

City of Brookings Small MS4 Storm Water Management Program

Summary of 2016 Goals



History of Storm Water Phase II

1987 Clean Water Act was amended to include Phase I and Phase II requirements for water quality

Phase I Requirements: populations greater than 100,000

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



In implementing the Clean Water Act:

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 develop Storm Water Management Program



Storm Water Management Program Requirements

- Best Management Practices (BMPs) for 6 minimum measures
- Measurable goals
- Schedule/frequency of activities
- Responsible entity
- Evaluation and Assessment
- Recordkeeping
- Annual reporting – summary of 2016 accomplishments



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 here?



Waste Water Treatment Plant



Or here?





Answer:

Storm water drains directly to water bodies without being treated.





GOAL 1: Public Education & Outreach

Approximately \$25,000 spent in 2016 to advertise in the Brookings Register, Town & Country Shopper and radio stations:

- Spring Clean Up/paint exchange
- Leaf pick up
- Free compost
- 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 boulevards. **The city will remove 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 4th is the first day that residents can start placing their items on the curb. All items must be out by April 10th. The City crews will start the curb side pickup on Monday April 11th. The Landfill will be open Monday thru Friday from 7:30am to 4:00pm April 4th through April 26th. Saturday hours will be from 8:00am to 4:00pm on Saturday April 16th and April 18th, and from 10:00am to 11:45am on April 23rd and April 25th. **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:

- Household refuse, place in green cart
- Cardboard, in recycling cart
- Mixed piles will not be picked up
- Grass/leaves, just to landfill for free
- Remodeling material/concrete
- Paint, drop at paint exchange
- Refrigerators/air conditioners

ITEMS THAT MUST BE HAULED TO LANDFILL FOR A FEE:

- Tires, fee based on size of tire
- Refrigerators/Freezers/A/C, \$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 11th. 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.

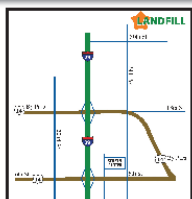
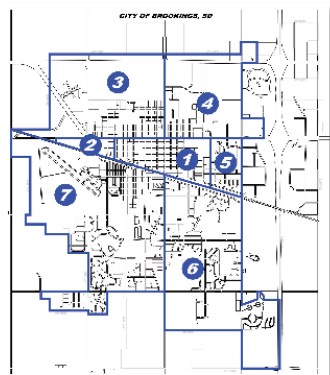
SCHEDULE FOR CURBSIDE PICKUP

SECTION 1 - Railroad tracks to 8th Street and from Main Avenue to 16th Avenue
SECTION 2 - Frost Street to 6th Street and from Main Avenue to Western Avenue
SECTION 3 - 4th Street to 11th Street and from Medary Avenue to Western Avenue
SECTION 4 - 4th Street to 8th Street east of Medary Avenue
SECTION 5 - Railroad Tracks to 4th Street from 16th Avenue to 22nd Avenue South
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 drive to 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 6th, 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

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

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.



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



The screenshot displays the Brookings, South Dakota City website. At the top, a navigation bar includes the text "+myConnections: Engage your community - connect to news, events and information you care about. [View more information...](#)" and a "Sign In" button. Below this is the city's logo, "brookings SOUTH DAKOTA", and a main navigation menu with links for "COMMUNITY", "BUSINESS", "VISITORS", "GOVERNMENT", and "SDSU". A search bar is also present. The left sidebar lists various services: "Bid Postings", "Board of Appeals", "Building Permits", "Calendar of Events", "Curb Cuts / Sidewalks", "Excavation Permits", "Grading Permits", "Storm Drainage", "Street Projects", and "Traffic Signals". The main content area is titled "Storm Drainage" and includes a breadcrumb trail: "Home > Government > Departments > Engineering > Storm Drainage". Under "Current Projects", there is a link for "2012-05SSI Camelot Square Drainage Improvement". A paragraph states that the City Engineer's Office handles storm sewer design and maintenance, with contact information for Street Superintendent Koss Delfinis. The "Stormwater Phase II Resources" section lists links for "Municipal Separate Storm Sewer Systems (MS4) Presentation", "Stormwater Phase II Fact Sheet Brochure", "Stormwater Phase II Final Rule Fact Sheet", "Stormwater Phase II PowerPoint", and "Summary of Phase II Rule". A paragraph provides contact information for City Engineer Jackie Lanning and the South Dakota Department of Environment and Natural Resources. The "Illicit Discharge Information" section includes a link to "illicit discharge detection and elimination" and a paragraph about reporting violations. The "Storm Drain Resources" section lists links for "Brookings Master Drainage Plan" (with sub-links for Appendices A through G and a "Master Drainage Update") and "Storm Drainage Design and Technical Criteria Manual" and "Storm Drainage Ordinance No. 21-10". Social media icons for Facebook, Twitter, YouTube, and RSS are at the bottom left.

+myConnections: Engage your community - connect to news, events and information you care about. [View more information...](#) Sign In

brookings
SOUTH DAKOTA

COMMUNITY BUSINESS VISITORS GOVERNMENT SDSU

Home > Government > Departments > Engineering > Storm Drainage

Storm Drainage

Current Projects

- [2012-05SSI Camelot Square Drainage Improvement](#)

The City Engineer's Office is responsible for the design of storm sewers. If you experience maintenance problems, please call Street Superintendent [Koss Delfinis](#) at (605) 692-2016.

Stormwater Phase II Resources

- [Municipal Separate Storm Sewer Systems \(MS4\) Presentation](#)
- [Stormwater Phase II Fact Sheet Brochure](#)
- [Stormwater Phase II Final Rule Fact Sheet](#)
- [Stormwater Phase II PowerPoint](#)
- [Summary of Phase II Rule](#)

For general questions on Phase II, please call City Engineer [Jackie Lanning](#) at (605) 692-6629 or [South Dakota Department of Environment and Natural Resources](#) at 1 (800) 737-8676.

Illicit Discharge Information

Read about [illicit discharge detection and elimination](#) from the Environmental Protection Agency.

Please call City Engineer Jackie Lanning at (605) 692-6629, the [Street Department](#) at (605) 692-2016, or complete the [report a drainage violation online form](#) if you see illegal dumping into storm sewers or inlets.

Storm Drain Resources

- [Brookings Master Drainage Plan](#)
 - [Appendix A](#)
 - [Appendix B](#)
 - [Appendix C](#)
 - [Appendix D](#)
 - [Appendix E](#)
 - [Appendix F](#)
 - [Appendix G](#)
 - [Master Drainage Update](#)
- [Storm Drainage Design and Technical Criteria Manual](#)
- [Storm Drainage Ordinance No. 21-10](#)

Facebook Twitter YouTube RSS

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 4th grade students



GOAL 1: Public Education & Outreach

- Sustainability Council subcommittee developed storm water public education program
- Mailed storm water brochure to 10,200 households
- Distributed storm water insert with building permits
- Presented Storm Water presentation to 3 service groups

GOAL 2: Public Participation inlet stenciling



In 2016, city staff painted 56 inlets



GOAL 2: Public Participation/Involvement

- Public dropped off 1,499 tons of grass, leaves and branches at landfill
- 37 volunteers cleaned Dakota Nature Park, Larson's Park and Golf Course tree grove
- Public dropped off 365 tons of debris during spring clean up
- Paint Exchange: public dropped off 565 gallons of paint, 15 volunteers worked 6 hours at the event
- Sustainability Council held a public meeting to discuss storm water quality.

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 2016, 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



BMU does preventative maintenance of sanitary system to decrease overflow during rain events

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

Ordinance No. 21-10

An Ordinance Amending Chapter 72 of the Code of Ordinances of the City of Brookings and Pertaining to Storm Drainage and Providing Requirements for Storm Water Discharges, Construction Site Runoff Erosion and Sediment Control, and Post-Construction Site Storm Water Runoff Control

Be It Ordained and Enacted by the Council of the City of Brookings, State of South Dakota, that the Code of Ordinances be amended as follows:

ARTICLE I. IN GENERAL

Sec. 72-1. Title.

These regulations may be referred to as the "Storm Drainage Ordinance" for the City of Brookings and the area of extraterritorial jurisdiction.

Sec. 72-2. Purpose.

The purpose of this ordinance is to provide for the health, safety, and general welfare of the citizens of the City of Brookings, with respect to storm drainage, to the maximum extent practicable and as required by federal and state law by:

1. Establishing methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process.
2. Prohibiting Illicit Connections and Discharges to the municipal separate storm sewer system (MS4).
3. Establishing legal authority for the City of Brookings to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this ordinance.
4. Establishing a drainage fee structure for funding public storm drainage infrastructure improvements within the City of Brookings.
5. Establishing storm water design standards for the City of Brookings.

Sec. 72-3. Authority.

In accordance with the South Dakota Water Pollution Control Act and the Administrative Rules of South Dakota (ARSD) Chapters 74:52:01 through 74:52:11 and any other authority provided by law or as such statutes may be amended, the City does hereby exercise the power and authority in the City and for land in the area of extraterritorial jurisdiction.

Sec. 72-4. Inspections by Authorized City Staff.

As part of the City's storm water pollution detection and elimination program, the City Engineer or designee reserves the right to inspect and monitor all facilities which discharge into the MS4. All inspections shall be documented and may include photographs of violations and potential problem areas.

Enforced the City ordinances for construction site runoff requirements



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:

- a. Lot lines, dimensions, existing structures, proposed structures.
- b. Location and area of all land disturbance (all cuts, fills, material stockpiles, etc.)
- c. 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.
- d. Location of all other watercourses on or adjacent to the property.
- e. 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.
- f. 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. Additional BMP guidance can be found at 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 81 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 BMPs on City construction projects

GOAL 4: Construction Site Runoff



Inspected construction sites for construction site runoff

GOAL 4: Construction Site Runoff



Required filtering device at inlets

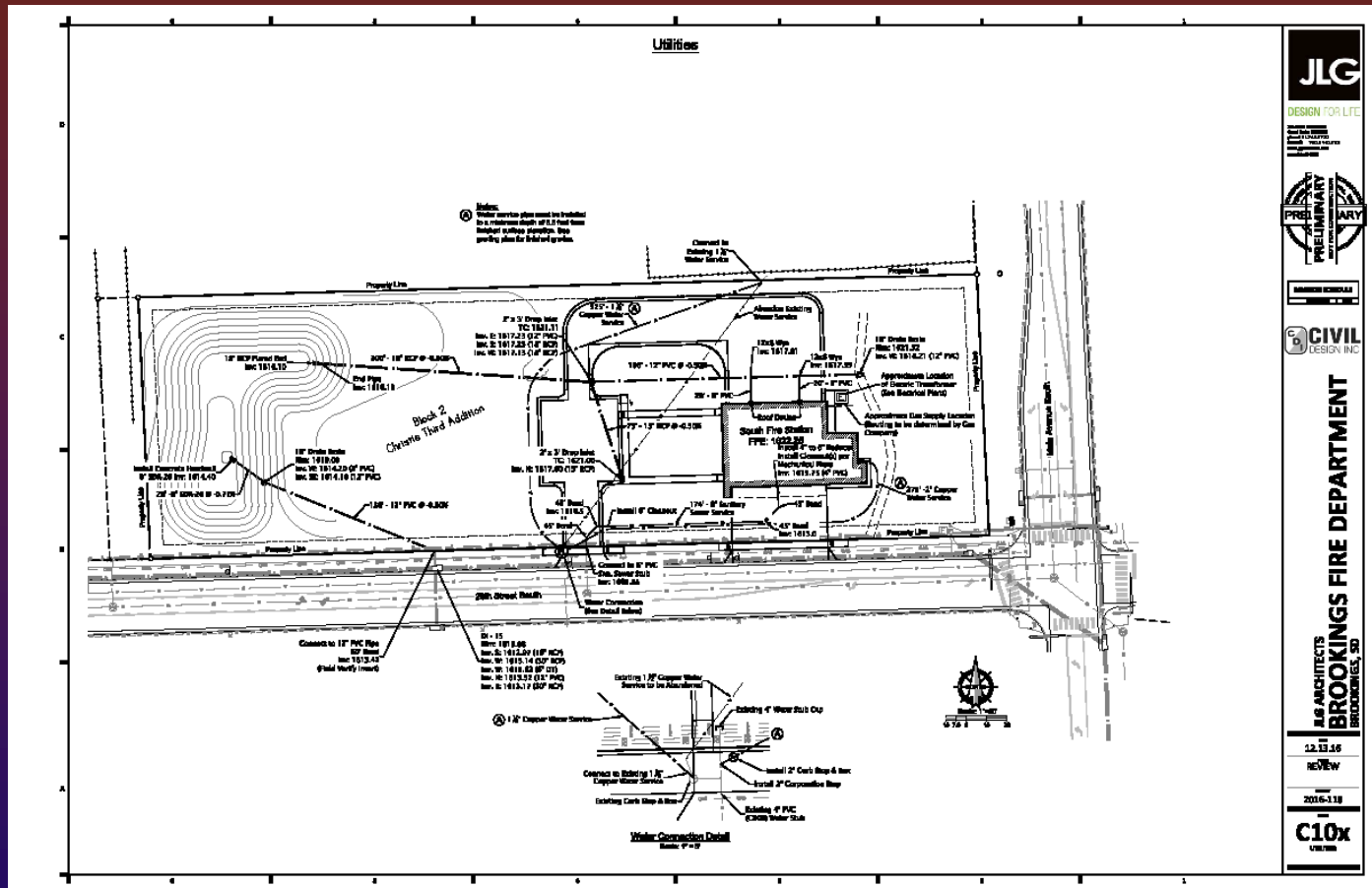


GOAL 4: Construction Site Runoff

Other achievements:

- Held a contractor's meeting in March 2016 to discuss construction site requirements
- 9 Notices of Intents were filed with DENR for construction sites 1 acre and larger
- Distributed storm water insert with building permits

GOAL 5: Post Construction Storm Water Mgmt



Engineering staff reviewed 11 drainage plans
6 detention ponds were constructed



GOAL 5: Post Construction Storm Water Mgmt

- Enforced City Storm Water Ordinance on Storm Water Management
- Enforced Storm Drainage Design & Technical Criteria Manual
- Encouraged the use of grassy swales, rain gardens & landscaping options

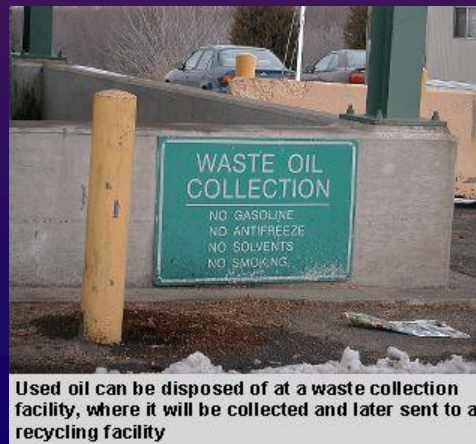
GOAL 6: Pollution Prevention/Good Housekeeping for Municipal Operations



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

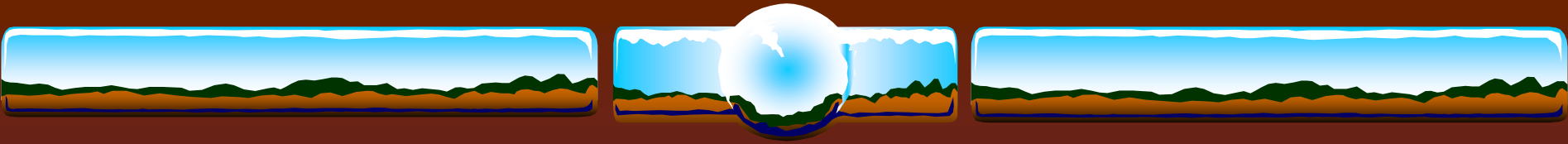


Used oil can be disposed of at a waste collection facility, where it will be collected and later sent to a recycling facility

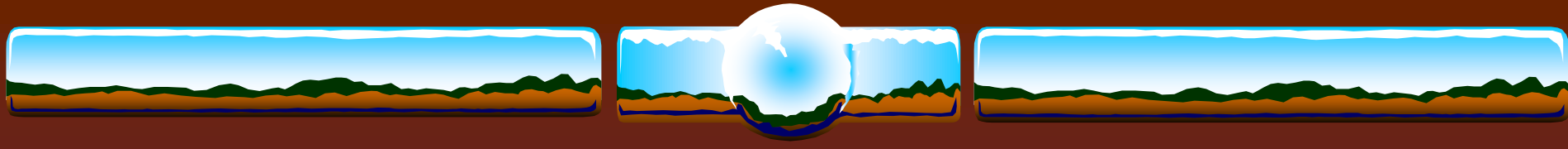


2016 Spring Clean Up totals:

- ❖ **316 tons of debris were picked up**
- ❖ **Mobile home courts dropped off 62 tons**
- ❖ **Public citizens dropped off 365 tons**
- ❖ **565 Gallons of paint dropped off for the paint exchange**



963 tons of grass and leaves were collected
in 2016



City offered free compost for the public



1035 tons of salt were mixed with sand the day they arrived to avoid runoff during rain



In 2016, 28,960 feet of pipe and 963 basins were cleaned.



All streets were swept approx. 3 times during the year to remove sediment and pollutants.
2,880 tons of sediment were swept up in 2016.



Expanded goals for 2017/2018

- ❖ Mail storm water brochure to businesses with information how to prevent illicit discharges
- ❖ Implement the storm water education program developed by the Sustainability Commission
- ❖ Track volunteer activities on storm water cleanup events
- ❖ Adopt Ordinance for the long term maintenance of BMPs (drainage facilities)
- ❖ Increase the number of dry weather screening of storm water outfalls
- ❖ Implement a training program for City staff on detecting illicit discharges
- ❖ Inspect and document construction sites for erosion control
- ❖ Continue evaluating municipal sites for prevention measures



DENR General Permit Update:

- ❖ The General Permit for Storm Water Discharges Associated with Construction Activities will be renewed
- ❖ DENR seeking input from the public on the draft permit
- ❖ <https://denr.sd.gov/des/sw/stormwater.aspx>
- ❖ Comments due by October 31, 2017
- ❖ DENR is considering charging annual fees for construction stormwater permits due to budget shortfalls during the 2018 Legislative session



Let's keep our streams and lakes clean!

