

**MUNICIPAL SEPARATE STORM
SEWER SYSTEM PROGRAM
(MS4)**

BENTON COUNTY

FOLEY, MINNESOTA

PURPOSE AND AUTHORITY

Minnesota's lakes, rivers, forests and farms all depend on the replenishing waters of annual precipitation. However, when rain falls on land and impervious areas such as paved streets, parking lots and building rooftops it can wash away soil and sediment. Stormwater runoff can change both water quality and quantity affecting our water resources physically, chemically and biologically. Polluted runoff containing oil, grease, chemicals, nutrients, metals, litter and pathogens for example, can severely reduce water quality. If left unmanaged, runoff stresses our streams, ages our lakes, and degrades and eliminates our wetlands.

The Minnesota Pollution Control Agency's (MPCA) Stormwater Program is designed to reduce the pollution and damage caused by stormwater runoff.

Mandated by Congress under the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) Stormwater Program is a comprehensive national program for addressing polluted stormwater runoff. Minnesota regulates the disposal of stormwater through State Disposal System (SDS) permits. The MPCA issues combined NPDES/SDS permits for construction sites, industrial facilities and municipal separate storm sewer systems (MS4s).

This booklet specifically addresses the Municipal Separate Storm Sewer Systems (MS4s) owned by Benton County in the St. Cloud Area Metropolitan Area.

The purpose of this booklet is to further the education of other government agencies, private organizations, businesses and individuals as to the existence and location of stormwater systems, to understand how a system operates, to recognize problems of a system, who should report a problem, to report a problem and to whom to report a suspected system problem.

PROGRAM ADMINISTRATOR

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321 6th Avenue
Foley, MN 56329

Telephone: (320) 968-5051

EMERGENCY CONTRACT

Benton County Sheriff's Office
581 Hwy 23 NE
Foley, MN 56329

Telephone: (320) 968-7201

IMPLEMENTATION OF MS4 PROGRAM

Benton County Highway Department is responsible for implementing the MS4 program for systems owned by the county. Implementation is an ongoing process and the initial process is to be completed within the time of the permit authority.

Implementation includes developing a program as per the Minnesota Pollution Control Agency Permit No. MN R 040000. Implementation also includes the development of a Storm Water Pollution Prevention Program (SWPPP), including Best Management Practices (BMPs) for administrative, monitoring, construction and maintenance of the program and BMPs.

Recording keeping of all MS4 activities is also included.

CONSTRUCTION PHASE OF MS4 PROGRAM

Benton County Highway is responsible to design and construct Best Management Practices (BMPs) as needed to control storm run-off and prevent adverse effects for systems owned and operated by Benton County.

MONITORING OF MS4 PROGRAM

Benton County Highway Department is responsible to monitor and keep records of monitoring activities. Monitoring as a minimum, includes an annual inspection. Routine inspections may also be required in the event of an unusual storm event or due to receiving a report of potential impact. Record of all inspection activities will be kept.

STORM SYSTEMS UNDER OPERATION OF BENTON COUNTY

Sartell CSAH 29 & CSAH 33 System

Approximately 1,700 linear feet of Storm Sewer with sizes of 24" Diameter Reinforced Concrete Pipe Sewer up to 54" diameter RC Pipe Sewer was designed for a 5 year frequency occurrence and constructed in 1983. Total Drainage area is approximately 70 acres, with a calculated "Q" of 90 cubic feet per second. The terrain is principally residential. The outlet is located approximately 500 feet Southwesterly of the intersection of CSAH 29 and CSAH 33. Drainage from the outlet goes to the Mississippi River by flowing approximately 2,000 feet in the ditch of Benton Drive and the Burlington Northern Railway.

Approximately 1,200 linear feet of Storm Sewer with sizes of 24" Diameter Reinforced Concrete Pipe Sewer up to 36" diameter RC Pipe Sewer was designed for a 5 year frequency occurrence and constructed in 1986. Total Drainage area is approximately 73 acres, with a calculated "Q" of 61 cubic feet per second. The terrain is principally residential or commercial. The outlet is located approximately 0.25 Easterly of the intersection of CSAH 29 and CSAH 33. Drainage from the outlet goes to the Mississippi River by flowing approximately 0.5 mile in a natural swale and in the ditch of Benton Drive and the Burlington Northern Railway.

See attached map for location of this system and drainage areas.

Sauk Rapids CSAH 33 System (Benton Drive)

This includes storm sewer on County State Aid Highway No. 33 (Benton Drive), from CSAH 3 (2nd Street) to northerly to TH 15. It includes several sewers that intake flow from the East side of Benton Drive by surface flow and by smaller sewers. These flows outlet on the West side of Benton Drive to larger sewers that in turn outlet into the ditch of the BNSF Railway. To provide continuity of attention to these sewers, the City of Sauk Rapids will conduct administrative and engineering tasks to comply with the requirements of the MS4 Permit.

Sauk Rapids CSAH 3 System.

This includes storm sewer on a segment of County State Aid Highway No. 3 (2nd Street), from Benton Drive to TH 10. The majority of the flow is from areas in the City of Sauk Rapids, This system includes several inlets that outlet into sewers owned by the City of Sauk Rapids. To provide continuity of attention to this

system, the City of Sauk Rapids will conduct administrative and engineering tasks to comply with the requirements of the MS4 Permit.

Sauk Rapids County Road 46 System.

This system includes approximately 900 linear feet of Storm Sewer with sizes of 12" Diameter Reinforced Concrete Pipe Sewer up to 15" diameter RC Pipe Sewer. It was designed for a 5 year frequency occurrence and constructed in 2004. Total Drainage area is approximately 8 acres, with a calculated "Q" of 10 cubic feet per second. The terrain is principally residential. The flow outlets into a storm sewer system owned by Sauk Rapids, which further outlets into a retention pond. The pond outlets into a natural drainage way.

St. Cloud CSAH 8 System

This system includes approximately 2,000 linear feet of Storm Sewer with sizes of 12" diameter Reinforced Concrete Pipe Sewer up to 36" diameter RC Pipe Sewer. It was designed for a 5 year frequency occurrence and constructed in 1998. The total drainage area is approximately 37 acres, with a calculated "Q" of 50 cubic feet per second. The terrain is principally residential. The flows outlet into the TH 23 ditch and some to a county highway ditch.

Highway Ditches – Miscellaneous Locations (outside of city limits)

Benton County has several different highways that are constructed with ditches to provide drainage for the highway. The highways in the St. Cloud Metropolitan Area include CSAH 1, CSAH 3, CSAH 8, CSAH 33, CR 45, CR 46, CR 47, CR 55, CR 57, CR 74, CR 75, CR 88, CR 89 and CR 90. See attached map to show locations.

Culverts constructed across the highways are generally designed for a 50 year frequency occurrence and entrance culverts are generally designed for a 25 (or less) year frequency.

POTENTIAL IMPACTS

Stormwater facilities are designed with a reasonableness, balancing cost of construction and environmental impact of the actual construction against the prevention of environmental adverse impacts.

Storm waters can create impacts of various degrees of severity, depending upon factors such as the intensity of the storm, location of the run-off, destination of the run-off, such as a water supply, time of year of run-off, impact to vehicular traffic, damage potential to nature, wildlife, historic or cultural concerns, man-made structures/facilities and impact to other sensitive environmental items.

Impacts to the above can result by spring run-off and heavy rains that may overflow a roadway, cause flooding, create fast flows of water, erosion of soil, silting of ditches, plugging of storm sewer pipes or other disruptive occurrences. Other significant impacts can be created by spills or intentional dumping of toxic or hazardous materials in areas that drain into stormwater facilities. Any adverse impact should be reported to appropriate authorities.

REPORTING OF INCIDENTS

Any government official, business or individual has the responsibility to report a condition or incident of hazardous nature. It is everyone's responsibility to preserve nature.

Reporting of incidents can be done by contacting the following:

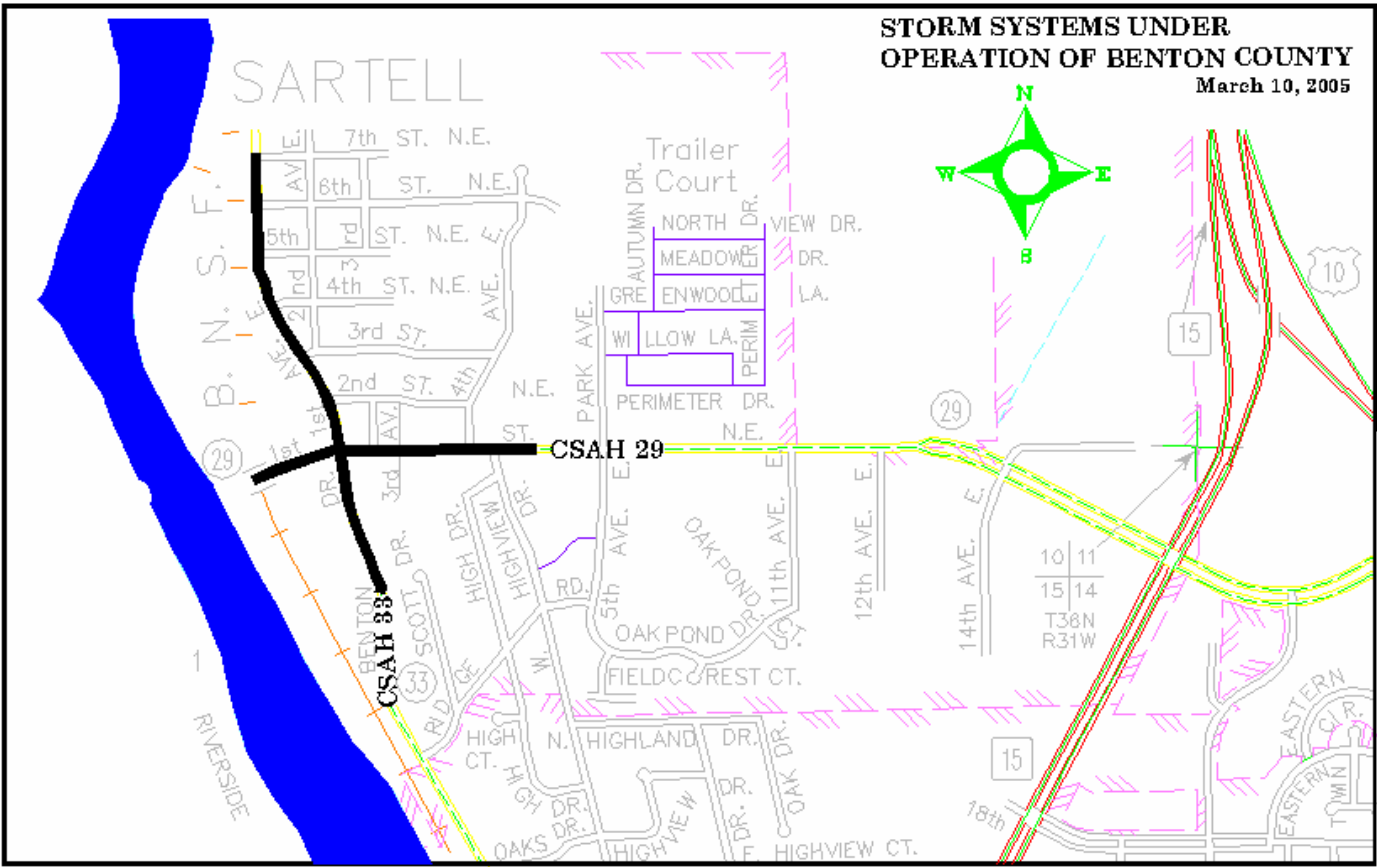
Program Administrator
Robert H Kozel
Benton County Highway Engineer
321 6th Avenue North
Foley, MN 56329 Telephone: (320) 968-5051 or (320) 968-5000

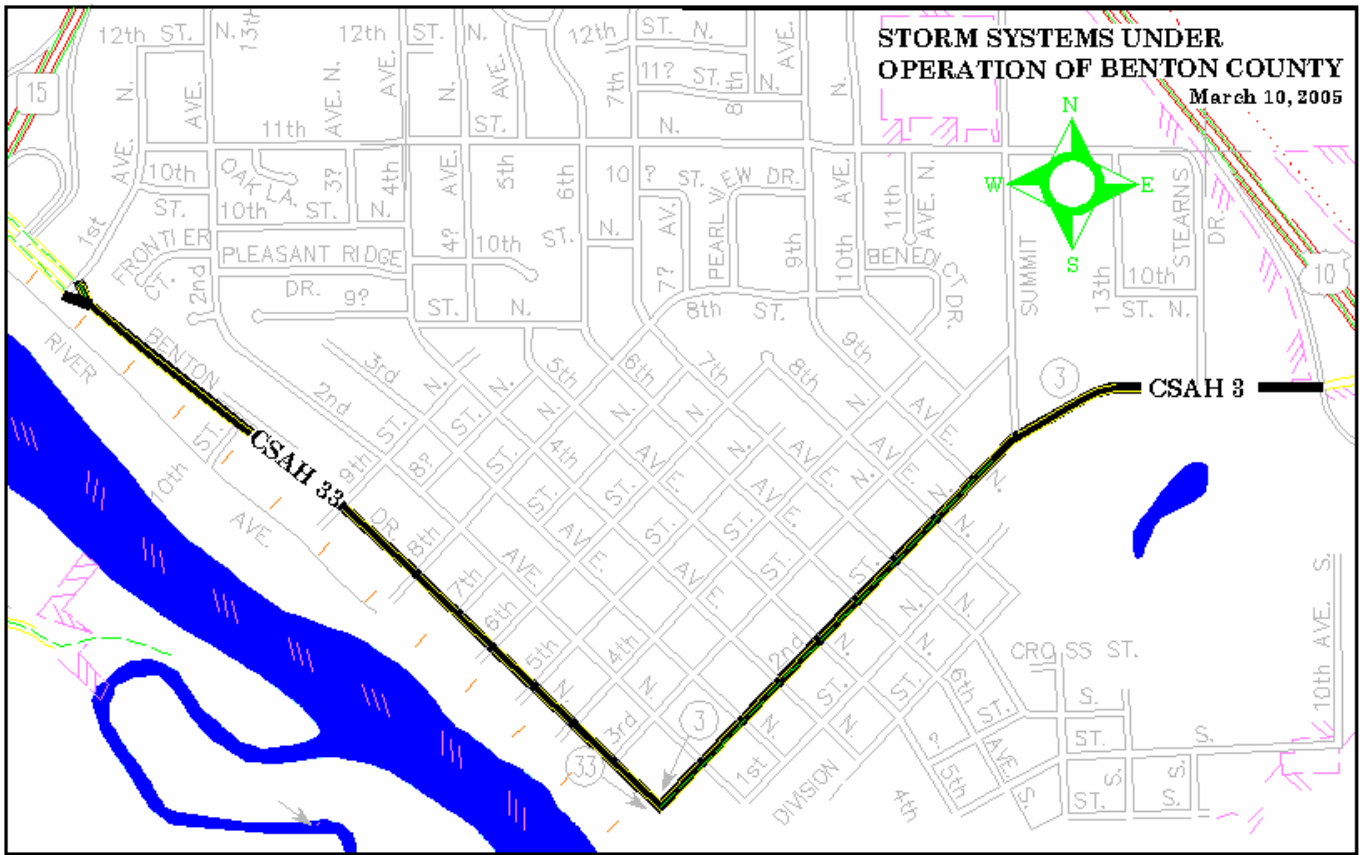
Benton County Sheriff's Office
581 Hwy 23 NE
Foley, MN 56329 Telephone: (320) 968-7201
Emergency 911

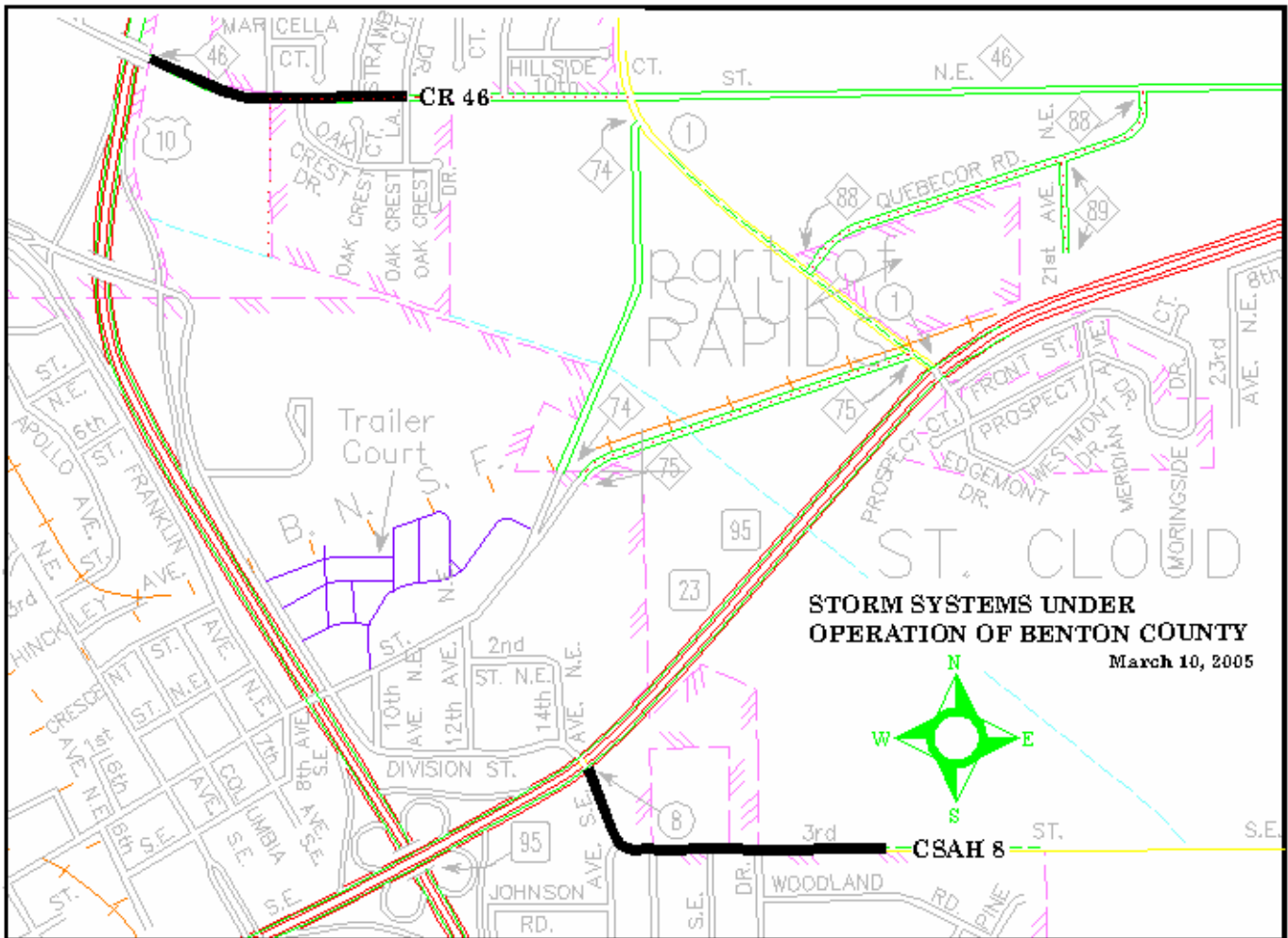
Minnesota Pollution Control Agency
1800 College Road South
Baxter, MN 56425 Telephone: (218) 855-5017

For any questions regarding this brochure or the Municipal Separate Storm Sewer System (MS4) program, contact the office of the program administrator.

This brochure is prepared for distribution to other government agencies, business and individuals. Additional copies can be obtained by contacting the program administrator.







**STORM SYSTEMS UNDER
OPERATION OF BENTON COUNTY**
March 10, 2005