APPENDIX C: Stormwater Pollution Prevention Program (SWPPP)

City of Minnetonka Water Resources Management Plan

City of Minnetonka, Minnesota

Stormwater Pollution Prevention Program (SWPPP)

City of Minnetonka, MN
Storm Water Pollution Prevention Program (SWPPP)

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Introduction

The City of Minnetonka is included in a group of communities that are federally required to obtain a Municipal Separate Storm Sewer System (MS4) permit for managing non-point source storm water. Non-point source storm water is generally the overland flow of storm water that does not originate from a single pipe, otherwise known as point-source storm water.

This permitting process requires cities such as Minnetonka to address how they will regulate and improve storm water discharges. The permit requirements mandate submission of an MS4 SWPPP Application for Reauthorization to the state; and, creation of a Storm Water Pollution Prevention Plan (SWPPP) that addresses all the requirements of the permit.

The primary source for developing the city's permit application and plan is the city's existing Water Resources Management Plan (WRMP), adopted in 2011. The purpose of the Minnetonka WRMP is to provide a thorough and comprehensive guide and reference in managing surface water resources within the city boundaries. The plan assists the city with policy decisions, water resource management, and implementation priorities.

The City of Minnetonka first established a Stormwater Utility Fee in 2003. This fee helped to keep a continuous, dedicated funding source to meet growing stormwater management needs. This dedicated revenue source enables Minnetonka to provide improved flood protection, stormwater system maintenance, water quality protection, erosion and sediment control, improved lake water quality and wetland/resource protection. The following is a breakdown of the most current Stormwater Utility Fee revenue source (2018):

Classification	Description	Rate
1	Open Space, Golf Course, Undeveloped	$3.19/acre/month
2	Single Family and two/three-Family Residential	$7.08/unit/month
3	Churches, Schools, & Government Buildings	$19.12/acre/month
4	Apartments, Condos, and Railroad R/W	$21.24/acre/month
5	Commercial & Industrial	$53.53/acre/month

Minnetonka's plan addresses the six Minimum Control Measures (MCMs) outlined in the permit requirements. Many of the Best Management Practices (BMPs) required in the permit have already been developed in accordance with the City of Minnetonka's Water Resources Management Plan. The six Minimum control Measures of the permit are:

1. Public Outreach and Education
2. Public Participation/Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post-Construction Runoff Control
6. Pollution Prevention/Good Housekeeping

Location and History

The City of Minnetonka is a 28 square mile, fully developed suburban community of just over 51,000 residents located in Hennepin County, eight mile west of Minneapolis. Minnetonka maintains a historic reputation as a community dedicated to protecting, preserving, and enhancing its natural resources – residents can enjoy 50 community parks, more than 95 miles of maintained sidewalks and trails and more than 1,500 acres of public open space, as well as 13 lakes and over 550 natural wetlands. Thanks to water management efforts developed in the city' infancy, these resources have been preserved from development and other pressures.

Four watershed management organizations cover Minnetonka, each with its own governing body: the Bassett Creek Watershed Management Commission (BCWMC), the Minnehaha Creek Watershed District (MCWD), the Nine Mile Creek Watershed District (NMCWD), and the Riley Purgatory Bluff Creek Watershed District (RPBCWD).

Currently approximately 96 percent of the city is developed. Minnetonka's land use is predominantly low density residential with interspersed park and open areas. Commercial, office, industrial, and other high density land uses generally occur along major transportation corridors such as Interstate 394 and Interstate 494, Minnetonka Boulevard, Highway 7, Excelsior Boulevard, County Road 101, and County Road 73. The southeastern corner of the city has a large industrial, office, and commercial area. Large park and open spaces exist along the city's large lakes and along the Minnehaha, Purgatory, and Nine Mile Creek corridors.

The city has a long history of water management planning. The city's 1982 City of Minnetonka Stormwater Management Plan established an integrated stormwater management system for the city and represented the city's "first generation" plan. However, drainage reports, surveys, and observations were presented in formal documents as early as 1959. The first generation plan focused primarily on flood control and was consistent with state statutes which promoted the retention of precipitation "in the area where it falls, as far as practicable (Minnesota Statutes 103A.205).

Subsequent to the development of that first generation plan, additional emphasis was placed on the preservation and enhancement of wetland, and water quality. In response, the city developed the 1999 City of Minnetonka Water Resources Management Plan. The 1999 plan represented the "second generation" of water resource planning and took previous stormwater management efforts in the city a step further by integrating flood control with wetland and water quality needs. Priority water bodies were, and continue to be, protected through classification and regional management.

The city implemented a "third generation" Water Resources Management Plan that was adopted in 2011. This plan continued on the city's previous efforts to integrate wetland protection, water quality protection, and flood control.

As state and federal laws have changed over the years, the role of the city in water resource management has also changed. In 1990, the EPA established the Phase I Stormwater Program. The Phase I federal regulations required two general categories of stormwater discharges to be covered under a National Pollutant Discharge Elimination System (NPDES) stormwater permit: 11 regulated categories of industrial activity including construction, that disturbs five or more acres of land, and municipal separate storm sewer systems (MS4s) serving populations of more than 100,000 (including Minneapolis and St. Paul).

In 1999, the Phase II federal regulations expanded the scope of the NPDES Stormwater Program to include smaller MS4s in urbanized areas, construction activities that disturb between one and five acres of land, and smaller municipally owned industrial activities. In 2003, Phase II of the NPDES program began at the state level. Phase II is a broader program that included smallest construction sites, municipally owned or operated industrial activity, and many more municipalities (MS4s). Regulated parties under the Phase II program were required to develop stormwater pollution prevention programs or plans to address their stormwater discharges, and determine the appropriate pollution prevention practices or "best management practices" to minimize pollution.

In 2003, the MPCA issued a General Permit for municipalities with populations over 10,000 (MS4 permit), including Minnetonka. This permit required cities to comply with six "minimum control measures," which include public education and outreach, illicit discharge detection and elimination, construction site stormwater runoff control, post-construction stormwater management, and pollution prevention/good housekeeping measures.

In 2006 and 2013, the MPCA issued new MS4 General Permits requiring regulated MS4s provide additional measures for protecting and restoring local water quality.

In 2002, the MPCA began identifying surface water resources that are impaired for their identified uses (swimming, aquatic habitat, etc.). If a water body is included on the impaired waters list it triggers an analysis called a total maximum daily load (TMDL) study. The TMDL analysis determines the impaired water body's capacity to assimilate specific pollutants and still meet water quality standards. A TMDL also develops an allocation scheme amongst the various contributors.

Best Management Practices:

Enforcement Response Procedures (ERPs)	
BMP Description	Review the ERPs annually to ensure relevance.
Measurable Goals	The ERPs will be reviewed annually and edits will be made if necessary
Timeline/Implementation Schedule	Annually over the permit cycle
Annual Update 2014 - 2018	The ERPS were reviewed but no changes were made to these enforcement procedures.
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Coordinating Engineer, Engineering Department

Annual Evaluation of City SWPPP Document	
BMP Description	Review SWPPP document annually to ensure that all links are current.
Measurable Goals	The SWPPP will be reviewed annually
Timeline/Implementation Schedule	Annually over the permit cycle
Annual Update 2014 - 2018	The SWPPP was reviewed and the links are current.
Responsible Party	Water Resources Coordinating Engineer, Engineering Department

Minimum Control Measure 1: Public Education and Outreach

Program Overview

The city of Minnetonka implements a comprehensive natural resource based approach to water quality education. The program includes all of the MCM's and targets a variety of audiences, including the general public, students, property managers (including yard care companies and groundskeepers), local business, government officials and boards and city staff.

The city's education goal is to engage its citizenry and businesses to implement stormwater BMPs and have people gain the understanding that stormwater is the community's water, it belongs to everyone. And ultimately that our everyday practices can have an impact on the quality of our water resources. Some of the highlights of the program include;

- Creating an understanding that urban development increases storm water runoff which is untreated, polluted water.
- Creating the understanding that if we can keep the water on the landscape and implement practices to reduce the pollutants and nutrients that we discharge then ultimately we will have cleaner surface waters.
- Addressing phosphorous, nutrient loading and contaminates as it relates to lawn care practices, pet waste management, construction site management and the benefits of native landscapes.
- Addressing the issues relating to snow removal and the impacts of deicing salts.

- Addressing illicit discharge as it relates to the proper disposal of all types of waste including yard waste, pet feces, chemicals, waste water, vehicle washing, and chimney ash. Additionally the city raises awareness about the problems that arise from irrigation overspray and the need for construction site management practices.
- Informing the public about the stormwater benefits that trees provide.
- Creating an understanding that site design and maintenance can reduce storm water impacts and provide information to the public about permanent BMPs used for long term erosion control and water quality protection. These include items such as; rain gardens, infiltration swales, permeable pavers, and wetland/shoreland buffers.
- Training city staff on the requirements of the MS4 program, the responsibility of the city to comply with these regulations and how each staff member contributes to that effort.

Specific BMPs

Distribute Educational Materials	
BMP Description	Educational materials will continue to be distributed to all audiences (as applicable) to address water quality impacts and protection measures.
Measurable Goals	• City newsletter articles – a minimum of 6 articles will be published annually. The newsletter is distributed monthly to 26,000 households. • The city partners with Clear Channel to provide educational messages on 6 electronic billboards in town. Two electronic billboard messages will be submitted annually to Clear Channel for publication. • The city's website will continue to have comprehensive information relating to water resources and construction site management. This information will be reviewed annually by city staff and updated as needed. • Email subscribers will see seasonal information of water quality protection. • City staff receives internal communication about water resource protection. These seasonal messages are published 3 - 4 times per year. • Staff directly contacts local businesses and educates them about the impacts of storm water and ways to minimize impacts. At least 20 businesses are contacted annually. • The city educates contractors on grading and erosion control BMPs at the time of issuance of every building or grading permit. • The city partners with Blue Thumb and Watershed Partners to provide "out of city" educational messages to our residents and businesses.
Timeline/Implementation Schedule	Annually/Ongoing
Annual Update 2014 - 2018	• Newsletter articles relating to surface water protection are published annually.

	o In 2014, 48 articles (13 related to special drop event and brush drop to prevent the illicit discharge of dumping) were published; o In 2015, 32 articles (13 relating to special drop or brush drop) were published; and o In 2016, 27 articles (5 relating to the special drop or brush drop) were published. o In 2017, 34 articles (11 relating to the special drop or brush drop) were published o In 2018, 33 articles (12 relating to the special drop or brush drop) were published • Clear Channel Billboard messages relating to surface water protection are submitted annually (2 required). o In 2014, 6 billboards messages were submitted; o In 2015, 6 billboards messages were submitted; o In 2016, 7 billboards messages were submitted; o In 2017, 5 billboards messages were submitted; and o In 2018, 5 billboards messages were submitted. The run times are on record and available upon request. • City website contains comprehensive information relating to water resources and construction site management. Staff reviewed and made some minor edits to this information in 2016. • Email subscribers to the "Minnetonka Minute" now known as the natural resources eblast receive seasonal information on surface water protection. In 2015 there were 200 subscribers, in 2016 there are about 1,000 subscribers and in 2017 and 2018, close to 1,600 people subscribed. • City staff receives internal communication about water resource protection generally 3 - 4 times per year. o Three seasonal messages were submitted and distributed in 2014. o Four seasonal messages were submitted and distributed in 2015. o Five seasonal messages were submitted and distributed in 2016. o Three seasonal messages were submitted and distributed in 2017. o Three seasonal messages were submitted and distributed in 2018. • Staff directly contacts local businesses and educates them about the impacts of storm water and ways to minimize impacts. About 200 businesses are contacted annually. • The Renter Report was distributed to about 40 rental property managers, many who share the information with their renters. In 2015 and 2016 a total of 6 messages (3 each year) relating to protecting surface waters were communicated; summer and fall yard care to protect surface waters and salt management.

	• The city partners with Metro Blooms/Blue Thumb and Watershed Partners to provide "out of city" educational messages to our residents and businesses. This partnership continued from 2013 - 2018. Special Outreach Efforts • In 2015 and 2016 the city promoted a Pet Waste Reduction Campaign to increase awareness about picking up after your pet. The campaign received media attention from KSTP, KARE11, 107.9, The Star Tribune and a public service message was displayed on the city's reader board. As part of the campaign the city hosted a pick up event, see details below in the event section. School children were educated, and created art work which became 1) signage in 6 parks and 2) flyers that were distributed at events. The city also partnered with local pet stores to help spread the word, please refer to the partnership section below for details. • In 2017 the city focused on salt usage. Staff partnered with the Nine Mile Creek Watershed District to engage faith-based communities about the amount of salt they use on their parking lots and sidewalks. This program was expanded in 2018 to include other communities other than Minnetonka. Several faith-based communities in Minnetonka attended the workshop where they were given valuable salt usage tips, customized to their specific site and amount of impervious surface.
Responsible Party	Natural Resources Manager, Public Works Department

Host and Participate in Events	
BMP Description	The city participates in and hosts events in order to help raise awareness about water resource protection. Minnetonka staff host exhibits and distributes information relating to water quality protection at annual events including the Remodelers' Fair, the State of the City which is the mayor's annual address, the Native Plant Market and Eco Fun Fest, and the city's open house.
Measurable Goals	Exhibits will be displayed at four events annually.
Timeline/Implementation Schedule	Annually/Ongoing
Annual Update 2014 - 2018	Staff hosted exhibits and distributed information relating to water quality protection at the following events: • Remodelers' Fair – 200 attendees - annually • The State of the City (mayor's annual address) – 50 attendees

	• Every other year the city hosts *Citizen Academy* where residents learn about local government. One component of the workshop focuses on storm water. About 40 people attend the training session bi-annually. • The Native Plant Market and Eco Fun Fest (2014 - 2016) – 150 to 250 attendees • Pollinator Field Day in 2017 and 2018 replaced the Native Plant Market and Eco Fun Fest due to declining numbers – 200 attendees • City Open House – about 3,000 attendees • Eco Series of Walk and Talks topic include shoreline restoration, pollinators and water quality (2014 - 2016) – 300 attendees (numbers were declining, people just not attending workshops) • Urban Waters Forum (2015 and 2016) - 100 attendees in 2015 and 60 in 2016 • Neighborhood Night Out - 200 flyers distributed and in 2017 presentations were given to six different neighborhood groups. In 2018 flyers were distributed to neighborhood groups. • Tree Sale – 500 flyers distributed annually • Rain Barrel Sale – annually sell about 40 barrels (partnership with Recycling Association of MN) • Pet Waste Reduction Campaign with a Pick Up event in March 2015. Fifty people picked up 134 pounds of poop in 2 hours. In 2016, a similar event was held at a different park with only 2 people attending and reclaiming 5 pounds of poop.
Responsible Party	Natural Resources Manager, Public Works Department

Conduct Informational Workshops	
BMP Description	The city hosts professional training sessions and workshops to educate different audiences including school groups, contractors and the general public about water resource protection.
Measurable Goals	Two presentations are offered annually.
Timeline/Implementation Schedule	Annually/Ongoing
Annual Update 2014 - 2018	• The city hires Fortin consulting annually to educate all 4th or 5th graders on storm water and surface water protection. Annually about 600 students receive this information. • The city educates contractors on grading and erosion control BMPs via a workshop and at the time of issuance of every building or grading permit. Generally 25- 50 people attend a workshop in February and about 300 building and grading permits, including commercial sites, have been issued. • The city partnered with multiple agencies to host the Shallow Lakes and Urban Waters Forums in April of 2015 and 2016. The focus of this workshop was to help riparian owners protect their lakes and ponds.

	• The Native Plant Market and Eco Fun Fest was held in early June (2014-2016). In 2017, Pollinator Field Day replaced the Native Plant Market and Eco Fun Fest due to declining numbers. Information and activities relating to water resource protection was and is a component of both events. • In 2015 the city hosted a NEMO Chloride workshop and educated local officials on the city's chloride reduction strategies. • In 2018 several faith-based communities attended a workshop where they were given valuable salt usage tips, customized to their specific site and amount of impervious surface.
Responsible Party	Natural Resources Manager, Public Works Department

Training	
BMP Description	The city educates staff on the requirements of the MS4 program, the responsibility of the city to comply with these regulations, and how each staff member contributes to that effort.
Measurable Goals	This is accomplished through staff meeting presentations and discussions, attending in-house and external professional trainings, and audits of operations for water quality impacts. City staff is able to identify and understand the purpose and details of MS4 requirements.
Timeline/Implementation Schedule	Annually/Ongoing
Annual Update 2014 - 2018	Public works, engineering community development and some police and fire department staff are trained annually. On May 19, 2016, the planning commission toured two development projects that they previously approved which included multiple natural resource components. The planning commissioners viewed stormwater BMPs, and wetland and tree protection measures. They communicated the benefit of that first-hand knowledge as they continue to review and approve development projects. The city has created a training powerpoint to increase the opportunity to educate the police and fire departments, this powerpoint is anticipated to be presented to staff in the fall of 2017. The 2017 expanded training was delayed, however police and fire department staff were trained in April of 2018. Public Works staff is trained twice per year, please refer to the *Training* section under MCM 6, Good Housekeeping.
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Coordinating Engineer, Engineering Department

Develop Partnerships to Implement Water Quality Protection Strategies	
BMP Description	The city undertakes environmental education programs directed at specific neighborhood groups. These groups may include a neighborhood pond or lake association where the focus is to educate the sub-watershed on lawn care and water quality protection or to install rain gardens or rain barrels.
Measurable Goals	The city attempts to be involved with at least two neighborhood groups annually.
Timeline/Implementation Schedule	Ongoing
Annual Update -2014	In 2014 the city worked with The St John's and Fairhills Rd. neighborhoods to educate them about surface water protection. The city annually (2014-2017) works with the owners in the Marshes of Meadow Woods, Stone Trace, Waterstone Place Apartments, Portico and Clarion Hills to address wetland and upland restoration.
Annual Update - 2015	In 2015 the neighbors in the Hilloway Park neighborhood were targeted due to illegal dumping that was occurring in the park. The Minnetonka Mills neighborhood was also educated about protecting their neighborhood wetland. In 2015 and 2016 the city promoted a Pet Waste Reduction Campaign to increase awareness about picking up after pets. The campaign received significant media attention. As part of the campaign the city hosted a pick up event, see details above in the *Event s*ection. School children were educated, and created art work which became 1) signage in 6 parks and 2) flyers that were distributed at events. The city also partnered with 14 local pet stores, hospitals and care facilities to help spread the word. Flyers featuring the students' artwork and "Doo Your Part" buttons were distributed at the 14 locations.
Annual Update - 2016	In 2016 the city became more involved with the Windsor Lake neighborhood to address lake issues, primarily nuisance aquatic vegetation. The city also targeted the Holdridge neighborhood to address illegal dumping that was occurring on city property.
Annual Update - 2017	City staff attended the Night Out for Neighbors at seven different locations; three surrounding the Windsor Lake neighborhood, Frear Drive, Wellington Circle, Saddlebrooke Circle and Nolan Rd. Staff partnered with the Riley Purgatory Bluff Creek Watershed District and the neighbors' of Spring Crest Pond to implement an experimental algae control program. Unfortunately, the project donors' ran out of money so the full effect of the experiment was never realized.

	The city approved the pond and lake management program which encourages lake and pond associations to be proactive in protecting and improving surface waters and creates an opportunity for those groups to acquire funding from the City of Minnetonka for water quality improvement projects. Additionally staff reached out to 30 faith-based communities to educate them about salt reduction strategies that they can incorporate into their winter maintenance practices.
Annual Update - 2018	The city approved the pond and lake management program in 2017 which encourages lake and pond associations to be proactive in protecting and improving surface waters and creates an opportunity for those groups to acquire funding from the City of Minnetonka for water quality improvement projects. The Lake Minnetoga HOA applied for funding to install raingardens within their sub-watershed to better protect the quality of the lake. City staff partnered with the Zvago Condominium Association to improve the quality of their lake and wetland buffers. Several faith-based communities attended a workshop to learn about specific salt usage strategies for their properties. Please refer to the *Distribute Educational Materials – Special Outreach Efforts* section *and Conduct Informational Workshops* section above for details.
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Coordinating Engineer, Engineering Department

Maintain Partnerships	
BMP Description	The city currently partners with other municipalities, the city's four watershed organizations, the MN Department of Transportation and non-profit organizations to continually promote water resource education.
Measurable Goals	The city will continue to maintain these partnerships as appropriate.
Timeline/Implementation Schedule	Ongoing
Annual Update 2014 - 2018	The city meets annually with other municipalities and the watershed districts to discuss and implement education strategies. The city collaborates with these groups to host and participate in events such as rain garden and lakescaping workshops, festivals (NPMEFF and Pollinator Field Day) and half-day seminars (The Urban Waters Forum). In 2016 the partners developed a Clean Water Survey (August 19, 2016 deadline) to evaluate communication methods and how well received those methods are received by the public. The city is a member of Metro Watershed Partners - Let's Keep it Clean Campaign and benefits from the implemented educational strategies.
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Engineer, Engineering Department

Explore New Opportunities for Utilizing Social Media	
BMP Description	Identify city policies and parameters for social media and, if feasible, work with the city's Communication Manager to develop the most appropriate method to distribute educational messages through social media along with complementary traditional practices.
Measurable Goals	Identify the best media to utilize and track the number of 'hits' and 're-posts' of material to gauge community coverage and awareness of City initiatives.
Timeline/Implementation Schedule	Establish conceptual program during 2016 with implementation of final program in 2017. Staff will gauge the amount of information distributed in 2017-2019.
Annual Update - 2016	Staff identified the following media: enewsletter, twitter, facebook and the website. Staff has scheduled seasonal messages to be distributed in 2017.
Annual Update - 2017	The city has published a lot of information on water quality in the Memo, eblast and Ripple Effect. Social media efforts in 2017 continued to focus on events and programmatic information. Staff is working with the communications division on posting seasonal messages relating to water quality issues. Additionally communication staff have indicated that social media analytics is not very accurate. The city has a 30% open rate for its eblasts but is not confident in the tracking number associated with other social media analytics.

Annual Update - 2018	In 2018 the city posted three topics to social media (chloride use, every day is Earth Day which had a focus on surface water protection and the protection of turtles).
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Coordinating Engineer, Engineering Department Communications Manager, Administration Department

Increase Internal Staff Education and Training	
BMP Description	Increase general education with an emphasis on illicit discharge for the following departments: Fire, Police, Public Works and Community Development.
Measurable Goals	Utilizing existing training schedules, present information to each department, and provide messages three - four times per year on the city's internal website.
Timeline/Implementation Schedule	Establish conceptual program and discuss with department heads in 2015 and 2016 with implementation of final program in 2017.
Annual Update 2014 - 2018	Public works, engineering community development and police and fire department staff have been trained. The city has created a training powerpoint to increase the opportunity to educate the police and fire departments, this video was presented to police and fire department staff in April of 2018. Water resource protection messages have been provided at least three times per year (four times in 2015 and five times in 2016) on the city's internal website.
Responsible Party	Water Resources Coordinator, Engineering Department Natural Resources Manager, Public Works Department

Increase Public Awareness of Illicit Discharge	
BMP Description	Develop a definition of illicit discharge, how to identify it, and where to report it.
Measurable Goals	Raising awareness of illicit discharges, creating structured processes governing their identification and how to report discharges once detected.
Timeline/Implementation Schedule	Begin implementation in 2014
Annual Update -2014	An Ordinance for Illicit Discharge was adopted on March 2, 2015. Definitions and standard operating procedures have been developed. Standard operating procedures will continue to be refined, and made available to the public. Additional materials will be generated for public events for distribution.
Annual Update 2015 - 2018	The city continues to enforce the Illicit Discharge ordinance, refine procedures, and distribute information to the public to create awareness.

	The city continues to enforce and track Illicit Discharges and requires compliance.
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Engineer, Engineering Department

Program Evaluation	
BMP Description	Evaluate current educational techniques and identify three priority areas.
Measurable Goals	The city has identified pet waste control, chloride use and wetland dumping as our three priority areas to focus education over this permit cycle
Timeline/Implementation Schedule	2014 - Identify priority areas for city-wide education 2015 - 2018 – Implement education programs to target these three areas
Annual Update 2014 - 2018	The priority areas were identified in 2014 and timelines for each educational component were outlined. The improper disposal of yard waste has continually been a problem throughout the years. Staff has and will continue to annually educate residents and businesses about the proper disposal of leaves and grass clippings. Neighborhood letters are sent to area residents when illegal dumping is reported in an attempt to educate all residents not just the person dumping the yard waste. Outreach efforts relating to yard waste disposal has occurred throughout 2014-2017. In 2015 the city initiated its Pet Waste reduction Campaign which included a volunteer pick-up event, media coverage and school children's art work became signage in 6 parks. See the *Distribute Educational Materials, Special Outreach Efforts* section above for details. In 2016 the chloride education campaign was outlined and will be implemented in 2017. In 2017 staff reached out to 30 faith-based communities to educate them about salt reduction strategies that they can incorporate into their winter maintenance practices. In 2018 several faith-based communities attended a workshop to learn about specific salt usage strategies for their properties. Please refer to the *Distribute Educational Materials – Special Outreach Efforts* section *and Conduct Informational Workshops* section above for details.
Responsible Party	Natural Resources Manager, Public Works Department

Minimum Control Measure 2: Public participation and Involvement

The goal of public participation and involvement is to raise the level of awareness of stormwater management and the impacts we have on our water resources. The city strives to educate all audiences

about relevant regulations pertaining to water resources. The city wants to engage its businesses and citizenry to implement stormwater BMPs and have people gain the understanding that stormwater is the community's water, it belongs to everyone.

The city of Minnetonka holds an annual public meeting to review the details of the city's stormwater management program. The meeting is noticed in the local paper, in the city's resident newsletter, the Minnetonka Memo, and on the city's website. The meeting has been held at various venues, including a standalone meeting, a booth at the city's environmental event, and at a Planning Commission meeting. Attendance has been sparse at all venues but the city continues to evaluate new meeting venues.

The city records and takes into consideration all input received on the stormwater management program, both written and verbal, and changes are made to the city's SWPPP based on these comments. Addtionally the city actively seeks to engage its' citizens in water resource programs such as the wetland health evaluation program, the citizen assisted lake monitoring program and the storm drain monitoring program.

The Annual Public Meeting and Solicitation of Public Opinion on the Adequacy of the SWPPP	
BMP Description	Conduct an Annual Stormwater Informational Meeting to receive public opinion on the adequacy of the SWPPP program components. The meeting is held prior to the submittal of the annual report. Public input is also solicited via correspondence with email subscribers, via the city's website and through the city's newsletter, the Minnetonka Memo.
Measurable Goals	Public meeting held. Date, time, minutes, and location recorded
Timeline/Implementation Schedule	Annually
Annual Update -2014	The City held its annual public meeting in a combined venue with its Native Plant Market and Eco-Fun Fest event on June 4, 2014. All SWPPP materials were made available, and any interested parties were able to submit questions, concerns, or opinions based on the documents.
Annual Update – 2015	The City held its annual public meeting at a planning commission meeting on June 11, 2015. Staff from Project NEMO were invited to speak to the audience and the commissioners. The meeting was taped and was broadcast on public access (cable) and was available for streaming on the city's website. No comments were received from the general public.
Annual Update – 2016	The City held its public meeting in a combined venue with its Native Plant Market and Eco-Fun Fest event on June 8, 2016. All SWPPP materials were made available, and any interested parties were able to submit questions, concerns, or opinions, and given the option to sign up for email updates.
Annual Update – 2017	The City held its public meeting in a combined venue with its Pollinator Field Day event on July 12, 2017. All SWPPP materials were made available, and any interested parties were able to submit questions, concerns, or opinions, and given the option to sign up for email updates.

Annual Update – 2018	The City held its public meeting in a combined venue with the city's Open House on October 9, 2018. Additionally the SWPPP was available at the city's Pollinator Field Day event on July 11, 2018. All SWPPP materials were made available, and any interested parties were able to submit questions, concerns, or opinions, and given the option to sign up for email updates.
Responsible Party	Water Resources Engineer, Engineering Department

Comply with Public Notice Requirements	
BMP Description	The City of Minnetonka will provide a 30 day public notice of the Annual Stormwater Informational meeting or any subsequent meetings to discuss the provisions of the SWPPP, its effectiveness, or amendments.
Measurable Goals	Publications used for the public notice recorded.
Timeline/Implementation Schedule	Annually
Annual Update 2014 - 2018	The annual stormwater meeting was noticed on the city's website, (www.eminnetonka.com) and in the city's newsletter (the Minnetonka Memo) and in the city's legal paper.
Responsible Party	Water Resources Engineer, Engineering Department

Consider Public Input	
BMP Description	The city provides a public comment period for the Annual Meeting and considers both oral and written comments that may be received. If relevant, these comments are incorporated into the SWPPP.
Measurable Goals	Document all comments on and changes made to the city's SWPPP.
Timeline/Implementation Schedule	Annual/Ongoing
Annual Update 2014 - 2018	No comments were received on the SWPPP.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department

Public Opinion and Surveys	
BMP Description	The City of Minnetonka will continue to conduct a statistically valid community survey on an annual basis. The survey will include questions regarding stormwater policy and/or procedural recommendations and water resource related issues.
Measurable Goals	Track responses to Natural Resources based survey questions and compare answers over time to see any ongoing trends.
Timeline/Implementation Schedule	Annually

Annual Update 2014 - 2018	The city's annual survey reveals that city residents generally believe the city is protecting the environment and the residents have taken steps to reduce storm water impacts. Questions and the three-year (2014-2016) averages as well as the 2017 results are below: 1. Is the city doing too much, too little, or the right amount to protect the environment? The 2014-2016 average indicates that 88% of respondents said the right amount. 2017, 80% said the right amount. 2018, 90% said the right amount. 2. How concerned are you about threats to the natural environment (includes surface water and forested areas)? The 2014-2016 average indicates that 44% said they were concerned. 2017, 36% said they were concerned. 2018, 50% said they were concerned. 3. What are you most concerned about? The 2014-2016 average indicates that 62% said they were concerned about surface water, run-off or water pollution. 2017, 54% said they were concerned about the same items listed above. 2018, 56% said they were concerned about the same items listed above. 4. Does the city protect its surface waters? The 2014-2016 average indicates that 90% said the city protects surface water. 2017, 86% said the city protects surface water. 2018, 96% said the city protects surface water. 5. How would you rate the overall quality of the environment? The 2014-2016 average indicates that 96% said it was good to excellent. 2017, 92% said it was good to excellent. 2018, 96% said it was good to excellent. 6. How would you rate the quality of the city's surface waters? The 2014-2016 average indicates that 80% thought it was good to excellent. 2017, 84% thought it was good to excellent. 2018, 91% thought it was good to excellent.

	7. The city provides outreach efforts to educate about surface water protection, have you seen this information? The 2014-2016 average indicates that 74% have seen the information. 2017, 85% have seen the information. 2018, 82% have seen the information. 8. Was the information helpful? The 2014-2016 average indicates that 92% said it was helpful. 2017, 91% said it was helpful. 2018, 96% said it was helpful. 9. Have you done anything to reduce run-off or pollutants? The 2014-2016 average indicates that 62% said they had done something (utilized environmentally friendly lawn care, cleaned storm drains, used a rain barrel or rain garden, swept up leaves or grass clippings, or picked up after their pet. 2017, 75% said they had done something (items stated above). 2018, 67% said they had done something (items stated above).
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Engineering Coordinator, Engineering Department

Stormwater Community Hotline/Website	
BMP Description	The City of Minnetonka has an existing community hotline and website link so residents can easily provide comments on the SWPPP. City staff may also receive comments via phone or email.
Measurable Goals	• Document all comments on and changes made to the city's SWPPP. • Maintain function of community hotline and website links
Timeline/Implementation Schedule	Annual/Ongoing
Annual Update 2014 - 2018	The city continues to address and document requests received through the online request system and community hotline. No SWPPP comments have been received.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department

Volunteer Lake Monitoring (CAMP)	
BMP Description	The City of Minnetonka regularly participates in the Metropolitan Council's Citizen Assisted Lake Monitoring Program (CAMP). Citizen volunteers are trained and responsible for collecting data on bi-weekly intervals throughout the summer.
Measurable Goals	• Waterbodies monitored and volunteer lists will be documented. • Annual data will be tabulated and compared to historic data and water quality goals to assist in identifying changes.

Timeline/Implementation Schedule	Annual/Ongoing
Annual Update - 2014	Crane Lake was monitored by 1 lake resident.
Annual Update 2015 - 2018	Staff is interested in monitoring Crane Lake and has had difficulty in finding a volunteer. Monitoring via this program did not occur in 2015 – 2018. Other lakes in Minnetonka are monitored by the watershed districts so the city is not interested in overlapping monitoring programs.
Responsible Party	Natural Resources Manager, Public Works Department

Volunteer Wetland Monitoring (WHEP)	
BMP Description	The City of Minnetonka regularly participates in Hennepin County's Wetland Health Evaluation Program (WHEP). This program uses volunteers to evaluate wetland health. Where multiple years of data are available for a specific wetland the data will be reviewed to determine if there is a discernible change in the health of the wetland. This program allows the city to effectively raise community awareness about the health of our wetlands.
Measurable Goals	• Waterbodies monitored and volunteer lists will be documented. • Annual data will be tabulated and compared to historic data and water quality goals to assist in identifying changes.
Timeline/Implementation Schedule	Annual/Ongoing
Annual Update 2014 - 2018	The Water bodies that are monitored and volunteer lists have been documented and are available upon request. Annual data is tabulated and compared to historic data and water quality goals to assist in identifying changes. Generally, 12 volunteers monitor 5 wetlands annually for macroinvertebrates and vegetative diversity, which gives insight as to the wetlands' health.
Responsible Party	Natural Resources Manager, Public Works Department Natural Resources Specialist, Public Works Department

Storm Drain Monitoring Program	
BMP Description	Residents can maintain the storm drain(s) in their neighborhood and the city tracks their efforts.
Measurable Goals	• Number of individuals who participate • Streets monitored
Timeline/Implementation Schedule	Annual/Ongoing
Annual Update – 2014	Ten confirmed residents were monitoring streets in 10 neighborhoods.

Annual Update – 2015, 2016	The interest in the program declined in 2015 because most volunteers moved. The city however promotes the importance of cleaning storm drains via outreach communication and asks the public to keep their neighborhood storm drain clean. The city no longer tracks the number of people cleaning their local storm drain.
Annual Update – 2017	The city explored opportunities to create a new storm drain monitoring system with the assistance of Master Water Stewards and scout groups. Unfortunately the city was unable to acquire long-term viable commitments from either of these groups.
Annual Update – 2018	The city explored the Clean Water Partners' storm drain monitoring program in 2018. In 2019, the city intends to launch a similar program in collaboration with the watershed districts.
Responsible Party	Natural Resources Manager, Public Works Department

Analyze the Existing Storm Drain Monitoring Program	
BMP Description	The city will attempt to increase the number of people that participate in this program by creating more exposure through the city's website, newsletter, social media and email subscriptions.
Measurable Goals	The city will publish four articles to raise awareness about this program during the permit cycle.
Timeline/Implementation Schedule	On-going
Annual Update – 2014 - 2015	2014 – 2015 Staff analyzed the efficacy of the current program to determine necessary changes from a staffing and tracking perspective.
Annual Update – 2016	Staff evaluated the program to try to determine how to attract and keep volunteers. The hope is to implement a new program with the help of Master Water Stewards.
Annual Update – 2017 and 2018	Please refer to the details in the *Storm Drain Monitoring Program* section above.
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Engineering Coordinator, Engineering Department

Explore New Ideas and Venues for Conducting an Effective Annual Meeting	
BMP Description	Identify logical venues, hold the event at different venues, and evaluate the effectiveness of the meeting.
Measurable Goals	Record amount of resident feedback received at each venue.
Timeline/Implementation Schedule	Annual/On-going
Annual Update – 2014	The 2014 annual meeting was held at the Native Plant Market and Eco-Fun Fest; no public comments were provided.
Annual Update – 2015	The 2015 annual meeting was held at a regularly scheduled Planning Commission Meeting; no public comments were provided.
Annual Update – 2016	The 2016 annual meeting was again held at the Native Plant Market and Eco-Fun Fest. While attendance was high, few residents came to discuss

	the SWPPP. No public comments were provided. The city will continue to evaluate other venues for the 2017 annual meeting.
Annual Update – 2017	The 2017 annual meeting was held at Pollinator Field Day. While attendance was high, few residents came to discuss the SWPPP. No public comments were provided.
Annual Update – 2018	The City held its public meeting in a combined venue with the city's Open House on October 9, 2018. Additionally the SWPPP was available at the city's Pollinator Field Day event on July 11, 2018.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department Natural Resources Manager, Public Works Department

Explore the Opportunity to Increase the Storm Water Education Component of the Citizens' Academy	
BMP Description	In addition to the natural resources division's water resource education component, engineering staff will explore adding a stormwater management module to the city's existing Citizens' Academy program.
Measurable Goals	By the end of year three of the permit cycle the city will have determined if a stormwater management module is needed. If it has been determined to be necessary the module will be developed and implemented by the end of the permit cycle.
Timeline/Implementation Schedule	Permit cycle
Annual Update 2014 - 2018	The citizen's academy program was evaluated to determine if there was room and interest in including a stormwater management module. Due to the size of the existing program curriculum and format, a stormwater module was not added. Although a specific module was not added one component of the workshop has always focused on storm water. Additional opportunities for outreach were provided at the city's Farmers' Market in 2017 and 2018 where an information kiosk was displayed.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department

Explore the Opportunity to Develop a Neighborhood Outreach Program; Specifically to Develop a Natural Resource Neighborhood Captain	
BMP Description	The goal of the program is find individuals who are interested in natural resources. The city will educate them and provide them with resources so they can be their neighborhoods "go to" person for natural resource issues. A water resource component will be included in this program.
Measurable Goals	By the end of the permit cycle the city will attempt to enlist five active natural resource neighborhood captains (title yet to be determined).
Timeline/Implementation Schedule	Permit cycle

Annual Update - 2014	Natural resource staff discussed the possibility of implementing such a program and what it might entail, including the positive and negative components.
Annual Update - 2015	Natural resource staff started to create a framework for the program.
Annual Update - 2016	Natural resource staff interviewed 7 individual residents to get their feedback about the possibility of implementing such a program and to gain their insight on the positive and negative components.
Annual Update – 2017 and 2018	Staff expanded the search for possible “captains” and spoke to watershed districts, citizen advisory committee members, members of lake associations and natural resource volunteers. Although those interviewed were interested in the idea and thought it was a good idea, no one wanted to be the “captain’ for their neighborhood. This idea needs to be re-evaluated in the next few years.
Responsible Party	Natural Resources Manager, Public Works Department

Minimum Control Measure 3: Illicit Discharge Detection and Elimination

The City of Minnetonka has existing ordinance language throughout city code that prohibits non-stormwater discharge into the storm sewer system. This ordinance language is found in Zoning Regulations (Chapter 3), Building and Construction Regulations (Chapter 5), Public Health; Public Nuisances (Chapter 8), Streets, Parks, and Other Public Property (Chapter 11) Public Utilities (Chapter 12) and General Provisions; Penalties (Chapter 13).

The city does not perform independent illicit discharge inspections but Engineering Department interns who are responsible for pond, and structural BMP inspections are trained to identify illicit discharges while they are out in the field. City public works staff are trained to look for signs of an illicit discharge while on the job. They are trained on reporting procedures and what actions to take when an illicit discharge has been identified. The reporting procedures are a part of annual public works training but have not been drafted into an ERP at this time.

Completed Storm Sewer System Map	
BMP Description	• Continue to update the city's GIS storm sewer system map (LOGIS) as new infrastructure is completed. • Continue the program to ground truth construction drawings by GPSing infrastructure in the field.
Measurable Goals	• Update the city's storm sewer system map to include outfalls with a unique identification number and GPS coordinate.
Timeline/Implementation Schedule	Annual/Ongoing
Annual Update 2014 – 2018	The City's storm sewer map is continually updated with structure conditions, material conditions, and locations of new infrastructure. Outfalls are assessed as often as possible, documenting condition, location, and ID.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department

Inspection Program	
BMP Description	Begin a limited IDDE specific inspection program with the goal to inspect 12 outfalls annually for illicit discharges.
Measurable Goals	• Document outfalls inspected and results of inspections.
Timeline/Implementation Schedule	Permit cycle
Annual Update 2014 – 2018	Outfalls, structural stormwater features, and ponds continued to be inspected at regularly scheduled annual intervals and incorporated into a database which determines maintenance priorities.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department

Illicit Discharge Reporting Hotline	
BMP Description	Continue to use Minnetonka Mike, the city's hotline and website link for citizen questions and concerns.
Measurable Goals	Document all reports of illicit discharges and respond per SOPs.
Timeline/Implementation Schedule	Ongoing
Annual Update -2014	Seven reports of illicit discharge were observed or received and investigated. Staff investigated and responded appropriately.
Annual Update -2015	Thirteen reports of illicit discharge were observed or received and investigated, most were related to yard waste disposal. Staff investigated and responded appropriately.
Annual Update – 2016	Seven reports of illicit discharge were received and investigated; concrete disposal issues, water leaks and yard waste were the common offenses. Staff investigated and responded appropriately.
Annual Update – 2017	Four reports of illicit discharge were received and investigated; leaf decomposition, material disposal into a wetland, oily substance by a driveway and yard waste disposal were the offenses. Staff investigated and responded appropriately.
Annual Update – 2018	Seven reports of illicit discharge were received and investigated involving two reports of petroleum discharge on the roadway, fuel cell puncture of an 18-wheeler, paint or stucco in the gutter, a second semi-truck leaked diesel fuel and two separate reports of yard waste disposal into neighborhood wetlands. Staff investigated, contained the leaks, hired contractors to clean up the fuel sites and responded appropriately.
Responsible Party	Natural Resources Manager, Public Works Department Natural Resource Specialist, Public Works Department Water Resources Engineering Coordinator, Engineering Department

Illicit Discharge Detection and Elimination Ordinance	
BMP Description	Within 12 months of the date of permit coverage is extended stormwater program staff will meet (Natural Resources, Planning, Engineering, and Legal) to explore the need for a specific IDDE ordinance.
Measurable Goals	If it is determined to be necessary for the city's IDDE program city staff will bring an ordinance to the city council for their consideration within 24 months of the date of permit coverage.
Timeline/Implementation Schedule	Update the ordinance within year 1 of the permit cycle.
Annual Update – 2014	The city updated its code to address illicit discharges.
Annual Update – 2015	Staff reviewed the ordinance to ensure that it remains relevant.
Annual Update 2016 – 2018	Staff continues to review the ordinance and analyze illicit discharge reports to ensure that the ordinance remains relevant and effective.
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Engineering Coordinator, Engineering Department

Explore Opportunities to Expand the Existing Training Program – Increase Awareness and Reporting	
BMP Description	Utilizing existing training schedules, present information to each department, targeting Police and Fire Departments.
Measurable Goals	• Provide messages at least four times per year on the city's internal website • Educate city departments annually
Timeline/Implementation Schedule	Annual/ Ongoing
Annual Update – 2014	• Staff developed the *inSites* Ripple Effect strategy to be implemented in 2015. • Public Works employees, both full-time and seasonal, were trained during two (spring and fall) annual training events. Refer to the training component under MCM 6 - Good Housekeeping. • Information was presented to Engineering and Community Development during regular meetings and individual members of the Police Department were also provide with IDDE information.
Annual Update – 2015, 2016	• Four messages relating to illicit discharge were posted *inSite*s. • Public Works employees, both full-time and seasonal, were trained during two (spring and fall) annual training events. Refer to the training component under MCM 6 - Good Housekeeping. • Information was presented to Engineering and Community Development during regular meetings and individual members of the Police Department were also provide with IDDE information. In 2016 Administration and Legal Departments were given information at regular meetings to create awareness. • A comprehensive education plan was drafted to target police and fire department staff. This is planned to be implemented in late 2017.
Annual Update – 2017	• Three messages relating to illicit discharge were posted to *inSite*s. • The city has created a training powerpoint to increase the opportunity to educate the police and fire departments, this powerpoint was anticipated to be presented to staff in the fall of 2017 but was delayed. The training is scheduled to occur within the first quarter of 2018.
Annual Update – 2018	• Two messages relating to illicit discharge and one relating to water resource protection were posted to *inSite*s. • The city has created a training powerpoint to increase the opportunity to educate the police and fire departments, this powerpoint was presented to staff in April of 2018.
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Engineer, Engineering Department

Standard Operating Procedures (SOPs)	
BMP Description	Develop SOPs for IDDE within 12 months of the date of permit coverage.
Measurable Goals	SOPs have been drafted for illicit discharge detection and elimination
Timeline/Implementation Schedule	2014/2015 – Draft SOPs 2016-2020 – Implement SOPs and update as necessary to keep current
Annual Update – 2014	SOPs have been drafted.
Annual Update – 2015	SOPs were reviewed, no edits were made at this time.
Annual Update – 2016	SOPs were reviewed, and minor changes were made to provide additional clarity through plain language.
Annual Update – 2017 and 2018	SOPs were reviewed, no edits were made at this time.
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Engineering Coordinator, Engineering Department Public Works Director, Public Works Department Community Development Director, Community Development Department

Tracking	
BMP Description	Explore more efficient and effective methods of tracking IDDE than the current spreadsheet.
Measurable Goals	Within the permit cycle city staff will evaluate at least 3 different methods of tracking IDDE to determine if there is a more effective method available.
Timeline/Implementation Schedule	Permit cycle
Annual Update – 2014	Staff is using the current spreadsheet because it is readily available and easy to create links to photos and other resources.
Annual Update – 2015	Staff evaluated using the Cityworks platform but has not yet decided if this is the most effective platform to use for this program.
Annual Update – 2016	Staff evaluated creating a database housing all MS4 related inspections and inventories, and will be exploring this option more into 2017 and throughout the permit cycle.
Annual Update – 2017	Staff continues to explore and evaluate the database option but has not yet decided if this is the most effective option. The current tracking system which utilizes an excel spreadsheet is an easy and efficient method but staff will continue to evaluate other options in 2018.
Annual Update – 2018	After reviewing other options staff has decided that the current tracking system which utilizes an excel spreadsheet is an easy and efficient method to track illicit discharges. This is the tracking system that will be continued to be used.
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Engineering Coordinator, Engineering Department

Maintain Partnerships (not in permit in this section but important to note)	
BMP Description	The city currently partners with the MN Department of Transportation and Hennepin County to address illicit discharge detection and elimination.
Measurable Goals	The city will continue to maintain these partnerships as appropriate.
Timeline/Implementation Schedule	Ongoing
Annual Update 2014 – 2018	Staff communicates with the partners annually.
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Engineering Coordinator, Engineering Department

Minimum Control Measure 4: Construction Site Stormwater Runoff Control

The city of Minnetonka has a well-established program to effectively control construction site stormwater. The city has an ordinance regulating grading, filling, and excavating (300.28.15-18) that outlines the requirements for construction site stormwater controls. A grading permit is required prior to a land disturbing activity that is greater than 5,000 square feet or 50 cubic yards. A grading and erosion control plan is required to be submitted for city approval as part of an application for any grading permit, preliminary plat, site plan review, lot division, or wetland/floodplain alteration permit, and as part of an application for a building permit that involves any amount of land-disturbing activity.

Active construction sites are inspected at least monthly with more frequent inspections conducted if there are sensitive natural resources adjacent to the site, if there is a history of violations, if there have been neighborhood complaints, or if there have been extreme weather events. If there is a violation on a construction site the city's inspector issues a verbal warning to the site operator. The city has the option of escalating enforcement using written notice of violations, stop-work orders, abatement, fines, forfeiture of security, withholding certificate of occupancy, criminal actions, and civil penalties. Most violations in the city are able to be handle with just verbal warnings.

The city employs a qualified erosion control inspector to inspect all private construction sites. This person has received training through the Erosion and Storm Water Management Program and has been certified as a Site Manager. The construction managers for all public city projects are also certified Site Managers and conduct on-going erosion control inspections.

The city currently keeps paper files of all construction site inspections. The city will be looking into transitioning into an electronic filing and tracking system for inspection records during this permit cycle.

Ordinance or Other Regulatory Mechanism	
BMP Description	The City of Minnetonka will revise its ordinances to better address grading and erosion control issues, including construction site storm water runoff and will bring the city's ordinance into compliance with the state's General Construction Site permit.

Measurable Goals	Ordinance adoption and implementation.
Timeline/Implementation Schedule	Ordinance adoption by April 7, 2015; within 12 months of receiving permit coverage.
Annual Update – 2014	Working with Planning, Engineering, Natural Resources, and Legal staff to draft ordinance language to meet the permit requirements.
Annual Update – 2015	The revised ordinance was adopted on March 10, 2015.
Annual Update 2016 – 2018	The ordinance was reviewed, and deemed adequate, no edits were made.
Responsible Party	Natural Resources Manager, Public Works Department City Planner, Community Development Department

Procedure for Site Plan Review	
BMP Description	The City of Minnetonka currently has an established site plan review process that incorporates consideration of potential water quality impacts. This process is fully outlined in the Standard Operating Procedures (SOP) for Construction Site Erosion and Sediment Control and Post-Construction Stormwater Management. The City of Minnetonka currently has procedures in place for a Development and Redevelopment Plan Review Program. The city's planning process considers any proposal and its compliance with, among others, the following ordinances; zoning, shoreland, wetland, and floodplain districts, and tree preservation. Water quality impacts and impervious surface restrictions are also considered. The city's Water Resources Management Plan also has specific guidelines for development. Some of the specific components (BMPs) are current practices conducted by the city and some have been selected as possible BMPs which may be appropriate options for minimizing stormwater runoff pollution and flooding. BMPs are implemented as part of developments and redevelopments that minimize the impact of storm water runoff by trapping floating debris and oils and removing sediment and nutrients by infiltrating runoff through rain gardens, by filtering it with other bioretention techniques or by settling sediment and nutrients out in temporary or permanent ponds. Runoff volumes are reduced by minimizing impervious surface, by infiltration where possible and through evapotranspiration in vegetated swales, drainage corridors and ponds. Development proposals are routed to numerous staff for review and comment. Staff looking at development proposals from a water quality impact perspective include: Water Resources Engineer, Natural Resources Manager, and the city's Natural Resources Specialist. Erosion, sediment control, water quality, and natural resource issues are discussed with developers and home owners. Proposals are routed to Planning Commission, Park Board, and/or City Council as required by ordinance.

	All development and grading plans are reviewed with erosion control in mind. The city requires developers or contractors to amend their plans to comply with the city's erosion control ordinance. Examples include inlet protection, dust control, and covering stockpiles that are left undisturbed for more than 14 days.
Measurable Goals	Document the number of site plans reviewed for water quality and natural resource protection.
Timeline/Implementation Schedule	Ongoing
Annual Update - 2014	City staff reviewed 52 development and engineering projects to ensure protection of the sites' natural resources.
Annual Update - 2015	City staff reviewed 49 development and engineering projects to ensure protection of the sites' natural resources.
Annual Update - 2016	City staff reviewed 72 development and engineering projects to ensure protection of the sites' natural resources.
Annual Update - 2017	City staff reviewed 67 development and engineering projects to ensure protection of the sites' natural resources.
Annual Update - 2018	City staff reviewed 69 development and engineering projects to ensure protection of the sites' natural resources.
Responsible Party	Natural Resources Manager, Public Works Department Natural Resource Specialist, Public Works Department Water Resources Engineering Coordinator, Engineering Department City Planner, Community Development Department

Construction Site Implementation of Erosion and Sediment Control BMPs	
BMP Description	The City of Minnetonka has developed procedures to review and evaluate the efficacy of construction site erosion control plans. This process is fully outlined in the Standard Operating Procedures (SOP) for Construction Site Erosion and Sediment Control and Post-Construction Stormwater Management.
Measurable Goals	Document the number of public and private grading/building plans reviewed for erosion control and compliance with natural resource regulations.
Timeline/Implementation Schedule	Ongoing
Annual Update – 2014	In 2014 city staff reviewed over 310 grading and building permits including two subdivisions for erosion control and compliance with natural resource regulations. Four hundred sites were inspected to ensure compliance with natural resource regulations.
Annual Update – 2015	In 2015 city staff reviewed 312 building and grading permits including three subdivisions and 4 new multi-tenant buildings for erosion control and compliance with natural resource regulations. Four hundred sites were inspected to ensure compliance with natural resource regulations.
Annual Update – 2016	In 2016 city staff reviewed 296 building and grading permits including six commercial sites for erosion control and compliance with natural

	resource regulations. Four hundred sites were inspected to ensure compliance with natural resource regulations.
Annual Update – 2017	In 2017, city staff reviewed 370 building and grading permits including 6 new commercial building sites for erosion control and compliance with natural resource regulations. Four hundred sites were inspected to ensure compliance with natural resource regulations.
Annual Update – 2018	In 2018, city staff reviewed 343 building and grading permits including 6 new commercial building sites for erosion control and compliance with natural resource regulations. Four hundred sites were inspected to ensure compliance with natural resource regulations.
Responsible Party	Natural Resources Manager, Public Works Department Natural Resource Specialist, Public Works Department

Waste Controls for Construction Site Operators	
BMP Description	The City of Minnetonka has established specific guidelines, inspection criteria, and enforcement procedures for the management of construction site waste. The program details requirements for construction site operators to control waste, such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste, at the construction site that may cause adverse impacts to water quality. These items are reflected in the city's grading and erosion control ordinance and Standard Operating Procedures (SOP) for Construction Site Erosion and Sediment Control and Post-Construction Stormwater Management. Waste control is inspected on every inspected construction site and typically builders are in compliance.
Measurable Goals	Document violations and enforcement actions taken.
Timeline/Implementation Schedule	Ongoing
Annual Update 2014 – 2018	Over the past five years the city took no enforcement action on this specific issue.
Responsible Party	Natural Resources Manager, Public Works Department Natural Resource Specialist, Public Works Department

Procedures for the Receipt and Consideration of Reports of Stormwater Noncompliance	
BMP Description	The City of Minnetonka has an existing community hotline and website link for residents to report construction site sediment control issues. City staff may also receive comments via phone or email. The city's Standard Operating Procedures (SOP) for Construction Site Erosion and Sediment Control and Post-Construction Stormwater Management outlines the process for receiving complaints.
Measurable Goals	Document violations and enforcement actions taken per the city's SOP.

Timeline/Implementation Schedule	Ongoing
Annual Update - 2014	The city tracks construction site complaints and received 50 complaints in 2014. City staff responded appropriately to all of these complaints and ensured the sites were brought into compliance. The number of verbal warnings issued: 35 The number of notice of violations issued: 1 The number of withholdings of certificate of occupancy: 1
Annual Update - 2015	The city tracks construction site complaints and received 50 complaints in 2015. City staff responded appropriately to all of these complaints and ensured the sites were brought into compliance. The number of verbal warnings issued: 40 The number of notice of violations (stop work order) issued: 1 Additionally staff inspected 9 other sites for significant erosion, tree removal, shoreland or wetland violations and sent 75 letters to 7 neighborhoods where the anonymous violations occurred.
Annual Update - 2016	The city tracks construction site complaints and received 50 complaints in 2016. City staff responded appropriately to all of these complaints and ensured the sites were brought into compliance. The number of verbal warnings issued:30 The number of notice of violations issued: 7 (4 were stop work orders) The number of withholdings of certificate of occupancy: 1 Additionally staff worked with three residents and one developer to correct significant wetland violations. Two of the violations involved significant wetland filling (McGinty Rd. W. and Powderhorn Dr.), which required removal of the fill and vegetative restoration of the site. Additionally staff inspected 2 other sites for wetland dumping violations and sent 12 letters to adjacent neighbors where the anonymous violations occurred. (Holdridge Rd and Dr.) Additionally staff addressed two encroachment violations (Hazelwood Rd and Muriel Lane) onto city-owned property that involved removal of trees and vegetation. Remedial action was required on all of the sites including replanting of trees and shrubbery.
Annual Update - 2017	The city tracks construction site complaints and received 60 complaints in 2017. City staff responded appropriately to all of these complaints and ensured the sites were brought into compliance. The number of verbal warnings issued:20 The number of notice of violations issued: 3 (all 3 were stop work orders)

	The number of fines issued: 1 Staff took enforcement action against eleven owners involving 1) illegal structures being erected, 2) illegal activities within wetlands and on city property, and 3) fall leaf dumping. Staff also resolved two issues of non-compliant landscaping on two sites.
Annual Update - 2018	The city tracks construction site complaints and received 60 complaints in 2018. City staff responded appropriately to all of these complaints and ensured the sites were brought into compliance. The number of verbal warnings issued: 25 The number of notice of violations issued: 2 The number of fines issued: 0 Additionally staff inspected 2 other sites for wetland dumping violations and sent 37 letters to adjacent neighbors where the anonymous violations occurred. (Dublin Drive and Trail Ridge Lane)
Responsible Party	Natural Resources Manager, Public Works Department Natural Resource Specialist, Public Works Department

Procedures for Site Inspections and Enforcement	
BMP Description	The City of Minnetonka continues to implement its existing program for site inspections and enforcement. This includes; following identified criteria for site inspections, determining if inspections will be conducted by city staff or outside sources, determining if escrow is required, consider stop work orders, fines and other methods of enforcement, and communicating enforcement actions to appropriate city staff. The city of Minnetonka employs a qualified erosion control inspector to inspect all private construction sites. This person has received training through the Erosion and Storm Water Management Program and is a certified Site Manager. All appropriate inspection procedures are followed. The city's Standard Operating Procedures (SOP) for Construction Site Erosion and Sediment Control and Post-Construction Stormwater Management outlines the process for site inspections and enforcement.
Measurable Goals	Documentation, including all inspections and enforcement actions pertaining to specific sites are on file with the city per the city's SOP.
Timeline/Implementation Schedule	Ongoing
Annual Update 2014 - 2018	Refer to the *Construction Site Implementation of Erosion and Sediment Control BMPs* and the *Procedures for the Receipt and Consideration of Reports of Stormwater Noncompliance* for the number of inspections and enforcement actions taken.

Responsible Party	Natural Resources Manager, Public Works Department Natural Resource Specialist, Public Works Department

Website Update	
BMP Description	Review the city website to ensure that the information relating to the building permit process includes requirements for construction site management and is up to date to reflect MPCA's current construction general permit requirements.
Measurable Goals	Review the website information
Timeline/Implementation Schedule	Annually
Annual Update 2014 - 2017	The website was reviewed, and deemed adequate, no edits were made.
Annual Update - 2018	Some of the links were broken in 2018 and it took some time to recover the information. The links should be operational.
Responsible Party	Natural Resources Manager, Public Works Department Natural Resource Specialist, Public Works Department

Standard Operating Procedures (SOPs)	
BMP Description	Review the city's SOPs for Construction Site Erosion and Sediment Control and Post-Construction Stormwater Management to ensure that they are up to date to reflect MPCA's current construction general permit requirements.
Measurable Goals	Document updates
Timeline/Implementation Schedule	Annually
Annual Update 2014 - 2018	The SOPs were reviewed, and deemed adequate, no edits were made.
Responsible Party	Natural Resources Manager, Public Works Department Water Resources Engineering Coordinator, Engineering Department

Maintain Partnerships (not in permit in this section but important to note)	
BMP Description	The city currently partners with the Minnehaha Creek Watershed District to address post-construction stormwater management through a Memorandum of Understanding (MOU) between the watershed district and the city.
Measurable Goals	The city will continue to maintain this partnership as appropriate.
Timeline/Implementation Schedule	Ongoing
Annual Update - 2014	Annual "check in" meeting was held on 9/17/2014.
Annual Update - 2015	Annual "check in" occurred via email during the week of 9/21/2015.
Annual Update - 2016	Annual "check in" was held on 9/15/2016.
Annual Update 2017 and 2018	City staff "checked in" with the MCWD on several different occasions throughout the year. This was determined to be a better strategy than once annually. Additionally the city and watershed district continually

	inform each other about the status or permits and have an open line of communication.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department Natural Resources Manager, Public Works Department

Minimum Control Measure 5: Post-Construction Stormwater Management

The City of Minnetonka has a number of documents and procedures in place that ensure an effective post-construction stormwater management program. The city has a Water Resources Management Plan (WRMP) that includes a design guidelines and standards document that addresses stormwater management. The city's design guidelines require stormwater management for new and disturbed impervious surface for all new and redevelopment that will disturb greater than 5,000 square feet or 50 cubic yards with the exception of linear projects and single family residential development less than three lots. Linear projects require stormwater management when they are disturbing greater than 1 acre of area and single family residential sites requires stormwater management when they are within a certain distance of a protected water body. Plan review requirements are outlined in the city's design guidelines and standards document. The city has four watershed management organizations within its boundary. These four organizations all have different stormwater management rules that an applicant may need to meet in addition to the city's requirements. The city has established Memorandum of Understanding with one watershed district to implement the city's stormwater management requirements in place of the district's rules and another watershed district has discontinued implementing stormwater management rules so only the city's requirements are in place in that district.

Ordinance	
BMP Description	Continue to implement the city's Water Resources Management Plan with its stormwater management design guidelines and standards.
Measurable Goals	• Document changes made to the city's WRMP. • Update the city's WRMP to include language prohibiting the use of infiltration techniques where industrial facilities are not authorized to infiltrate industrial stormwater and to prohibit infiltration where vehicle fueling and maintenance occurs. • Update the city's WRMP to ensure that TSS and TP mitigation project will ensure that the following requirements are met: 1) involve either the creation of new or the retrofit of existing structural BMPs, 2) not allow for routine maintenance of structural stormwater BMPs to count towards mitigation requirements, 3) be completed within 24 months of the start of construction activity, 4) document who will be responsible for long-term maintenance, and 5) payment received from the owner for mitigation purposes must be applied to a public stormwater project.

Timeline/Implementation Schedule	Specific updates will be completed by April 7, 2015 which is 12 months after permit coverage was extended to the city. Updates will be complete in their entirety after local watershed districts update their management plans.
Annual Update - 2014	Significant edits to the Appendices of the City's WRMP, which covers Stormwater management criteria, were drafted.
Annual Update - 2015	All edits have been drafted and are awaiting council approval. Three Watershed District's within the City are currently updating their Management Plan's and will likely have rule revisions associated with their planning process. In order to maintain an efficient process and conform with watershed district rules, the city will postpone adopting new criteria within the WRMP until Watershed District Management Plan updates have concluded.
Annual Update – 2016 and 2017	Staff continues to implement the WRMP, while reviewing and analyzing the document for potential updates and programming gaps in preparation for the new 10-year cycle of plans due at the end of 2018.
Annual Update - 2018	An updated WRMP has been prepared and was posted on September 14, 2018 for review and public comment. Staff will bring the WRMP to Council for approval and adoption in 2019.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department

Operation and Maintenance	
BMP Description	Continue to perform and track annual inspections of all public water quality BMPs.
Measurable Goals	Document location and results of all inspections, maintenance, and repairs required or completed for the storm sewer system including pond inspections and sump inspections.
Timeline/Implementation Schedule	Ongoing
Annual Update - 2014	In 2014 the city inspected 387 sump structures and 111 stormwater management ponds.
Annual Update - 2015	In 2015, the city inspected 378 sump structures and 0 stormwater management ponds.
Annual Update – 2016	In 2016, the city inspected 384 sump structures and 90 stormwater management ponds.
Annual Update – 2017	In 2017, the city inspected 375 sump structures and 111 stormwater management ponds.
Annual Update – 2018	In 2018, the city inspected 159 sump structures and 12 stormwater management ponds to determine volume of sediment loading.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department

Documentation	
BMP Description	Continue to track number and location of public stormwater Best Management Practices (BMPs).
Measurable Goals	Provide unique ID, location, type, ownership information, and maintenance schedule for all BMPs
Timeline/Implementation Schedule	Ongoing
Annual Update 2014 - 2018	The city continues to log unique IDs, locations, types, ownerships, and maintenance schedules for all new BMPs. Corrections are also made to previously inventoried items as inspections continue. This information is available through LOGIS map.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department

Maintenance Agreements	
BMP Description	Continue to require maintenance agreements be filed against a property for all private stormwater BMPs using the city's approved template.
Measurable Goals	• Document that agreements are filed against the property. • Update the city's maintenance agreement to ensure that the original design treatment of structural BMPs is maintained regardless of future development or site conditions.
Timeline/Implementation Schedule	Updates to the maintenance agreements must be completed by April 7, 2015 which is 12 months after permit coverage was extended to the city.
Annual Update – 2014 and 2015	In 2014/2015 the templates were updated to include language ensuring that treatment efficiency of the structural BMPs won't be diminished. The agreements still need to be reviewed by the legal department. BMP's requiring maintenance agreements are recorded against the subject property before approval and issuance of permit.
Annual Update 2016 - 2018	In 2016, the Legal Department updated and created standard maintenance agreements for common BMP practices. BMP's requiring maintenance agreements continue to be recorded against the subject property before approval and issuance of permit.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department

Develop a Program to Inspect Private Stormwater BMPs	
BMP Description	Within 12 months of extension of permit coverage, develop a map of private stormwater BMPs and within the permit cycle develop a checklist and schedule for inspection.
Measurable Goals	• Access database updated • GIS map and inspection schedule established • Implementation of inspections
Timeline/Implementation Schedule	2015 – Update Access database of private BMPS 2016 – Develop map in GIS and establish an inspection schedule 2017-2019 – Implement inspection schedule
Annual Update 2015 - 2018	The database continues to be updated with private Stormwater BMPs as new development and redevelopment projects are submitted. Staff will be looking to develop a GIS layer in 2017, after the database has been updated to incorporate additional features. Updated BMP database and calculator will be online by the end of 2019.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department

Road Reconstruction Projects	
BMP Description	Explore opportunities to incorporate additional infiltration and water quality BMPs into city road reconstruction projects.
Measurable Goals	Document BMPs implemented on city road reconstruction projects and track any volume or phosphorus reductions.
Timeline/Implementation Schedule	2016-2017 Road Reconstruction – implement additional stormwater BMPs to reduce TP load into Lake Minnetonka.
Annual Update - 2014	In 2014 the city reconstructed 3 streets and incorporated 2 sump manholes into the projects.
Annual Update - 2015	In 2015, the city reconstructed 4 streets as part of the pavement rehabilitation program. Two sump catch basins and 1 infiltration pond was incorporated as part of this effort.
Annual Update – 2016	In 2016, the city reconstructed 1 large neighborhood and 1 street as part of the pavement rehabilitation program. 7 sump catch basins/manholes and 1 infiltration basin was incorporated as part of this effort.
Annual Update – 2017	In 2017, the city reconstructed 1 street as part of the pavement rehabilitation program. Storm water structures and concrete curb and gutter were constructed in key locations to eliminate erosion and improve water quality.
Annual Update – 2018	In 2018, the city reconstructed 1 street and rehabilitated 3 as part of the pavement rehabilitation program. Storm water structures, concrete curb and gutter, and a filtration basin were constructed in key locations to eliminate erosion and improve water quality.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department

Southwest Light Rail Transit (SWLRT)	
BMP Description	Explore opportunities to incorporate additional infiltration and water quality BMPs and water resource BMPs into the project.
Measurable Goals	Document BMPs implemented on the SW LRT project and track any volume or phosphorus reductions.
Timeline/Implementation Schedule	Permit cycle
Annual Update 2014 - 2018	The City coordinated with the SPO to analyze opportunities to enhance stormwater management over the project area.
Responsible Party	City Engineer, Engineering Department Water Resources Engineering Coordinator, Engineering Department

Standard Operating Procedures (SOPs)	
BMP Description	Review the city's SOPs for Construction Site Erosion and Sediment Control and Post-Construction Stormwater Management to ensure that they are up to date to reflect MPCA's current construction general permit requirements. The SOPs were developed by April 7, 2015, which is 12 months after permit coverage was extended to the city.
Measurable Goals	Document updates
Timeline/Implementation Schedule	Annually
Annual Update 2014 - 2018	The SOPs were reviewed, and deemed adequate, no edits were made.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department Natural Resources Manager, Public Works Department

Minimum Control Measure 6: Pollution Prevention/Good Housekeeping for Municipal Operations

The city of Minnetonka's goal for its good housekeeping program is to educate city staff to create an understanding of the impacts that city practices can have on water quality. The city reviews its practices and incorporates strategies to minimize impacts to water resources. The program includes completing the required pond/outfall and structural BMP inspections, and implementing fleet, pond, storm sewer, park and open space maintenance programs, and a road salt management program.

City streets and public parking lots are swept annually in the spring and as needed thereafter (i.e. major storms, maintenance cleanup, block party and other special requests). The city times the sweeping to occur before annual water main flushing to avoid any accumulated road debris being swept into the storm sewer.

Fleet Maintenance Program	
BMP Description	The City of Minnetonka currently recycles oil used for municipal operations. As part of the EPA's Spill Prevention, Control & Counter measures (SPCC) Program; the city has developed and implemented a plan to address the prevention and proper cleanup of oil spills. Additionally, the vehicle oil change intervals on all city vehicles have been extended by oil sample testing. This has reduced the amount of waste oil to be recycled. The city's fleet, consisting of approximately 194 vehicles, is annually inspected for all types of leaks (oil, hydraulic fluid, etc.). The city has one designated vehicle washing area that is designed to capture and separate grease and oils with another separate sediment collection basin. The grease and oil trap is cleaned every 6 months by an outside vendor and the sediment basin is cleaned out monthly by city staff.
Measurable Goals	• Document vehicle inspections • Document grease and oil trap cleaning • Document sediment basin cleaning
Timeline/Implementation Schedule	Ongoing
Annual Update 2014 - 2018	Vehicle inspections, grease and oil trap cleaning and sediment basin inspection and cleaning is documented and available upon request. Generally the city recycles about 1,000 gallons of waste oil.
Responsible Party	Fleet Manager, Public Works Department Operations Manager, Public Works Department

Park and Open Space Maintenance Program	
BMP Description	The City of Minnetonka currently conducts roadside vegetative mowing and maintenance twice yearly, in June and September. Right-of-way tree pruning is conducted on a rotating basis with a target of pruning all of the right-of-way trees within a ten to twelve year cycle. The city is concerned about the use of fertilizer and pesticides in the environment. The city uses these items only on high maintenance athletic fields or on an as-needed basis as approved by the Park Board.
Measurable Goals	Track materials used for the maintenance of park spaces, landscaped medians, or other municipal landscaped areas.
Timeline/Implementation Schedule	Ongoing
Annual Update 2014 - 2018	Material usage is tracked annually and available upon request. The city generally uses about 20 gallons of herbicide, .5 gallon of grub control and 5 tons of fertilizer. Additionally the city uses products similar to Roundup and Rodeo to control invasive species like buckthorn and garlic mustard as needed in 310 acres that are under active woodland, wetland or prairie restoration.
Responsible Party	Operations Manager, Public Works Department Natural Resources Manager, Public Works Department

Pond Maintenance Program	
BMP Description	The city maintains public stormwater ponds. Maintenance includes removal of sediment deltas, dredging, correcting side slope erosion, and maintaining inlet and outlet pipes. Pond maintenance is prioritized based on the amount of accumulated sediment, neighborhood complaints, and the result of annual inspections.
Measurable Goals	Document pond maintenance inspections and activities including, any sediment testing, and amount of material removed
Timeline/Implementation Schedule	Annually
Annual Update 2014 - 2018	Pond maintenance inspections and activities are tracked annually and the documentation is available upon request.
Responsible Party	Operations Manager, Public Works Department Water Resources Engineering Coordinator, Engineering Department

Road Salt Materials Management Program	
BMP Description	The city will continue its program to track the amount of road salt applied during an annual reporting cycle and work to minimize the overall amount of salt used. Application rates will be adjusted based on new technology and use of alternative products will be integrated into the city's program as they are proven to be acceptable. Additionally the city educates its residents about its snow removal operations and how they can reduce the amount of salt they apply as homeowners.
Measurable Goals	Track the amount of road salt applied annually and record any new technology or products used.
Timeline/Implementation Schedule	Ongoing
Annual Update 2014 - 2018	The amount of road salt applied is tracked annually and the documentation is available upon request. Generally: • The city spreads between 1,200 to 2,000 tons of road salt annually (in 2014-2015, 2087 ton was used; in 2015-2016, 1,180 ton was used, in 2016-2017 1,750 ton was used; in 2017-2018 2,900 ton was used) • Twenty spreaders are calibrated as needed throughout the winter season. • The use of brine, pre-treatment of salt, and anti-icing strategies are implemented to reduce bounce and scatter. • Temperature sensors are used to determine which pre-wet mixture to use on the salt as well as to determine if anti-icing can occur prior to the snow event. In 2014 a lower temperature rated anti-icing liquid called Amp was tested. The city used it during the 2015-2016 season. In 2015-2016 a V-Box spreader was tested which has the spinner in the middle of the vehicle to control salt spread patterns. Staff did not see a significant change in the salt distribution and will not be purchasing the V-Box. Prior to the 2017/2018 season, air and road temperature sensors were installed on 12 plow trucks, for a total of 19 trucks out of 21 equipped with sensors.
Responsible Party	Operations Manager, Public Works Department

Storm Sewer Maintenance Program	
BMP Description	The city has a dedicated two to three person drainage crew that handles storm sewer repair and maintenance throughout the city. The drainage crew is responsible for cleaning out structural stormwater BMPs, small pond dredging and sediment delta removal, repair of erosion gullies, and replacement of deteriorated catch basins, manholes, and storm sewer pipes. The drainage crew currently tracks their work using electronic work order forms and an Excel database. The city also hires interns during the summer to assist in the Storm Sewer Maintenance Program. City staff will study and analyze the integration and use of the city's GIS based asset tracking software, CityWorks, to track all storm sewer maintenance activities.
Measurable Goals	• Maintain records regarding all storm sewer inspections, maintenance, and repairs. • Staff will study and analyze the integration and use of the city's GIS based asset tracking software, CityWorks, to track all storm sewer maintenance activities.
Timeline/Implementation Schedule	2015-2020 – Study CityWorks integration
Annual Update 2014-2018	Staff examined the integration of CityWorks into current maintenance protocols and reporting. Staff ultimately determined that system introduced would be too cumbersome and expensive to warrant implementation, and will continue investigating other methods while maintaining the current database.
Responsible Party	Operations Manager, Public Works Department Water Resources Engineering Coordinator, Engineering Department

Facility Management Program	
BMP Description	City staff currently inspects city owned facilities (Williston Fitness Center, fire stations, Civic Center Campus, Glen Lake Activity Center, and Gray's Bay Marina) and properties at irregular intervals for spills, dumpster leakage, litter, debris, yard waste, and exposed soil and erosion. The city inspects the maintenance yard at the Public Works facility to ensure containment of sediment, debris, and salt.
Measurable Goals	• Document all inspections and maintenance activities. • Develop an inspection checklist and schedule for each facility or city owned property.
Timeline/Implementation Schedule	2015-2020 – Develop the inspection checklist and schedule.

Annual Update – 2014, 2015, 2016	Between 2014 and 2015 staff inspected the facilities at irregular intervals. A facilities manager was hired in late 2015 and will be developing a schedule and checklist for the above listed facilities.
Annual Update - 2017	The checklist was developed and is expected to be implemented in 2018.
Annual Update - 2018	Multiple facilities were inspected in 2018 and the inspection forms are available upon request.
Responsible Party	Facilities Manager, Public Works Department

Structural Pollution Control Devices Inspections	
BMP Description	The City of Minnetonka regularly inspects 100% of the known public structural pollution control devices such as sump catch basins/manholes, grit chambers, floatable skimmers, traps, separators, and other small settling or filtering devices.
Measurable Goals	Document all sump inspections as well as required and completed maintenance.
Timeline/Implementation Schedule	2015-2019 – Inspect all structural stormwater BMPs and perform maintenance as needed.
Annual Update 2014 - 2018	As of 2018, the city has completed inspecting all 434 structural stormwater BMPs located within its boundaries, and has begun performing maintenance on facilities found to be operating at suboptimal levels. Inspections will continue into 2019 to further monitor infrastructure.
Responsible Party	Water Resources Engineering Coordinator, Engineering Department Operations Manager, Public Works Department

Pond and Outfall Inspections	
BMP Description	The city inspects all of the water quality treatment ponds and outfalls in the city within the permit cycle.
Measurable Goals	Document all pond inspections as well as required and completed maintenance.
Timeline/Implementation Schedule	2015-2019 – Inspect all ponds and outfalls throughout the city.
Annual Update 2014 - 2018	The city continues to inspect all 22 outfalls and 252 ponds at regular intervals, and will complete at least one inspection for each facility by the end of the permit term.
Responsible Party	Operations Manager, Public Works Department Water Resources Engineering Coordinator, Engineering Department

Training (Good Housekeeping)	
BMP Description	The city annually conducts training sessions to most departments with a focus on bi-annual training for public works staff. Full-time and seasonal public works staff (parks, fleet, streets buildings and natural resources) are educated about topics that can impact water quality.
Measurable Goals	• Number of training opportunities • Number of staff that attend • Topics presented • Explore the opportunity to expand existing training program to building inspectors, police and fire department staff
Timeline/Implementation Schedule	2015 – explore expanding training to building inspectors, police, and fire department staff 2015-2019 – Continue to implement training program to Public Works staff.
Annual Update - 2014	Public works staff received training on May 20, 2014 relating to spring and summer storm water related issues and on October 21, 2014 on fall and winter storm water related issues.
Annual Update - 2015	Public works staff received training on May 21, 2015 relating to spring and summer storm water related issues and on October 22, 2015 on fall and winter storm water related issues. Additionally all park full-time and seasonal staff attended a turf management and water quality training on June 10, 2015.
Annual Update - 2016	Public works staff received training on May 19, 2016 relating to spring and summer storm water related issues and on October 27, 2016 on fall and winter storm water related issues. Additionally 22 plow drivers attended a winter road maintenance training on September 13th or October 13, 2016.
Annual Update - 2017	Public works staff received training on May 18, 2017 relating to spring and summer storm water related issues and seasonal staff were trained on May 31, 2017. On October 26, 2017 public works staff received training on fall and winter storm water related issues including the effects of chlorides.
Annual Update - 2018	Public works staff received training on May 24, 2018 relating to spring and summer storm water related issues with a focus on illicit discharge and seasonal staff were trained on May 29, 2018. On October 23, 2018 public works staff received training on fall and winter storm water related issues including the effects of chlorides. Additionally 2 plow drivers attended a winter road maintenance training on October 9, 2018.
Responsible Party	Public Work Director, Public Works Department Operations Manager, Public Works Department Natural Resources Manager, Public Works Department

Evaluate Current Street Sweeping Program	
BMP Description	City staff will introduce the idea of an expanded street sweeping program with a cost/benefit analysis to the engineering and public works department heads within 12 months of the extension of permit coverage.
Measurable Goals	• Schedule a time to review • Discuss concerns • Discuss test sites
Timeline/Implementation Schedule	2015 Discuss the possibility of expanding the street sweeping program. 2016 - 2018 Begin a trial of 2 areas to evaluate efficacy and the neighbors' cooperation in keeping the leaves out of the street. 2019 - 2020 Evaluate and expand the program if the trial was successful.
Annual Update - 2015	Discussed on occasion with the Public Works Director and Operations Manager. Their concern is that people will rake and blow their leaves into the street and the city will be ineffective in its collection of fall tree debris.
Annual Update - 2016	The city will implement a three-year trial program in 2 subwatersheds to determine the sweeping efficacy and evaluate the neighbors' cooperation in keeping the leaves out of the street.
Annual Update - 2017	This is the first year of the city's three-year trial program. The Lake Windsor neighborhood experienced some issues with neighbors discharging leaves into the street while the Minnetoga neighborhood experienced good cooperation.
Annual Update - 2018	The city received good cooperation from the Lake Windsor and Lake Minnetoga neighborhoods during the city's second year of its three-year trial program.
Responsible Party	Public Work Director, Public Works Department City Engineer, Engineering Department Operations Manager, Public Works Department Water Resources Engineering Coordinator, Engineering Department

SOPs	
BMP Description	Develop SOPs for appropriate good housekeeping practices within 12 months of the date of permit coverage. This includes procedures for Fleet Maintenance Program, Park and Open Space Maintenance Program, Pond Maintenance Program, Road Salt Materials Management Program, Storm Sewer Maintenance Program, and Facility Management Program.
Measurable Goals	Document updates
Timeline/Implementation Schedule	Annually
Annual Update - 2014	SOPS were developed and are available upon request.
Annual Update 2015 - 2018	The SOPs were reviewed, and deemed adequate, no edits were made.
Responsible Party	Public Works Director, Public Works Department Operations Manager, Public Works Department Fleet Manager, Public Works Department Natural Resources Manager, Public Works Department

Minimum Control Measure 3
Illicit Discharge Detection and Elimination

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INTRODUCTION

1.1 Basis for the Standard Operating Procedures (SOPs)

On August 1, 2013, the Minnesota Pollution Control Agency reissued their National Pollutant Discharge Elimination System (NPDES) General Permit (GP) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). The MS4 GP requires the City of Minnetonka to develop written procedures for the purpose of eliminating non-storm water discharges through the development of an Illicit Discharge Detection and Elimination Program.

This manual will assist the city in meeting the Storm Water Phase II regulations and will encourage the use of targeted best management practices (BMPs) to prevent the discharge of non-storm water related discharges. This Guidelines and Standard Operating Procedures Manual will help promote behavior to improve the water quality of the City of Minnetonka's lakes, ponds and creeks.

1.2 Objectives of the SOPs

This manual provides guidance on Illicit Discharge Detection and Elimination (IDDE) as follows:

- Provide guidance regarding commonly found illicit discharges.
- Provide guidance for prioritizing areas where illicit discharges are commonly found.
- Provide tools for detecting, tracking and eliminating illicit discharges and spills.
- Provide guidance on the city's legal authority to properly enforce illicit discharges.
- Provide a mechanism for coordinating spill response and prevention and illicit discharge identification among fire, police, health and public works departments

2 LOCATING PRIORITY AREAS

A map has been provided in Appendix A that identifies potential priority areas for detecting illicit discharges based on land use, history of IDDE violations, schools, village centers and location of public beaches. The methodology for further establishing priority areas is detailed in **Section 2.1**. The city will update the prioritization at least once during each five year permit term.

2.1 Review of Available Information

Activities and Definition

Priority areas for IDDE will vary depending on water quality conditions, land use, etc. A relatively simple desktop assessment of available community information

can provide many clues as to where illicit discharges may be occurring for basing the prioritization.

Preparation

The following is a list of resources that have been collected and reviewed and a brief description of factors that were or will be considered in the future for the prioritization process:

a. Zoning Maps
   Industrial areas with high density development may have a high illicit discharge potential, or areas where large quantities of material are being stored.
b. Locations of Previous Illicit Discharges
   Areas with historical illicit discharge reports or previous citizen complaints are considered a high priority.
c. Schools
   There are five Minnetonka School District schools and six Hopkins School District schools located in the community. There are additional educational facilities including private and religious schools and satellite offices for universities and colleges.
d. Village Centers
   The city does not have a designated downtown but rather local gathering places that connect specific neighborhoods like Glen Lake, Ridgedale and The Mills.
e. Areas that Drain to Public Beaches
   The city has two public beaches at Shady Oak Lake and Libb's Lake. These areas are designated as high priority for public health and economic reasons.
f. Location of Public Sanitary Sewer and the Age of Sanitary Sewer Lines
   Older areas with aging public sanitary sewer should be considered high priority.
g. Approximate Density of Known Outfalls per Stream Mile
   Areas with a high density of outfalls should be considered medium priority and will be evaluated at a later date.
h. Age of Development
   Older areas of the community with a lack of water quality ponding and other pollution control infrastructure will be considered a medium priority and will be evaluated at a later date.
i. Water Quality Information
   Water quality information will be evaluated to determine if there are any areas where high concentrations of pollutants are identified. The city's primary water quality concerns are associated with excess chlorides in Nine Mile Creek, excess phosphorus in Medicine Lake, excess phosphorus and suspended solids in Bassett Creek, excess bacteria, phosphorus, and chlorides in Minnehaha Creek and elevated turbidity

levels in Purgatory Creek and the Minnesota River. This is a medium priority and will be evaluated at a later date.

2.2 Field Mapping Process

a. Using existing storm sewer index maps and record drawings as a basis for locations, field personnel began a storm sewer mapping verification process in 2010. Engineering interns collected storm sewer location and design information using global positioning system (GPS) equipment capable of sub-meter (approximately 3 foot) accuracy. Using a data logger and data collection software, GIS files were generated that are in use throughout the city and will be useful for many years.
b. Structures, such as catch basins, manholes, culverts, pipes, inlets, outlets, and pollution control devices were field verified and GPSed.
c. Data such as outlet control structure type, elevation, dimension, and condition; pipe size, type, elevation and condition; and manhole and catch basin diameter, material, and condition were all collected in the field and cataloged in the city's GIS database.
d. Dry weather inspection information has been collected as part of existing storm water pond or pollution control device inspections. Currently, dry weather discharge information is collected on paper forms for manual entry into a database at a later time. The city will be transitioning to a process of directly entering field data into a database on-site.

3 DETECTION PROCESS

3.1 Types of Illicit Discharges

A Dry Weather Outfall Inspection Form (Appendix C) can be used during routine inspections to detect continuous, transitory, or intermittent discharges. The form should be completed whenever evidence of an illicit discharge is observed such as significant flow during dry weather, the presence of raw sewage indicators, staining, or residue. A Dry Weather Outfall Inspection Form should be completed during routine inspections even if there is no evidence of an illicit discharge.

Long-term, regular inspections of outfalls are a primary part of an effective IDDE program. Regular inspections will not be significantly different from inspections conducted during mapping. The Dry Weather Outfall Inspection Form can be used.

The Engineering Department employs summer civil engineering interns. The interns are required to perform routine outfall inspections as required by the MS4 permit. The interns will also be trained to detect illicit discharges, which they will watch for while they are in the field.

Many public works crews conduct their regular duties in and around the storm drain system. Public works staff are trained to detect illicit discharges while they are performing their usual job duties and to report them to the city's natural resource staff. When an employee observes evidence of an illicit discharge, they collect as much information about the potential illicit discharge as possible and contact their supervisor or natural resource staff so that appropriate action can be taken.

It is important to collect as much information as possible at the time of initial observation because of the likelihood that a discharge may be transitory or intermittent. Initial identification of the likely or potential sources of the discharge is also very important.

Once an illicit discharge has been reported or detected through an inspection, the next step is to locate the source. Selection of tracing techniques will depend on the type of illicit discharge detected and the information collected during initial discovery and observation (whether through an inspection by a municipal employee or through a citizen report) and the resources/technology available. A single technique may be used or several techniques may need to be combined to identify the source of the discharge. There are three types of discharges:

a. Transitory illicit discharges: Typically one-time events resulting from spills, breaks, dumping, or accidents. Transitory illicit discharges are often reported to an authority through a citizen complaint line or following observation by a municipal employee during regular duties. Because they are not recurring, they are the most difficult to identify, trace, and remove. The best method to reduce transitory discharges is through general public education, education of municipal employees and response personnel, tracking of discharge locations and enforcement of the illicit discharge sections of city code.

b. Intermittent illicit discharges occur occasionally over a period of time (several hours per day, or a few days per year). Intermittent discharges can result from legal connections to the storm drain system, such as a legal sump pump connection that is illegally discharging anything other than groundwater. Intermittent discharges can also result from activities such as drum washing in exterior areas. These types of discharges are more likely to be discovered and are less difficult to trace and remove, but can still present significant challenges. These discharges can have large or small impacts on waterbodies depending on pollutant content and the size of the receiving water body.

c. Continuous illicit discharges are typically the result of a direct connection from a sanitary sewer, overflow from a malfunctioning septic system, inflow from a nearby subsurface sanitary sewer that is malfunctioning, or an illegal connection from a commercial or industrial facility. Continuous illicit discharges are usually easiest to trace and can have the greatest pollutant load.

3.2 Tracing Techniques and Methods

The investigative techniques used will depend on whether or not a potential source location was identified during the initial observation:

a. Potential source identified: If a potential source for the illicit discharge was initially identified, steps should be taken to investigate the potential source site, such as inspecting the site and storm drain system in the vicinity of the site. If floor drains, sumps, or other suspect discharge locations are observed during this inspection, dye testing, smoke testing, electronic location of subsurface pipes, or televising may be used. These techniques should definitively show whether the suspect site was the source of the illicit discharge.

b. Potential source not identified: If no source site is suspected and only the general area of the illicit discharge is known, it may be possible to trace the evidence of the illicit discharge by visual inspection of the storm drain access points. If this catch basin/manhole inspection technique is not fruitful, some interim steps could be taken to try to trap water from an intermittent discharge. For example, sand bagging and damming or block testing of selected storm drain access points, combined with installation of an optical brightener trap to assess if detergents are present in a discharge, can help reveal the source of the discharge. If these techniques have no positive result (no water pools behind the weir or sand bag), the discharge was likely transitory (one time only), and it may not be possible to determine its origin. In this case, the location of the originally reported illicit discharge should be added to a regular inspection program to provide for the possibility of future incidents. If the original report of the illicit discharge was severe or gross pollution, then smoke testing or televising of the storm drain system may be warranted.

It is necessary to understand the tracing technique and its limitation in order to select an effective tracing technique. The following is a brief summary of each of the tracing techniques that may be used to locate the source of an illicit discharge:

a. Visual Inspection at manholes/catch basins: This tracing technique is typically used when there is no suspected source site. It is the most cost effective and efficient method of tracing. Structures should be systematically inspected starting at the initial detection location, gradually working upstream through the system. If the inspector is tracking a continuous discharge, the inspections may be relatively easy and the flow can be tracked back to its source. If the inspector is attempting to track a transitory or intermittent discharge, the inspector should make the following observations depending on the information provided from the initial identification: color and clarity of any discharges; staining or deposits on the bottom of the structure; oil sheen, scum, or foam on any standing fluids in the sump of the structure; odors, staining or deposits on inlet pipes and outlet pipes. Depending on what the crew is looking for and what they find, they will progressively inspect additional structures until either a potential source is found, or no further evidence is found. If no further evidence is found, the inspector may elect to further assess some of the structures by installing

sandbags or other damming devices to determine if the discharge recurs. Inspectors should use standard safety procedures when conducting these inspections such as cone placement and safety vests in traffic areas, confined space entry techniques (if entry is necessary), steel-toed boots, etc.

b. Sandbagging or damming: Sandbagging and damming is typically only conducted when the discharge flow has ceased since initial detection. Application of this technique will show whether the discharge is one time only (no water pools behind the sandbag or dam) or intermittent (water pools behind the sandbag).

c. Televising: Televised video inspections are a useful technique when an illicit connection or infiltration from a nearby sanitary sewer is suspected, but little evidence of the illicit discharge remains behind. Two types of video cameras are available for use:

   1. A small camera that can be manually pushed on a stiff cable through storm drains to observe the interior of the piping, or
   2. A larger, remote-operated video camera on treads or wheels that can be guided through storm drains to view the interior of the pipe. Typically, the operator of the camera has access to a keyboard or audio voice-over to record significant findings on the videotape that is produced for future review and evaluation.

d. Sampling flowing discharges: Samples should be collected only in the event a discharge is flowing through the outfall. Stagnant pools of water or sump water should not be sampled. If the municipal staff will be collecting the sample, the staff should be trained in safety and proper collection techniques or a contractor listed in Appendix D can be used. The Center for Watershed Protection's (CWP) Guidance Manual for Illicit Discharge Detection and Elimination (2004) lists the parameters that a sample may be analyzed for and provides a detailed discussion of sampling procedures and analysis of results. Sampling and analysis for many of the compounds should be completed by personnel trained in collection, handling and preservation techniques to ensure accurate data. EPA guidance recommends collecting a sample when the discharge is initially found and after any source is removed. The sample collected after removing an illicit discharge can indicate if other illicit discharges are present.

e. Optical brightener monitoring traps: Optical brightener monitoring (OBM) traps can be used to trace intermittent or transitory discharges that result from wash water with detergent. Detergents usually contain optical brighteners that can be detected at high concentrations using this method. However, the traps only detect highly concentrated discharges. The detergent concentration required to be detected by the light is approximately the same as pure wash water from a washing machine. Consequently, OBM traps may be best suited as a simple indicator of the presence or absence of intermittent flow or to detect the most concentrated flows. The traps can be made using easily acquired materials.

   The traps contain an absorbent, unbleached cotton pad or fabric swatch contained inside a wire mesh trap or section of small diameter (e.g., 2-inch)

PVC pipe. The traps should be anchored to the inside of an outfall at the invert using wire or monofilament that is secured to the pipe itself. Rocks or bricks with holes can be used as temporary weights to hold the trap in place.

Field crews can retrieve the OBM traps after 24 to 72 hours of dry weather. OBM traps need to be retrieved before coming into contact with storm water, which will contaminate the trap or wash it away. When placed under a long wave fluorescent ultraviolet or "black" light, an OBM trap will indicate if it has been exposed to detergents.

f. Dye testing: Dye testing is typically conducted when a potential source site has been identified and the inspector is trying to determine whether the site has floor drains or other locations that connect and discharge to the storm drain system. Permission to access the site must be obtained before dye testing can be conducted. Verbal or written requests are both acceptable. The inspector should review available sanitary sewer and storm drain maps before conducting the dye testing. The dye testing procedure consists of two steps: (1) discharging the dye into the suspect location and (2) opening nearby storm drain and sanitary sewer manhole covers to determine where the dye discharges.

   This procedure is fairly effective for confirming direct connections into the storm drain system for short reaches. If a longer pipe network is being evaluated, charcoal packets can be left in selected structures and later collected and analyzed for the presence of the dye. If dye testing on porcelain structures, tablets or charcoal should be wrapped in tissue before depositing. When dye testing, the inspector should keep in mind that each structure (sink, toilet, etc.) should be tested separately. Many times a single utility in a basement may be incorrectly connected to a storm drain line instead of a sanitary line.

g. Smoke testing: Smoke testing is a useful technique for tracing intermittent discharges or continuous discharges that have no apparent source site. Smoke is introduced into the storm drain system and emerges at locations that are connected to the system. Smoke testing works best for short reaches of pipe or in situations where pipe diameters are too small for video testing.

   Notifying the public about the date and purpose of smoke testing before starting is critical. The smoke used is non-toxic, but can cause respiratory irritation, which can be a problem for some residents. Residents should be notified at least two weeks prior to testing, and should be provided the following information:

   1. Date testing will occur
   2. Reason for smoke testing
   3. Precautions they can take to prevent smoke from entering their homes or businesses
   4. What they need to do if smoke enters their home or business, and any health concerns associated with the smoke
   5. A number residents can call to relay any particular health concerns (e.g., chronic respiratory problems)

3.3 Citizen Reporting Program

Activities and Definition

a. A citizen reporting program is an effective way to identify illicit discharges. A citizen comment or complaint line is available to all residents. The city also utilizes its website to receive citizen comments or complaints. To maximize the effectiveness of citizen reporting, dispatch personnel should be trained to connect the citizen with the appropriate city staff in charge of initial handling of illicit discharges.

b. The MS4 management team should identify who should be trained and where the reporting line will be publicized.

Preparation

a. The city currently operates Minnetonka Mike, a hotline and website link for citizen questions and concern.

Process

a. Use an incident tracking sheet to collect the appropriate information from the caller. Then, transfer the incident tracking sheet to the Natural Resources Manager or other proper authority (ie. MS4 management team member, department head, Water Resources Engineer, Natural Resource Specialist, construction inspector, code enforcement officer, or other assigned personnel).

b. Promptly investigate reported incidents.

c. If an illicit discharge of an unknown source is confirmed, follow the procedure of Tracing Illicit Discharges.

d. If an illicit discharge known source is confirmed, follow the Removing Illicit Discharges procedure.

3.4 Tracking Illicit Discharges

a. Developing a long-term tracking program can help the MS4 management team better understand the origins of illicit discharges and identify maintenance issues for the storm drain system structures. A tracking program will also facilitate evaluation of the overall IDDE program and will expedite annual reporting. An effective tracking program should address illicit discharge and maintenance issues resulting from the following:

    1. Citizen complaints
    2. Opportunistic inspections
    3. Regular, longer-term inspections
    4. Removal actions taken for illicit discharges

b. Minnetonka's CityWorks system can be modified to include all the fields on the Dry Weather Outfall Inspection Form. The advantage to this tracking program is that it is a GIS platform. Utilizing GIS mapping of illicit discharge locations, citizen complaint locations and many other IDDE issues can assist greatly in the overall program management.

3.5 Opportunistic Illicit Discharge Observation

Activities and Definition

While city staff conduct their regular duties in and around the storm drain system, there is an opportunity to be alert for potential illicit discharges to the municipal storm water system while going about normal work activities. These opportunistic illicit discharge observations are happenstance and their identification is the result of trained city staff and their unique eye in recognizing potential illicit discharges.

Preparation

a. Be alert for potential illicit discharges to the municipal storm water system while going about normal work activities.

Process

a. Call the appropriate authority (i.e. Natural Resources Manager, MS4 team member, department head, Water Resources Engineer, Natural Resource Specialist, code enforcement officer, construction inspector, or a supervisor).

b. Assess the general area of the illicit discharge to see if you can identify its source.

c. Whenever possible, take photographs of the suspected illicit discharge.

d. Responding personnel will complete the following:

    1. Use the IDDE Incident Tracking Sheet to document observations.
    2. Obtain sample for visual observation and complete an Outfall Inspection Form, if applicable.
    3. Follow the procedure of IDDE – Tracing Illicit Discharges.

e. Clean Up – If needed, follow relevant written procedures or guidance from regulatory agencies. See Appendix D for commonly used contractors

Documentation

a. File all completed forms (i.e. Dry Weather Outfall Inspection Form, Public Works Drainage Team work log, and the IDDE Incident Tracking Sheet).

b. Document any further action taken.

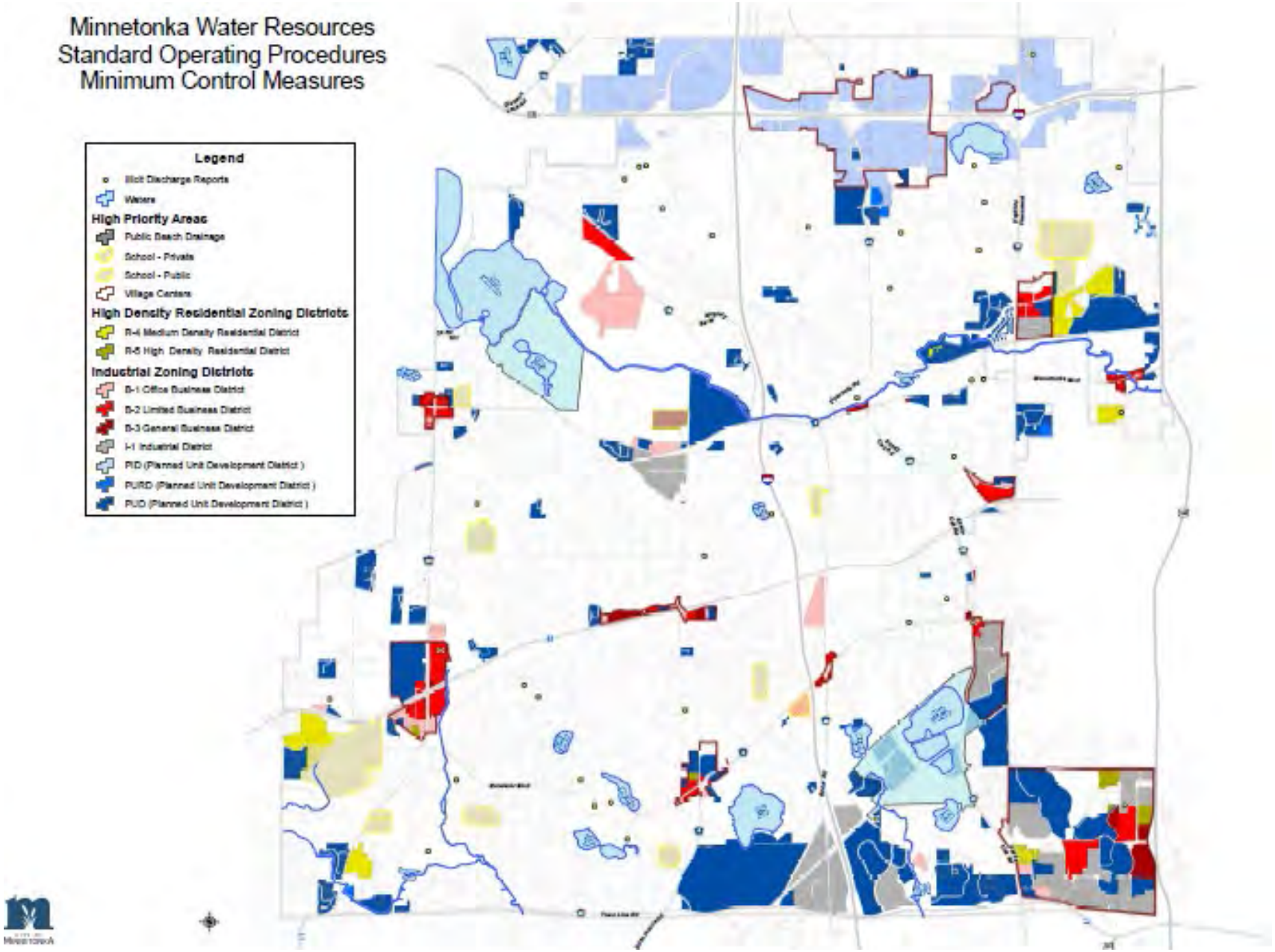
3.6 Training

Activities and Definition

Training of city staff will be important so that they are aware of the importance of Illicit Discharge Detection and Elimination. This includes knowledge in identifying illicit discharges and procedures to report, document and ensure follow-up is completed.

Specific training requirements for all city staff can be found in the city's education program document.

Appendix A
High Priority Areas



Appendix B
Enforcement Response Procedures (ERPs)

Enforcement Response Procedures

(ERPs) for

MS4 Violations

2016

Under the terms of the General NPDES/SDS Permit MNR040000, the City of Minnetonka is required to develop and implement adequate enforcement authority for activity that impacts storm water that take place within the boundaries of the Municipal Separate Storm Sewer System (MS4). The purpose of these Enforcement Response Procedures is to communicate how the enforcement tools available to the city will be used to achieve compliance. The Enforcement Response Procedures also specifies criteria by which city personnel can determine the enforcement action most appropriate to instances of non-compliance. This plan is a document of the city's procedure to be followed when a construction storm water requirement, illicit discharge and/or post-construction violation is discovered. This plan is a guide; any of the enforcement responses may be used at the city's discretion. The city may also choose to pursue an enforcement case by skipping intermediate steps.

I. Description of Each Type of Enforcement Response

1. Verbal Warnings

    i. At a minimum, verbal warnings must specify the nature of the violation and required corrective action.

    ii. Verbal warning may be given at the discretion of the inspector when it appears the condition can be corrected by the violator within a reasonable time, which time shall be approved by the inspector.

2. Written Notices

    i. Written Warning

        i. A written warning must specify the nature of the violation, the required corrective action and a follow-up inspection date.

    ii. Notice of Violation (NOV)

        i. The city will submit an NOV specifying the nature of the violation, the required corrective action and a follow-up inspection date by which the violation must be remedied.

        ii. Monetary penalties (civil and administrative penalties) may be assessed for NOVs at the City's discretion.

    iii. In instances where the violation cannot be tied to an individual, such as disposing of yard waste into a wetland, the city will target the neighborhood with an education campaign in hopes of educating the violator and their neighbors.

3. Stop Work Orders

    i. Cease and Desist Order

        i. The City of Minnetonka may issue a stop work order or an order to cease and desist for any person who has violated or continues to violate this chapter or any permit or order issued hereunder.

        ii. This order requires that the violator must comply with the order and must take appropriate remedial or preventive action as may be needed to properly address a continuing or threatened violation including halting operations except for cleaning up, terminating the discharge, installing appropriate control measures, or other corrections needed.

        iii. Monetary penalties (civil and administrative penalties) may be assessed with the cease and desist order.

4. Suspension, Revocation or Modification of Permit

    i. The city may suspend, revoke or modify the permit authorizing the land development project or any other project of the applicant or other responsible person within the city.

ii. A suspended, revoked or modified permit may be reinstated after the applicant or other responsible person has taken the remedial measures set forth in the Notice of Violation or has otherwise cured the violation(s) described therein, provided such permit may be reinstated upon such conditions as the city of may deem necessary to enable the applicant or other responsible person to take the necessary remedial measures to cure such violation(s).

5. Citations with Administrative Penalties

i. Citations

i. The City of Minnetonka is empowered to pursue administrative citations when there is a violation of a provision of the city code.

ii. Administrative Citations and Civil Penalties are governed by city code Section 1310. The citation must state the date, time and nature of the offense, the name of the issuing officer, the amount of the scheduled fine and the manner for paying the fine or appealing the citation.

iii. The person responsible for the violation must either pay the scheduled fine or request a hearing within seven days after issuance.

iv. Monetary penalties (civil and administrative penalties) may be assessed with the citation.

ii. Compliance Order

i. When the City of Minnetonka finds that any person has violated or continues to violate storm water regulations, a permit issued or an order issued hereunder, a compliance order may be issued to the violator directing that, following a specific time period, adequate structures or devices be installed and/or procedures implemented and properly operated.

ii. Orders may also contain such other requirements as might be reasonably necessary and appropriate to address the noncompliance, including the construction of appropriate structures, installation of devices, self-monitoring and management practices.

iii. Monetary penalties (civil and administrative penalties) may be assessed with the compliance order.

6. Additional Measures

i. Abatement

i. Abatement procedures are covered under City Code Section 845.045.

ii. Whenever the City of Minnetonka determines that an abatement must occur, the city must give written notice to the property owner and occupant or other responsible party in person or by certified mail.

iii. The notice must state;

a) The property location of the violation

b) The nature of the violation, with reference to the appropriate code provision

c) The steps to be taken to abate the violation and a reasonable amount of time, for the violation to be abated

d) If the owner, occupant, or other responsible party does not comply with the notice within the time specified, the city may provide for abating the violation.

e) The city may assess its costs against the property in accordance with city code.

iv. The city may provide for abating a violation without following the standard abatement procedures when:

a) There is an immediate threat to the public health or safety;

b) There is an immediate threat of serious property damage; or

c) A violation has been caused by private parties on public property.

ii. Civil Penalties

i. The city declares that any person violating the provisions of this chapter may be assessed a civil penalty by the City of Minnetonka.

ii. An administrative offense may be subject to a civil penalty not exceeding $2,000.00.

iii. Each day of violation shall constitute a separate violation.

iv. The City of Minnetonka may consider the following in assessing civil penalties for violations:

a) The harm done to the public health or the environment;

b) Whether the civil penalty imposed will be a substantial economic deterrent to the illegal activity;

c) The economic benefit gained by the violator;

d) The amount of effort put forth by the violator to remedy this violation;

e) Any unusual or extraordinary enforcement costs incurred by the municipality;

f) The amount of penalty established by ordinance or resolution for specific categories of violations; and

g) Any equities of the situation which outweigh the benefit of imposing any penalty or damage assessment.

iii. Recovery of Damages and Costs

In addition to civil penalties, the city may recover:

i. All damages proximately caused by the violator to the city, which may include reasonable expenses incurred in investigating violations of and enforcing compliance with this chapter or any other actual damages caused by the violation.

ii. The costs of the city's maintenance of storm water facilities when the user of such facilities fails to maintain them as required by this chapter.

iv. Performance Security

i. The city may require an applicant to submit a performance security before a permit is issued or reinstated in order to ensure that the storm water practices are installed by the permit holder as required by the approved storm water management plan.

ii. Acceptable performance securities include a Letter of Credit in the city's required format, cashier's check that will be deposited in the city's account, cash escrow, or a check

iii. The amount for the performance security will be based on the total estimated construction cost plus 10%, of the structural BMPs approved under the permit plus any reasonable foreseeable additional related costs (e.g., damages, enforcement).

iv. The applicant must provide an itemized construction cost estimate complete with unit prices or an engineer's estimate which shall be subject to acceptance, amendment or rejection by the city. Alternatively, the city shall have the right to calculate the construction cost estimate as it so chooses.

v. The performance security shall contain forfeiture provisions for failure to complete the specified work in the storm water management plan.

vi. To receive full release of the performance security, both of these steps must be fulfilled:

a) The applicant must submit as-built drawings and written certification by a registered professional engineer licensed to practice in stating that the structural BMP(s) have been installed in substantial compliance with the approved plan and other applicable provisions of the storm water ordinance.

b) The City will make a final inspection of the structural BMP(s) to ensure substantial compliance with the approved plan and the provisions of this ordinance.

vii. Provisions for a partial pro-rata release of the performance security based on the completion of various development stages can be made at the discretion of the City. The City reserves the right to retain surety until consent warranty or other conditions are satisfied.

v. Legal Action/Other Remedies

i. The city may bring legal action to enjoin the continuing violation of this chapter. Pursuant to the City's Code of Ordinances, the City of Minnetonka may, through the City Attorney, petition the appropriate court(s) for issuance of preliminary or permanent injunctions to restrain or compel activities by an owner.

II. NPDES Permit Referrals

1. For a known project site involving a construction activity where the discharge should also be covered by a state NPDES permit and the known site does not have a state NPDES permit, the city must notify the MPCA about this discharge. The following information must be supplied to the MPCA:

    i. Construction project location;

    ii. Name of owner or operator;

    iii. Estimated construction project size or type of industrial activity (including SIC code if known); and

    iv. Records of communication with the owner or operator regarding filing requirements.

2. Where the city has used progressive enforcement to achieve compliance with this chapter and in the judgment of the city has not been successful, the city may refer the violation to the MPCA. For the purposes of this provision, “progressive enforcement” shall mean two (2) follow-up inspections and two (2) warning letters. The following information must be supplied to the MPCA:

    i. Construction project location;

    ii. Name of owner or operator;

    iii. Estimated construction project size; and

    iv. Records of communication with the owner or operator regarding the violation, including at least two follow-up inspections, two warning letters or notices of violation and any response from the owner or operator.

III. Recordkeeping & Tracking

1. All noncompliance instances resulting in a written warning must be tracked either electronically or using paper files. This tracking must include all records and documents related to ordinance violations and should be stored in the enforcement case file.

2. The minimum required documentation must include the following items:

    i. Name of owner/operator;

    ii. Location of illicit discharge violation;

    iii. Description of violation;

    iv. Required schedule for returning to compliance;

    v. Description of enforcement responses used, including escalated responses if repeat violations occur or violations are not resolved in a timely manner;

vi. Accompanying documentation of enforcement response (e.g., notices of noncompliance, notices of violation, etc.);

vii. Any referrals to different departments or agencies; and

viii. Date violation was resolved.

3. The city must use the noncompliance records and tracking to identify any chronic violators, and use this information to work toward reducing the rate of noncompliance relapse.

    i. This will include tracking violations, applying incentives and/or disincentives and increasing the inspection frequency of the operator's sites.

    ii. If the operator fails to take corrective actions, the city must pursue progressive enforcement and, if need be, perform the necessary work and assess against the owner the costs incurred for repairs.

4. For BMPs on public property or within public rights-of-way, the City must document that appropriate maintenance and/or repairs have been completed (e.g., using photos, maintenance logs, contractor invoices).

5. The City must keep any closed files related to enforcement for a minimum of three (3) years after the file is closed consistent with the MS4 General Permit conditions. However, file retention time may be longer if required by law.

6. In the case of Illicit Discharge complaints, the city shall investigate and respond within 7 days from detection, and eliminate as soon as possible.

IV. Enforcement Action Matrices

1. Noncompliance with Construction Requirements

    i. See Table 1 for the enforcement action matrix for noncompliance with construction requirements. In general, the severity of the enforcement measure increases moving down the matrix.

    ii. For parties who fail to obtain a land disturbance permit before starting work, the initial enforcement action may be more stringent than for a project that has an approved plan, but has failed to comply with the approved plan.

        a) The city has the ability to stop project work for non-permittees. Stopping work generally includes all work except what is needed to address storm water and/or safety until the project has an approved storm water plan.

        b) Non-permittees may be required to perform corrective actions as advised by the city and to develop the required erosion control and/or storm water plan submittals to submit to the city for review and approval.

c) Once the corrective actions have been successfully completed and the submitted storm water plan has been approved by the city, the city will issue the violator a written notice that the situation has been resolved.

d) If the corrective actions or the submitted plan cannot be approved, the city should also send a written notice to the violator describing what was deficient and what step(s) are needed to resolve the situation.

Table 1. Enforcement Action Matrix for Noncompliance with Construction Requirements.

Type of Violation	Failure to Obtain Land Disturbance Permit Prior to Starting Work	Minor Violations (Failure to Install, Maintain or Upgrade Measures on Erosion and Sediment Control Plan)	Minor Violations (Failure to Install, Maintain or Upgrade Measures on Erosion and Sediment Control Plan for a Priority Area)	Major Violation (Failure to Install, Maintain or Upgrade Measures on Erosion and Sediment Control Plan that Resulted in a Sediment Release from the Project Site)	Repeat Violation by a Party (Same Site)	Repeat Violation by a Party (Different Site than initial Noncompliance Site)
Enforcement Measures For Use (Increasing Severity Moving Down the Chart)	Cease and Desist Order or Consent Order	Verbal and/or Written Warning	Verbal and/or Written Warning	NOV and/or Verbal or Written Warning	NOV and/or Verbal or Written Warning	NOV and/or Verbal or Written Warning
		NOV	NOV	Suspension, Revocation or Modification of Permit	Suspension, Revocation or Modification of Permit	Suspension, Revocation or Modification of Permit
	Legal Action	Suspension, Revocation or Modification of Permit	Suspension, Revocation or Modification of Permit	Compliance Order or Consent Order	Compliance Order or Consent Order	Compliance Order or Consent Order
		Cease and Desist Order or Consent Order	Cease and Desist Order or Consent Order	Legal Action	Legal Action	Legal Action
		Legal Action	Legal Action			

This plan is a guide; any of the enforcement responses may be used at the City's discretion and the City may choose to escalate an enforcement case by skipping intermediate steps. Penalties (Civil, Recovery of Damages and Costs, Etc.) may be assessed as described in the city's ordinance and as allowed by law at the City's discretion.

2. Failure to Remove Illicit Discharges

   i. See Table 2 for the enforcement action matrix for failure to remove illicit discharges.

   ii. The action matrix was set up to provide varying suggested degrees of response to noncompliance documented by the City.

   iii. In general, the severity of the enforcement measure increases moving down the matrix.

Table 2. Enforcement Action Matrix for Failure to Remove Illicit Discharges.

<table>
<tr><th>Type of Violation</th><th>First Failure to Remove Illicit Discharge</th><th>Repeat Violation by a Party (Same Site)</th><th>Repeat Violation by a Party (Different Site than initial Noncompliance Site)</th></tr>
<tr><td rowspan="6">Enforcement Measures For Use (Increasing Severity Moving Down the Chart)</td><td rowspan="2">Verbal and/or Written Warning</td><td>NOV and Verbal and/or Written Warning</td><td rowspan="2">NOV and Verbal Warning and/or Written Warning</td></tr>
<tr><td>Compliance Order or Consent Order</td></tr>
<tr><td>NOV</td><td>Cease and Desist Order or Consent Order</td><td>Compliance Order or Consent Order</td></tr>
<tr><td>Compliance Order or Consent Order</td><td rowspan="3">Legal Action</td><td>Cease and Desist Order or Consent Order</td></tr>
<tr><td>Cease and Desist Order or Consent Order</td><td rowspan="2">Legal Action</td></tr>
<tr><td>Legal Action</td></tr>
</table>

This plan is a guide; any of the enforcement responses may be used at the city's discretion and the city may choose to escalate an enforcement case by skipping intermediate steps. Penalties (Civil, Recovery of Damages and Costs, Etc.) may be assessed as described in the city's ordinance and as allowed by law at the city's discretion.

3. Noncompliance with Post-Construction Requirements

   i. See Table 3 for the enforcement action matrix for noncompliance with post- construction requirements.

   ii. The action matrix was set up to provide varying suggested degrees of response to noncompliance documented by the city.

   iii. In general, the severity of the enforcement measure increases moving down the matrix.

Table 3. Enforcement Action Matrix for Noncompliance with Post-Construction Requirements

<table>
<tr><th>Type of Violation</th><th>First Failure to Remove Illicit Discharge</th><th>Repeat Violation by a Party (Same Site)</th><th>Repeat Violation by a Party (Different Site than initial Noncompliance Site)</th></tr>
<tr><td rowspan="6">Enforcement Measures For Use (Increasing Severity Moving Down the Chart)</td><td rowspan="2">Verbal and/or Written Warning</td><td>NOV and Verbal and/or Written Warning</td><td rowspan="2">NOV and Verbal Warning and/or Written Warning</td></tr>
<tr><td>Compliance Order or Consent Order</td></tr>
<tr><td>NOV</td><td>Cease and Desist Order or Consent Order</td><td>Compliance Order or Consent Order</td></tr>
<tr><td>Compliance Order or Consent Order</td><td rowspan="3">Legal Action</td><td>Cease and Desist Order or Consent Order</td></tr>
<tr><td>Cease and Desist Order or Consent Order</td><td rowspan="2">Legal Action</td></tr>
<tr><td>Legal Action</td></tr>
</table>

This plan is a guide; any of the enforcement responses may be used at the city's discretion and the city may choose to escalate an enforcement case by skipping intermediate steps. Penalties (Civil, Recovery of Damages and Costs, Etc.) may be assessed as described in the city's ordinance and as allowed by law at the city's discretion.

Appendix C
Inspection Forms

CITY OF MINNETONKA – DRY WEATHER OUTFALL INSPECTION FORM

Water Body ID #: _____

DATE:			INSPECTOR:	
LAST RAINFALL Date_____ Amount_____ EVENT(S) (in.): Date_____ Amount_____			**WEATHER CONDITION:** □ Sunny □ Cloudy □ Rainy □ Partly Cloudy □ Winter evaluation. □ Other: _____	
OVERALL CONDITION	**WATER BODY** □ Good □ Fair □ Poor	**INLETS (# of _____)** □ Good □ Fair □ Poor	**OUTLETS (# of (_____)** □ Good □ Fair □ Poor	**FLOW CONDITION:** □ Dry, no flow □ Wet, water flowing in or out of pond □ Wet but no flow of water
COMMENTS / NOTES				

INDICATOR	**DESCRIPTION**		**OUTFALL ID WHERE IDENTIFIED / FOLLOW-UP REQUIRED?**
OVERALL CONDITION OF OUTFALL	□ Good □ Fair □ Poor	□ Unknown - Submerged □ Unknown – Snow covered □ Other: _____	**Comments:**
FLOW CONDITIONS	□ Open □ Inhibited □ Restricted	□ Plugged □ Other: _____ □ Not Applicable / None	**Comments:**
EROSION	**Erosion Present?** □ Yes □ No	**Location of Erosion:** □ Base of Structure □ Overflow area □ Other: _____	**Comments:**
FLOW PRESENT?	**Is the flowage path open and unobstructed?** □ Yes □ No	**Flow Condition:** □ Open □ Inhibited □ Plugged □ Other: ___	**Comments:**

ILLICIT DISCHARGE POTENTIAL

☐ Unlikely (no visual indicators) ☐ Potential (presence of one or more indicators) ☐ Obvious (oil, unusual color, odor, etc.)	**Contact Information:** Was someone onsite contacted? If yes, who? _____ Comments: _____
Sample collected for laboratory analysis? ☐ Yes ☐ No	**Laboratory Analysis Information:** Laboratory Delivered to: _____ Date Delivered: _____
Sample collected from: ☐ Flow ☐ Pool ☐ Other: _____	**Inlet or Outlet (ID#(s)):**

Appendix D
Contractor Contact List

HVAC SERVICES

NORTHLAND MECHANICAL (Paul Perkins)	612-790-1657
MMC CONTROLS (Tom Collins)	612-226-1966
KLAMM MECHANICAL (Ben McDonald)	612-282-9709
(Large plumbing & Mechanical repairs)	952-890-4868

GENERATOR REPAIR

ZIEGLER CAT	952-887-4535
INTERSTATE DIESEL	612-854-5511

ELECTRICIANS

BERNDT ELECTRIC	612-379-4112
KILMER ELECTRIC (Brian Zilka) cell	612-363-3108
KILMER ELECTRIC OFFICE	763-425-2525
SIPMA ELECTRIC (Dell)	952-937-7000
PAGE ELECTRIC	612-720-1544
ACCESS POWER (UPS)	612-773-9406
PREMIER ELECTRIC	763-424-6551
EIM	763-479-3744

PLUMBING

HIGHVIEW PLUMBING	952-933-8600
HUBER PLUMBING	763-231-0295
STEVE POKORNY PLUMBING	952-938-7933
WELD & SONS PLUMBING	763-475-0296
AMERICAN SEWER	612-246-4800
MR ROOTER	612-424-3478
GARY'S WATER & SEWER	952-240-6417

OVERHEAD DOORS

TWIN CITY GARAGE DOOR	763-533-3838

CULVERTS

CON TECH	952-496-1050

UTILITY LOCATING

GOPHER STATE ONE CALL (GSOC)	651-454-0002

ROOFING

DALBEC	952-473-8080
MINT ROOFING (Tim Comer)	612-369-2523
DIVERSE CONSTRUCTION	763-442-5735

ELEVATORS

THYSSEN-KRUPP SERVICE	612-302-2012
	800-328-4087

STATE / COUNTY PUBLIC WORKS

HENNEPIN COUNTY PUBLIC WORKS	612-596-0299
MINNESOTA D.O.T. / DISPATCH	651-234-7110

BARRICADES/CONES

WARNING LITES	612-521-4200

WEATHER

NATIONAL WEATHER SERVICE	952-361-1527

BUILDING MATERIALS/ TOOLS

HOME DEPOT / PLYMOUTH	763-509-9590
SCHERER BROTHERS / HOPKINS	952-938-2741
LYMAN LUMBER / CHANHASSEN	952-470-4800
MENARDS / EDEN PRAIRIE	952-946-5380
FRATTALLONE'S	952-474-5461

TOOLS / SUPPLIES

GRAINGER	888-838-1933
GRAINGER (EMERGENCY)	800-472-4643

EXCAVATORS/WATER MAIN REPAIRS

G.L. CONTRACTING	763-478-9529
G.L. CONTRACTING / EMERGENCY	763-242-0335
HIGHVIEW PLUMBING / OFFICE	952-933-8600
HIGHVIEW PLUMBING / CELL	612-916-0444
VALLEY RICH	952-448-3002
VALLEY RICH / EMERGENCY	612-839-8502

SAND SUPPLIERS

MUELLER & SONS (BRAD)	612-581-9289
MUELLER & SONS (CORY)	612-581-1712
HASSAN SAND & GRAVEL	763-428-2393
BARTON SAND & GRAVEL (ST. PAUL)	763-425-4191
BARTON SAND & GRAVEL (MAPLE GROVE)	763-425-4191
MIDWEST ASPHALT	952-937-8033
SHAKOPEE GRAVEL	952-403-9986

SANDBAGS

NORTH STAR PACKAGING	612-249-0661
BERG BAG COMPANY	612-332-8845
NYP CORP	1-800-524-1052
SANDBAGS EXPRESS	1-844-237-9470
HOME DEPOT	763-509-9590
NORTHERN BAG (GRAND FORKS, ND)	1-800-551-6982
FARBER BAG & SUPPLY (PESOTA, IA)	1-563-583-6304
VALLEY BAG (EAST GRAND FORKS)	218-773-1189
SANDBAG WAREHOUSE (OXBOW, ND)	701-361-4815

SEWER PUMP OUT

SULLIVAN'S	952-473-4300

SEWER PUMP REPAIR

ELECTRIC PUMP	612-884-5394
QUALITY FLOW	612-944-9445

WATER MAIN THAWING

PORT-A-WELDING	763-428-7653
JOBS WELDING	763-428-2169

WELL CONTRACTORS

BERGESON CASWELL	763-479-3121
KEYS	651-646-7871
RENNER	763-427-6100
TRAUT	1-800-728-5091
TRAUT/EMERGENCY	320-251-5090

CONTROLS

IN CONTROL	763-783-9500

SEWER - VIDEO INSPECTION

INFRATECH	763-428-6488
VISU SEWER	763-252-0004

CHEMICALS

DIXIE PETRO CHEM	651-437-1333
HAWKINS	612-331-9100

WATER PARTS

FERGUSON	763-560-5200

	CORE & MAIN	952-937-9666
	PLANT AND FLANGED	763-792-3870
	DUSTIN	651-338-5759

SIREN REPAIR

	ELECTRIC SERVICE CO.	612-332-1465
	EMBEDDED SYSTEMS	612-757-3696

UTILITIES

	CENTERPOINT ENERGY/ LEAKS	612-321-5464
	CENTERPOINT ENERGY/LOCATE	612-321-5200
	XCEL ENERGY	800-895-1999
	QWEST RESIDENTIAL REPAIR	800-573-1311
	CENTURYLINK	800-954-1211
	GOPHER STATE ONE CALL	651-454-0002

WATERSHED DISTRICTS

	MINNEHAHA CREEK (MCWD)	952-471-0590
	NINE MILE CREEK	952-835-2078
	RILEY PURGATORY BLUFF CREEK	952-607-6512

CITIES

	DEEPHAVEN / CITY HALL	952-474-4755
	EDEN PRAIRIE / CITY HALL	952-949-8300
	EDEN PRAIRIE / UTILITIES	952-548-6373
	HOPKINS / CITY HALL	952-935-8474
	HOPKINS / UTILITIES	952-939-1382
	SAINT LOUIS PARK / CITY HALL	952-924-2500
	SAINT LOUIS PARK / UTILITIES	952-924-2562
	PLYMOUTH / CITY HALL	763-509-5000
	WAYZATA / CITY HALL	952-404-5360
	WAYZATA / UTILITIES	952-404-5363

RAILROADS (EMERGENCY)

	BURLINGTON NORTHERN & SANTA FE	
	(Line north of Minnehaha Creek)	800-832-5452
	TWIN CITIES & WESTERN RR	800-747-4919
	CANADIAN PACIFIC / SOO	800-716-9132
	(Shared line south of Excelsior Boulevard.)	

ALARMS / CARD ACCESS

	LIFE SAFETY SYSTEMS **(**FIRE ALARMS)	612-919-5069
	TRANS ALARM (KEYS)	952-894-1700
	PRO-TEC DESIGN (SECURITY/CARD ASSESS)	763-553-1477
	SUMMIT (SPRINKLERS)	651-251-1880
	SILENT KNIGHT (CENTRAL STATION)	952-881-0038

ARMER RADIOS

	ANCOM	952-808-7699

TREE SERVICE

	AAA SHADYWOOD TREE EXPERTS	952-933-0614

BARLETT	763-253-8733
FOUR SEASONS TREE SERVICE	952-938-7708
RAINBOW TREECARE	952-922-3810
*S & S TREE SPECIALISTS	651-451-8907
SAV A TREE SERVICE	952-881-3779
TREECARE, INC	612-719-8733

* CITY CONTRACTOR THROUGH MARCH 2019

PEST CONTROL

ADAMS	763-478-9810

WATER SOFTENERS

HILL COMPANY	952-925-1444

OTHER

MN POLLUTION CONTROL AGENCY FOR SPILLS

MINNESOTA STATE	651-649-5451
DUTY OFFICER	800-422-0798
MN PCA INFORMATION	651-296-6300

EMERGENCRY RESPONSE COMPANIES

BAY WEST COMPANIES	651-291-0456
BAY WEST 24 HR	800-279-0456
WEST CENTRAL ENVIROMENTAL	763-315-4818
WEST CENTRAL 24 HR	888-923-2778

Minimum Control Measure 4 & 5
Construction Site Erosion and Sediment Control
Post-Construction Storm Water Management

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APPENDICES

1. INTRODUCTION

1.1. Basis for the Standard Operating Procedures (SOPs)

In August 1, 2013, the Minnesota Pollution Control Agency issued a National Pollutant Discharge Elimination System (NPDES) General Permit (GP) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). The MS4 GP requires the City of Minnetonka to develop written procedures for the purpose of eliminating pollutants associated with construction activity and due to new development and redevelopment on projects with land disturbance of greater than or equal to once acre, including projects that are less than one acre that are part of a common plan of development or sale.

This manual assists the City in meeting these storm water regulations by incorporating guidance on the following:

- Plan review
- Training
- Inspections
- Long-term Operation and Maintenance

1.2. Objectives of the SOPs

This manual is intended to provide guidance on Construction Site Erosion and Sediment Control (MCM 4) and Post-Construction Storm Water Management (MCM 5):

- Provide guidance regarding plan review procedures.
- Provide guidance for prioritizing where construction site inspections may need to occur on a more frequent basis.
- Provide guidance on what to look for during construction inspections.
- Provide guidance on what type of activities will require storm water management BMPs.
- Provide guidance regarding the construction of post-construction storm water BMPs to help ensure their longevity.
- Provide guidance on how to enforce non-compliant construction sites.
- Provide guidance on proper procedures for long-term operation and maintenance of public and private BMPs.

2. PLAN REVIEW AND APPROVAL PROCESS

2.1. Plan Review

Activities and Definition

Plans that are submitted to the city for approval will have a review process to guarantee that erosion and sediment control standards and storm water management requirements and standards are being met.

Preparation

a. Documents to review:
    a. City ordinances Chapter 3. Zoning Regulations, Section 300.28. Performance Standards, Subdivisions. 15-20, City of Minnetonka's Water Resources Management Plan (WRMP) Goals and Policies (Chapter 2), and the Design Guidelines and Standards (Appendix A), and
    b. MPCA Construction General Permit, and the MS4 post-construction storm water standards.
b. Reviews of submitted plans, will utilize the Plan Review Protocol (Appendix A) to ensure accuracy.

Process

a. Planning staff will coordinate review of permit applications.
b. Plan Review Protocols (Appendix A) will be used by Planning, Engineering and Natural Resources staff to ensure comprehensive review of submitted plans.
c. The city will forward permit applications to the Minnehaha Creek, Nine Mile Creek, and Riley Purgatory Bluff Watershed Districts and the Bassett Creek Watershed Management Commission as a courtesy for their review and enforcement of the WMO rules.
d. A Permit Tracking System will be developed that integrates construction site storm water runoff review and permanent storm water BMP inspection documents into an electronic permit tracking program. This system would include a map of all public and private storm water BMPs.

Follow-up

The city will contact the applicant with all applicable comments. A permit application cannot be approved without all required departments and staff signing off on the application. The city has 15 business days to act on a building permit and 60 to 120 days to make a final decision on a development or redevelopment review unless waived by the applicant.

Documentation

a. Keep logs of number of plan reviews per calendar year.
b. Copies of site plans, sediment and erosion control plans and proposed storm water management BMPs will be kept on file for the city's inspectors.
c. A log of all maintenance agreements that get filed against a property along with a map of their BMP locations will be kept in a database.

2.2. Training

Activities and Definition

Training of staff is important so that they are aware of the importance of good erosion and sediment control practices as well as techniques regarding the proper installation of post-construction storm water BMPs. This includes knowledge in installation and inspection techniques as well as record keeping and maintenance activities. It is important to be able to recognize deficiencies in BMPs on construction sites. Inspection staff will be responsible for the tracking and enforcing permit requirements.

Employees responsible for inspections will receive appropriate training. Public Works, Building Inspectors and other field staff are trained to look for violations.

2.3. Inspections

Activities and Definition

Construction site inspections will determine compliance with the city's regulatory mechanism(s).

Preparation

a. Identify priority sites for inspection based on topography, soil characteristics, type of receiving water, stage of construction, compliance history, weather conditions, or other local characteristics and issues. The city inspects active construction sites at least monthly with more frequent inspections as needed due to proximity to sensitive natural resources, during extreme weather conditions or when citizen complaints are received.

b. Ensure inspection staff have proper training pertaining to Erosion and Sediment Control techniques and Post-Construction Storm Water BMPs. Currently, the City employs a qualified erosion control inspector that is certified as a Site

Manager to inspect all private construction sites. In addition, all construction managers working on public city projects are certified as Site Managers.

Process

a. Identify sites that require an erosion and sediment control inspection.
b. Perform inspection using the Site Inspection Protocol (Appendix B).
c. Document construction activities and follow up with site owner/permitee about findings from inspection. If feasible, prior to leaving the site, talk to the responsible person to ensure corrections can be made in a timely fashion.
d. Perform a follow-up inspection of site if deficiencies are found during initial inspection. Ensure that correction items have been completed.
e. Failure to comply with the permit requirements may require initiating enforcement action as described in the City's Enforcement Response Procedures (ERPs) in Appendix D.
f. Develop a map of all private storm water BMPs and a long-term inspection and maintenance schedule.

Documentation

a. Keep logs of number of inspections per site.
b. Keep records of inspection reports.
c. Keep records of escalation of penalties as outlined in the ERP.
d. Permanent records are retained per the city's record retention schedule.

2.4. City Projects - Erosion and Sediment Control BMPs

Activities and Definition

City projects that will disturb any amount of soil will use proper erosion and sediment control BMPs.

Preparation

a. Ensure extra BMPs are available for city projects including: inlet protection, perimeter control, temporary and permanent stabilization methods.
b. Ensure staff has proper training pertaining to Erosion and Sediment Control techniques.

Process

a. Construction projects that have the potential to impact the MS4 system or any natural resource will have BMPs available prior to construction activity.
b. Install down gradient perimeter control where needed on the site.
c. Block adjacent inlets and outlets, if necessary, to prevent sediment and debris from discharging into the storm sewer.
d. Stabilize all exposed soil areas upon completion of work. If work is not complete, temporary stabilization methods will be used.
e. After work is complete, clean out any sediment that might have entered the MS4 system.
f. Encourage use of structural and non-structural BMPs, structural or hard engineering techniques and bio-engineering.

Documentation

a. Keep logs showing the BMPs were inspected and properly maintained during the active construction period until the period where final stabilization has been achieved.
b. Sites should be inspected at least monthly or after a rainfall event greater than 0.5 inches in 24 hours where the soil disturbance is one acre or greater.
c. If applicable, record the number of catch basins cleaned and the area they were cleaned in. Keep any notes or comments of any problems.
d. If applicable, document the final location of where the material was disposed and any paperwork received from the disposal location.

2.5. Sediment and Erosion Control for Private Projects

Activities and Definition

Private projects that require a building or grading permit will use proper erosion and sediment control BMPs. Depending on the proposed improvements, these sites may also be required to install BMPs for post-construction storm water management. Natural Resources staff will be responsible for inspecting building and grading permit activities that require a sediment and erosion control plan and for inspecting sites that require a state NPDES permit.

The City of Minnetonka requires an erosion control plan for the following activities:

- All land disturbing activities greater than 5,000 square feet or 50 cubic yards.
- Excavation, grading, filling, or other land-disturbing activity that exposes soil in or on any steep slope, wetland, floodplain, or shoreland.
- Preliminary plat, site plan review, lot division, or as part of an application for a building permit that involves any amount of land-disturbing activity.

The Minnehaha Creek, Nine Mile Creek, and Riley Purgatory Bluff Creek Watershed Districts require an erosion control permit for the following activities:

- ≥ 5,000 sq. ft. disturbance
- ≥ 50 c.y. grading, excavation, filling or storing of soil or earth material

The Bassett Creek Water Management Commission requires an erosion control permit for the following activities:

- ≥ 200 cubic yards of cut or fill
- ≥ 10,000 sq. ft. grading disturbance for development or redevelopment

All regulating authorities have staff that actively inspects construction sites throughout the entire district. The City will also want to oversee the installation of BMPs for post-construction storm water management.

Process

Any private projects that are within the city limits will be inspected by a qualified employee. Inspections will occur at a frequency that is commensurate of the activities taking place. The field inspector should use the Site Inspection Protocol document for guidance (Appendix B). Using an inspection protocol for inspections will create consistency among all inspectors. Encourage use of structural and non-structural BMPs, structural or hard engineering techniques and bio-engineering. Require installation of wet and dry storm water detention ponds when obligated by the MPCA's Construction Site GP when surface drainage discharges into receiving waters. For sites less than one acre, ponding will be as required by the city engineer.

Documentation

a. Keep logs of number of inspections per site.
b. Keep records of inspection reports and notices sent.
c. Keep records of escalation of penalties as outlined in the ERP.

2.6. Storm Water Management for Private Projects

Activities and Definition

Private projects that are a single family subdivision of three lots or greater or single family residential lot with disturbance of greater than 50 cubic yards or 5,000 square feet and are within 500 feet of a protected wetland or 300 feet of a creek or a non-single family residential property that is disturbing more than 50 cubic yards or 5,000

square feet will be required to provide storm water management per the city's Water Resources Management Plan (WRMP), Appendix A (Design Guidelines and Standards).

Process

All private projects in the city that trigger storm water management requirements will be reviewed by the Water Resources Engineer for compliance with the city's Storm Water Management Design Guidelines and Standards. Storm water management BMPs that provide volume control, runoff rate control and water quality treatment will be required to be implemented. A list of recommended BMPs can be found in the city's Water Resources Management Plan (WRMP), Appendix A (Design Guidelines and Standards).

Documentation

a. Keep a log of all projects or permits requiring storm water management BMPs.
b. Keep a record of where private BMPs are installed and if they require maintenance agreements to be filed against the property.
c. Require final inspection of all storm water management BMPs before issuance of a certificate of occupancy or release of final escrow funds to ensure that they were installed correctly and function as designed.

2.7. Private Projects - Long-Term Operation and Maintenance

Activities and Definition

BMPs installed as part of single family developments that are three lots or greater or for a project on a non-single family residential property for the purpose of meeting storm water management requirements will have maintenance agreements drafted and recorded against the property with Hennepin County.

Preparation

a. Develop an inspection form for owners of post-construction storm water BMPs.
b. Utilize a storm water facility maintenance agreement or easement template (Appendix D).

Process

a. Require storm water facility maintenance agreements be filed against any property where installation of a storm water management BMP was required. A template agreement is available in Appendix D.

Documentation

a. Keep logs of all maintenance agreements that get filed along with their BMP locations.
b. Obtain as-built plans for all public and private post-construction storm water BMPs that are installed within the City.
c. Update the GIS system to include all public and private storm sewer and post-construction storm water BMPs installed within the City.
d. Once during each permit cycle inspect all privately installed BMPs.

Appendices

Appendix A: Protocol for Site Plan Review
Appendix B: Protocol for Site Inspections
Appendix C: Storm Water Facility Maintenance Agreement Template
Appendix D: Enforcement Response Procedures (ERPs)

Appendix A

City of Minnetonka Protocol for Site Plan Review

The following outlines the protocol and standards used to conduct the review of site plans submitted for site plan applications, building, and grading permits prior to issuance of the permit. Please also refer to the site inspection protocol for additional city standards.

Ordinances and other Regulatory Mechanisms

- Zoning Districts – 300.09 through 300.20
- Wetland – 300.23
- Floodplain – 300.24
- Shoreland – 300.25
- Site and Building Plan Review– 300.27
- Grading – 300.28.15-18
- Tree Protection – 300.28.19
- Steep Slope – 300.28.20
- Public Nuisance - 845
- Driveway – 1105
- Water Resources Management Plan (WRMP)
- Engineering Design Standards and Specifications

Development Plan Review

Development projects are generally received by the Planning Division. A planner is assigned to the project and the Project plans are sent to Community Development, Engineering, Finance, Fire, Natural Resources, Utility, Assessing, Legal, and Police department staff. Comments on the project are routed to the project planner to be sent to the applicant.

Projects are approved the by the Planning Commission and the City Council. As part of the project's approval, resolutions are passed outlining project-specific requirements.

Permit Routing

Permits are generally received at the permits window of city hall and routed electronically to the building inspectors, planning division, natural resources division, engineering department, and fire department (as applicable). The Engineering Department and Natural Resources Division are generally routed on all building permits that involve the creation or expansion of a structure or significant earth disturbance (e.g. - replacement of a retaining wall) as noted on the permit application. All grading permits are routed to Planning, Natural Resources, and Engineering.

Permits are entered by the permit techs into the Permits and Inspection Management System (PIMS). If there are requirements that need to be completed before the permit is issued, the reviewer needs to place an immediate HOLD ("DO NOT ISSUE") in the "Comments" section to

prevent the permit from being issued (e.g. - 11/20/10 NR, AS – waiting for silt fence_DO NOT ISSUE). The reviewer will "sign off" in PIMS when the specific requirements have been met or the permit is OK to issue (e.g. - 11/20/10 NR, AS –OK). The permit will not be issued until all applicable departments have approved the permit and the permit techs have called the applicant to pick up the permit.

Permit Types

Most permits can be categorized into 4 general types for general site plan review purposes.

1. Post footings (decks, porches, etc.)
2. Additions; residential and other (commercial, industrial, etc) including detached garages, sheds, pools, retaining walls, etc.
3. New construction; residential and other including demo/rebuild.
4. Grading
    a. Landscaping, filling, grading, etc. on a single lot
    b. Subdivisions (installation of infrastructure, mass grading, etc.)
    c. Commercial

These categories are for site plan review only and do not necessarily reflect the actual permit types used by the city. The plan reviewer should be familiar with all types and be aware that a project site may involve more than one permit type either concurrently or phased over time. The City of Minnetonka requires that adequate erosion controls and tree protection be installed and inspected *before* a building or grading permit is issued. The city may require wetland buffers placed in conservation easement on some sites. Sites may also be required to meet the city's storm water requirements per the Water Resources Management Plan.

Post Footings

Permits on post footings generally involve little earth disturbance and typically do not require the installation of erosion controls prior to issuance of the permit. However, the reviewer should be clear on the number and extent of the post footings to be augured as well as potential earth disturbance related to the proposed structure (retaining walls, patios, mass excavation of the post holes, extensive landscaping, etc.). If there are water resources near the project, a site visit likely will be needed.

1. Examine the plans to determine the location and type of construction proposed (deck, porch, etc.). Be certain to determine if the structure will be enclosed or covered. Attempt to ascertain if there will be additional impacts or work related to the proposed structure (attached or referenced landscape plans, retaining wall shown, "future patio to be completed by owner," etc.).
    a. If there appears to be other work indicated, check for other permits, contact the applicant, or visit the site as appropriate.
    b. If you believe erosion controls or tree protection is needed prior to issuance of the permit, also use the review process for "Additions."

2. Check for any conditions of approval for a previous subdivision, variance, SBP, CUP, etc. by checking the Planning Database.
3. Review aerial of property in LOGISmap using all the following layers:
    a. Topography
    b. Wetland (City and NWI)
    c. Shoreland (and Waters)
    d. Floodplain
    e. Public Easements
    f. Land Preservation Easements
    g. Natural Communities (likely will not apply in most instances)
    h. Contours
4. Zoning Setbacks
    a. Property Line Setbacks – Required setbacks vary by zoning classification. In the case of PUD or PID zoning, required setbacks are outlined in the development approvals.
        i. Determine the zoning classification of the subject property. If it is non-PUD or non-PID, refer to the setback requirements as outlined in the pertinent zoning ordinance. If the property is zoned PUD or PID, refer to setbacks outlined in the development approval granted by the city council; this approval is generally in the form of an ordinance
    b. Wetland Setbacks - In general, 35 feet for most wetlands; 60 feet for preserve wetlands (10 foot reduction for uncovered/unenclosed decks, patios, or cantilevered building areas) but check city code for pools, retaining walls, etc.
        i. If there appears to be wetland or potential areas of wetland (shown as floodplain, low-lying areas of topo, pooling water on aerial, etc.), determine if the proposed structure is close to the required setback of the nearest *conservative* estimate of a potential wetland boundary.
    c. Floodplain – Floodplain elevations are based on approved FEMA maps and the city's WRMP.
        i. Horizontal setbacks are measured from the 100-year flood elevation on the FEMA maps or the city's WRMP.
        ii. Low Floor – Minimum low floors are measured from the 100-year flood elevation or from the open channel overflow in the case of a landlocked basin.
    d. Shoreland

i. Setbacks – In general, 50 feet for General Lakes or Tributary Creeks and 75 feet for Recreational Lakes. However, legal lots of record existing as of February 12, 1966, and "Water-Oriented Structures" may have reduced setbacks. Also, be certain to check for setback from "Top of Bluff" if applicable.
    1. Look up OHWL elevation for lakes or examine aerial to approximate "top of bank" (TOB) for creeks.
ii. Impervious Surface – In general, 30% maximum within the first 150 feet of the OWHL or TOB. Outside the first 150 feet, 75% maximum within the Shoreland District
iii. Shoreland standards regarding grading and removal of vegetation (see city ordinance if applicable)
iv. Shore and Bluff Impact Zones (and setbacks from Top of Bluff if applicable)
v. Review activities proposed over 12% grade (measured across 50 feet).

5. Public Easements – Determine if the proposed construction will be located within any platted or otherwise documented easements. If yes then determine if the encroachment into the easement creates a negative impact to the city's public use of the easement.
    a. If there is a negative impact – don't allow the encroachment
    b. If there is not a negative impact – allow the encroachment but require an encroachment agreement be filed against the property.
6. Land Preservation Easements – Look for records of conservation, tree preservation, or other protective easements *granted to the city* on the property that may prevent the proposed construction. Please note that these often are not shown on the survey. Check the document text carefully as MOST (almost all) do not allow structures or grading. You may need to refer the applicant to the appropriate watershed district if you believe there may be additional buffers or easements required for which the city may not have knowledge.
7. Steep Slope – check for steep slopes (25 foot rise, 20% grade, 100 foot width) and review to see if proposal is in compliance with city code requirements.
8. Check for any other Impervious Surface requirements (e.g. - PUD).

Additions

See items 1-8 above before proceeding to item 9 below.

9. Determine the extent and type of proposed activity (excavation for footings, foundation type, grading for slab, retaining walls, etc.).

a. Review foundation and cross-section plans carefully (consider depth of excavation, crawl spaces, foundation type, footing locations, etc.).
b. Review any grading, drainage, or natural resource protection plans submitted by the applicant.
c. Consider stockpiling and equipment access locations/routes.
d. Consider potential issues/violations if the applicant decides to spread the excavated soils.

10. Determine the impacts to adjacent trees on the property.
    a. Review any plans showing proposed tree removal, grading, equipment access, or other potential impacts.
    b. Visit the site to review the tree inventory (if provided) or to locate adjacent trees that may be impacted.
    c. Ask the owner (if present after you ring the doorbell) if there will be any tree removal.
11. Review for any potential grading or drainage issues
    a. Try to maintain existing natural drainage patterns.
    b. Drainage generally should not be re-directed to adjacent properties.
    c. Drainage must be controlled to prevent erosion (e.g. – outlets for pipes and draintile, etc.).
    d. Maximum created slope cannot exceed 3:1 unless it complies with the city's Grading Ordinance [Section 300.28_17]
12. Red-line a plan indicating the city's natural resource requirements for the permit as per the standards below:
    a. Erosion Control: silt fence, inlet protection and tree protection fencing will be required.
    b. Land preservation easements
        i. Need to be clearly called out on the survey
        ii. Confirm the areas follow the filed documents
        iii. Check to make certain no proposed work will be occurring in the areas (unless permitted under the terms of the easement). Check proposed grades.
        iv. Summarize terms of easement in e-mail to applicant.
    c. Water Resource Protection
        i. Ensure silt fence or tree protection fencing is adequate to prevent erosion of sediment OR activity within protected water resource or within a required buffer (see above)

13. Send requirements to applicant
    a. Usually e-mail and then follow-up with a phone call unless you need (or prefer) to speak with applicant first.
    b. Items to clarify BEFORE the building permit is issued:
        i. Clarify any setback or impervious surface issues, violations, missing easements, tree removal, or other site or survey issues that require correction or clarification.
        ii. Call out and clarify the requirements shown on the red-lines
14. Put HOLD in PIMS so that permit is not issued until all requirements have been completed and inspected.

New Construction including demo/rebuild

See items 1-14 above before proceeding to item 15 below.

BEFORE building permit is issued (in addition to items above for "Additions")

15. Refer to the development approval, generally in the form of an ordinance or resolution, to determine if any legal documents, financial securities, or other items must be submitted prior to release of the permit. If such are required, ensure they have been submitted.
16. Require construction management plan (CMP) template be completed and signed.
17. Escrow deposits with signed receipt may be required for erosion control maintenance on some sites as part of a condition of approval or for sites with significant potential for erosion issues or impacts to water resources.
18. Need comprehensive tree inventory, denoting trees to be removed, protected and/or mitigated.
19. Need grading plan with 2-foot contours, direction of drainage and spot elevations per city survey requirements.
20. Storm water management - may be required by the city's engineering department. This includes incorporating techniques to infiltrate storm water runoff from all hard surfaces per the city's Storm Water Management Design Guidelines and Standards and WRMP.
    a. Triggers:
        i. Single Family Homes – Disturbance of greater than 50 cubic yards or 5,000 square feet and property is located within 500 feet of a protected water or wetland or within 300 feet of a creek.
        ii. Subdivision of 3 lots or greater or non-single family residential lot disturbing greater than 50 cubic yards or 5,000 square feet.
    b. Maintenance Agreements/Easements – may be required to ensure continuing function of storm water BMPs.

21. Wetland buffer required in conservation easement (if wetland present)
    a. Wetland delineation required
    b. Applicants surveyor must prepare exhibits and update survey
22. Site Utilities – verify sewer and water connections are of adequate depth and meet the city's requirements.
23. Driveway – all new driveways that enter public right-of-way require a driveway permit from the city's Engineering Department.

BEFORE Certificate of Occupancy (CO)

24. Site must be in general compliance
25. Groundcover must be fully established and any grading or drainage must comply with the approvals and city code
26. The drive must be paved the street to the garage and meet engineering and fire code requirements (check with engineering)
27. Storm water requirements (compost amendment, rain gardens, infiltration trenches, etc.) must be completed and inspected (may need to confirm function as well)
28. Tree Mitigation must be installed if required
29. Verify no permanent structures are present within easements or the public right-of-way.
30. Wetland Buffer (if applicable) must be fully established with native vegetation (hold money for seeding)
31. Any other requirements related to the permit (as applicable) must be completed and inspected (required landscaping, outstanding violations, pervious pavement, etc.)

Require escrow and signed receipt for items above if not completed before CO.

Grading

See items 1-31 above before proceeding to item 31 below.

32. Refer to the development approval, generally in the form of an ordinance or resolution, to determine if any legal documents, financial securities, or other items must be submitted prior to release of the grading permit. If such are required, ensure they have been submitted.
33. General Grading Permits – grading, filling, or landscaping on individual lots and not generally related to a project approval per PC or CC
    a. Identify structures (retaining walls, patios, pavement, sheds, detached decks, etc.) that may not meet required setbacks from floodplain, wetlands, lakes, or creeks or are located within public easements.
    b. Check for potential floodplain, wetland, or other water resource impacts.

34. Floodplain alteration – Review triggers for administrative versus council approval. There can be no net fill of floodplain and record drawings are required at the end of construction.

BEFORE grading permit is issued:

35. Check conditions of approval as well as compare submitted plans with any approved plans.
36. Review SWPPP plan sheet (concrete washout, seed mixes, inlet protection devices, rock entrances, etc.).
37. Some larger or more complex sites may require EITHER proof that a qualified erosion control inspector has been contracted OR escrow submitted to allow the city to hire a private inspector for weekly inspection reports.
38. City Utilities
    a. Ensure that all utility materials, installation, and connections to existing public utility systems meet all city standards and requirements.
    b. Ensure receipt of all required permits (MCES, MPCA, MDH, etc.).

PLEASE NOTE THAT THESE ARE GENERAL STANDARDS AND MAY NEED TO BE ADJUSTED FOR SPECIFIC SITES/PROJECTS.

DURING construction

39. See Protocol for Site Inspections

PRIOR to city acceptance of final project

40. Storm water requirements - must be proven to function to city standards through multiple rain events before acceptance and release of an LOC.
41. Groundcover must be FULLY established and the site in FULL compliance prior to the full release of the Grading/Erosion LOC (or escrow).
42. Landscaping must be in general conformance with the approved plan. Tree mitigation must comply with the city's tree mitigation requirements and must be in general conformance with the approved plan
43. For release of Utility LOC the following items must be completed and signed off by the city's construction manager
    a. Onsite utility testing
    b. Walk through and punch-list items
    c. Bituminous wear course
    d. Submittal of as-built drawings and utility service tie-cards

Appendix B

City of Minnetonka Protocol for Site Inspections
Natural Resource Protection

The City of Minnetonka requires that adequate erosion controls and tree protection be installed and inspected *before* a building or grading permit is issued. The following outlines the protocol and standards used to conduct the initial inspection as well as continued routine inspections through the project until completion. Please also refer to the site plan review protocol for additional city standards.

Equipment

- Permit and plan set
- Measuring tape (reel)
- DBH tape
- Safety vest
- Minnetonka ID (personal, vehicle as applicable)
- Hard hat (as applicable)
- Cell phone
- Soil auger (for wetland as applicable)

Before or Upon Entering the Site

- Put on safety vest and hard hat (as applicable) BEFORE entering site.
- Familiarize yourself with the site plans and approvals as well as history of issues at the site BEFORE entering the property. Be certain to review specific list of permit requirements for the site as well as past inspection results and required corrections.
- Make contractor or property owner aware of your presence
    - Notify site super you are on site (if present). Check job trailer if present for site super.
    - If no construction workers present at the site, knock on door or ring doorbell to notify the owner you are on their property before proceeding around the home
        - If no one answers, proceed with inspection
        - If owner answers, indicate you are from the City of Minnetonka and explain you are conducting an inspection on their property.
        - If owner indicates they do not want you on their property, leave and contact your supervisor (leave contact information and obtain theirs if possible)

Inspection Scheduling

- Sites should be inspected routinely throughout construction until groundcover has been fully established, all temporary erosion controls are removed and the site is in compliance.
- Inspections should generally follow the inspection standards outlined in **Checklist A.**
- Inspections generally are to be conducted by map sections but the inspector may need to revisit a site or check a site outside the current section due to a complaint or other issues.
- Sites with known issues or potential issues may be inspected more frequently (or prioritized after large rain events) to ensure the site is maintained in compliance.
- Sites should be inspected in a timely manner following receipt of a complaint and given priority over routine inspections. The speed of the response should be gauged by the severity of the issue. Complaints must be kept confidential and the identity of the individual making the complaint may NOT be released (see below).

<u>Notification of Corrections Needed Following Inspection</u>

- The contractor (or property owner as applicable) generally should be contacted as soon as possible but no later than the end of the following business day regarding any site corrections needed unless additional time is needed to determine the extent of the corrections needed.
- Notification may be made by phone, but violations or more detailed corrections should be sent by e-mail as well. Severe violations may require notice on city letterhead by certified mail.
- Inspection records should be kept with the Natural Resources permit file and must include the date and inspector's initials. The inspection record should clearly note any issues on the site and the corrections needed as well as who and how the applicant was contacted. Any written correspondence should be kept with the NR permit file.
- Confidential correspondence (e.g. – complaints, concerns, or questions by neighbor or others who are not part of the project) should be kept on a separate page, noted as "CONFIDENTIAL" and highlighted in green. The inspector may NOT release the identity of individuals with complaints, concerns, or questions regarding the project (e.g. – neighbors).
- Site corrections should generally be completed and re-inspected within seven days of notification unless an extended deadline has been agreed upon or if items do not require correction within that time frame. Items requiring more immediate

attention may be given shorter deadlines at the discretion of the inspector. Tracking into the roadway should generally be cleaned up by the end of each day and more often as needed (e.g.- during heavy hauling activities)

- The city may post a "stop work" order, issue fines, use escrow deposits or letters of credit, conduct nuisance abatement, or take other action in accordance with city ordinance to correct site violations or complete site work that is not in compliance with city approvals. [Consult a supervisor before taking any of actions noted in this bullet.]

Certificates of Occupancy

- A Certificate of Occupancy (CO) is generally required for all new construction (homes, office buildings, etc.).
- The building department generally notifies the NR Division once a final inspection has been scheduled for a new home. Most commercial projects require deposits or letters of credit prior to issuance of the permit; thus, NR notification of final inspection for those sites is generally not needed.
- Once notified by the building department (or contacted by the applicant), an inspection of the site should be made as soon as possible following the standards listed below in **Checklist A**. If the date of the final building inspection is known, the inspection should be made before that date. If you believe the inspection will be delayed, you may need to contact the applicant to find out how soon they are looking for the CO.
- The engineering department (or other applicable departments such as Fire or Planning) should be notified immediately by the NR Division as well to confirm any other requirements or deposit amounts needed. Encroachment agreements or other documentation may be needed as well. Also, check the comments and warning sections in PIMS for potential issues remaining before CO.
- Prior to issuance of the CO, the site should generally be in compliance. Any remaining items (refer to the e-mail sent to the applicant before the permit was issued) need to be completed and inspected prior to issuance of the CO or an escrow deposit submitted along with a signed receipt indicating the city may use the deposit to complete the work if not completed by the applicant. Site corrections or violations generally should be completed BEFORE the CO is issued (a deposit may only be accepted at the discretion of the inspector for violations or site corrections, but see a supervisor first).

- Call AND e-mail the applicant a list of the remaining requirements needed before CO along with any required deposit amount and a copy of the receipt that will need to be signed.
- Immediately notify the building department (forward the e-mail) so that they can require the appropriate deposit amount or delay the CO if needed.

REFER to Checklist A below for Site Inspection Standards

Site Inspection Standards - CHECKLIST A

Offsite

1. Pavement (public street, private road, public sidewalk, shared drive)
    a. Tracking or washout of materials onto the pavement
    b. Evidence of tracking or washout that has been recently been removed (look for causes and well as additional resulting issues)
    c. Concrete wash, paint wash, material spills, etc.
    d. Material storage in street
2. Inlets
    a. Inlet protection
        i. Number of devices
        ii. Correct type of device
        iii. Adequately maintained (less than 1/3 full)
    b. Sediment in storm sewer system
        i. Document (photo) presence of materials that can be attributed to the site
        ii. Check areas down flow (sumps, structures, outlets, swales, ditches) for potential discharge as well as water resources
    c. Water resources
        i. Accumulated materials, debris, or discoloration in adjacent lakes, creeks, or wetland
        ii. Potential discharges into ponding (wet or infiltration) and floodplain
3. Adjacent properties (public or private)
    a. Sediment or other discharge
    b. Unauthorized activity or other impacts on adjacent properties
4. Dust control (if applicable)
5. Debris (wind-blown or washed materials such as house wrap, shingles, concrete sacks, food wrappers, etc.)

Onsite

1. Rock entrance
    a. Present (if needed – generally needed for new homes, commercial sites, subdivisions, or other sites with significant potential tracking)
    b. Adequate maintenance (filled with sediment, depressed into underlying soils)
    c. Secondary/temporary entrances requiring rock or to be closed off with erosion control log or silt fence

   d. Site entrance visible or adequately marked/fenced to prevent secondary accesses (large sites)
2. Existing pavement (drives, parking lots, etc.) – Either clean or adequately contained
3. Inlet protection
   a. Devices (number, type, and maintenance – 1/3 full)
   b. Adequate protection for domed ("bee-hive") covers as well as open culvert ends or other potential inlets (e.g.- paved swales) where drainage is directed
4. Perimeter controls (full perimeter required for most new construction and demo/rebuild projects; partial required where activity is limited to a small portion of the site such as additions, pools, parking lot extensions, etc.)
   a. Silt fence
      i. Adequately covers downslope and sideslope of all exposed soil
      ii. Correct type or quantity for application (heavy duty, steel post, double-row)
      iii. Installed correctly (fabric tight, posts on the outside, buried/trenched/sliced 4 to 6 inches deep)
      iv. Maintained (no more than 1/3 full)
   b. Erosion control log – generally not accepted as a substitute for silt fence, but may be used for temporary repairs, areas with minimal erosion potential and where a construction limit is not needed or has already been provided with other fencing, where access is needed and permitted, or as a supplement to other devices/techniques
      i. Adequate for use (size, location, quantity)
      ii. Installed correctly (lapped, ground contact)
      iii. Condition (ruptured, flattened)
      iv. Maintained (removal of sediment or replace – 1/3 full)
   c. Tree protection fencing – Silt fence may be used for tree protection in most instances if it is installed adequately so that the fabric does not tear loose in strong winds. In some instances, silt and tree protection fencing may be required in the same location (increased potential for tree impacts or increased protection needed). Heavy-duty tree protection fencing (four-foot tall chain-link on steel posts with construction limits signs) may be required adjacent to conservation or other protective easements, for trees or other areas requiring additional protection due to limited space or due to the level of protection required (be certain to check any conditions of approval)

i. Adequately located to minimize impacts within the critical root zone (CRZ; extends 1.5 feet for each inch of trunk diameter)
ii. Adequate materials for application (see above)
iii. Maintained (on ground, posts missing, removed)

d. Water resource protection
i. Silt fence or tree protection fencing adequate to prevent erosion of sediment or activity within protected water resource or within a required buffer (see above)
ii. Fencing located at a distance from the protected water resource when possible to avoid immediate impact if device fails (e.g. - silt fence generally should not be installed at the wetland edge even if a buffer is not required)

5. Removal of Accumulated Sediment – See a supervisor regarding significant issues/violations. Erosion controls must be adequately repaired or installed to prevent recurrence.
a. Adjacent property – sediment must be removed adequately
b. Water resource (see a supervisor for significant deposits)
i. Document (photograph when possible) significant deposits including vegetation present and adjacent areas to determine level of restoration needed
ii. Hand removal required; equipment may NOT be used within a wetland, lake, or creek
iii. Remove sediment to level of pre-existing hydric soil in wetland areas (contractor should not remove or disturb hydric soils)
iv. May require a site meeting with the contractor prior to or during removal
v. Vegetation must be adequately restored
c. Storm sewer system – sediment must be removed; it may NOT be flushed
d. Floodplain or ponding – remove to pre-existing ground level
e. Infiltration basins – remove to previous ground level and restore function if impaired by sediment

6. Stockpiles
a. Location adequate (NOT in street, water resource, drainage way, or protected area)
b. Covered or otherwise stabilized if left unworked more than 14 days unless no run-off from them is directed toward a watercourse, tree protection area, or the site perimeter

7. Slopes
    a. Permanently created slopes may not exceed 3:1 unless they meet the standards of city grading ordinance [Section 300.28_17(18).]
    b. If steeper than 3:1, must be covered or otherwise stabilized if left unworked more than 14 days unless no run-off from them is directed toward a watercourse, tree protection area, or the site perimeter
8. Concrete washout (if applicable)
    a. Adequately constructed
    b. Maintained
    c. Proper use
9. Water resources
    a. Presence of unauthorized/illegal activities (dumping, equipment access, excavation, tree removal, etc.)
    b. Any permitted work (filling, alteration, restoration) must comply with the permit requirements and applicable ordinances. PLEASE NOTE that wetland, shoreland, or floodplain alteration approvals are rare; thus, most activities in a water resource or floodplain are likely violations.
10. Infiltration basins
    a. The location of proposed basins or existing basins must be adequately protected (fenced) to prevent compaction by equipment or materials.
    b. Erosion controls must be sufficient to prevent siltation and impairment of the basins function (ability to absorb water)
    c. Areas that drain to the basin must be adequately stabilized
11. Conservation Easements
    a. Generally no construction, grading, tree removal, equipment access, landscaping, or other similar activities are permitted within most conservation easements. Check the terms of the easement for specifics and consult a supervisor for details or for clarity.
    b. Immediately consult a supervisor regarding any activity apparent within a conservation easement.
12. Conditions of Approval
    a. Refer to the original e-mail sent to the applicant (owner or contractor) regarding any specific conditions of approval for the property (grading/drainage, tree removal/mitigation, storm water requirements, impervious surface, pre-existing violations, etc. Check any planning commission or council approvals as applicable for details and consult a supervisor for clarity or if violations are present.

b. Landscaping is often required for commercial sites and subdivisions. Consult a supervisor regarding landscaping questions or to obtain a copy of the approved landscape plan for the site before checking the final landscaping.

13. If there are remaining questions regarding Utilities, Grading, Drainage, Storm Water Management, or Water Resources contact the Engineering Department.

Appendix C

Rain Garden Easement Agreement

THIS EASEMENT is given on _____, 2016 by _____ _____, a _____ under the laws of _____, ("Owner"), to City of Minnetonka, a Minnesota municipal corporation, ("City"), in accordance with the following:

1. Owner is the fee owner of certain real property located in the City of Minnetonka, County of Hennepin, and State of Minnesota, legally described on attached Exhibit A (the Property").

2 Grant of Easement. For valuable consideration, Owner conveys to the City an easement for drainage and utility purposes ("Easement") over, under, and across the real property in Hennepin County, Minnesota, legally described on attached Exhibit B (the "Easement Area") and depicted on attached Exhibit C.

3. Scope of Easement Rights. The Easement includes the right of the City, its contractors, employees, agents and assigns to:

a. locate, construct, reconstruct, operate, maintain, inspect, alter and repair within the Easement Area storm sewer, sanitary sewer and water facilities, ground surface drainage ways, or other public facilities or improvements of any type that are not inconsistent with drainage and utility use; and

b. cut, trim, or remove from the Easement Area trees, shrubs, or other vegetation that in the City's judgment unreasonably interfere with the City's easement or facilities.

4. Owner's Obligations. In that portion of the Easement Area legally described on attached Exhibit D (the "Rain Garden"), the Owner must establish a rain garden and maintain it so that it is constructed and functions in accordance with the plans approved by, and on file with, the City. The required maintenance must comply at a minimum with the maintenance standards described below.

Maintenance Item	Frequency
A. Debris Cleanout	Monthly
B. Vegetation - Maintain at least 80% surface area coverage of plants approved per plan. - Removal of undesirable woody plants. - Removal of invasive plants, - Removal of dried, dead, diseased vegetation. - Re-mulch void areas.	Annual
C. Hydrocarbon Build-up - Eliminate hydrocarbon oil and grease build-up.	Monthly
D. Outlet and Overflow Spillway - Correct any erosion. - Remove any sediment build-up or blockage.	Annual

Annual inspections must be performed, and an annual report must be provided to the City of Minnetonka Engineering Department by October 1 of the same year as the inspection using the form attached as Exhibit D. These obligations are further subject to the following:

a. City may enter the Easement Area for the purposes of inspection and enforcement of the obligations of Owner under this Easement. If Owner fails to perform its obligations under this Easement, the City must provide written notice of default to Owner before taking any corrective action. If the failure continues for 30 days after the City's written notice, then the City may take whatever actions are necessary in order to fulfill the obligations of the Owner under this Easement. Owner must reimburse the City for the reasonable out-of-pocket costs incurred by the City for its corrective action within 30 days after receipt by Owner of a written demand from the City accompanied by reasonable documentation of the expenses. If Owner fails to reimburse the City within the 30-day period prescribed above, then the City may the City may recover its costs by assessing the amounts against the Property to be collected with property taxes. The Owner waives all rights that it might have to receive notice and a hearing or to contest these assessments. Further, City may enforce the terms of this Easement by any proceeding in law or in equity to restrain violation, to compel compliance, or to recover damages, including attorneys' fees and costs of the enforcement actions. The Owner is not be liable for the actions of any third party, other than its employees, agents, or contractors, that may violate the terms of this Easement unless the Owner, its employees, agents, or contractors had actual knowledge of the violation and failed to take reasonable action to stop the violation.

b. Failure to enforce any provision of this Easement upon a violation of it may not be deemed a waiver of the right to do so as to that or any subsequent violation.

c. Invalidation of any of the terms of this Easement will in no way affect any of the other terms, which will remain in full force and effect.

5. Duration of Easements. The Easement is permanent and remains in effect in perpetuity.

6. Warranty of Owner. The Owner warrants that it is the owner of a fee simple interest in the Property, that it has the right to grant the Easement, and that the Property is free and clear of any lien, encumbrance, easement, restriction, covenant or condition, except for those filed of record with the [County Recorder][Registrar of Titles] for Hennepin County, Minnesota.

7. Easement Runs with Land. The Easement runs with the land and is binding on the Owner, its heirs, successors and assigns.

8. Amendments. The Easement may not be amended without the written approval of the City.

IN WITNESS WHEREOF, the Owner has executed this instrument on the date first written above.

(NAME OF OWNER)

BY: _____
Its

STATE OF MINNESOTA)
) SS
COUNTY OF HENNEPIN)

The foregoing instrument was acknowledged before me this _____ day of _____, 2016 by _____, the _____ of _____, a _____ under the laws of _____, on behalf of the _____.

_____
Notary Public

DRAFTED BY:

[Insert name, address, phone of person/company that prepared this document.]

Exhibit A

Legal Description Property

Exhibit B

Legal Description of Easement

Exhibit C

Depiction of Easement

Exhibit D

Legal Description of Rain Garden

CONSENT

The undersigned Mortgagee of the real estate described in the attached instrument pursuant to the Mortgage recorded as Document No._____ in the office of the Hennepin County _____ _____ , hereby joins in and consents to all of the terms and provisions contained in the attached Easement. The undersigned Mortgagee further agrees that its interest in the property covered by the Mortgage is subject to this Easement and to all of the terms and provisions contained in it and agrees that if the Mortgagee forecloses its mortgage(s) on the property, or takes a deed in lieu of foreclosure, the Mortgagee will take title subject to the Easement.

BY: _____
Its

STATE OF _____)
) SS
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 2016 by _____, the of _____, a _____ under the laws of _____, on behalf of the _____.

_____
Notary Public

Stormwater Pond Easement Agreement

THIS EASEMENT is given on _____, 2016 by _____ _____, a _____ under the laws of _____, ("Owner"), to CITY OF MINNETONKA, a Minnesota municipal corporation, ("City"), in accordance with the following:

1. Owner is the fee owner of certain real property located in the City of Minnetonka, County of Hennepin, and State of Minnesota, legally described on attached Exhibit A (the Property").

2 Grant of Easement. For valuable consideration, Owner conveys to the City an easement for storm water ponding purposes ("Easement") over, under, and across the real property in Hennepin County, Minnesota, legally described on attached Exhibit B ("Easement Area") and depicted on attached Exhibit C (the "Storm Water Pond").

3. Scope of Easement Rights. The Easement includes the right of the City, its contractors, employees, agents and assigns to:

a. reasonable right of ingress and egress to perform the Owner's Obligations pursuant to paragraph 4 hereof;

b. locate, construct, reconstruct, operate, maintain, inspect, alter and repair within the Easement Area a storm sewer facility consisting of a storm water pond, ground surface drainage ways, ditches and storm sewer utility piping and structures, or other public facilities or improvements of any type that are not inconsistent with the intended use of this Easement Area; and

c. cut, trim, or remove from the Easement Area trees, shrubs, or other vegetation that in the City's judgment unreasonably interferes with the City's easement or facilities.

4. Owner's Obligations. A storm sewer facility will be constructed on a portion of the Easement Area, legally described on attached Exhibit B and depicted on attached Exhibit C. Owner agrees that it shall maintain the Storm Water Pond and any other required drainage improvements approved by the City. Maintenance must include at a minimum annual inspection, repair and removal of sediment from all sump storm sewer catch basins, the periodic removal of sedimentation at the base of the Storm Water Pond and any adjacent drainage ditches, retention of a vegetative cover within the ditches and Storm Water Pond, the removal of any blockage of a swale or culvert that may impede the drainage of the site and annual inspection of the Storm Water Pond and related storm sewer improvements, including flared end sections and outlet structures. If necessary, the work must include periodic removal of sedimentation, trash and vegetation from the Storm Water Pond to maintain original design, volumes and configurations

as approved by the City. Annual inspections must be performed, and an annual report must be provided to the City of Minnetonka Engineering Department by October 1 of the same year as the inspection using the form attached as Exhibit D. Any apparent erosion or failure of the Storm Water Pond must be corrected prior to submitting the annual report. These obligations are further subject to the following:

a. City may enter the Easement Area for the purposes of inspection and enforcement of the obligations of Owner under this Easement. If Owner fails to perform its obligations under this Easement, the City must provide written notice of default to Owner before taking any corrective action. If the failure continues for 30 days after the City's written notice, then the City may take whatever actions are necessary in order to fulfill the obligations of Owner under this Easement. Owner must reimburse the City for the reasonable out-of-pocket costs incurred by the City for its corrective action within 30 days after receipt by Owner of a written demand from the City accompanied by reasonable documentation of the expenses. If Owner fails to reimburse the City within the 30-day period prescribed above, then the City may recover its costs by assessing the amounts against the Property to be collected with property taxes. Owner waives all rights that it might have to receive notice and a hearing or to contest these assessments. Further, City may enforce the terms of this Easement by any proceeding in law or in equity to restrain violation, to compel compliance, or to recover damages, including attorneys' fees and costs of the enforcement actions. The Owner is not be liable for the actions of any third party, other than its employees, agents, or contractors, that may violate the terms of this Easement unless the Owner, its employees, agents, or contractors had actual knowledge of the violation and failed to take reasonable action to stop the violation.

b. Failure to enforce any provision of this Easement upon a violation of it may not be deemed a waiver of the right to do so as to that or any subsequent violation.

c. Invalidation of any of the terms of this Easement will in no way affect any of the other terms, which will remain in full force and effect.

5. Duration of Easements. The Easement is permanent and remains in effect in perpetuity.

6. Warranty of Owner. The Owner warrants that it is the owner of a fee simple interest in the Property, that it has the right to grant the Easement, and that the Property is free and clear of any lien, encumbrance, easement, restriction, covenant or condition, except for those filed of record with the [County Recorder][Registrar of Titles] for Hennepin County, Minnesota.

7. Easement Runs with Land. The Easement runs with the land and is binding on the Owner, its heirs, successors and assigns.

8. Amendments. The Easement may not be amended without the written approval of the City.

IN WITNESS WHEREOF, the Owner has executed this conservation easement on the date first written above.

(NAME OF OWNER)

BY: _____
Its

STATE OF MINNESOTA)
) SS
COUNTY OF HENNEPIN)

The foregoing instrument was acknowledged before me this _____ day of _____, 2016 by _____, the _____of _____, a _____ under the laws of _____, on behalf of the _____.

_____
Notary Public

DRAFTED BY:

[Insert name, address, phone of person/company that prepared this document.]

Exhibit A

Legal Description Property

Exhibit B

Legal Description of Easement

Exhibit C

Depiction of Easement

CONSENT

The undersigned Mortgagee of the real estate described in the attached instrument pursuant to the Mortgage recorded as Document No._____ in the office of the Hennepin County _____ _____ , hereby joins in and consents to all of the terms and provisions contained in the attached Easement. The undersigned Mortgagee further agrees that its interest in the property covered by the Mortgage is subject to this Easement and to all of the terms and provisions contained in it and agrees that if the Mortgagee forecloses its mortgage(s) on the property, or takes a deed in lieu of foreclosure, the Mortgagee will take title subject to the Easement.

BY: _____
Its

STATE OF _____)
) SS
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 2016 by _____, the of _____, a _____ under the laws of _____, on behalf of the _____.

_____
Notary Public

Underground Stormwater Facility

THIS EASEMENT is given on _____, 2016 by _____ _____, a _____ under the laws of _____, ("Owner"), to CITY OF MINNETONKA, a Minnesota municipal corporation, ("City"), in accordance with the following:

1. Owner is the fee owner of certain real property located in the City of Minnetonka, County of Hennepin, and State of Minnesota, legally described on attached Exhibit A (the Property").

2 Grant of Easement. For valuable consideration, Owner conveys to the City an easement for Storm Water Facility purposes ("Easement") over, under, and across the real property in Hennepin County, Minnesota, legally described on attached Exhibit B (the "Easement Area") and depicted on attached Exhibit C.

3. Scope of Easement Rights. The Easement includes the right of the City, its contractors, employees, agents and assigns to:

c. reasonable right of ingress and egress to perform the Owner's Obligations pursuant to paragraph 4 hereof;

d. locate, construct, reconstruct, operate, maintain, inspect, alter and repair within the Easement Area the Storm Water Facility, and any other required drainage improvements approved by the City that are not inconsistent with the intended use of this Easement Area; and

e. cut, trim, or remove from the Easement Area trees, shrubs, or other vegetation that in the City's judgment unreasonably interfere with the City's easement or facilities.

4. Owner's Obligations. A Storm Water Facility will be constructed on a portion of the Easement Area, legally described on attached Exhibit B and depicted on attached Exhibit C. The Owner agrees that it must maintain the Storm Water Facility and any other required drainage improvements approved by the City. The water quality treatment and removal efficiency of the storm water facility must be maintained. If site conditions change causing decreased

effectiveness then new or improved Best Management Practices (BMPs) must be implemented. Maintenance includes at a minimum annual inspection, repair and removal of sediment and pollutants from the Storm Water Facility and all pre-treatment devices, the periodic removal of sedimentation within the pre-treatment device and any structures upstream of the Storm Water Facility, the removal of any blockage within the Storm Water Facility that may impede the drainage of the site, and annual inspection of the Storm Water Facility and related storm sewer improvements, including catch basins and manholes and an annual report of inspection and maintenance activities to be submitted to the City. If necessary, the work must include periodic removal of sedimentation and trash from the Storm Water Facility to maintain original design, volumes and configurations as approved by the City. Annual inspections must be performed, and an annual report must be provided to the City of Minnetonka Engineering Department by October 1 of the same year as the inspection using the form attached as Exhibit D. Any apparent failure of the facility must also be corrected before submitting the annual report. These obligations are further subject to the following:

a. City may enter the Easement Area for the purposes of inspection and enforcement of the obligations of Owner under this Easement. If Owner fails to perform its obligations under this Easement, the City must provide written notice of default to Owner before taking any corrective action. If the failure continues for 30 days after the City's written notice, then the City may take whatever actions are necessary in order to fulfill the obligations of Owner under this Easement. Owner must reimburse the City for the reasonable out-of-pocket costs incurred by the City for its corrective action within 30 days after receipt by Owner of a written demand from the City accompanied by reasonable documentation of the expenses. If Owner fails to reimburse the City within the 30-day period prescribed above, then the City may recover its costs by assessing the amounts against the Property to be collected with property taxes. Owner waives all rights that it might have to receive notice and a hearing or to contest these assessments. Further, City may enforce the terms of this Easement by any proceeding in law or in equity to restrain violation, to compel compliance, or to recover damages, including attorneys' fees and costs of the enforcement actions. The Owner is not be liable for the actions of any third party, other than its employees, agents, or contractors, that may violate the terms of this Easement unless the Owner, its employees, agents, or contractors had actual knowledge of the violation and failed to take reasonable action to stop the violation.

b. Failure to enforce any provision of this Easement upon a violation of it may not be deemed a waiver of the right to do so as to that or any subsequent violation.

c. Invalidation of any of the terms of this Easement will in no way affect any of the other terms, which will remain in full force and effect.

5. Duration of Easements. The Easement is permanent and remains in effect in perpetuity.

6. Warranty of Grantor. The Owner warrants that it is the owner of a fee simple interest in the Property, that it has the right to grant the Easement, and that the Property is free

and clear of any lien, encumbrance, easement, restriction, covenant or condition, except for those filed of record with the [County Recorder][Registrar of Titles] for Hennepin County, Minnesota.

7. Easement Runs with Land. The Easement runs with the land and is binding on the Owner, its heirs, successors and assigns.

8. Amendments. The Easement may not be amended without the written approval of the City.

IN WITNESS WHEREOF, the Owner has executed this conservation easement on the date first written above.

(NAME OF OWNER)

BY: _____
Its

STATE OF MINNESOTA)
) SS
COUNTY OF HENNEPIN)

The foregoing instrument was acknowledged before me this _____ day of _____, 2016 by _____, the _____of _____, a _____ under the laws of _____, on behalf of the _____.

_____
Notary Public

DRAFTED BY:

[Insert name, address, phone of person/company that prepared this document.]

Exhibit A

Legal Description Property

Exhibit B

Legal Description of Easement

Exhibit C

Depiction of Easement

CONSENT

The undersigned Mortgagee of the real estate described in the attached instrument pursuant to the Mortgage recorded as Document No._____ in the office of the Hennepin County _____ _____ , hereby joins in and consents to all of the terms and provisions contained in the attached Easement. The undersigned Mortgagee further agrees that its interest in the property covered by the Mortgage is subject to this Easement and to all of the terms and provisions contained in it and agrees that if the Mortgagee forecloses its mortgage(s) on the property, or takes a deed in lieu of foreclosure, the Mortgagee will take title subject to the Easement.

BY: _____
Its

STATE OF _____)
) SS
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 2016 by _____, the of _____, a _____, under the laws of _____, on behalf of the _____.

_____
Notary Public

EXHIBIT "A"

"Property"

(insert legal description from current certificate of title (if TORRENS PROPERTY) and included Certificate of Title No. as indicated below:

(According to Certificate of Title No._____)

OR

(insert legal description from most recent deed filed in the office of the County Recorder (if ABSTRACT PROPERTY) and include the Document Number of the deed as indicated below:

(According to W.D. *(Warranty Deed)* Doc. No. _____) **OR**

(According to Q.C.D. *(Quit Claim Deed)* Doc. No. _____) **OR**

(According to _____*(insert other type of deed)*Doc. No. _____)

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the

(insert page # of total # of pages), e.g. A-1 of 2

EXHIBIT "B"

"Easement Area"

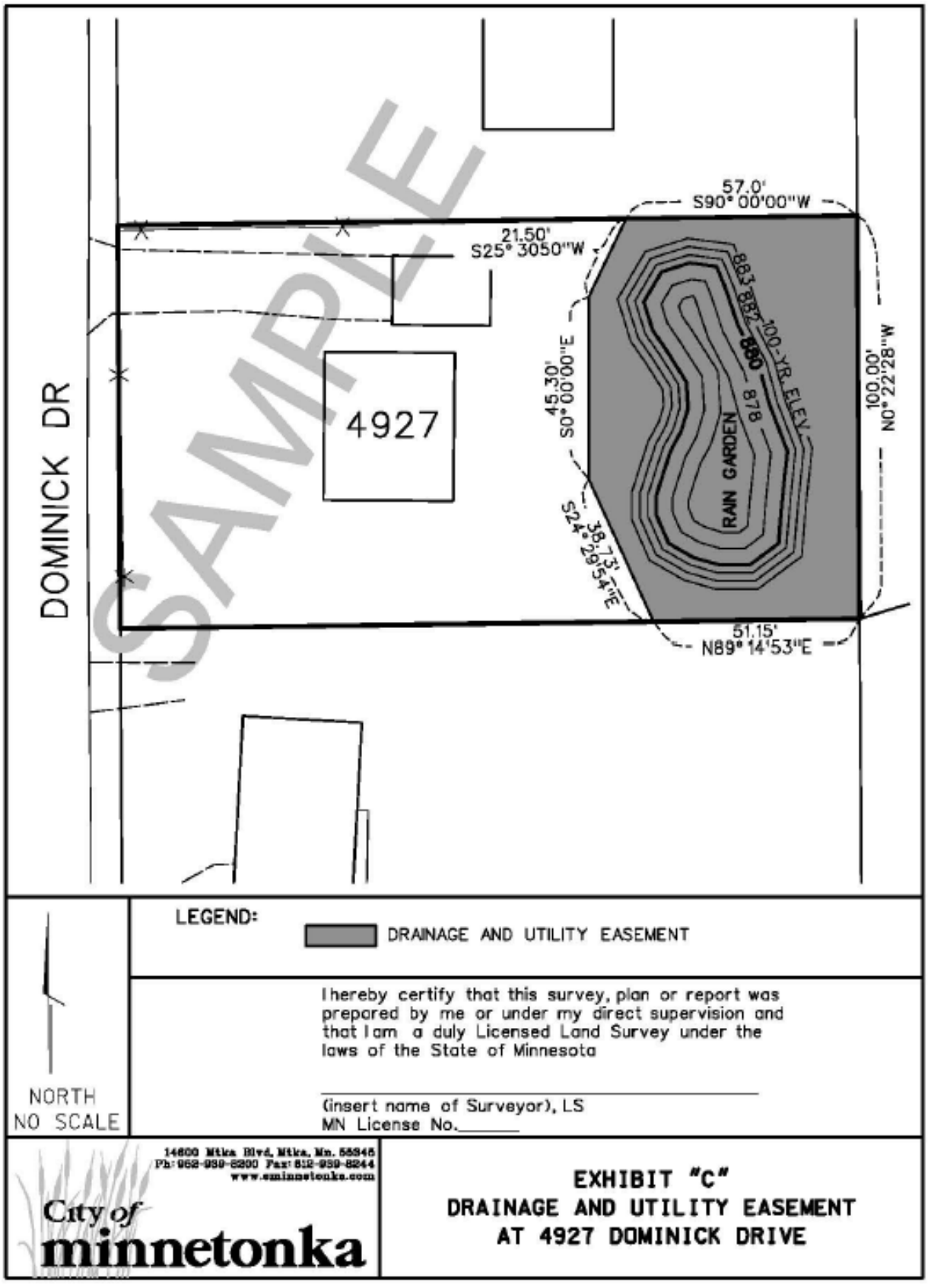
1. A perpetual easement for _____purposes over, under, across and through *(insert certified legal description of permanent easement prepared by Registered Land Surveyor licensed in the State of Minnesota)*

2. A temporary easement for _____purposes over, under, across and through *(insert certified legal description of permanent easement prepared by Registered Land Surveyor licensed in the State of Minnesota)*

All as depicted on Exhibit "C" attached hereto and made a part hereof.

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the

(insert page # of total # of pages), e.g. B-1 of 2


SAMPLE
DOMINICK DR
4927
57.0'
S90° 00'00"W
21.50'
S25° 3050"W
45.30'
S0° 00'00"E
38.73'
S24° 29'54"E
51.15'
N89° 14'53"E
100.00'
N0° 22'28"W
883
882
880
878
100-YR. ELEV.
RAIN GARDEN
LEGEND:
DRAINAGE AND UTILITY EASEMENT
NORTH
NO SCALE
I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Survey under the laws of the State of Minnesota
(insert name of Surveyor), LS
MN License No._____
14600 Minka Blvd, Minka, Mn. 55345
Ph: 952-939-8200 Fax: 612-939-8244
www.eminnetonka.com
City of minnetonka
EXHIBIT "C"
DRAINAGE AND UTILITY EASEMENT
AT 4927 DOMINICK DRIVE

STORMWATER POND INSPECTION CHECKLIST

Water Body ID #: _____

DATE:	TIME		INSPECTOR:	
LAST RAINFALL Date_____ Amount_____ EVENT(S) (in.): Date_____ Amount_____			**WEATHER CONDITION:** ☐ Sunny ☐ Cloudy ☐ Rainy ☐ Partly Cloudy ☐ Winter evaluation. ☐ Other: _____	
OVERALL CONDITION	**WATER BODY** ☐ Good ☐ Fair ☐ Poor	**INLETS (# of _____)** ☐ Good ☐ Fair ☐ Poor	**OUTLETS (# of (_____)** ☐ Good ☐ Fair ☐ Poor	**FLOW CONDITION:** ☐ Dry, no flow ☐ Wet, water flowing in or out of pond ☐ Wet but no flow of water
COMMENTS / NOTES				

OVERALL POND CONDITION

INDICATOR	DESCRIPTION		LOCATION / FOLLOW-UP REQUIRED?
ODOR OF POND OR WATER	☐ Sewage ☐ Sulfide ☐ Rancid/sour	☐ Petroleum/gas ☐ Other: _____ ☐ None	☐ Faint ☐ Easily Detected ☐ Noticeable from a distance
COLOR OF WATER	☐ Clear ☐ Dark Brown/Tannic ☐ Cloudy	☐ Muddy ☐ Other: _____ ☐ None	☐ Tinted / Color (Gray, Brown, Yellow, Red, etc.): _____ Comments: _____
TURBIDITY IN WATER	☐ Slight cloudiness ☐ Cloudy ☐ Opaque/Murky	☐ Moderate ☐ Other: _____ ☐ None	Comments:
EMBANKMENT AND/OR SHORELINE EROSION	☐ Slight ☐ Moderate ☐ Excessive ☐ None	☐ Seeps, leaks or springs present ☐ Erosion gully forming ☐ Animal burrows present ☐ Embankment bulging ☐ Slope sliding or cracking ☐ Spillway obstructed ☐ Other: _____	**Comments:**
FLOATING PLANTS	☐ Mat of unknown vegetation ☐ Algae Bloom ☐ Duckweed	☐ Other: _____ ☐ None ☐ Present but unknown species	**Comments:**
GENERAL VEGETATION INFORMATION	**Density of Vegetation:** ☐ Excessive (blocking flow) ☐ Moderate or Adequate ☐ Slight or somewhat bare ☐ None / very sparse ☐ Other: _____ _____	**Type of Vegetation:** ☐ Sod / Turf ☐ Native / Wild Grass Mix ☐ Wooded / Shrubs ☐ Cattails ☐ Floating Mats of Vegetation ☐ Other: _____	**Comments:**
	Open Water Conditions: ☐ Open water present over whole ponding area ☐ Open water present over part of the ponding area _____% pond's surface area covered by vegetation ☐ No open water	**Invasive Species (if known):** ☐ Crown vetch ☐ Buckthorn ☐ Thistle: _____ ☐ Purple Loosestrife ☐ Garlic Mustard ☐ Reed Canary Grass ☐ Other: _____	
FLOATABLES (NOT INCLUDING TRASH)	☐ Paint ☐ Sewage ☐ Petroleum (oil sheen) ☐ Suds / Bubbles ☐ Other: _____ ☐ None	☐ Source not obvious ☐ Possible source found ☐ Source clear	**Comments:**

STORMWATER POND INSPECTION CHECKLIST

Water Body ID #: _____

TRASH OR DEBRIS IN POND	☐ Glass ☐ Yard Waste ☐ Mixed materials	☐ Paper ☐ Metal ☐ None	☐ Plastics ☐ Floating vegetation mats Other: _____	**Comments:**
OVERLAND FLOW CONDITIONS	**Overland Flow Channel Present?** ☐ Yes ☐ No ☐ Unknown **Channel Open?** ☐ Yes ☐ No		**Type of Flow Path?** ☐ Swale ☐ Curb Cut ☐ Man-made channel ☐ Emergency Overflow ☐ Other: _____	**Comments:**

STORMWATER POND INSPECTION CHECKLIST

Water Body ID #: _____

INLET/OUTLET DESCRIPTIONS

Inlet/Outlet 1 ID#: _____

OVERALL CONDITION OF INLET	☐ Good ☐ Fair ☐ Poor Recommendations: _____
TYPE / SHAPE / SIZE OF INLET	**Size** (inches) Width/Height or Diameter: _____ **Type / Shape**: ☐ Round ☐ Arch ☐ Box ☐ Swale ☐ Curb Cut ☐ Other: _____ **Material:** ☐ RCP ☐ PVC ☐ CMP ☐ Earthen Swale ☐ Galvanized ☐ Concrete ☐ Other **Trash guard?** ☐ Yes ☐ No ☐ Other: _____ **Flared End?** ☐ Yes ☐ No ☐ Other: _____
SEDIMENT DELTA	☐ Yes Approximate measurements (feet): Depth_____ Length_____ Width_____ ☐ No
EROSION	☐ Yes ☐ No
FLOW PRESENT?	☐ Yes ☐ No FLOW CONDITION / ABILITY (IS THE FLOWAGE PATH OPEN IF WATER WERE PRESENT): ☐ Open ☐ Plugged ☐ Inhibited ☐ Other: _____
COMMENTS / NOTES:	

Inlet/Outlet 2 ID#: _____

OVERALL CONDITION OF INLET	☐ Good ☐ Fair ☐ Poor Recommendations: _____
TYPE / SHAPE / SIZE OF INLET	**Size** (inches) Width/Height or Diameter: _____ **Type / Shape**: ☐ Round ☐ Arch ☐ Box ☐ Swale ☐ Curb Cut ☐ Other: _____ **Material:** ☐ RCP ☐ PVC ☐ CMP ☐ Earthen Swale ☐ Galvanized ☐ Concrete ☐ Other **Trash guard?** ☐ Yes ☐ No ☐ Other: _____ **Flared End?** ☐ Yes ☐ No ☐ Other: _____
SEDIMENT DELTA	☐ Yes Approximate measurements (feet): Depth_____ Length_____ Width_____ ☐ No
EROSION	☐ Yes ☐ No
FLOW PRESENT?	☐ Yes ☐ No FLOW CONDITION / ABILITY (IS THE FLOWAGE PATH OPEN IF WATER WERE PRESENT): ☐ Open ☐ Plugged ☐ Inhibited ☐ Other: _____
COMMENTS / NOTES:	

Inlet/Outlet 3 ID#: _____

OVERALL CONDITION OF INLET	☐ Good ☐ Fair ☐ Poor Recommendations: _____
TYPE / SHAPE / SIZE OF INLET	**Size** (inches) Width/Height or Diameter: _____ **Type / Shape**: ☐ Round ☐ Arch ☐ Box ☐ Swale ☐ Curb Cut ☐ Other: _____ **Material:** ☐ RCP ☐ PVC ☐ CMP ☐ Earthen Swale ☐ Galvanized ☐ Concrete ☐ Other **Trash guard?** ☐ Yes ☐ No ☐ Other: _____ **Flared End?** ☐ Yes ☐ No ☐ Other: _____
SEDIMENT DELTA	☐ Yes Approximate measurements (feet): Depth_____ Length_____ Width_____ ☐ No
EROSION	☐ Yes ☐ No
FLOW PRESENT?	☐ Yes ☐ No FLOW CONDITION / ABILITY (IS THE FLOWAGE PATH OPEN IF WATER WERE PRESENT): ☐ Open ☐ Plugged ☐ Inhibited ☐ Other: _____
COMMENTS / NOTES:	

STORMWATER POND INSPECTION CHECKLIST

Water Body ID #: _____

ILLICIT DISCHARGE POTENTIAL

☐ Unlikely (no visual indicators): _____
☐ Potential (presence of one or more indicators): _____
☐ Obvious (oil, unusual color, odor, etc.): _____
Was someone onsite contacted? If yes, who?: _____
Comments: _____

ADDITIONAL COMMENTS OR NOTES	

Minimum Control Measure 6
Pollution Prevention and Good Housekeeping Practices for Municipal Facilities

TABLE OF CONTENTS

APPENDICES

Appendix A: Inspection Forms

MINIMUM CONTROL MEASURE 6

1. INTRODUCTION

1.1. Basis for the Standard Operating Procedures (SOPs)

In August 1, 2013, the Minnesota Pollution Control Agency issued a National Pollutant Discharge Elimination System (NPDES) General Permit (GP) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). The MS4 GP requires the City of Minnetonka to develop written procedures for the purpose of elimination pollutants associated with city activities and operations.

This manual will assist the city in examining and subsequently altering actions to help ensure a reduction in the amount and type of pollution that collects on streets, parking lots, open spaces and storage and vehicle maintenance areas that discharge to local waterways.

1.2. Objectives of the SOPs

This manual is intended to provide guidance on the city's Good Housekeeping practices as follows:

- Provide guidance to municipal staff regarding operations and maintenance practices.
- Provide management techniques to address Good Housekeeping practices including detecting, eliminating, and tracking potential pollutants.

2. POLLUTION PREVENTION

2.1. Dumpsters/Garbage Storage

Activities and Definition

Potential for pollutants can occur if proper garbage management is not in place. An appropriate number of dumpster should be located throughout the facility to provide enough storage for daily activities. In addition, facility dumpsters are to be marked for proper materials disposal.

Preparation

a. Train employees on proper trash disposal.
b. Locate dumpsters and trash cans in convenient, easily observable areas.
c. Provide properly labeled recycling bins to reduce the amount of garbage disposed.

d. Where applicable, install berms, curbing, or vegetation strips around storage areas to control water entering/leaving storage areas.

Process

a. Inspect garbage bins for leaks regularly and have repairs made immediately by responsible party.
b. Request/use dumpsters and trash cans with lids and without drain holes.
c. Locate dumpsters on a flat, hard surface that does not slope or drain directly into the storm drain system.

Clean-up/Follow-up

a. Keep areas around dumpsters clean of all garbage.
b. Have garbage bins emptied regularly to keep from overfilling.
c. Request provider to change bins or dumpsters as needed to keep odors from becoming a problem.

Documentation

a. Document training of employees.

2.2. Parking Lot Maintenance

Activities and Definition

Parking Lots can potentially generate increased pollutant loads to the storm water system from run-off. A well maintained parking surface can help to reduce some of those pollutant concerns.

Preparation

a. Conduct regular employee training to reinforce proper housekeeping.
b. Restrict parking in areas to be swept prior to and during sweeping using regulations as necessary.
c. Perform regular maintenance and services in accordance with the recommended vehicle maintenance schedule on sweepers to increase and maintain efficiency.

Process

a. Sweep parking areas at a minimum of twice annually, or as needed, or as directed by the city's responsible official.
b. Hand sweep sections of gutter if soil and debris accumulate.
c. Pick-up litter as required to keep parking areas clean and orderly.

Clean-up/Follow-up

a. Dispose of sweepings properly (appropriate facility).
b. Street sweepers to be cleaned out in a manner as instructed by the manufacturer and in a location that swept materials cannot be introduced into a storm drain.
c. Swept materials will not be stored in locations where storm water could transport finds into the storm drain system.

Documentation

a. Use AVL to track sweeping activities.
b. Document training of employees.

2.3. Parks – Chemical Application Pesticides, Herbicides, Fertilizers

Activities and Definition

A pivotal part of the beautification of the city is a great parks system. The health and beauty of lawns and natural areas take the application of some chemicals and fertilizers.

Preparation

a. Ensure seasonal and full-time city staff are adequately trained in proper use and application of fertilizers and pesticides for maintenance of city lands.
b. Use pesticides only if there is an actual pest problem and periodically test soils for determining proper fertilizer use.
c. Time and apply the application of fertilizers, herbicides or pesticides to coincide with the manufacturer's recommendations for best results ("Read the Label").
d. Know the weather conditions. Do not use pesticides if rain is expected. Apply pesticides only when wind speeds are low (less than 5 mph).

Process

a. Always follow the manufacturer's recommendations for mixing, application and disposal ("Read the Label").
b. Do not mix or prepare pesticides for application near storm drains. Preferably, mix pesticides inside a protected area with impervious secondary containment (preferably indoors), so that spills or leaks will not contact soils.
c. Employ techniques to minimize off-target application (e.g. spray drift, over broadcasting.) of pesticides and fertilizers.

Clean-up/Follow-up

a. Sweep or blow pavements or sidewalks where fertilizers or other solid chemicals have fallen back onto grassy areas before applying irrigation water.
b. Triple rinse containers and use rinse water as product. Dispose of unused pesticide as hazardous waste.
c. Always follow all federal and state regulations governing use, storage and disposal of fertilizers, herbicides or pesticides and their containers ("Read the Label").

Documentation

a. Keep copies of MSD sheets for all pesticides, fertilizers and other hazardous products used.
b. Record fertilizing and pesticide application activities, including date, individual who did the application, amount of product used and approximate area covered.

2.4. Parks – Cleaning Equipment

Activities and Definition

There are many benefits to taking proper care of the city's equipment. Prolonging the life of the equipment by taking the time to maintain critical parts is an essential part of the parks department's daily activities.

Preparation

a. Review process with all parks employees.

Process

a. Wipe off dirt, dust and fluids with disposable towel.
b. Wash equipment in approved wash station.

Clean-up/Follow-up

a. Dispose of towels in proper trash receptacle
b. Sweep floor and dispose of debris.

Documentation

a. NA

2.5. Parks – Mowing and Trimming

Activities and Definition

Regular mowing and trimming activities have potential to deposit materials onto hard surfaces. Care should be taken to ensure mowing or trimming refuse is disposed of properly.

Preparation

a. Process overview with employees.
b. Check the oil and fuel levels of the mowers and other equipment. Fill in proper areas if needed.

Process

a. Put on eye and hearing protection.
b. Mow and trim the lawn.
c. Sweep or blow clippings to grass areas and not onto impervious surfaces.

Clean-up/Follow-up

a. Mowers are to be scraped and brushed at designated location.
    1. Dry spoils are dry swept and disposed of properly
b. Wash equipment in approved wash station.

Documentation

a. Document any observed deficiencies for correction or repair.

2.6. Parks – Open Space Management

Activities and Definition

Open space provides great value to the park system that go beyond ball fields. This includes storm water retention and potential flood relief.

Preparation

a. Provide a regular observation and maintenance of parks and other pubic open spaces.
b. Identify public open spaces that are used for storm water detention and verify that detention areas are included on the storm drain system mapping, inspection schedules and maintenance schedules.

Process

a. Ensure that any storm drain or drainage system components on the property are properly maintained.
b. Avoid placing bark mulch (or other floatable landscaping materials) in storm water detention areas or other areas where storm water runoff can carry the mulch into the storm drainage system.
c. Follow all SOPs related to irrigation, mowing, landscaping and pet waste management.

Clean-up/Follow-up

a. Keep all outdoor work areas neat and tidy. Clean by sweeping instead of washing whenever possible. If areas must be washed, ensure that wash water will enter a landscaped area rather than the storm drain. Do not use soap for outdoor washing.
b. Pick up trash on a regular basis.

Documentation

a. Document any observed deficiencies for correction or repair.

2.7. Parks – Pet Waste

Activities and Definition

Pet waste has the potential to be a contributor to downstream degradation if not maintained and properly disposed of.

Preparation

a. Enforce ordinances that require pet owners to clean up pet wastes and use leashes in public areas. If public off-leash areas are designated, make sure they are clearly defined.
b. Whenever practical and cost effective, install dispensers for pet waste bags and provide disposal containers at locations such as trail heads or parks where pet waste has been a problem. Provide signs with instructions for proper cleanup and disposal.

Process

a. Check parks and trails for pet waste as needed.
b. Check public open space for pet waste prior to mowing and watering.
c. Provide ordinance enforcement as needed.

Clean up / follow-up

a. Remove all pet waste; provide temporary storage in a covered waste container, and dispose of properly. Dispose of in dumpsters at nearest city facility.

Documentation

a. Document problem areas for possible increased enforcement and/or public education signs.

2.8. Parks – Planting Vegetation (Starters)

Activities and Definition

Vegetation is a key component of establishing healthy ecosystems that hold water and nutrients on site.

Preparation

a. Call the appropriate numbers for location of utilities.
b. Decide where any spoils will be taken.

Process

a. Dig holes; place spoils near the hole where they may easily be placed back around the roots. Avoid placing spoils into the gutter system.
b. Bring each plant near the edge of the hole dug for it.
c. Check the depth of the hole, and adjust the depth if necessary. The depth of the hole for a tree should be measured from the bottom of the root ball to the top of the root flare, so that the top of the root flare is at least level with the top of the hole or higher than the adjacent grade.
d. Carefully remove pot or burlap
e. Place the plant in the hole
f. Backfill the hole with existing spoils, compost, and a litter fertilizer if desired. Do not use excessive amendments.
g. Water the plant.
h. Stake the plant if necessary to stabilize it.

Clean-up/Follow-up

a. Remove any extra spoils into truck or trailer. Place the spoils on a tarp if there is likelihood that some of the dirt would be lost through openings in the bed.

b. Sweep dirt from surrounding pavement(s) into the planter area.
c. Transport spoils to their designated fill or disposal area.

Documentation

a. N/A

2.9. Parks – Planting Vegetation (Seeds)

Activities and Definition

Vegetation is a key component of establishing healthy ecosystems that hold water and nutrients on site

Preparation

a. Call the appropriate numbers for location of utilities.
b. Decide where any spoils will be taken.
c. Decide on the application rate, method, water source and ensure adequate materials are on hand.
d. Grade and prepare soil to receive the seed. Place any extra soil in a convenient location to collect.

Process

a. Place the seed and any cover using the pre-determined application method (and rate).
b. Lightly moisten the seed.

Clean-up/Follow-up

a. Remove any extra spoils into truck or trailer. Place the spoils on a tarp if there is likelihood that some of the dirt would be lost through openings in the bed.
b. Sweep dirt from surrounding pavement(s) into the planter area.
c. Transport spoils to their designated fill or disposal area.

Documentation

a. NA

2.10. Parks – Transporting Equipment

Activities and Definition

Equipment Transportation is a pivotal part of the daily activities that occurs on a daily basis.

Preparation

a. Determine equipment needed for transport and method (trailer, truck bed) needed to transport equipment.
b. Conduct pre-trip inspection of equipment.

Process

a. Load and secure equipment on trailer or truck.
b. Load and secure fuel containers for equipment usage.

Clean-up/Follow-up

a. Off load equipment.
b. Store equipment and trailer in proper location.
c. Conduct post-trip inspection of equipment.
d. Wash equipment if needed, according to the written procedure for Cleaning Equipment.

Documentation

a. Pre-trip and post-trip inspection report.

2.11. Streets/Storm Drain – Catch Basin Cleaning

Activities and Definition

Catch Basin Cleaning needs to be completed on a regular basis to ensure the functionality of the storm sewer system.

Preparation

a. Clean sediment and trash off of grate.
b. Do visual inspection on outside of grate.
c. Make sure nothing needs to be replaced.
d. Do inside visual inspection to see what needs to be cleaned.

Process

a. Clean using a high powered vacuum truck to start sucking out standing water and sediment.
b. Use a high pressure washer to clean any remaining material out of catch basin, while capturing the slurry with the vacuum.
c. Move truck downstream of pipe to next catch basin.

Clean-up/Follow-up

a. When vacuum truck is full of sediment, take it to the designated location to dump all the sediment out of truck into a drying bed.
b. When it evaporates, clean it up with a backhoe/skid loader, put it into dump truck and take to permanent disposal site (landfill).

Documentation

a. Keep logs of number of catch basins/sumps cleaned.
b. Record the amount of waste collected.
c. Keep any notes or comments of any problems.

2.12. Streets/Storm Drain – Detention Pond Cleaning

Activities and Definition

Storm drains are gateways that allow pollutants in storm water to flow untreated from local streets to lakes, rivers and streams. Residual oil, grease, solids, antifreeze, cigarette butts, yard waste, plastic and other wastes found on roads, parking lots and driveways pollute downstream waters by increasing phosphorus levels, reducing oxygen levels and ultimately impairing aquatic habitat for fish and other organisms as well as drinking water sources.

Preparation

a. Schedule the pond cleaning work for a time when dry weather is expected or during the winter.
b. Collect and analyze sediment samples as necessary based on the MPCA's guidance document on sediment removal.
c. Remove any sediment and trash from grates, placing it in a truck for disposal.
d. Do a visual inspection to make sure any grates, structures, manholes and pipes are in good working order. Remove manhole covers and grates as necessary for inspecting.

Process

a. Inspect all of the city-owned ponds and outfalls within the five-year MS4 General Permit term.
b. Provide outlet protection where feasible to minimize the amount of debris that might leave the basin during cleaning process.
c. Start cleaning basin by using backhoe to remove debris and sediment off the bottom.
d. Continue cleaning structures and pond bottom as necessary by sweeping and shoveling.
e. Put all material removed from the pond into a dump truck.
f. Some structures might require use of a vacuum truck. If so, use the same procedures described for cleaning catch basins.
g. Ensure city-owned ponds are effectively treating total suspended solids and total phosphorus.

Clean-up/Follow-up

a. After cleaning basins, clean off the concrete pads using dry methods (sweeping and shoveling).
b. Make sure work area and site access areas are swept up and clean.
c. Take the material that was removed to the Public Works stockpile.

Documentation

a. Keep logs of each detention basin/pond cleaned including date, individuals involved in cleaning and a description of the type of debris removed.
b. Record the amount of waste collected.
c. Keep any notes or comments of any problems.

2.13. Streets/Storm Drain – Ditch Management

Activities and Definition

Storm drains are gateways that allow pollutants in storm water to flow untreated from local streets to lakes, rivers and streams. Residual oil, grease, solids, antifreeze, cigarette butts, yard waste, plastic and other wastes found on roads, parking lots and driveways pollute downstream waters by increasing phosphorus levels, reducing oxygen levels and ultimately impairing aquatic habitat for fish and other organisms as well as drinking water sources.

Preparation

a. Monitor city ditches on a regular basis (Annually). Some ditches, such as those adjacent to rural road sections, are the responsibility of the homeowner to maintain.
b. Maintain access to ditch channels wherever possible or contact the resident responsible for maintenance.
c. Contact affected property owners and utility owners.
d. Apply for appropriate wetland permits if applicable.

Process

a. Identify areas requiring maintenance.
b. Determine what manpower or equipment will be required.
c. Identify access and easements to area requiring maintenance.
d. Determine method of maintenance that will be least damaging to the channel and adjacent properties or utilities.
e. Obtain applicable permits (WCA, watershed district, etc.)

Clean-up/Follow-up

a. Stabilize all disturbed soils.
b. Remove all tracking from paved surfaces near maintenance site, if applicable.
c. Haul all debris or sediment removed from area to approved dumping site.

Documentation

a. Keep log of actions performed including date and individuals involved.
b. Record the amount of materials removed or imported.
c. Keep any notes or comments of any problems.
d. Use “before” and “after” photographs to document activities as applicable.

2.14. Streets/Storm Drain – Overlays and Patching

Activities and Definition

Pollutants collect on surfaces in between storm events as a result of atmospheric deposition, vehicle emissions, winter road maintenance, construction site debris, trash, road wear and tear. Overlays and patching are a part of the maintenance of these surfaces that help prolong the life of the roadway.

Preparation

a. Measure and mark locations of manholes and valves on the curb

b. Alligator cracks and potholes should be removed and patched. Rutting may be milled or a leveling course placed prior to road overlay.
c. Surface should be clean and dry.
d. Uniform tack coat applied and cured prior to placement of overlay.
e. If milling is required, install inlet protection as needed.

Process

a. Check hot asphalt mix for proper temperature.
b. Raise manhole lids and valves to elevation of new asphalt surface with riser rings.
c. Surface texture should be uniform, no tearing or scuffing.
d. Rolling should be done to achieve proper in-place air void specification.

Clean up / follow-up

a. After pavement has cooled, sweep gutters to remove loose aggregate if needed.

Documentation

a. Record location and date on the maintenance database and map.

2.15. Streets/Storm Drain – Crack Seal

Activities and Definition

Pollutants collect on surfaces in between storm events as a result of atmospheric deposition, vehicle emissions, winter road maintenance, construction site debris, trash, road wear and tear. Crack sealing is a part of the maintenance of these surfaces that help prolong the life of the roadway.

Preparation

a. Remove weeds from the road.
b. Air-blast the cracks to remove sediments from the crack to allow for proper adhesion.
c. Ensure that surface is clean and dry.

Process

a. Proper temperature of material should be maintained.
b. Sufficient material is applied to form the specified configuration.

Clean-up/Follow-up

a. Excessive sealant application or spills are removed.
b. Sweep all loose debris from the pavement and dispose of it in the Public Works stockpile.

Documentation

a. Record location and date on the maintenance database and map.

2.16. Streets/Storm Drain – Concrete Work

Activities and Definition

The use of concrete is a common practice for BMP maintenance, proper management of those materials is critical for pollution prevention.

Preparation

a. Train employees and contractors in proper concrete waste management.
b. Store dry and wet materials under cover, away from drainage areas.
c. Remove any damaged concrete that may need to be replaced.
d. Prepare and compact sub-base.
e. Set forms and place any reinforcing steel that may be required.
f. Determine how much new concrete will be needed.
g. Locate or construct approved concrete washout facility.

Process

a. Install inlet protection as needed.
b. Avoid mixing excess amounts of fresh concrete on-site.
c. Moisten sub-base just prior to placing new concrete. This helps keep the soil from wicking moisture out of the concrete into the ground.
d. Place new concrete in forms.
e. Consolidate new concrete.
f. Screed off surface.
g. Let concrete obtain its initial set.
h. Apply appropriate surface finish.
i. Remove forms when concrete will not slump.

Clean-up/Follow-up

a. Perform washout of concrete trucks and equipment in designated areas only.
b. Do not washout concrete trucks or equipment into storm drains, open ditches, streets or streams.

c. Cement and concrete dust from grinding activities is swept up and removed from the site.
d. Remove dirt or debris from street and gutter.

Documentation

a. N/A

2.17. Streets/Storm Drain – Garbage Storage

Activities and Definition

Illegal dumping of non-hazardous household waste and improper dumping of yard waste in streets, storm drains, wetlands, lakes and other water bodies pollute surface waters. Non-hazardous household waste includes items such as tires, furniture, common household appliances and other bulk items. Yard waste includes any organic debris such as grass clippings, leaves, and tree branches.

Preparation

a. Locate dumpsters and trash cans with lids in convenient, easily observable areas.
b. Provide properly labeled recycling bins to reduce the amount of garbage disposed.
c. Provide training to employees to prevent improper disposal of general trash.

Process

a. Inspect garbage bins for leaks regularly, and have repairs made immediately by responsible party.
b. Locate dumpsters on a flat, impervious surface that does not slope or drain directly into the storm drain system.
c. Install berms, curbing, or vegetation strips around storage areas to control water entering/leaving storage areas.
d. Keep lids closed when not actively filling dumpster.

Clean-up/Follow-up

a. Keep areas around dumpsters clean of all garbage.
b. Have garbage bins emptied as often as needed to keep from overfilling.
c. Wash out bins or dumpsters as needed to keep odors from becoming a problem. Wash out in properly designated areas only.

Documentation

a. See Facility Inventory

2.18. Streets/Storm Drain – Snow Removal and De-icing

Activities and Definition

The concentration of chloride is increasing in our surface and ground water largely due to storm water runoff from road salt storage piles, areas of excessive application, or simply from years of repeated application since chloride does not degrade in soil and water. Chloride in road salt and road salt additives (e.g. ferrocyanide for anti-caking) can create toxic conditions for fish, insects and vegetation.

Preparation

a. Store de-icing material under a covered storage area.
b. Slope loading area away from storm drain inlets.
c. Design drainage from loading area to collect runoff before entering storm water system.
d. Washout vehicles (if necessary) in approved washout area before preparing them for snow removal.
e. Calibrate spreaders to minimize amount of de-icing material used and still be effective.
f. Provide vehicles with spill clean-up kits in case of hydraulic line rupture or other spill.
g. Train employees in spill clean-up procedures and proper handling and storage of de-icing materials.

Process

a. Load material into trucks carefully to minimize spillage.
b. Periodically dry sweep loading area to reduce the amount of de-icing materials exposed to runoff.
c. Distribute the minimum amount of de-icing material to be effective on the roads.
d. Do not allow spreaders to idle while distributing de-icing materials.
e. Park trucks loaded with de-icing materials inside when possible.

Clean-up/Follow-up

a. Sweep up all spilled de-icing material around loading area.
b. Clean out trucks after snow removal duty in approved washout area.
c. Provide maintenance for vehicles in covered areas.

Documentation

a. Material usage reports are generated for each day plowing occurs. Data includes amount of salt used, miles spread and miles traveled.

2.19. Streets/Storm Drain – Street Sweeping

Activities and Definition

Pollutants collect on surfaces in between storm events as a result of atmospheric deposition, vehicle emissions, winter road maintenance, construction site debris, trash, road wear and tear, and litter from adjacent lawn maintenance (grass clippings). Sweeping of materials such as sand, salt, leaves and debris from city streets, parking lots and sidewalks prevents them from being washed into storm sewers and surface waters. Timing, frequency and critical area targeting greatly influence the effectiveness of sweeping.

Preparation

a. Prioritize cleaning routes to use at the highest frequency in areas with the highest pollutant loading.
b. Restrict street parking prior to and during sweeping using regulations as necessary.
c. Increase sweeping frequency just before the rainy season, unless sweeping occurs continuously throughout the year.
d. Perform preventative maintenance and services on sweepers to increase and maintain their efficiency.

Process

a. Streets are to be swept annually or as needed or specified by the city; Street maps are used to ensure all streets are swept at a specific interval.
b. Drive street sweeper safely and pick up debris.
c. When full, empty the sweeper into a dump truck.

Clean-up/Follow-up

a. Street sweepers are to be cleaned out in the approved street sweeper cleaning area.
b. Haul all dumped material to the Public Works stockpile.

Documentation

a. Keep accurate logs to track streets swept and streets still requiring sweeping utilizing AVL route completion maps.
b. Log the amount of debris collected.

2.20. Streets/Storm Drain – Transporting Soil and Gravel

Activities and Definition

Transportation of materials should be handled with pre-planning and contingency planning.

Preparation

a. Spray down dusty materials to keep from blowing in needed.
b. Make sure you know and understand any SWPPP requirements for the site you will be working at.
c. Determine the location that the truck and other equipment will be cleaned afterwards.

Process

a. Follow any SWPPP requirements for the specific site to/from which the materials are being hauled.
b. Make sure not to overfill materials when loading trucks.

Clean-up/Follow-up

a. Use sweeper to clean up any materials tracked out on the roads from site.
b. Washout truck and other equipment when needed in properly designated area.

Documentation

a. NA

2.21. Vehicles – Fueling

Activities and Definition

Fueling of equipment and vehicles should always occur in designated areas when possible. Spill prevention and planning should occur before any fueling takes place.

Preparation

a. Train employees on proper fueling methods and spill cleanup techniques.
b. Install a canopy or roof over aboveground storage tanks and fuel transfer areas.

c. Absorbent spill clean-up materials and spill kits shall be available in fueling areas shall be disposed of properly after use.

Process

a. Shut off the engine
b. Ensure that the fuel is the proper type of fuel for the vehicle.
c. Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shut off to prevent overfill.
d. Fuel vehicle carefully to minimize drips to the ground.
e. Fuel tanks shall not be topped off.
f. Mobile fueling shall be minimized. Whenever practical, vehicles and equipment shall be transported to the designated fueling area in the facilities area.
g. When fueling small equipment from portable containers, fuel in an area away from storm drains and water bodies.

Clean-up/Follow-up

a. Immediately clean up spills using dry absorbent (e.g. kitty litter, sawdust, etc.). Sweep up absorbent material and properly dispose of contaminated clean up materials.
b. Large spills shall be contained as best as possible and the Duty officer and Hazmat team should be notified as soon as possible.

Documentation

a. Comply with underground storage tank records and monitoring requirements.
b. Document training of employees.

2.22. Vehicles – Vehicle and Equipment Storage

Activities and Definition

When hazardous material comes into contact with rain or snow, the pollutants are washed into the storm sewer system and, ultimately, to surface water bodies and/or ground water. Hazardous materials have negative impacts on fish habitat, ground water drinking water sources and recreational uses.

Preparation

a. Inspect parking areas for stains/leaks on a regular basis.
b. Provide drip pans or absorbents for leaking vehicles.

Process

a. Whenever possible, store vehicles inside where floor drains have been connected to sanitary sewer systems.
b. When inside storage is not available, vehicles and equipment will be parked in the approved designated areas.
c. Maintain vehicles to prevent leaks as much as possible.
d. Address any known leaks or drips as soon as possible.
e. Clean up all spills using dry methods.
f. Never store leaking vehicles over a storm drain.
g. Implement the city's SPCC plan for oil spills.

Clean-up/Follow-up

a. Any leaks that are spilled on the asphalt will be cleaned up with dry absorbent; the dry absorbent will be swept up and disposed of in the garbage.
b. The paved surfaces around the building will be swept twice annually or as needed for cleanup after a spill.

Documentation

a. N/A

2.23. Vehicles – Washing

Activities and Definition

MS4 vehicle washing involves the removal of dust and dirt from the exterior of trucks, boats and other vehicles, as well as the cleaning of cargo areas and engines and other mechanical parts. Washing of vehicles and equipment generates oil, grease, sediment and metals in the wash water as well as degreasing solvents, cleaning solutions and detergents used in the cleaning operations.

Preparation

a. Provide wash areas for vehicles and heavy equipment inside the maintenance building that has a drain system which is attached to the sanitary sewer system. The drain system has a sump to collect sediment and a skimmer to collect oils before discharging to the sanitary sewer system.
b. No vehicle washing will be done where the drain system is connected to the storm sewer system.

Process

a. Minimize water and soap use when washing vehicles inside the shop building.

b. Soap should not be used when washing vehicles outside the shop building.
c. Use hoses with automatic shut off nozzles to minimize water usage.
d. When washing outside the building, it is the operator's responsibility to make sure all wash water is contained on the wash pad and does not have access to the storm drain.
e. Never wash vehicles over a storm drain.

Clean-up/Follow-up

a. Clean wash area periodically to collect what solids can be collected to prevent them from washing down the drain system.
b. Clean solids from the settling pits on an as-needed basis.
c. Use vactor truck to clean sediment from drain system sump.
d. Schedule contractor to remove and dispose of collected oils and pollutants from skimmer.

Documentation

a. N/A

2.24. Water – Planned Waterline Excavation Repair/Replacement

Activities and Definition

Waterline Excavation and repair of an MS4 system can potentially involve activities that could affect the health of the MS4 system. Planning is critical.

Preparation

a. Determine where discharge flow will go.
b. Place inlet protection at nearest downstream storm drain inlets.
c. Clean gutters leading to inlets.
d. Isolate waterline to be worked on.

Process

a. Make efforts to keep water from pipeline from entering the excavation.
b. Direct any discharge to pre-determined area.
c. Backfill and compact excavation.
d. Haul off excavated material.

Clean-up/Follow-up

a. Clear gutter /waterway where water flowed.
b. Clean up all areas around excavation.
c. Clean up travel path of trucked material.

Documentation

a. Complete paperwork.

2.25. Water – Unplanned Waterline Excavation Repair/Replacement

Activities and Definition

Waterline Excavation and repair of an MS4 system can potentially involve activities that could affect the health of the MS4 system. Unplanned excavations can be additionally tricky and pre-planning is critical.

Preparation

a. Make sure service trucks have wattles, gravel bags, or other materials for inlet protection.

Process

a. Slow the discharge.
b. Inspect flow path of discharge water.
c. Protect water inlet areas.
d. Follow planned repair procedures.
e. Haul off spoils of excavation.
f. Consider use of silt filter bags on pumps.

Clean-up/Follow-up

a. Repair eroded areas as needed.
b. Follow planned repair procedures.
c. Clean up the travel path of trucked excavated material.

Documentation

a. Complete paperwork.

2.26. Water – Transporting Dry Excavated Materials and Spoils

Activities and Definition

Transportation of materials should be handled with pre-planning and contingency planning.

Preparation

a. Utilize truck with proper containment of materials.
b. Determine disposal site of excavated materials.

Process

a. Load
b. Check truck after loading for possible spillage.
c. Transport in manner to eliminate spillage and tracking.
d. Utilize one route for transporting.

Clean-up/Follow-up

a. Clean loading area.
b. Clean transporting route.
c. Wash off truck and other equipment in a designated equipment cleaning area.

Documentation

a. Complete paperwork.

2.27. Water – Transporting Wet Excavated Materials & Spoils

Activities and Definition

Transportation of materials should be handled with pre-planning and contingency planning.

Preparation

a. Utilize truck with containment for material.
b. Determine disposal site of excavated material.

Process

a. Load and Transport in manner to minimize spillage & tracking of material.
b. Check truck for spillage.
c. Utilize one route for transporting.

Clean-up/Follow-up

a. Clean route of transport to provide cleaning of any spilled material.
b. Wash out equipment truck and other equipment in designated wash area.

Documentation

a. Complete paperwork.

2.28. Water – Waterline Flushing for Routine Maintenance

Activities and Definition

Flushing is a process that rapidly removes water from the city's water piping system. Flushing uses water force to scour out materials that accumulate in the city's pipes. Water pipes are usually flushed by opening fire hydrants, where the discharged water flows off the streets the same as rainwater.

Preparation

a. Determine flow path of discharge to inlet of waterway.

Process

a. Clean flow path.
b. Use diffuser to dissipate pressure to reduce erosion possibilities.

Clean-up/Follow-up

a. Clean flow path.

Documentation

a. Complete paperwork.

2.29. Water – Waterline Flushing after Construction/System Disinfection with Discharge to Storm Drain.

Activities and Definition

Flushing is a process that rapidly removes water from the city's water piping system. Flushing uses water force to scour out materials that accumulate in the city's pipes. Water pipes are usually flushed by opening fire hydrants, where the discharged water flows off the streets the same as rainwater.

Preparation

a. Determine flow path of discharge.

Process

a. Protect inlets in flow path.
b. Sweep and clean flow path.
c. Use diffuser to reduce velocities.

Clean-up/Follow-up

a. Pick up inlet protection.
b. Clean flow paths.
c. Remove equipment from flush point.

Documentation

a. Residual tests of discharge water.
b. Complete paperwork.

2.30. Water – Chemical Handling/Transporting and Spill Release

Activities and Definition

Hotspot facilities are facilities that produce higher levels of storm water pollutants and/or present a higher potential risk for spills, leaks or illicit discharges. Hazardous material storage and handling is of particular concern in these areas.

Preparation

a. Understand MSDS sheets for handling of product.
b. Determine proper place of handling.
c. Have necessary containment and spill kits at handling place.

Process

a. Begin transfer process.
b. Discontinue operations if a spill level occurs.
c. Disconnect and store handling equipment.

Clean-up/Follow-up

a. Clean up spills with proper material.

b. Dispose of contaminated material at appropriate facility.

Documentation

a. Report spills to duty officer.
b. Complete paperwork.

Appendix A
Inspections Forms

Public Works Department Quarterly Inspection Form

Procedure and Schedule

At minimum, City Staff should record, at each inspection for each site, the following information:

Site name and location
Date and time of inspection
Description of site activities
Description of site BMPs
Receiving waterbody

Inspection Schedule

Inspection 1 – March
Inspection 2 – May
Inspection 3 – July
Inspection 4 – September

Inspection Form

Date:
Time:
Name of inspector:
Facility being inspected:

Vehicle and Equipment Maintenance

Item	Y/N/NA	Comments
Vehicles are stored indoors (if possible)		
Vehicle maintenance is performed in a covered facility		
Drip pans are used during vehicle maintenance		
Leaking vehicles are stored under a roof, or drained		
Some vehicles are parked over a storm drains		
Are there any excessive scrap piles		
Maintenance areas have been swept recently		
There is a designated area to wash vehicles		

Vehicle and Equipment Fueling

Item	Y/N/NA	Comments
A well-labeled spill kit is located nearby		
Personnel are within view of hoses during fueling		

Spill Response Procedure are posted nearby		
Fueling of small equipment (lawn mowers, etc.) is conducted over a paved area. Tanks, pipes, pumps related to fuel dispensing are in good condition		
Absorbent cleanup materials are disposed of promptly and properly		
Storm drains are covered during fuel loading/transfer		
Material Storage		
Item	**Y/N/NA**	**Comments**
Hazardous materials and wastes are stored in sealed, labeled containers on containment structures (e.g. pallets)		
Dumpsters are located on a flat, paved surface		
All dumpsters have lids		
Bulk materials are covered		
Berms or curbs surround the storage area		
Waste containers are not washed outdoors		
Deicing Material and Sand Storage		
Item	**Y/N/NA**	**Comments**
Salt and sand stockpiles are stored in a permanent structure		
If a permanent structure is not available, seasonal tarping is implemented		
Deicing Material and Sand Storage		
Item	**Y/N/NA**	**Comments**
Storage and loading areas have been swept recently		
BMPs are in place to limit tracking of materials in loading areas		
Outdoor sand stockpiles are not in close proximity to storm water conveyance infrastructure		
General Housekeeping		
Item	**Y/N/NA**	**Comments**
Spill logs and site inspection records are maintained		
Outdoor work areas are not hosed where water may flow somewhere other than a sanitary sewer line		
Areas with exposed soils are stabilized during rainfall events		
Perimeter sediment controls are implemented where necessary		

Public Works Department – Facilities Inspection Form

Facility Inspection Checklist: General Stormwater Compliance

This checklist can be used by all appropriate facilities staff to:

- Conduct general inspections;
- Determine if additional best management practices (BMPs) may be required;
- Assess MS4 compliance.

Fill out all applicable fields below and answer each question. If a deficiency is noted, document where the issue took place (specific room, outdoor area), how the issue will be addressed (clean up, leak sealed, etc.) and if additional staff or supervisors need to be contacted. Completed inspections must be retained for a minimum period of three (3) years and must be made available upon request.

Facility Name:_____
Date:_____

Address:_____
Time:_____

Inspector:_____ **Job Title:_____**

General Housekeeping – check the applicable box that best answers the question. If additional notes need to be added, indicate which item your notes refer to and fill in additional information in the 'notes' space at the end of the section.

	Housekeeping Item	Yes	No	N/A
1.	Are outside areas kept neat, clean and free of liquid pollution?			
2.	Are storm drain inlets free of debris?			
3.	Are garbage cans, waste bins, and dumpsters covered & not leaking?			
4.	Has the stormwater conveyance system been recently altered? If yes, provide additional information in the notes section below.			
5.	Are stormwater drainage paths clear? Grates clean?			
6.1	Are vehicles or equipment cleaned at this facility?			
6.2	If yes, is wash water being collected and disposed of properly?			

Notes:

HAZMAT Storage - check the applicable box that best answers the question. If additional notes need to be added, indicate which item your notes refer to and fill in additional information in the 'notes' space at the end of the section.

	HAZMAT Item	Yes	No	N/A
8.	Are vehicles fueled at this location?			
8.1	If yes, are fuel tanks locked and/or properly operated?			
8.2	If yes, are measures taken to protect storm drains from spills? Provide specifics in notes.			
9.	Do above-ground tanks (liquid) have secondary containment?			
10.	Are containment structures or surface slabs liquid tight?			
11.	Does this site store hazardous materials such as solvents, pesticides, or acids?			
11.1	If yes, are containers weather tight or covered?			
11.2	If yes, are ignitable or reactive wastes stored at least 50 ft from the property line?			
12.	Has the facility had a hazardous waste spill since the last inspection?			

Notes

Other Best Management Practices: check the applicable box that best answers the question. If additional notes need to be added, indicate which item your notes refer to and fill in additional information in the 'notes' space at the end of the section.

	BMP Items	Yes	No	N/A
13.	Does this site store hazardous or other materials that could impact the storm drain such as detergent, pain, or powders?			
13.1	If yes, are they stored in a manner prohibiting exposure to rain or			
14.	Are waste materials kept on-site in closed leak tight containers?			
15.	Are erodible soils uncovered or exposed to rainwater?			
16.	Is the ground surface stained by oil or significant materials?			
16.1	If yes, has the source been found and contained?			
17.	Does the facility have waste products, salvaged materials, and recyclables stored properly?			
18.	Does the facility have a clarifier/oil/water separator?			
18.1	If yes, is it clean and functioning properly?			
19.	Has this facility received a complaint regarding storm water discharge?			
19.1	If yes, has the problem been addressed?			
20.	Have personnel received training on MS4/Illict Discharge?			

Notes:

21. Are spill response materials on-site and available? (check all that apply below)

- ☐ Sand
- ☐ Rice Hulls
- ☐ Sorbent
- ☐ Booms/Pillows/Blankets
- ☐ Oil Dry/Cat Litter
- ☐ Neutralizer
- ☐ Drip Pans
- ☐ Other (please list):_____

22. Identify existing management practices employed to reduce pollutants in storm water discharges: (Check all that apply and describe conditions)

- ☐ Good Housekeeping _____
- ☐ Containment _____
- ☐ Berms _____
- ☐ Leachate Collection _____
- ☐ Sand Filter _____
- ☐ Recycling _____
- ☐ Retention Facilities _____
- ☐ Silt Fence _____
- ☐ Sorbent _____
- ☐ Booms _____
- ☐ Spill Mitigation _____
- ☐ Oil/Water Separator _____
- ☐ Sumps _____
- ☐ Other _____

23. Action Items (if applicable):

a. _____
b. _____
c. _____