



Stormwater Newsletter Fall 2019



October 7th, 2019

FOREBAY TO REGIONAL BMP 25-1 WEST OF HIGHWAY 11

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Fall 2019 Update

2019 was another rough year for City of Sioux Falls stormwater and drainage. Wet weather such as what happened this last year makes complying with stormwater quality regulations both important and difficult. Flooding and extreme weather are realities the Sioux Falls area had to face, but other realities included continuing to ensure city-wide stormwater quality compliance. Please enjoy the following topics highlighted for discussion during the tumultuous year of 2019.

Positive ESCP Examples

Constant inclement weather stressed many erosion and sediment control plans (ESCP's) throughout the City this year. Sediment basins had issues, silt fence and inlet protection failed or could simply not

keep up with the constant deluge of water, and site maintenance was lacking at many points in town. Even though problems were plentiful, many positive examples of effective erosion and sediment control jumped out as well. Read all about some of the best ESCP noted this year on page 3.

Converting BMP's

Sediment basins and traps are important BMP's to implement while a site is under construction. They provide much needed treatment of stormwater runoff impacted by debris and sediment. Many of these temporary controls end up as the permanent treatment facilities for a site post-construction. Take a look at page 4 to find out about the importance of ensuring proper conversion of BMP's.



Sioux Falls MS4 Permit

Find out about why the City cares about what gets into the storm sewer system.

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What Constitutes an Illicit Discharge?

Learn about what an illicit discharge is and what the different forms can be.

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The Sioux Falls MS4 Permit and Why We All Should Care



Many instances transpire throughout the City of Sioux Falls in which the City must intervene to ensure some person or persons are following the City's stormwater rules and policy. But why is the City doing this in the first place and why is it important? The City of Sioux Falls is one of the many cities throughout the United States that operates under a Municipal Separate Storm Sewer (MS₄) Discharge Permit. Sioux Falls was large enough in the late 1990's to be in the first round of regulation doled out by the Environmental Protection Agency (EPA). The City has been permitted to discharge to the Big Sioux River via its MS₄ since November 1, 1999. Every City Code and policy regarding stormwater quality and, to a degree, quantity can be tied back to the MS₄ Permit. For the City of Sioux Falls to be compliant with its permit a report must be sent to the State of South Dakota DENR every year to prove it is actively undertaking programs such as a public education program, a commercial and residential management program, an illicit discharge program, an industrial facilities program, a municipal facilities runoff control program (MFRCP), and lastly a construction site program.

Not all of the programs cause activity by the City that is easily recognized by the public, but one program causes City staff to be very visible. The construction site program within the MS₄ permit mandates the City to regulate construction site stormwater. This necessitates policies the City must enact to stay compliant with the permit. Chapter 11 and 12 of the Engineering Design Standards for the City are used to dictate stormwater policy to parties interested in building within Sioux Falls. The intent is to show the contractors responsible for construction sites what must be done by them to protect the City's MS₄. Regulating the treatment of stormwater leaving a construction site before it reaches City drainage is the most effective way for the City of Sioux Falls or any other municipality to prove to regulatory authorities they are doing as much as practically possible to reduce pollution loading on the nearby Water of the United States, in this case the Big Sioux River.

City inspectors, analysts, and engineers check sites to ensure compliance. Compliance can be as simple as placing the commonly seen black silt fence along the edge of a property. Every project within the City is different so not every site can implement silt fence to be compliant. There are many layers to a proper Stormwater Pollution Prevention Plan (SWPPP) which is always required for a construction site within City limits. Contractors and owners must implement controls such as silt fence and sediment basins, but they also need to apply ground cover as soon as an area will no longer be worked on. So, the next time someone asks why the City seems so interested in what is getting into the street and down the drain take the time to educate him or her on the complexities of the MS₄ Permit.

Good Erosion Control and Stormwater Quality Examples around Sioux Falls

Citi Bank Site South Corporate Place



One of the three sediment basins at this site is pictured to show ideal stabilization of a basin and the slopes surrounding it. Proper hydromulch application and turf reinforcement has been utilized throughout.

Twin Home Site South Duluth Avenue



Silt fence and sediment traps in sequence were utilized at this site. One trap upstream of the pictured area helps lessen the load on the far trap and properly installed silt fence.

Jans Corp. Warehouse West 54th ST N



Two building sites on W 54th ST N shared a well-built sediment basin. The picture shows how effectively a well-built sediment basin holds back sediment and other particulates during a storm event.

Beadle and Cherry Rock Park Bike Trail



Drill lines in the left photo will provide good roughness to impede erosion while the proper hydromulch thickness was applied. The steeper slope to the right was covered with a woven blanket to provide good slope protection and integrity while vegetation works to take hold.

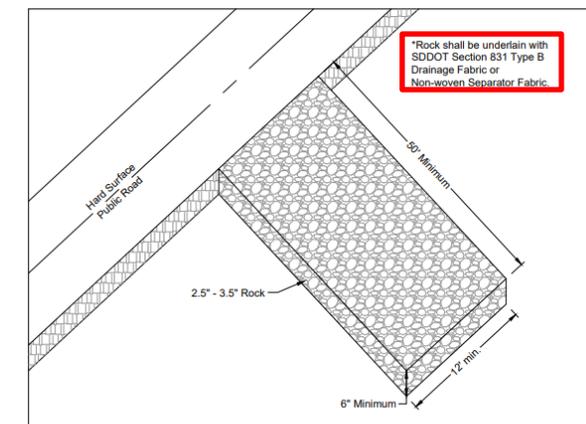
What Constitutes an Illicit Discharge?

An illicit discharge is described in Chapter 53.015(b) of the Sioux Falls Code of Ordinances as such, "It shall be unlawful to discharge to any natural outlet within the city or in any area under the jurisdiction of the city any wastewater or other polluted waters, except where suitable treatment has been provided in accordance with this subchapter, or permitted by the DENR or EPA." Chapter 53 defines a natural outlet as "Any outlet, including storm sewers and combined sewer overflows, into a watercourse, pond, ditch, lake or other body of surface water or groundwater." Because of these definitions, the City of Sioux Falls must regulate what enters the storm system. Debris, sediment, chemicals, or bacterial wastes such as animal feces are subject to the *polluted waters* portion of the illicit discharge definition. This means any dumping of chemicals, for example paint, down the storm sewer can be enforced as an illicit discharge. Also, any pumped water entering the street or storm system with excessive amounts of sediment is considered an illicit discharge. Examples such as the last two are straight forward, but there are also other common examples of illicit discharge which are overlooked.

Easily overlooked illicit discharges can include failing to install silt fence along a ditch and allowing polluted runoff to flow directly into said ditch. Another example is tracking mud onto a street with unprotected storm sewer inlets. The tracking turns into an illicit discharge if a rain event occurs and no cleanup of the street has been accomplished. To sum everything up, if no controls are present and polluted water is noted entering the City's MS4 in any way, enforcement action can be initiated for an illicit discharge. In order to ensure avoidance of an illicit discharge, please take the appropriate first steps. For example, contact the Environmental Department at 367-8276 if you are unsure of the nature of the discharge that is planned, or make sure to get the necessary permits from the South Dakota DENR before starting any projects.

Recent SWPPP Standard Plate Updates

Contractors, developers, and engineers are reminded the standard plates 734.02 (Vehicle Tracking Control), 734.31 (Filter Strip), and 734.08 (ESC Narrative) have been updated along with updates to Chapter 12 of the Engineering Design Standards (EDS). One item of particular interest is the new inspection requirement. Now responsible parties may inspect once per week or once every two weeks. If the two week schedule is implemented the site must also be inspected after every 1/4" rainfall. You will also notice all Engineering standard plates have an updated appearance. Please ensure to download the most current version of standard plates from the City website and refresh on Chapter 12 of the EDS. If you have any questions, please contact City Engineering at 367-8601.



***Rock shall be underlain with SDDOT Section 831 Type B Drainage Fabric or Non-woven Separator Fabric.**

 <p>CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You</p>	<p>Temporary Vehicle Tracking Control</p>	<p>Specification Reference No. 734</p>	<p>Plate Number 734.02</p>
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Converting BMP's from ESC Mode to Post-Construction Mode

Another important portion of the Sioux Falls MS₄ is the proper implementation of post-construction BMP's within the City. Due to the need to ensure private development adhered to the post-construction BMP rule, Chapter 55 of the Sioux Falls Code of Ordinances was created in 2017. Chapter 55 allows the City to inspect private post-construction BMP's for performance and take enforcement action if the BMP's are not functioning as intended. A major way for developers to avoid running into issues with post-construction BMP's is to appropriately incorporate conversion of temporary BMP's to the post-construction design. Many temporary BMP's on sites are planned to be converted yet they end up forgotten at the tail end of the project. The City views proper conversion of the outlet structure, grading to post-construction specifications, incorporation of underdrains and proper subgrade materials, and stabilization to be important pieces to the finalization of a site. Developers and contractors need to keep this necessary conversion in mind during the entire project. For example, BMP slopes may be at final grade early on in the project, so seeding could take place to allow for proper slope stabilization leading to one less step to take when tidying up a project.

Weather usually plays a tough role in BMP maintenance and conversion. It is paramount for site owners to take advantage of dry weather periods. If turf reinforcement matting (TRM) is to be used to stabilize the BMP bottom or base flow channel and a dry week is ahead it is wise to plan on some action to work on the wetter areas. As depicted below, staying compliant with construction stormwater regulations can be simple, but readying a BMP for life after construction is complete takes more planning and thoughtfulness. A simple horseshoe filter in an adequately-sized BMP can keep a site compliant while multiple operations may need to be coordinated to properly convert the BMP to its final status.



2019 Annual Stormwater Seminar Announcement!

The City of Sioux Falls is pleased to announce the 2019 Annual Stormwater Seminar will be held in conjunction with the 2019 Big Sioux River Water Summit on December 5th at the Hilton Garden in Sioux Falls Downtown. The seminar will be held in the morning with the summit to follow in the afternoon.

Many important stormwater subjects will be discussed in the morning and a multitude of interesting speakers will be on hand in the afternoon, so please mark your calendars!

