Habitat-

Preserving and enhancing contiguous tracts of open space, prime agricultural land and natural areas through programs along with local partners and the county.

1. Collaborate with conservation partners, identifying high priority sites for enrollment into a conservation easement or acquisition. (500 ac.)
2. Prepare a local comprehensive wetland protection and management plan for adoption.
3. Native tree and shrubs tree sales for urban and rural landowners (30,000 plants)

## 2009 District Objectives (cont.)

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### Objective – Watershed organizations and partnerships-

Support collaborative partnerships to identify common goals and enhance natural resource conservation efforts. Stay informed of the most innovative land and water management techniques.

1. Cooperate and collaborate conservation efforts within the Blue Earth River basin, Cannon River Watershed and others to jointly deliver efficient and effective services to landowners.
2. Collectively address the need for technicians and wetland specialist.
3. Coordinate conservation projects with the TSA , Kyle Vogt and Greg Schemmel, for engineering and oversight.

### Objective – Environmental Education-

Promote and increase the awareness of conservation practices for residents and elected officials to make positive impacts on land use decisions.

1. Provide technical assistance to landowners to promote stewardship of natural resources and awareness of the issues that contribute to degradation. Inform them of practices that can improve the quality of their backyard.
2. Host our annual outdoor environmental day for our 1<sup>st</sup> grade students within the county. Topics include: wetlands, soil, wildlife, forestry, fisheries, ground water.
3. Promote compliance with existing statutes, rules and guidance regarding conservation issues.
4. Promote disclosure of the resource limitations of a property during a change of ownership, such as soils, wetlands, flood plains, and easements.

### Objective - District Operations, Financial Stability-

To provide effective conservation leadership through the most efficient use of public funds.

1. Oversight to ensure County levy adequately supports conservation efforts in Waseca County and effectively addresses the needs of the citizens.
2. Develop annual service contracts with watersheds and partners. (3 Rivers RCSD, GBERBA)
3. Coordinate Board and staff training needs.
4. Compile with all reports and requirements outlined in State Statute or in the operating expectations provided by BWSR.
5. Maintain a staffing level to fulfill all program responsibilities. (Manager, Technicians, Office Assistant)

## 2009 District Objectives (cont.)

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### Objective - Grant and Contract Management -

The District will seek grants and manage successful grants and contracts to ensure that identified outcomes are delivered and that budget performance is appropriate.

1. Submit grants to state agencies, Lessard Heritage Council and Clean Water Legacy Council for implementation of conservation and easements to preserve and enhance the county's natural resources.
2. Actively report project status in the MN BWSR E-Link system.
3. Collaborate with nonprofit organizations for grant opportunities to achieve multiple resource benefits. (Pheasants Forever, MN Dark House, DU, Lake Associations, etc)

## State Cost Share Program

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Technical assistance for survey, design and installation of a water quality practice is provided through District, Non-point Engineering Assistance Program, or NRCS.

The District Board has established policies to administer the State cost-share program and there are no significant changes to the program. The Board continues to hire an accountant for financial responsibility and has trained staff to deliver technical assistance for voluntary conservation efforts.

Total funding needed to install anticipated conservation practices under the various financial assistance programs is estimated at \$320,000 for 2009. Cooperators will continue to come through the door for financial assistance for conservation projects. Using all available funding sources, the following practices are anticipated for installation in 2009 with technical assistance from the District:

- Streambank Stabilization
- Grass Waterways
- Water and Sediment Control Basins
- Critical Area Plantings
- Shoreline Restorations
- Rain Gardens
- Ag Waste system
- Wetland Restorations
- Rock Check dam
- Shelterbelts
- Terraces

## STATE COST-SHARE PROGRAM DEFINITIONS

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State cost-share funds continue to be used for high priority concerns within Waseca County. The 2009 allocation for the county is \$17,767 of which 20% can be used for T&A. The Waseca County SWCD Board of Supervisors has applied the following definitions.

### HIGH PRIORITY EROSION

"High priority erosion problems": areas where erosion from wind or water is occurring equal to, or in excess of, 2 x T tons per acre per year or is occurring on any area that exhibits active gully erosion or is identified as high priority in the comprehensive local water management plan.

"T" means the soil loss tolerance that is the maximum average annual rate of soil loss from sheet and rill erosion or wind erosion, expressed in tons per acre per year that can occur while the productive capacity of the soil to produce food and fiber over the long term is sustained.

"2 x T" means soil erosion at the rate of two times T.

### HIGH PRIORITY WATER QUALITY

"High priority water quality problems": areas where sediment, nutrients, chemicals, or other pollutants discharge to Department of Natural Resources designated protected waters, or to any high priority waters as identified in a comprehensive local water management plan or discharge to a sinkhole or groundwater. The pollutant delivery rate to the water source is in amounts that will impair the quality or usefulness of the water resource.

Waseca County has over 8,200 acres of surface water area making up about 3% of the total area.

### HIGH PRIORITY FEEDLOTS

Feedlots where the pollution potential rating from the feedlot model is greater than or equal to one (1) and which are discharging pollutants to Department of Natural Resources designated public waters or to a sinkhole or shallow soils overlaying fractured or cavernous bedrock or within 100 feet of a water well. Animal waste control systems may be used with any high priority feedlot or where the land occupier was cited by the MN Pollution Control Agency or other situations where that agency determines there is a potential feedlot pollution hazard.

Waseca County continues to conduct on site inspection all feedlots in a 3 year rotation.

### HIGH PRIORITY SEDIMENTATION

Areas within 300 feet of a water course or 1,000 feet of a water basin or wetland where the water erosion rate exceeds three (3) tons per acre per year or areas where the district can show that sediment delivery occurs from a watershed or direct conveyance course. Water basin or wetland must be classified by the Department of Natural Resources as public waters.

Within Waseca County there continues to be erosion, water quality and water quantity concerns and issues that need to be addressed. The demand for program implementation funds continues to be strong. Because of the intensive agricultural land use, for both livestock and crops, and residential development pressure it is important that we continue to work to meet all individual needs. Education to make sound responsible decisions and the need to protect the natural resources for future generations is necessary to individuals in the decision making process.

STAFFING NEEDS WORKSHEET

WORK ACTIVITY	District Manager	Technician (vacant)	Office Assistant
Wetland Conservation Act- Administration	25		
Wetland Conservation Act- Technical	40	10	
Big Cobb Watershed 319 grant	5	5	
Tree Program/Distribution and Planting	30	25	2
State cost share Administration	5		
State cost share- Implementation	20	12	
RIM Easements	15	120	
NRCS support	5	30	5
Zone 10 JPB	4		
Survey, design, oversee construction of projects	20	15	
Lakeshore restoration projects	7	7	
Feedlot site team reviews	5		
Finances	5		
Training	6	15	
Education	5	5	
Board meetings	7	6	3
Administration	28		
QBERBA	12		100
Three Rivers RC&D	3		150
Cannon River Watershed Partnership	3		
Holiday	10	10	10
TOTALS	260	260	260

\*This analysis is based on a 260 workday year.

ADJUSTMENTS NEEDED IN PROGRAMS And/or FINANCES

The Waseca County SWCD Board of Supervisors and staff will accept the responsibilities and changes in the next year. Legislation is changing the role of the Districts with new programs and partnerships. Priorities will have to be given to achieve our program goals and objectives and to meet our "Mission Statement":

Public awareness of the Districts abilities and programs continue to be emphasized to both rural and urban citizens.

Each year the Districts' financial burden gets greater. The District will be faced with questions on meeting the financial obligations without losing the efficiency of program delivery and service the public has become accustomed to. The District will need to look for alternative funding sources that may or may not meet all of our objectives and goals.

SWCD 2009 PROPOSED SCHEDULE

<b>JANUARY</b>		<b>FEBRUARY</b>	
	Re-organization of Board		Promote Tree Sales
	Area VI Chairman's meeting (Wayne)		Legislative Day at the Capitol (All)
	Tree Day Open House		GBERBA Annual meeting (All)
	SWCD newsletter		Finalize Annual report
	Zone 10 JPB meeting (Bob)		Review draft Co. water plan
	Attend training		E-Link deadline - March 1
			Review and adopt 2009 budget
<b>MARCH</b>	Financial Statements -15th deadline	<b>APRIL</b>	Distribute/plant trees
	Annual Report - 15th deadline		Attend Area VI meeting (All)
	Promote tree sales		Budget committee -2010 budget
	Review cost share applications		Submit resolutions to MASWCD
	Attend training (Staff)		Zone 10 JPB meeting (Bob)
	Enter E-Link data		Enter E-Link data
	EQIP signup		Submit Feedlot Water Quality Appl.
<b>MAY</b>	1st Grade Environmental Day (Ron)	<b>JUNE</b>	Nominate 2009 Conservationist
	Sakatah Environmental Day (Staff)		Area VI meeting (All)
	lakeshore restoration plantings		Native Buffer plantings
	Plant trees		Review annual plan (All)
	Submit 2010 budget to Co. (Ron)		Receive County allocation
	CREP spot checks		CREP and cost share spot checks
	Three Rivers RC&D meeting (Larry)		Resolution meeting
	SCMACDE Area VI envirothon (Staff)		SCMACDE Employee training
	Enter E-Link data		Shore land restoration plantings
<b>JULY</b>	Co. Fair booth	<b>AUGUST</b>	Review cost share applications
	Enter E-Link data		Receive BWSR allocation
	Zone 10 JPB meeting (Bob)		Cost-share Project implementation
	Ag waste construction		Enter E-Link data
<b>SEPTEMBER</b>	Fall construction	<b>OCTOBER</b>	Fall construction
	Attend training		Order trees
	Enter E-Link data		Enter E-Link data
<b>NOVEMBER</b>	Fall construction	<b>DECEMBER</b>	Fall construction
	MASWCD Area VI meeting (All)		Zone 10 JPB meeting (Bob)
	EQIP local workgroup (Ron)		Personnel evaluations
	Enter E-Link data		MASWCD Annual Convention (All)
			Receive County Allocation

Monthly meetings to be attended by Supervisor/Staff:

CRWP (Ron): Jan. - Dec.

SWCD Board meeting (Supervisors/Staff): Jan. - Dec.

Waseca Lakes Association (Ron): Jan. - Dec.

Lake Elysian Watershed (Wayne) Feb. - Nov.

GBERBA Executive meeting: (Jurgen): Jan. - Dec.

Three Rivers RC&D meeting: (staff): Jan. - Dec.

GBERBA Tech meeting (staff) - Jan. - Dec.

## 2009 PROPOSED BUDGET- WASECA SWCD

### EXPENDITURES-

#### Personal Services

Employee Sal. (2 employees)	93,185
Seasonal Employees	10,537
Supervisor Comp. (5 supervisors)	4,900
FICA	8,310
PERA	6,290
Health Insurance (2 employees)	23,910

Total Personal : \$147,132

#### Other Services & Charges

Supervisor Expense	2,500
mileage, meals, registration, lodging, etc.	
Employee Expense	2,000
registration, lodging, meals, mileage, boots, etc.	
Education	2,000
school related activities, 1 <sup>st</sup> grade day, Sakatah, envirothon	
Postage	750
MCIT Insurance	3,400
public officials liability, general liability, auto, property, etc.	
Truck Expense	3,100
Rent (400 sq. ft @\$19.75)	7,900
Copier	2,710
2009 Dues	4,000
MASWCD, DU, PF, NACD, Area VI Assoc., Cannon River, Lake Elysian, Dark House, MACDE, Area VI Employees,	
Phone- cell phone	750
Accounting/Bookkeeping Services	1,425
contract -\$280/quarter plus yr. end reports	
Lan/Wan/Voice - land phone	650
Computer	3,000
Wetland Conservation Expenses	300
public notices, printing charges, manuals, etc.	
Miscellaneous Expenses	<u>500</u>

Total Services & Charges 34,985

Supplies (office) 500

#### Project Expense

District Projects	32,000
trees, plants, bags, generic gel, seed, license	
State Cost Share Projects - Implementation	17,767

Total Project Expense 49,767

Field Supplies 500

    lath, flagging, first aid kit, nails, flags, etc.

Total Expenditures \$232,884

### REVENUES

BWSR (administration- \$31,449, cost share-\$17,767)	49,216
Waseca County	76,162
Wetland Conservation Act (state grant- administration)	13,806
Three Rivers RC&D- contract for clerical support (24 hrs/wk)	31,200
Greater Blue Earth River Basin Alliance -contract (16 hrs/wk)	20,800
Greater Blue Earth River Basin Alliance T&A on c-share projects	2,000
Project Revenues - Trees	37,000
MCIT rebate	1,200
Interest - checking and savings	1,500

Total Revenues \$232,884

## KEY FOR ABBREVIATIONS

AG BMP	Agricultural Best Management Practices
BWSR	Board of Water and Soil Resources
CCRP	Continuous Conservation Reserve Program
CRWP	Cannon River Watershed Partnership
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program
CSP	Conservation Security Program
EQIP	Environmental Quality Incentive Program
FWP	Farmed Wetland Program
FY	Fiscal Year
GBERBA	Greater Blue Earth River Basin Alliance
HEL	Highly Erodible Land
JBP	Joint Powers Board
MASWCD	MN Association of Soil and Water Conservation Districts
MDNR	Minnesota Department of Natural Resources
MPCA	Minnesota Pollution Control Agency
NACD	National Association of Conservation Districts
NRCS	Natural Resource Conservation Service
PHEL	Potentially Highly Erodible Land
Three Rivers RC&D	Three Rivers Resource Conservation and Development
RIM	Re-Invest In Minnesota
SWCD	Soil and Water Conservation District
SLR	Streambank, Lakeshore, and Roadside
T&A	Technical and Administrative Services
TEP	Technical Evaluation Panel (WCA)
TMDL	Total Maximum Daily Load
WCA	Wetland Conservation Act
WHIP	Wildlife Habitat Incentive Program
WRP	Wetland Reserves Program
Zone 10 JBP	Nine county Joint Powers Board of SWCDs

## GLOSSARY OF TERMS

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*aquifers – a body of permeable rock that is capable of storing significant quantities of water, that is underlain by impermeable material, and through which groundwater moves.*

*best management practices – methods, measures, or practices designed to prevent or reduce water pollution. Usually BMPs are applied as a system of practices rather than a single practice.*

*cost-share – programs that partially reimburse landowners for implementing best management practices.*

*erosion – the wearing away of the land surface by rain, running water, wind, ice, gravity, or other natural or man-made agents.*

*filter strip – an area of land adjacent to a water body that will trap and filter out suspended sediment and chemicals attached to sediment before it reaches the surface water.*

*floodplain – a part of a river valley that is made of unconsolidated, river-borne sediment and is periodically flooded.*

*groundwater – the water that moves down into the soil and underlying geological strata from the upper soil layers following rainfall. Groundwater is stored in aquifers and may move underground by streams or seepage.*

*impervious surfaces – surface that prevents or significantly reduces the entry of water into the underlying soil, resulting in runoff from the surface in greater quantities and/or at an increased rate when compared to natural conditions prior to development. Examples of places that commonly exhibit impervious surfaces include parking lots, driveways, roadways, storage areas, and rooftops.*

*infiltration – the movement of surface water into soil or rock through cracks and pores.*

*intermittent – ceases to flow in very dry periods.*

*invasive – tending to spread.*

*native – those species that occur naturally in an area and have not been introduced, accidentally or otherwise, by humans.*

*non-point – pollutants discharged over a large area or from a number of small inputs rather than from one distinct identifiable source (point source).*

*noxious – undesirable, troublesome, difficult to control or eradicate.*

*nutrient – any element or compound that an organism must take in from its environment either because it cannot produce it at all or fast enough to meet its needs. In aquatic systems, nutrients can also be pollutants especially when they are excessive and contain phosphorus or nitrogen that permits high organic growth.*

*point source – pollution originating from a single identifiable point such as pipes, ditches, wells, channels, sewers and containers.*

*stormwater retention ponds – ponds that hold stormwater allowing sediment and pollutants to settle.*

*riparian – anything connected with or immediately adjacent to the banks of a stream or other body of water.*

*sediment – fragmented material that originated from the weathering of rocks and decomposition of organic material that is transported in suspension by water, air, or ice, to be subsequently deposited at a new location.*

sustainability – meeting the needs of the present without compromising the ability of future generations to meet their own needs.

tributary – a stream feeding, joining, or flowing into a larger stream.

watershed – a region or land area drained by a single stream, river, or drainage network.

wetlands – an area inundated by surface or groundwater at a frequency sufficient to support, and under normal circumstances does support, a prevalence of vegetation typically adapted for life in waterlogged soils.

### FWS Circular 39 Wetland Types

Type 1: Seasonally flooded basins or flats. Soil is covered with water or is waterlogged during variable seasonal periods but usually is well-drained during much of the growing season. Vegetation varies greatly according to season and duration of flooding: from bottom-land hardwoods to herbaceous growths.

Type 2: Inland fresh meadows: Soil is usually without standing water during most of the growing season but is waterlogged within at least a few inches of the surface. Vegetation includes grasses, sedges, rushes and various broadleaved plants. Meadows may fill shallow basins, sloughs, or farmland sags, or these meadows may border shallow marshes on the landward side.

Type 3: Inland shallow fresh marshes: Soil is usually waterlogged early during the growing season; often covered with as much as 6 inches or more of water. Vegetation includes grasses, bulrushes, spikerushes and various other marsh plants such as cattails, arrowheads, pickerelweed and smartweeds. These marshes may nearly fill shallow lake basins or sloughs, or may border deep marshes on landward side. Also common as seep areas on irrigated lands.

Type 4: Inland deep fresh marshes: Soil is usually covered with 6 inches to 3 feet or more of water during the growing season. Vegetation includes cattails, reeds, bulrushes, spikerushes and wildrice. In open areas, pondweeds, naiads, coontail, water milfoils, waterweeds, duckweeds, waterlilies or spatterdocks may occur. These deep marshes may completely fill shallow lake basins, potholes, limestone sinks and sloughs, or they may border open water in such depressions.

Type 5: Inland open fresh water: Shallow ponds and reservoirs are included in this type. Water is usually less than 10 ft. deep and fringed by a border of emergent vegetation similar to open areas of type 4.

Type 6: Shrub swamps. Soil is usually waterlogged during the growing season and is often covered with as much as 6 inches of water. Vegetation includes alders, willows, buttonbush, dogwoods and swamp-privet. Occur mostly along sluggish streams and occasionally on flood plains.

Type 7: Wooded swamps: Soil is waterlogged at least to within a few inches of surface during growing season and is often covered with as much as 1 foot of water. Occur mostly along sluggish streams, on flood plains, on flat uplands and in shallow basins. Trees include tamarack, arborvitae, black spruce, balsam, red maple and black ash. Northern evergreen swamps usually have a thick ground cover of mosses. Deciduous swamps frequently support beds of duckweeds, smartweeds.

Type 8: Bogs: Soil is usually waterlogged and supports a spongy covering of mosses. Occur mostly in shallow basins, on flat uplands and along sluggish streams. Vegetation is woody or herbaceous or both. Typical plants are heath shrubs, sphagnum moss and sedges. In the North, leatherleaf, Labrador-tea, cranberries, carex and cottongrass are often present. Scattered, other stunted, black spruce and tamarack may occur.