

# City of Brookings Small MS4 Storm Water Management Program

## Summary of 2017 Goals



## History of Storm Water Phase II

1987 Clean Water Act enacted requirements for water quality

Phase I Requirements: populations greater than 100,000

Phase II Requirements: populations greater than 10,000  
(Small MS4) - Implemented in 2003

➤ EPA requires *that all owners/operators of small MS4s (cities with a population over 10,000 people) reduce the discharge of pollutants from a regulated system to the “maximum extent practicable” to protect water quality.*



## Cities are required to have a Storm Water Management Program with the following criteria:

- Best Management Practices (BMPs) for 6 minimum measures
- Measurable goals
- Schedule/frequency of activities
- Responsible entity
- Evaluation and Assessment
- Recordkeeping
- Annual reporting



## *6 Required Components*

- ❖ Public Education & Outreach on Storm Water
- ❖ Public Involvement/Participation
- ❖ Illicit Discharge Detection & Elimination
- ❖ Construction Site Storm Water Runoff Control
- ❖ Post-Construction Storm Water Management in New Development & Redevelopment
- ❖ Pollution Prevention/Good Housekeeping for Municipal Operations

# Where does Storm Water Go?

After it rains, does water flows from storm drain pipes..







# To Waste Water Treatment Plant?



Or to water bodies?





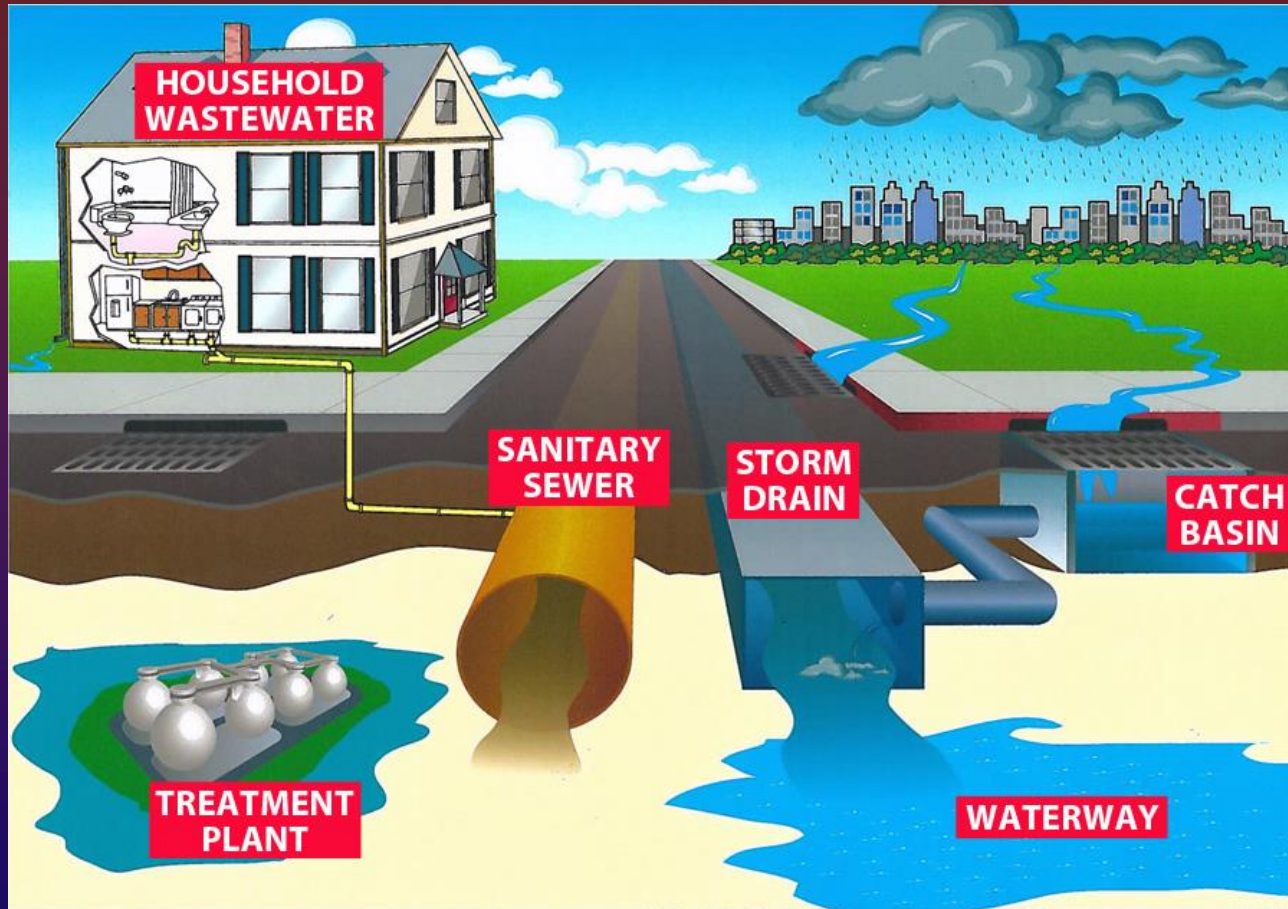
Answer:

Storm water flows directly to water bodies without being treated.





# What is the difference between storm sewer and sanitary sewer?



**\*\*The pipe systems are not connected**



# GOAL 1: Public Education & Outreach

## City spent \$23,980 in 2017 to advertise Spring Clean up, Leaf pickup, free compost and curbside recycling

### BROOKINGS REGIONAL LANDFILL SPRING CLEAN UP

The City of Brookings annual spring clean up for city residents.

This program allows the residents to place their rubbish, debris and branches in front of their home during a designated time period. This program is for anyone residing within the city limits. Commercial haulers and businesses do not have free access to dumping. The City of Brookings then sends the Street Department, Park and Forestry, Solid Waste Collection and Landfill Departments together to clean up the material set on the boulevard. **The city will curbside the items one time only.** All items must be placed on the boulevard. There is no alley pickup. Please make sure everything is on the boulevard to help reduce any damage from the use of heavy equipment.

#### SPRING CLEAN UP HOURS

Monday, April 18th is the first day that residents can start placing their items on the curb. All items must be out by April 18th. The City crews will start the curb side pickup on Monday April 18th. The Landfill will be open Monday through Friday from 7:30am to 4:15pm April 18th through April 20th. Saturday hours will be from 8:00am to 4:00pm on Saturday April 19th and April 20th, and from 8:00am to 11:45am on April 21st and April 22nd. **There will be free dumping at the Landfill for City of Brookings Residents.**

#### RECYCLING AND SEPARATION OF ITEMS

The City of Brookings landfill regulations and recycling policies require more sorting of items placed on the curb. Your cooperation is critical to continue this project. Below is a list of items that will not be picked up from the curb:

- House hold refuse, place in green cart
- Cardboard, in recycling cart
- Mixed piles will not be picked up
- Crane/hoists, haul to landfill for free
- Remodeling material/concrete
- Paint, drop at paint exchange
- Batteries/waste chemicals

#### ITEMS THAT MUST BE HAULED TO LANDFILL FOR A FEE:

- Time, fee based on size of the
- Refrigerators/Air conditioning, \$12 each plus sales tax

#### TREE BRANCH PICKUP

Please place branches lengthwise on the boulevard (in the same direction with the gutter line). The City of Brookings will begin to pick up branches on Monday, April 18th. Please remember that tree trunks and branches should not be more than 12 inches in diameter and 12 feet long. They must be placed on the curb. The City of Brookings will not enter residential property to pick them up.

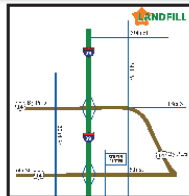
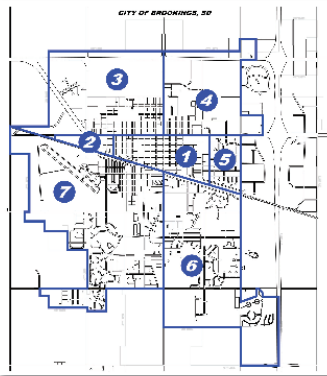
#### SCHEDULE FOR CURBSIDE PICKUP

**SECTION 1:** Railroad tracks to 6th Street and from Main Avenue to 16th Avenue  
**SECTION 2:** Front Street to 6th Street and from Main Avenue to Western Avenue  
**SECTION 3:** 6th Street to 11th Street and from Medary Avenue to Western Avenue  
**SECTION 4:** 11th Street to 16th Street and from Medary Avenue to Western Avenue  
**SECTION 5:** Railroad Tracks to 6th Street from 16th Avenue to 22nd Avenue  
**SECTION 6:** South of Railroad Tracks from Medary Avenue South to 22nd Avenue South  
**SECTION 7:** Railroad Tracks south to City limits from Medary Avenue West to City limits  
**Note:** Please follow the Brookings Radio Station to find out what section they are in for each day of the week.

#### PAINT EXCHANGE PROGRAM

The Annual Paint Exchange program will be held on Saturday, April 18th, 2015 at the Brookings Regional Landfill. The citizens can bring in latex paint from 8:00 a.m. to 12:00 noon to be recycled. Then from 1:00 p.m. to 4:00 p.m. the paint will be available to the general public free of charge.

IF YOU HAVE ANY QUESTIONS,  
PLEASE CALL THE BROOKINGS REGIONAL LANDFILL AT 693-3667.



## LEAF DROP OFF

The City of Brookings Landfill will have free leaf drop off starting September 28 and ending October 31.

You can haul your leaves to the Landfill at no cost. All loads must be weight.

### BROOKINGS LANDFILL

"Take Part in Saving Our Future"

693.3667

## FREE COMPOST FOR YOUR GARDEN!

Grass clippings and leaves which have become compost and has been cleaned is available to anyone who wishes to use it to improve your garden or yard soil. **We'll even help you load it!**



#### CART REMINDER

All recycling and household garbage must be placed in the City of Brookings containers. Please bag your recycling and garbage to help keep carts clean and odor free. This also prevents material from blowing out of the cart.

#### TREE BRANCH DISPOSAL OPTIONS

- Drop off tree branches at the Landfill for free
- Small twigs may be placed in the yard waste bags
- Christmas trees will be collected twice in January
- Put your branches out during Spring Clean Up

#### ALTERNATE PICK-UP SCHEDULE

for Holiday Disruptions

#### Sunday and Monday holidays

Monday's garbage and yard waste will be picked up on Tuesday. Tuesday's garbage and yard waste will be picked up on Wednesday.

#### Tuesday holidays

Garbage and yard waste will be picked up on Wednesday.

#### Thursday holidays

Recycling and yard waste will be picked up on Wednesday.

#### Friday and Saturday holidays

Friday's recycling and yard waste will be picked up on Thursday. Thursday's recycling and yard waste will be picked up on Wednesday.

#### Solid Waste Department

#### HOLIDAY CALENDAR

Brookings collection service will not operate on the following holidays:

May 30	Memorial Day - Closed all day
July 4	Independence Day - Closed all day
Sept. 4	Labor Day - Closed all day
Oct. 3	Free Leaf dumping starts
Oct. 10	Native American Day - 8:00am to 11:45am
Nov. 11	Veterans Day - Closed all day
Nov. 24	Thanksgiving Day - Closed all day
Dec. 25	Christmas Day - Closed all day
Dec. 26	Hours 8:00am to 12:00 noon
Jan. 1, 2017	New Year's Day - Closed all day
Jan. 2, 2017	Hours 8:00am to 12:00 noon



#### Brookings Regional Landfill

47352 30th Street, Brookings • 693-3667

Hours: M-F 7:30am-4:15pm

Sat 8:00am-11:45am March-December



# GOAL 1: Public Education & Outreach



Updated Storm Water page on City website

# GOAL 1: Public Education & Outreach



Engineering staff hosted an event at the Big Sioux Water Festival to educate approx. 140 4<sup>th</sup> grade students



## GOAL 1: Public Education & Outreach

- Sustainability Council subcommittee developed storm water public education program
- Mailed storm water brochure to 10,400 households
- Handed out storm water brochure to contractors
- Presented Storm Water presentation to 2 service groups



# GOAL 1: Public Education & Outreach



**In 2017, city staff painted 227 inlets**



## GOAL 2: Public Participation/Involvement

- Public dropped off 1,047 tons of grass, leaves and branches at landfill
- 130 volunteers cleaned Dakota Nature Park, Larson's Park and Golf Course tree grove
- Public dropped off 452 tons of debris during spring clean up
- Paint Exchange: public dropped off 420 gallons of paint, 30 volunteers worked 6 hours at the event
- Sustainability Council held a public meeting to discuss storm water program

# GOAL 3: Illicit Discharge Detection/Elimination



Goal is to locate and remove illicit discharges (pollutants)





## **GOAL 3: Illicit Discharge Detection/Elimination**

Tasks completed:

- Updated City Storm Sewer Map – Surveying of storm sewer pipes and inlets continued in 2017, giving the city it's most accurate information to date
- Enforced storm water ordinance on illicit discharge
- Performed dry weather screenings to look for discharges.



## GOAL 3: Illicit Discharge Detection/Elimination



Staff regularly inspected storm sewer and outfalls

# GOAL 3: Illicit Discharge Detection/Elimination



Illicit discharge link on website so people  
can report pollution



# GOAL 4: Construction Site Runoff

**GRADING PERMIT APPLICATION**

Name of Applicant (responsible party): \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

Property Owner (check if same ☐): \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

Work Activities (check all that apply):

☐ Building Const.    ☐ Parking Lot / Driveway Const.    ☐ General Lot Grading (cut or fill)

☐ Pond / Ditch Excavation    ☐ Landscape / Seeding    ☐ Other: \_\_\_\_\_

Building Permit Required? ☐ yes ☐ no    Approximate Disturbed Area (cut or fill): \_\_\_\_\_ Sq.Ft.

DENR Permit Required? ☐ yes ☐ no

Contractor: \_\_\_\_\_ Phone: \_\_\_\_\_

Consultant: \_\_\_\_\_ Phone: \_\_\_\_\_

Please attach a site plan sketch showing, at minimum, the following:

- Lot lines, dimensions, existing structures, proposed structures.
- Location and area of all land disturbance (all cuts, fills, material stockpiles, etc.)
- Location of all storm sewer features on or adjacent to the property, including but not limited to: streets, storm water inlets and outlets, swales, channels, detention ponds, and ditches.
- Location of all other watercourses on or adjacent to the property.
- Arrows indicating the general direction of runoff flow, as well as the path of flow of any storm water conveyance feature on or adjacent to the property.
- Location and description of all storm water pollution control BMP's to be incorporated on the site, as required by this ordinance. Recommendations and descriptions of various BMP's can be found in the SDDOT 2006 Erosion and Sediment Control manual, which can be downloaded free of charge from the South Dakota DOT website at [www.sddot.com](http://www.sddot.com). Additional BMP guidance can be found at [www.epa.gov](http://www.epa.gov).

By signing this Grading Permit Application, I, the permittee, agree to conform to the requirements of Chapter 72 of the City of Brookings Code of Ordinances.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Issued 54 grading permits for sites disturbing  
5,000 square feet or more





## GOAL 4: Construction Site Runoff



Encouraged vegetated dirt piles to reduce runoff



## GOAL 4: Construction Site Runoff



Installed erosion control on City construction projects

## GOAL 4: Construction Site Runoff



Required filtering device at inlets



## GOAL 4: Construction Site Runoff

Other achievements:

- Held a contractor's meeting in March 2017 to discuss construction site requirements
- 10 Notices of Intents were filed with DENR for construction sites 1 acre and larger

Engineering staff reviewed 10 drainage plans and 8 detention facilities were constructed.





## GOAL 5: Post Construction Storm Water Mgmt

- Enforced City Ordinances on Storm Water Management and the Storm Drainage Design & Technical Criteria Manual
- Encouraged the use of grassy swales, rain gardens & landscaping options
- Ordinances were updated on maintenance responsibilities of detention ponds

# GOAL 6: Pollution Prevention/Good Housekeeping for Municipal Operations



Signs on hazardous material storage containers indicate the dangers associated with each substance



Hazardous household wastes can be disposed of properly by taking them to a local waste collection facility



Used oil can be disposed of at a waste collection facility, where it will be collected and later sent to a recycling facility



## 2017 Spring Clean Up totals:

- ❖ 299 tons of debris were picked up
- ❖ Mobile home courts dropped off 52 tons
- ❖ Public citizens dropped off 452 tons
- ❖ 6 staff worked with the paint exchange to process 1918 containers of paint



876 tons of grass and  
leaves were collected







1454 tons of salt were mixed with sand the day they arrived to avoid runoff during rain



In 2017, 29,855 feet of pipe and 545 basins were cleaned.



All streets were swept approx. 3 times during the year to remove sediment and pollutants.  
2,004 tons of sediment were swept up in 2017.





# Expanded goals for 2018/2019

- ❖ Mail storm water brochure to businesses with information how to prevent illicit discharges
- ❖ Update City Ordinances
- ❖ Improve tracking information on inspections of storm water outfalls and construction sites
- ❖ Expand training program for City staff on detecting illicit discharges
- ❖ Hire a full-time staff person staff to assist with the storm water program





# Let's keep our streams and lakes clean!

