

SWPPP

(Storm Water Pollution Prevention Program)

City of Brainerd



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Table of Contents

	<u>Page</u>
I. Summary of SWPPP Development Process	4
II. City of Brainerd BMP Summary Matrix	12
III. City of Brainerd BMP Pages.....	14
1. <u>Public Education and Outreach</u>	
<u>Best Management Practice</u>	
1-1: Newsletter Articles	14
1-2: City Website.....	16
1-3: Stormwater Brochures/Handouts	17
1-4: 30-Day public notice for Annual Stormwater Meeting	18
1-5: Pet Waste Signage in Parks.....	19
1-6: Coordination with Local Agencies and Groups	20
2. <u>Public Involvement and Participation</u>	
<u>Best Management Practice</u>	
2-1: Annual Spring Cleanup	21
2-2: Planning and Zoning Commission	22
2-3: Annual Storm Water Public Meeting	23
2-4: Public Comment/Complaint Procedures	24
3. <u>Illicit Discharge, Detection and Elimination</u>	
<u>Best Management Practice</u>	
3-1: Storm Sewer Map.....	25
3-2: Illegal Dumping Regulations	26
3-3: Septic System Maintenance Program.....	27
3-4: Sanitary Sewer Maintenance Program	28
3-5: Pet Waste Control Ordinance.....	29
3-6: Phosphorus Turf Fertilizer Use Ordinance	30
3-7: Illicit Discharge and Illicit Connection Ordinance	31
3-8: Illicit Discharge Inspection Program.....	32
4. <u>Construction Site Runoff Control</u>	
<u>Best Management Practice</u>	
4-1: Construction Site Runoff Control Regulations	33
4-2: Storm Water Management Plan, Review, & Approval Procedures	34
4-3: Erosion Control Inspection	35
4-4: Pre-Construction Meeting.....	36
4-5: Minimum ESC BMP Standards	37
4-6: Construction Site Waste	38
5. <u>Post-Construction Runoff Control</u>	
<u>Best Management Practice</u>	
5-1: Stormwater Management Criteria for Permanent Facilities	39
5-2: Zoning Ordinance.....	40
5-3: Green Space Requirement	41
5-4: Wetland Requirements	42
5-5: Comprehensive Plan.....	43
5-6: Mississippi Headwaters Regulations.....	44

5-7: Shoreland Management	45
5-8: Long-term Operation and Management Requirements	46
5-9: Plan Review Process.....	47
6. Pollution Prevention/Good Housekeeping	
<u>Best Management Practice</u>	
6-1: Municipal Operation and Maintenance Programs.....	48
6-2: Municipal Street Sweeping Program.....	49
6-3: Street Deicing Program	50
6-4: MS4 Outfall, Pond, and Sediment Basin Inspection	51
6-5: Structural Pollution Control Device (SPCD) Inspection.....	52
6-6: Exposed Stockpile, Storage and Material Handling Area Inspection ...	53
6-7: Inspection Analysis and Frequency.....	54
6-8 Record Keeping and Reporting	55
7. Additional BMP Requirements	
<u>Best Management Practice</u>	
7-1: Discharge Affecting Source Water Protection Areas.....	56
7-2: Restricted Discharge Waters.....	57
7-3: Trout Waters	59
IV. Attachment A (Map of Discharges to Restricted Waters)	60
V. Attachment B (Map of Trout Waters Drainage Area)	61
VI. Attachment C (Map of Drinking Water Supply Management Area)	62
VII. Attachment D (Map of Impaired Waters)	63
VIII. Attachment E (Map of “Waters of Concern”).....	64

Summary of SWPPP Development Process

Introduction

Before selecting BMPs and Measurable Goals, City staff undertook a self-assessment of the storm water system. Representatives from the firm Bonestroo, Rosene, Anderlik and Associates met with City of Brainerd staff to facilitate and document the self-assessment process. This was an evaluation of our City's conditions, needs, and practices. The objective of the process was to provide a knowledge base upon which to structure the SWPPP to meet the Permit's Maximum Extent Practicable standard. Details of this process are presented below.

The self-assessment meeting was conducted on August 25, 2006. The scope of the self-assessment was based on the steps and approach structured in the League of Minnesota Cities (LMC) NPDES Phase II MS4 Guide Plan. BRA representatives Greg Halverson and Jesse Carlson facilitated the meeting. Attendees from the City of Brainerd included the following:

- Jeff Hulsether City Engineer
- Don Klein..... Assistant City Engineer
- Mark Ostgarden..... City Planner
- Tom Phelps Public Works Superintendent
- Wayne Mooney Parks and Recreation Director
- Chuck Vaneberg..... Parks and Recreation
- Andy Swift Street Superintendent

Based on the self-assessment process, City staff considered the following, as well as additional factors in order to meet the Maximum Extent Practicable standard set forth in the Permit:

- sources of pollutants
- potentially polluting activities being conducted in the watershed
- sensitivity of receiving waters
- uses of receiving waters
- specific local concerns
- the size of our community
- climate
- implementation schedules
- current ability to finance stormwater programs
- hydrology
- geology
- capacity to perform operation & maintenance
- local land uses
- rate and type of development
- characteristics of our watershed
- organizational characteristics of our city

In addition to the self-assessment process discussed above, City staff also considered the non-stormwater discharges listed below to determine whether they should be identified as significant contributors of pollutants to our stormwater system. Based on the assessment, we have determined

that they are not significant contributors of pollutants to the Brainerd stormwater system at this time; we will continue to monitor these sources and revise the SWPPP if appropriate.

- water line flushing
- landscape irrigation
- diverted stream flows
- rising ground waters
- uncontaminated ground water infiltration
- uncontaminated pumped ground water
- discharges from potable water sources
- foundation drains
- air conditioning condensation
- irrigation water
- springs
- water from crawl space pumps
- footing drains
- lawn watering
- individual residential car washing
- flows from riparian habitats and wetlands
- dechlorinated swimming pool discharges
- street wash water
- discharge or flows from fire fighting activities.

Environmental Setting

The City of Brainerd is situated in the heart of one of the prime resort and recreational areas in the State of Minnesota approximately 120 miles north of the Minneapolis/St. Paul metropolitan area. It is estimated that there are more than 400 lakes within 20 miles of the City. While the greatest economic impact from the tourism generated by the environmental setting is in the summer months with fishing and golfing, winter activities such as ice fishing, skiing, and snowmobiling also draw vacationers during the winter season. The Mississippi River runs north to south through the City creating a picturesque setting. Also, either partially or entirely within the City are Boom Lake, Gilbert Lake and Rice Lake/Reservoir.

Drainage

Almost all storm water from the City of Brainerd drains into the Mississippi River either directly or via local lakes, reservoirs, streams, and ditches. A few small portions within the southwestern portion of the City are landlocked basins. The entire drainage area of the city is located within the DNR minor watershed “Mississippi River – Brainerd”.

Roughly 55-60% of the City drains directly into the Mississippi River. This includes all of the drainage to the west of the river and several adjacent portions to the east.

Buffalo Creek receives about 25-30% of the stormwater from the city. This includes the majority of the drainage from the southeast part of the city.

Rice Lake receives about 15 % of the stormwater drainage from the city. This includes drainage areas in the northeast part of the city.

In 1982 the city underwent a sewer separation project and the city has been operating for over 23 years with independent sanitary and stormwater sewer systems. According to City staff, the stormsewer infrastructure is moderately undersized. Open ditches and existing streams are used to carry water to the Mississippi River. According to staff, the ditch system has not experienced a high amount of significant erosion or structural problems to date.

Receiving Waters

Mississippi River

The majority of the city's water drains into the Mississippi River. At the northwest edge of the city the Potlatch Paper Company dam impedes the flow of the river and provides power for industry in the city.

According to Minnesota State Rule 7050.0180, subpart 6, the Mississippi River is designated a "Restricted Water" from the headwaters at Lake Itasca to the southern boundary of Morrison County that are included in the Mississippi Headwaters Board comprehensive plan dated February 12, 1981. Consequently, a small portion in the south western portion of the City of Brainerd which was recently annexed will be subject to additional requirements within the MS4 Permit. See attachment A (Map of Restricted Discharge Waters).

Appendix C.B (Discharges to Waters with Restricted Discharges) of the NPDES MS4 permit includes the requirements relating to new or expanded discharges into the Mississippi River.

In addition, the Mississippi River below the Brainerd Dam is currently listed on the MPCA 303(d) impaired waters list. The river was listed in 1999 because mercury was impacting aquatic consumption. According to the MPCA, the target completion date for a TMDL is 2011.

Little Buffalo Creek

Little Buffalo Creek flows west from its starting point in Oak Lawn Township to the Mississippi River in southern Brainerd. The creek meanders through the southern edge of the city which drains a substantial portion of its stormwater into the creek.

The entire reach of Little Buffalo Creek is currently listed on the MPCA 303(d) impaired waters list. The creek was listed for having low fish (listed 2002) and invertebrate (listed 2006) indexes of biotic integrity (IBIs). This indicates conditions that may not be conducive to aquatic life in the creek. According to the MPCA, the target completion date for increasing both IBIs to acceptable levels is 2011.

Buffalo Lake

Buffalo Lake is currently within the City limits of Brainerd due to an annexation area located on the southwestern boundary although no development has occurred yet surrounding this receiving water. The DNR conducted a survey of the lake which determined the 32 acre water body had a maximum depth of 13 feet, median depth of 6.5 feet. According to the MnDNR area fisheries manager Tim Brastrup, Buffalo Lake is essentially a large wetland or marsh which serves valuable water quality treatment for Little Buffalo Creek. It experiences northern pike runs in the spring but is frequent winter kills minimize game fish populations. Wild rice is abundant which provides good forage for waterfowl.

Rice Lake

Rice Lake is a 434 acre reservoir with a maximum depth of 25 feet located on the northeast side of Brainerd in Crow Wing County. It is formed by the Potlatch Paper Company dam on the Mississippi River. The lake has an average water clarity depth of 6 feet, as reported by the DNR.

Rice Lake is currently listed on the MPCA 303(d) impaired waters list. The lake was listed in 1998 because mercury was impacting aquatic consumption. According to the MPCA, the target completion date for a TMDL is 2011.

Gilbert Lake

Gilbert Lake is a 369 acre lake located in Brainerd. The lake has a maximum depth of 45 feet, however about 61% of the surface area is less than 15 feet deep. It is a moderately hard water lake with moderate phosphorus fertility and water clarity that is typical for this area. Shallow water soils are primarily sand and gravel, with appreciable areas of muck also present. The aquatic plant community is fairly diverse. Emergent species help cycle nutrients and provide some shoreline protection from wave activity. Bulrush enhances quality of bass/panfish spawning habitat and wild rice does the same for northern pike. Submerged species provide cover and food sources for a wide variety of aquatic life. (MN DNR)

Whiteley Creek

Whiteley Creek is located near the northwestern border of the city and generally flows north into the Rice Lake. The DNR has classified Whiteley Creek and its tributary streams as designated trout waters (MN Rules 7050.0420). This includes all sections of Whiteley Creek and its tributaries within the city of Brainerd. Currently, there is very little development within the City boundaries. Appropriate planning and stormwater design will be necessary to protect this water from new or expanded discharges according to the MS4 General Permit Part IX. Appendix C. C

FEATURES

Rare Species Review

A rare species review was conducted for the City of Brainerd. To conduct the review, current information about the type and known locations of state and listed Special Concern, Threatened, or Endangered species, as well as information about rare features such as rookeries and high quality natural areas, was obtained from the Minnesota DNR Natural Heritage program. The information was imported into GIS (ArcView 3.1) and compared to the City boundaries to determine whether any rare species or rare features occurred within City boundaries. Several listed features were found within the City of Brainerd and are listed on page 8.

COMMON NAME	STATE STATUS	TOWNSHIP, RANGE & SECTION	ELEMENT OF OCCURANCE RANK
Blanding's Turtle	THREATENED	45N031W 36,44N031W 2,44N031W 1,45N031W 35	Not ranked
Blanding's Turtle	THREATENED	45N031W 36,45N031W 25,133N028W 9	Not ranked
Blanding's Turtle	THREATENED	134N028W 33,134N028W 32,134N028W 28,134N028W 29	Not ranked
Blanding's Turtle	THREATENED	45N030W 19,45N030W 20	Not ranked
Blanding's Turtle	THREATENED	133N028W 4,45N031W 23	Not ranked
Blanding's Turtle	THREATENED	133N028W 9,133N028W 8	Not ranked
Blanding's Turtle	THREATENED	134N028W 33,134N028W 28	Not ranked
Blanding's Turtle	THREATENED	134N028W 33,134N028W 28,134N028W 32	Not ranked
Blanding's Turtle	THREATENED	45N030W 30,45N031W 25,45N030W 19	Not ranked
Bald Eagle	SPECIAL CONCERN	133N028W 4	E - Verified extant (viability not assessed)
Native Plant Community, Undetermined Class		45N031W 36,44N031W 2,133N028W 17,133N028W 16,44N031W 1,45N031W 35	A - Excellent estimated viability
Colonial Waterbird Nesting Site		134N028W 34,45N030W 19,45N031W 24	Not ranked

Blanding's Turtle (Emydoidea blandingii)

In a study done by NDSU, the occurrence of Blanding's turtles in the Brainerd/Baxter area has been well established through both element occurrence records and from previous studies done at Camp Ripley. Monitored turtles during the study utilized an array of aquatic habitats common to Brainerd including inland shallow fresh marshes (type 3), inland deep fresh marshes (type 4), inland open fresh water (type 5), and shrub swamps (type 6). (NDSU – Piegras, Sajwaj, Hamernick, and Lang)

Soils Information

According to the 2002 Crow Wing County Comprehensive Local Water Plan, the general soil classification for Brainerd was Menahga. The Menahga series consists of very deep, excessively drained to well drained soils that formed in sandy glacial outwash sediments on outwash plains, valley trains, and some moraines and drumlins. These soils have rapid permeability. Their slopes range from 0 to 55 percent. Mean annual precipitation is about 26 inches. Mean annual air temperature is about 42 degrees F. Menahga soils are excessively drained. Surface runoff is moderately low to moderately high. Permeability is rapid. The native vegetation for this soil is coniferous forest with jack pine being the dominant tree.

Land Use & Future Expansion

The 2004 Comprehensive Plan for the city of Brainerd listed nine major land use categories.

Existing Land Use City of Brainerd September 2002

Land Use Category	Acres			Percent (of Total Developed Area)	
	Gross	Wetland	Net*	Gross	Net
Residential					
Low Density	1,338	70	1,268	35	37
Medium to High Density	171	15	156	4	4
Manufactured Housing	84	5	79	2	2
Public /Semi-Public / Institutional	1,010	170	840	27	25
Industrial	546	119	427	14	13
Park / Trails	340	33	307	9	9
Commercial					
General	255	17	238	7	7
Downtown	35	0	35	1	1
Total Developed	3,779	429	3,350	100	100
Vacant	2,089	701	1,388	35	29
Total Land	5,868	1,130	4,738	100	100
Water	420		420	6	7
Right of Way	993		993	14	16
Total City	7,281		6,151	100%	100%

Future development within the City is limited. To the north, lakes and wetlands impede future growth however provide interesting challenges to protect given the higher interest in property adjacent to water features. To the southwest, a recent annexation area (600 acres) has recently been included within City boundaries. Historically, annexation within the City has been landowner driven.

Currently, the City downtown area is experiencing redevelopment efforts. The 2004 Comprehensive Plan identified the redevelopment of downtown as a high priority. Possible stormwater opportunities include retrofitting, infiltration, filtration, or increased green space.

Organizational Structure

City Government Perspective

The City staff is broken into the following departments: Administration/Finance, Engineering, Parks, Police, Fire, Streets/Sewers, and Planning. Brainerd Public Utilities (BPU) Commission provides service to the Brainerd residents by operating the wastewater treatment plant.

Periodically, there are newsletters and attempts to educate local residents and business owners by the Commission which provides an opportunity to coordinate stormwater education in the future.

Overall, the City staff believes there is a large amount of political support to protect water resources within the City. In the past, the city has implemented a number of programs to minimize and prevent stormwater pollution within the engineering departments. These programs include street sweeping, spill response training, and routine inspections of large outfalls and open ditch system. More recently, the City has adopted a utility fee and stormwater ordinance to help maintain the stormsewer system.

Community Perspective

The residents within Brainerd value local resources. According to a public meeting during the development of the 2002 Comprehensive Plan, the local residents ranked the environment and natural features within Brainerd as the highest value. However, the staff feels the residents have a limited knowledge of the impacts of stormwater on local water quality.

Roughly 50% of the housing in Brainerd is rental property. This will cause some unique challenges regarding the effectiveness of standard educational efforts such as bill stuffers or newsletters. Efforts must be made to centralize any activities or messages and target areas in the City where the community congregates.

Currently, there are very few programs run by the city to educate or involve people in regards to stormwater. The Crow Wing Soil and Water Conservation District (SWCD) have periodically provided educational efforts. Specifically, a training session for local contractors and developers was conducted to educate them on the MPCA construction general permit. There are possibilities of coordinating efforts with the SWCD for future programs.

Additional organizations within the community for possible volunteer opportunities include:

- Schools
 - Central Lakes Community College
 - Brainerd High School
 - Local Elementary Schools
- Northland Arboretum
- Watershed District
- DNR
- Lake-/River-shore Residents
- Scout groups
- Church groups
- Garden clubs
- Neighborhood groups
- Conservation groups

Permit Completion

The self-assessment process led to the development of this SWPPP, with appropriate BMPs and measurable goals for the City. The final SWPPP includes both existing and proposed BMPs, responsible persons, measurable goals, and timelines for implementation.

City of Brainerd SWPPP BMP Summary Matrix

BMP	Title	Public Education and Outreach	Public Participation and Involvement	Illicit Discharge Detection and Elimination	Construction Site Runoff Controls	Post-Construction Stormwater Management	Pollution Prevention/Good housekeeping
		1	2	3	4	5	6
1-1	Newsletter Articles	X	X	X	X	X	X
1-2	City Website	X	X	X	X	X	X
1-3	Stormwater Brochures/Handouts	X		X	X		
1-4	30-day Public Notice for Annual Stormwater Meeting	X	X				
1-5	Pet Waste Signage in Parks	X		X			
1-6	Coordination with Local Agencies and Groups	X	X				
2-1	Annual Spring Cleanup		X	X			
2-2	Planning and Zoning Commission		X			X	
2-3	Annual Storm Water Public Meeting	X	X	X	X	X	X
2-4	Public Comment/Complaint Procedures		X	X	X		
3-1	Storm Sewer Map			X			
3-2	Illegal Dumping Regulations			X			
3-3	Septic System Maintenance Program			X			
3-4	Sanitary Sewer Maintenance Program			X			X
3-5	Pet Waste Control Ordinance			X			
3-6	Phosphorus Turf Fertilizer Use Ordinance			X			
3-7	Illicit Discharge and Illicit Connection Ordinance and Enf.			X			
3-8	Illicit Discharge Inspection Program			X			
4-1	Construction Site Runoff Control Regulations				X		
4-2	Stormwater Management Plan, Review, & Approval Procedures				X		
4-3	Erosion Control Inspection				X		
4-4	Pre-Construction Meeting	X			X		

4-5	Minimum ESC BMP Approval Standards	X			X		
4-6	Construction Site Waste Control				X		
5-1	Stormwater Management Criteria for Permanent Facilities					X	
5-2	Zoning Ordinance					X	
5-3	Green Space Requirement					X	
5-4	Wetland Requirements					X	
5-5	Comprehensive Plan					X	
5-6	Mississippi Headwaters Zoning Districts					X	
5-7	Shoreland Management					X	
5-8	Long-term Operation and Maintenance of BMPs					X	
5-9	Plan Review Process					X	
6-1	Municipal Operation and Maintenance Programs	X					X
6-2	Municipal Street Sweeping Program						X
6-3	Street Deicing Program						X
6-4	MS4 Outfall, Pond, and Sediment Basin Inspection						X
6-5	Structural Pollution Control Device (SPCD) Inspection						X
6-6	Exposed Stockpile, Storage, and Material Handling Program						X
6-7	Inspection Analysis and Frequency						X
6-8	Record Keeping and Reporting	X	X	X	X	X	X
7-1	Discharge Affecting Source Water Protection Areas			X			
7-2	Restricted Discharge Waters Plan					X	
7-3	Trout Waters					X	

PUBLIC EDUCATION AND OUTREACH

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 1-1

Minimum Control Measures Addressed by This BMP

X	Public education & outreach	X	Construction site runoff controls
X	Public participation & involvement	X	Post-construction stormwater management
X	Illicit discharge detection & elimination	X	Pollution prevention/Good housekeeping

BMP Title: Newsletter Articles	
BMP Description: The Brainerd Public Utilities (BPU) Commission currently issues a monthly newsletter to educate residents on wastewater related issues. The City of Brainerd plans to coordinate with BPU to utilize this educational tool to provide stormwater related such as those listed within the specific components below. As a goal, the City plans to include one article each year related to each of the six minimum control measures within the MS4 general permit. Each year, the City will evaluate the educational needs of the community related to stormwater and make adjustments to the material within the newsletter. The Annual Public Meeting notice will also be published in the newsletter to encourage participation from residents and local media.	
Measurable Goals: <ul style="list-style-type: none">• Number of educational stormwater articles for each MCM• Number of times the newsletter is sent out• Number of households receiving newsletters	Timeline / Implementation Schedule: <ul style="list-style-type: none">• 2007: Develop a list of stormwater related educational material for newsletter• 2008-2011: Annual Review list and revise as necessary• 2008-2011: At a minimum, annually include one article related to each minimum control measure
Specific Components & Notes (optional): <ul style="list-style-type: none">• Public notice for Annual Stormwater Public Meeting• General homeowner practices regarding illicit discharge, detection and elimination• Erosion and sediment control policies and/or impacts to water resources• Pollution prevention/good housekeeping practices conducted by the City	
Responsible Person for this BMP	
Name: Jeff Hulsether	

Title: City Engineer
Phone: (218) 828-2309
E-mail: jhulsether@ci.brainerd.mn.us
<u>Educational components related to this BMP (description or number – optional):</u> Audience: Residents within the City of Brainerd Educational Goal: To provide general stormwater awareness regarding each of the minimum control measures and participation at the Annual Stormwater Public Meeting

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 1-2

Minimum Control Measures Addressed by This BMP

<input checked="" type="checkbox"/>	Public education & outreach	<input checked="" type="checkbox"/>	Construction site runoff controls
<input checked="" type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input checked="" type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: City Website

BMP Description:

The City has developed a website to provide education and government services to the local community. Other than access to the municipal code, there is currently no stormwater related educational material on the website. The city plans to update the website and maintain a stormwater page for residents to obtain general information related to each of the minimum control measures. Also, the website will provide the residents with the notice for Annual Stormwater Public Meeting, local volunteer opportunities, and links to existing educational resources.

Each year, the City will evaluate the information within the website related to stormwater and make revisions based on inspections of the stormsewer system, revised local and state regulations, and new city policies and initiatives related to pollution prevention/good housekeeping activities.

Measurable Goals:

- Number hits on the stormwater web page
- Educational messages/links related to each minimum control measure.

Timeline / Implementation Schedule:

- 2007: Determine educational material to update website
- 2008: Update website with information related to each minimum control measure
- 2008-2011: Annually review and revise educational material on website.

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

Audience: General Public, Businesses, Developers, and Contractors

Educational Goal: To provide easy access for audience to obtain SWPPP, Annual Report documentation, local stormwater policies, general awareness of stormwater related impacts, and volunteer opportunities

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 1-3

Minimum Control Measures Addressed by This BMP

<input checked="" type="checkbox"/>	Public education & outreach	<input checked="" type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Stormwater Brochures/Handouts

BMP Description:

The City has a number of brochures and pamphlets available at City Hall for the public to learn more about city services and policies. The City plans to develop a pamphlet which outlines the minimum BMP requirements for erosion and sediment control and distribute at City Hall with building permit applications and also at local construction sites which are experiencing compliance problems.

In addition, the City plans to solicit additional educational brochures and pamphlets from outside entities related to homeowner and business practices to control stormwater especially from illicit discharge and illicit connections through coordination with local agencies and groups (BMP 1-6). By utilizing existing educational material, the local residents will obtain a clear and consistent educational message from all agencies providing stormwater education.

Measurable Goals:

- Number of ESC pamphlets distributed
- Number of types of brochures/pamphlets available at City Hall

Timeline / Implementation Schedule:

- 2007: Develop ESC pamphlet
- 2008: Solicit existing brochures/pamphlets from outside entities for City Hall availability
- 2009-2011: Distribute ESC pamphlet with building permit and appropriate construction sites

Specific Components & Notes (optional):

- Minimum ESC BMP Approval Standards (BMP 4-5)

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

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Educational components related to this BMP (description or number – optional):

Audience: Developers, contractors, general public

Educational Goals: To provide awareness to developers and contractors regarding minimum erosion and sediment control standards and to provide general stormwater knowledge to the public utilizing existing information from outside entities.

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 1-4

Minimum Control Measures Addressed by This BMP

<input checked="" type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input checked="" type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: 30-Day public notice for annual stormwater meeting

BMP Description:

The City will post a 30-day public notice for the annual stormwater public meeting (BMP 2-3). In an effort to encourage public participation in the meeting, the City will initially publish the notice in the local newspaper (Brainerd Daily Dispatch), and post on the City website, newsletter, and City Hall bulletin board. Each year, the City will evaluate the attendance at the meeting and revise the public notice strategy as resources are available and the need for additional public awareness is apparent.

Written comments received during the 30-day public notice will be reviewed by the appropriate City staff. Revisions to the SWPPP will be conducted based on the review and responses to each comment will be recorded and submitted with the Annual Report.

Measurable Goals:

- Completed public notice (y/n)
- Number of places notice is posted
- Number of written comments received

Timeline / Implementation Schedule:

- 2007-2011: Annually post/publish 30-day public notice for stormwater public meeting
- 2007-2011: Annually review and revise public notice procedures based on available resources and need.

Specific Components & Notes (optional):

- Annual Stormwater Public Meeting (BMP 2-3)
- City Website (BMP 1-2)
- Newsletter Articles (BMP 1-1)

Responsible Person for this BMP

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Educational components related to this BMP (description or number – optional):

Audience: General Public, Businesses, Developers and Contractors

Educational Goal: As a goal, the City will attempt to provide notice to all residents and encourage participation at the annual stormwater public meeting.

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 1-5

Minimum Control Measures Addressed by This BMP

<input checked="" type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Pet Waste Signage in Parks

BMP Description:

The City currently installs signage in the City owned parks to provide awareness of the City regulations regarding picking up pet waste. In addition, bags and waste baskets are available for the public use. Additional educational information will be included on the City website and newsletter publications. As a goal, the City plans to issue one additional educational message related to pet waste requirements throughout the year.

Measurable Goals:

- Total number of signs posted in Parks
- Number of parks with signage

Timeline / Implementation Schedule:

- 2007-2011: Continue existing program
- 2007-2011: Annually include one educational message regarding pet waste cleanup in website or newsletter

Specific Components & Notes (optional):

- Newsletter Articles (BMP 1-1)
- City Website (BMP 1-2)

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

Audience: Residents within the City of Brainerd, property owners and general public who enter public parks

Educational Goal: To provide awareness of city pet waste policy and general knowledge regarding the impacts to local water resources

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 1-6

Minimum Control Measures Addressed by This BMP

<input checked="" type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input checked="" type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Coordination with Local Agencies and Groups

BMP Description:

The City plans to develop an annual procedure to review potential coordination opportunities including funding or in-kind contributions with local agencies and groups. The coordinating efforts will focus on educational materials for distribution and any public participation activities to educate the public on stormwater issues and/or implement stormwater protection projects within the City.

Possible coordination entities within the City of Brainerd include local schools, watershed district, DNR, Scout groups, lakeshore and river shore residents, MPCA, Soil and Water Conservation District, and Baxter. The City will annually research available educational material for distribution in the newsletter, website, or stormwater brochures/handouts. As a goal, the City will coordinate with local agencies and groups for 2 public participation efforts prior to 2011.

Measurable Goals:

- Coordinate with local agencies and/or groups for 2 public participation efforts prior to 2011
- Number of educational materials obtained from local agencies and groups

Timeline / Implementation Schedule:

- 2007-2011: Solicit information and possible partnerships with local agencies/groups annually
- 2007-2011: Determine appropriate partnerships and educational information for distribution annually

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

Audience: General public

Educational Goal: To provide consistent storm water educational messages by utilizing existing information from local agencies and groups

PUBLIC PARTICIPATION AND INVOLVEMENT

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 2-1

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input checked="" type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

<u>BMP Title:</u> Annual Spring Cleanup	
<u>BMP Description:</u> <p>The City currently assists an annual spring cleanup effort administered by community neighborhood groups, service clubs, or others. Assistance provided may include money to cover a tipping fee, in-kind contributions such as City chipper and crew, or other means determined appropriate by City staff on an annual basis. By allowing an easy and environmentally safe venue for proper disposal of household waste, the City feels the potential for illicit discharge and illegal dumping will be minimized.</p> <p>In the future, the City will provide additional educational efforts through the newsletter and/or website. As a goal, the city will incorporate one educational message related to the spring cleanup effort annually.</p>	
<u>Measurable Goals:</u>	<u>Timeline / Implementation Schedule:</u>
<ul style="list-style-type: none"> • Amount of debris collected • Number of volunteers • Number of groups participating • Number of cleanup efforts conducted each year 	<ul style="list-style-type: none"> • 2007-2011: Continue ongoing procedures • 2007-2011: Incorporate one educational message related to spring cleanup effort annually with either the newsletter and/or website.
<u>Specific Components & Notes (optional):</u>	
Responsible Person for this BMP	
Name: Jeff Hulsether	
Title: City Engineer	
Phone: (218) 828-2309	
E-mail: jhulsether@ci.brainerd.mn.us	
<u>Educational components related to this BMP (description or number – optional):</u>	
Audience:	
Educational Goals:	

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 2-2

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input checked="" type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Planning and Zoning Commission

BMP Description:

The City Planning and Zoning Commission allow interested citizens the opportunity to be involved in City planning and project approval. The current planning and zoning commission includes 6 members from the public and one council liaison person. The planning commission responsibilities include recommendations to the City Council for ordinances changes, preliminary and final site plan layouts for development and redevelopment, and preliminary review of grading and drainage plans.

The planning commission provides residents the opportunity to participate in the decision making process. The City currently advertises vacant commission seats on the website, and has good participation from the community.

Measurable Goals:

- Number of plans reviewed by Commission
- Number of people on the commission

Timeline / Implementation Schedule:

- 2007-2011: Continue ongoing program

Specific Components & Notes (optional):

This BMP is a part of the overall plan review and approval standards for post-construction stormwater runoff. Together with engineering department review, the City ensures proper installation of stormwater according to City ordinance and stormwater design policies.

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

Audience: City residents

Educational Goal: Provide awareness of open planning and zoning commission seats by using the website (BMP 1-2)

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 2-3

Minimum Control Measures Addressed by This BMP

<input checked="" type="checkbox"/>	Public education & outreach	<input checked="" type="checkbox"/>	Construction site runoff controls
<input checked="" type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input checked="" type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Annual Storm Water Public Meeting

BMP Description:

The City will conduct an Annual Storm Water Public meeting prior to submitting the Annual Report to the MPCA. The meeting will be held at a location within the general vicinity of the City. During the meeting, the city will provide a short presentation describing the importance of stormwater runoff control, the status of compliance with permit conditions, and allow interested persons a reasonable opportunity to make oral or written statements concerning the SWPPP or implementation procedures. Comments will be reviewed by appropriate City staff and the SWPPP will be revised if appropriate. All responses to comments will be recorded and submitted with the annual report.

During the first year of the permit, the City will establish approved procedures and processes for the public meeting. The City may conduct this meeting at a regular council meeting which will be broadcasted on local cable access television. This will provide additional public education and outreach to a larger audience.

In addition, the City will have educational stormwater brochures/pamphlets identified in BMP 1-3 available for interested citizens.

Measurable Goals:

- Annually conduct stormwater public meeting (y/n)
- Number of attendees at meeting
- Number of comments (written/oral) received at meeting.

Timeline / Implementation Schedule:

- 2007: Establish approved procedures and processes for the public meeting
- 2008-2011: Conduct Annual Stormwater Public Meeting

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

Audience: General public, business owners, developers, contractors

Educational goal: Provide audience knowledge of importance of stormwater runoff control, SWPPP provisions, and permit compliance.

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 2-4

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input checked="" type="checkbox"/>	Construction site runoff controls
<input checked="" type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Public Comment/Complaint Procedures

BMP Description:

The City will develop a program for receipt and consideration of public complaints and comments throughout the year which involve illicit discharge, detection and elimination (IDDE) and construction site runoff control. This process will benefit the City by increasing the number of noncompliance identified during the year for enforcing the Illicit Discharge and Illicit Connection Ordinance (BMP 3-7) and Construction Site Runoff Control Regulations (BMP 4-1).

Currently, all public comments/complaints are received by a central operator and forwarded to the appropriate City staff. In 2007, the City will develop a procedure to record and respond to public comments/complaints for the annual report.

Measurable Goals:

- Number of complaints/comments regarding illicit discharge, detection and elimination
- Number of complaints/comments regarding construction site runoff control

Timeline / Implementation Schedule:

- 2007: Develop procedures to record and respond to public complaints/comments
- 2008: Provide public awareness through website

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

ILLICIT DISCHARGE DETECTION & ELIMINATION

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 3-1

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Storm Sewer Map	
BMP Description: The City will develop a stormsewer map illustrating the specific components below. Currently, the City has incorporated most of the stormsewer infrastructure in CAD format and has a good understanding of the drainage system. Once completed, the map will be posted on the City website (1-2). This will allow residents the opportunity to determine which water body receives drainage from their property. Also, this map will be utilized when illicit discharge detection and elimination (IDDE) program has identified potential noncompliance by tracking upstream to identify the source.	
Measurable Goals: <ul style="list-style-type: none"> • Completed stormsewer map according to permit requirements (y/n) 	Timeline / Implementation Schedule: <ul style="list-style-type: none"> • 2007: Identify all structural pollution control devices and MS4 outfalls within the City. • 2007: Include all ponds, streams, lakes, and wetlands • June 30, 2008: Completed MS4 Stormwater Map • 2009-2012: Annually update electronic storm sewer map and update City website
Specific Components & Notes (optional): <ul style="list-style-type: none"> • Ponds, streams, lakes and wetlands that are part of the MS4 • Structural pollution control devices • Pipes and conveyances that are 24" in diameter and over that are part of the MS4 • Outfalls and other discharge points leaving the MS4 	
Responsible Person for this BMP	
Name: Jeff Hulsether	
Title: City Engineer	
Phone: (218) 828-2309	
E-mail: jhulsether@ci.brainerd.mn.us	
Educational components related to this BMP (description or number – optional):	

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 3-2

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

<u>BMP Title:</u> Illegal Dumping Regulations	
<u>BMP Description:</u> <p>The City ordinance currently requires proper storage, deposit and disposal of refuse within the City. Specific language outlined in Chapters VI and VIII provide enforcement (misdemeanor) for noncompliance and are referenced in the Specific Components below.</p> <p>Specific items addressed in the ordinance include proper disposal of garbage and rubbish by using a licensed solid waste hauler. In addition, no person shall throw, deposit, place or leave in any park or parkway, or waters therein, any paper, rubble, waste, cans, glass or refuse of any kind, whether or not the same is offensive to the senses or is injurious to the health, except in receptacles provided for waste.</p> <p>The City plans to revise the ordinance to include requirements for illicit discharge and illicit connections as outlined in BMP 3-7. Codified ordinances are available on the City webpage for public viewing and downloading.</p>	
<u>Measurable Goals:</u>	<u>Timeline / Implementation Schedule:</u>
<ul style="list-style-type: none"> • Completed ordinance regulations (y/n) • Number of enforcement actions taken 	<ul style="list-style-type: none"> • 2007-2011: Continue enforcement of existing or new ordinance language
<u>Specific Components & Notes (optional):</u>	
<ul style="list-style-type: none"> • Chapter VI. Public Health (Section 600) • Chap. VIII Streets, Alleys, Public Ways and Grounds (Section 815) 	
Responsible Person for this BMP	
Name: Jeff Hulsether	
Title: City Engineer	
Phone: (218) 828-2309	
E-mail: jhulsether@ci.brainerd.mn.us	
<u>Educational components related to this BMP (description or number – optional):</u>	

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 3-3

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Septic System Maintenance Program

BMP Description:

Maintaining septic systems within the City will reduce the amount of failing systems that may impact receiving waters. The City currently does not allow septic systems to be installed within City property unless city sanitary services are not available. All new systems must be inspected by a third party for proper installation.

Currently, there are very few septic systems within the City. However, if a building permit application is submitted to the City which has a septic tank on the property, the City requires the applicant to provide documentation that the system has been inspected and compliant with 7080 Rules. If not, the septic system must be brought into compliance prior to certificate of occupancy.

Measurable Goals:

- Number of known septic systems within the City
- Number of known failing septic systems
- Number of septic systems removed

Timeline / Implementation Schedule:

- 2007-2011: Continue ongoing program

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 3-4

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input checked="" type="checkbox"/>	Pollution prevention/Good housekeeping

<u>BMP Title:</u> Sanitary Sewer Maintenance Program	
<u>BMP Description:</u> Proper maintenance of the sanitary sewer system will prevent sewer overflows due to inflow/infiltration or blocked sanitary infrastructure causing discharge to local receiving waters. The City has currently implemented a successful preventive maintenance program which includes annual flushing and rodding all sewer lines and periodic inspections of the lift stations are conducted by the PUC.	
<u>Measurable Goals:</u>	<u>Timeline / Implementation Schedule:</u>
<ul style="list-style-type: none"> • Total amount of sewer cleaned • Number of backups causing discharge to storm sewer system 	<ul style="list-style-type: none"> • 2007-2011: Continue ongoing program
<u>Specific Components & Notes (optional):</u>	
Responsible Person for this BMP	
Name: Andy Swift	
Title: Street and Sewer Superintendent	
Phone: (218) 828-2313	
E-mail: aswift@ci.brainerd.mn.us	
<u>Educational components related to this BMP (description or number – optional):</u>	

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 3-5

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

<u>BMP Title:</u> Pet Waste Control Ordinance	
<u>BMP Description:</u> Pet waste on public streets and property may impact local receiving waters. The City has included a provision in Chapter IX. Public Safety which requires anyone walking a dog to be responsible for cleanup and proper disposal of the dog waste. Enforcement of the ordinance includes a misdemeanor including payment for any associated costs. This is an existing program which the City will continue to implement.	
<u>Measurable Goals:</u> <ul style="list-style-type: none"> • Completed Ordinance (y/n) • Number of enforcement actions taken 	<u>Timeline / Implementation Schedule:</u> <ul style="list-style-type: none"> • 2007-2011: Continue ongoing program
<u>Specific Components & Notes (optional):</u> Chapter IX. Public Safety (Section 900)	
<u>Responsible Person for this BMP</u>	
Name: Jeff Hulsether	
Title: City Engineer	
Phone: (218) 828-2309	
E-mail: jhulsether@ci.brainerd.mn.us	
<u>Educational components related to this BMP (description or number – optional):</u>	

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 3-6

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Phosphorus Turf Fertilizer Use Ordinance

BMP Description:

The City has adopted an ordinance (Chapter V. Section 535) which prohibits a person from applying a fertilizer containing the plant nutrient phosphorus to turf in the City of Brainerd, unless a soil test has been done within the last three years indicating the level of available phosphorus is insufficient to support healthy turf growth, a new turf via seed or sod is being established only in the first growing season, or applied to golf courses under the direction of a person licensed certified, or approved by an organization with an ongoing training program approved by the Commissioner of Agriculture.

The ordinance also requires proper application rates and prohibits fertilizer on impervious surfaces. Fertilizers must be immediately contained and either legally applied to turf or returned to the appropriate container. A violation of this ordinance is a petty misdemeanor.

At a minimum, the City will provide one public educational message regarding the impacts of phosphorus fertilizer and the city regulations.

Measurable Goals:

- Completed Ordinance (y/n)
- Number of enforcement actions taken

Timeline / Implementation Schedule:

- 2007-2011: Continue ongoing program
- 2007-2011: Annually include an educational message to public via BMP 1-1, 1-2, or 1-3

Specific Components & Notes (optional):

- Chapter V. Planning and Land Use Regulations (Section 535)
- The City plans to educate the public on the fertilizer regulations and the impacts related improper fertilizer control and water resources by utilizing the educational BMPs in the SWPPP such as the Newsletter articles (BMP 1-1), City Website (1-2), or Stormwater Brochures/Pamphlets (BMP 1-3)

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 3-7

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Illicit Discharge and Illicit Connection Ordinance and Enforcement

BMP Description:

The City will develop an illicit discharge and illicit connection ordinance by June 30th, 2008. The ordinance will include prohibited discharges to the City's MS4, enforcement actions and penalties for noncompliance. The Illicit Discharge Inspection Program (BMP 3-8) and Public Comment/Complaint Procedures (BMP 2-4) will be used to identify the discharges and the storm sewer map (BMP 3-1) will be used to track and identify the discharges up-stream. When violations to the ordinance are identified, the City will use the enforcement and penalty descriptions outlined in the ordinance to eliminate the discharge.

Measurable Goals:

- Number of updates to the City ordinance regarding illegal discharge and illicit connections to the storm sewer system
- Number of illicit discharges eliminated

Timeline / Implementation Schedule:

- 2007: Review existing ordinance and research example IDDE ordinances for revisions.
- June 30th, 2008: Completed illicit discharge and illicit connections ordinance
- 2008-2011: Enforce ordinance

Specific Components & Notes (optional):

Coordination with Illicit Discharge Inspection Program (BMP 3-8) and Public Comment/Complaint Procedures (BMP 2-4)

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 3-8

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Illicit Discharge Inspection Program

BMP Description:

The City will inspect the MS4 outfalls, ponds and sediment basins, and structural pollution control devices as outlined in BMP 6-4 and BMP 6-5. As a goal, the system will be inspected during dry weather to make it easier to identify non-stormwater discharges. Standard inspection checklists will be developed in 2007 to assist consistent inspections and documentation. If discharges are identified, the City will use the Storm Sewer Map (BMP 3-1) to track the discharge up stream and utilize the Illicit Discharge and Illicit Connection Ordinance (BMP 3-7) and Illegal Dumping Ordinance (BMP 3-2).

Measurable Goals:

- Number of outfalls, pond/sediment basins, and SPCDs inspected for Illicit Discharge Inspection Program.
- Number of illicit discharge located
- Number of enforcement actions taken

Timeline / Implementation Schedule:

- 2007: Develop standard inspection checklists for MS4 outfalls, ponds and sediment basins, and structural pollution control devices
- 2007-June 30th, 2008: Inspect required storm sewer structures, list, and attempt to identify discharges utilizing storm sewer map
- June 30th, 2008: Utilize ordinance to enforce noncompliance and eliminate discharges.

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

CONSTRUCITON SITE RUNOFF CONTROL

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 4-1

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input checked="" type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Construction Site Runoff Control Regulations

BMP Description:

The City code currently requires grading and filling permits for all projects disturbing 50 cubic yards or more of material or movement of any amount of material within steep slopes or within bluff or shore impact zones (Chapter IV. Planning and Land Use Regulations Section 530). Also, the City has temporary erosion and sediment control requirements for all construction projects (Chapter IV. Building, Housing and Construction) which include a misdemeanor penalty for noncompliance. In addition, the City requires projects which disturb over 5 acres to submit a Storm Water Management Plan which must meet the requirements of the state NPDES construction permit. (Chapter VII. Public Utilities Section 715)

The City plans to review the existing ordinance provisions during the first year of the permit and make revisions to reflect current best management practices as outlined in the state NPDES construction permit, enforcement procedures, and possible additional penalties associated with noncompliance. These revisions will be provided to all contractors and developers as a brochure/pamphlet during the building permit application process.

Measurable Goals:

- Completed ordinance (y/n)

Timeline / Implementation Schedule:

- 2007: Research ordinances from other communities
- 6 months after permit authorization: Update ordinance to include 1 acre threshold and possible revised minimum BMPs and penalties as necessary
- 2008-2011: Implement ordinance

Specific Components & Notes (optional):

- Chap IV. Building, Housing and Construction Regulations (Section 430)
- Chapter V. Planning and Land Use Regulations (Section 530)
- Chapter VII. Public Utilities (Section 715)

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 4-2

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input checked="" type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Storm Water Management Plan, Review, & Approval Procedures

BMP Description:

The City requires all applicants for a building permit except those exempted by the ordinance to submit a Storm Water Management Plan (SWMP). SWMPs must include construction site runoff control measures to meet the requirements of the state NPDES construction permit. Additional site erosion control requirements are included in the ordinance and must be shown on the site map, site construction plan, or final site conditions plan. All submitted plans are reviewed by City staff and must meet the requirements of the ordinance prior to approval.

Measurable Goals:

- Completed SWMP plan review process (y/n)
- Number of SWMPs reviewed annually

Timeline / Implementation Schedule:

- 2007: Review exemptions for SWMP
- 6 months after permit authorization: Update ordinance to include 1 acre threshold and possible revised minimum BMPs and penalties as necessary
- 2008-2011: Implement revised SWMP review and approval standards

Specific Components & Notes (optional):

- Chapter VII. Public Utilities (Section 715)

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 4-3

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input checked="" type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Erosion Control Inspection

BMP Description:

The City's Engineering department currently inspects construction sites periodically to determine if construction site runoff controls are being implemented.

In 2007, the City plans to evaluate the existing erosion and sediment control inspection process and develop and document standard policies and procedures. The City will determine if the new enforcement procedures will be outlined in revised ordinance sections or within a brochure/pamphlet distributed to building permit applicants. Implementation of the new inspection process will begin prior to 6 months after permit authorization.

Measurable Goals:

- Number of job sites inspected for ESC
- Number of enforcement actions taken

Timeline / Implementation Schedule:

- 2007: Identify needs for inspection procedures and policies
- 2007: Develop and document determined inspection procedures and policies
- 6 months after permit authorization: Implement inspection requirements for City inspector

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 4-4

Minimum Control Measures Addressed by This BMP

<input checked="" type="checkbox"/>	Public education & outreach	<input checked="" type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Pre-construction meeting

BMP Description:

Grading pre-construction meetings are currently required for all city owned projects and selected private projects to discuss erosion and sediment control requirements and expectations for developers and contractors depending on the size and proximity to receiving waters. These meetings provide the developer and contractor the opportunity to review city policies and expectations, ask questions, and become educated on the importance of controlling runoff and waste from construction sites. The City will develop a standard pre-construction meeting checklist which, at a minimum, will include the specific components listed below. In addition, the City will develop standard criteria for requiring pre-construction meetings on private projects.

Measurable Goals:

- Annually conduct grading preconstruction meetings as needed
- Number of meetings conducted

Timeline / Implementation Schedule:

- 2008: Develop standard pre-construction meeting checklist to include, at a minimum, items listed within the specific components
- 2008: Determine appropriate internal policy/criteria for requiring pre-construction meeting on private projects.
- 2007-2011: Conduct pre-construction meetings as appropriate

Specific Components & Notes (optional):

- Erosion control
- Sediment control
- Inspections and maintenance
- Dewatering and Basin Draining
- Construction Site Waste Control

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 4-5

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input checked="" type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Minimum ESC BMP Standards

BMP Description:

Current City ordinances shown in the specific components below outline the minimum erosion and sediment control BMP requirements both during the required SWMP submittal and construction process. The City plans to review the existing minimum requirements and revise according to new state NPDES requirements and industry standards as needed according to the timeline/implementation schedule below.

In addition, the City plans to develop a brochure/handout (BMP 1-3) which will be distributed to all building permit applicants and appropriate on-site personnel during the inspection process.

Measurable Goals:

- Revised minimum ESC BMP standards (y/n)
- Number of ESC brochures/handouts distributed.

Timeline / Implementation Schedule:

- 2007: Review existing standards and compare with MPCA Construction General Permit and industry standards
- 6 months after permit authorization: Revise ordinance (BMP 4-1) as needed
- 2009: Develop brochure showing city requirements to be distributed to permit applicants

Specific Components & Notes (optional):

- Chap IV. Building, Housing and Construction Regulations (Section 430)
- Chapter V. Planning and Land Use Regulations (Section 530)
- Chapter VII. Public Utilities (Section 715)
- Stormwater Brochures/Handouts (BMP 1-3)

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Page

MS4 Name: City of Brainerd

Unique Identifying Number: 4-6

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input checked="" type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction storm water management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Construction Site Waste Control

BMP Description:

As part of the Construction Site Runoff Control Regulations (BMP 4-1), the City will incorporate construction site waste control requirements for all projects within the City to meet the standards of the MPCA Construction General Permit. In addition, the city will include construction site waste control as a discussion item for preconstruction meetings (BMP 4-4), listed in the minimum construction site BMP requirements (BMP 4-5), and inspect construction sites for noncompliance with the requirements (BMP 4-3).

Measurable Goals:

- Number of identified construction sites violating waste control requirements.
- Number of enforcement actions taken for construction site waste control noncompliance.

Timeline / Implementation Schedule:

- 2007-2008: Review existing ordinance and compare with state minimum standards for construction site waste
- 6 months after permit authorization: Adopt new Construction Site Runoff Ordinance provisions for construction site waste, incorporate into preconstruction meeting, and inspect sites for noncompliance.

Specific Components & Notes (optional):

Responsible Party

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

POST-CONSTRUCTION SITE RUNOFF CONTROL

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 5-1

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

<u>BMP Title:</u> Stormwater Management Criteria for Permanent Facilities	
<u>BMP Description:</u> Under Chapter VII. Section 715 subd. 9, the City has established storm water management criteria for permanent facilities. A summary of the minimum requirements are outlined within the specific components below. All required SWMPs must meet the requirements of this section of the ordinance. During the Restricted Discharge assessment (BMP 7-2), the City will determine if revisions to the existing stormwater criteria for permanent facilities requires updating. The timeline for this will be dependent upon approval of the MPCA.	
<u>Measurable Goals:</u>	<u>Timeline / Implementation Schedule:</u>
<ul style="list-style-type: none"> • Number of permanent stormwater facilities installed • Number of permanent stormwater facilities accepted by City 	<ul style="list-style-type: none"> • 2007-2011: Continue enforcement of existing regulations • To be determined: Review and update standards based on Restricted Discharge analysis.
<u>Specific Components & Notes (optional):</u>	
<ul style="list-style-type: none"> • 3"-24hr discharge rates • Infiltration and natural features encouraged • Retention and Detention pond design standards • MPCA "Protecting Stormwater BMP Manual" reference 	
<u>Responsible Person for this BMP</u>	
Name: Jeff Hulsether	
Title: City Engineer	
Phone: (218) 828-2309	
E-mail: jhulsether@ci.brainerd.mn.us	
<u>Educational components related to this BMP (description or number – optional):</u>	

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 5-2

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Zoning Ordinance

BMP Description:

The City's Zoning ordinance (V.515) provides requirements for development and redevelopment to follow building setbacks, landscaping requirements, impervious surface requirements, flood plain, flood fringe, and tree preservation for specific land use districts outlined in the approved zoning map. The purpose of the ordinance includes:

- (1) Protecting the public health, safety, morals, comfort, convenience and general welfare.
- (2) Promoting orderly development of land for residential, commercial, industrial, recreational land public uses.
- (3) Protecting and preserving the natural environment of the City.
- (4) Encouraging the protection of historic and esthetics resources in the City.
- (5) Conserving energy through the use of alternative energy systems and conservation through the encouragement of energy efficient structures for commercial, industrial, and residential uses.

The city plans to review the ordinance related to stormwater and revise as determined appropriate by June 30th, 2008. Additional revisions may be necessary as part of the Restricted Discharge Water assessment and will be implemented based on the approved schedule by the MPCA.

Measurable Goals:

- Updated zoning ordinance (y/n)

Timeline / Implementation Schedule:

- June 30th, 2008: Ordinance review and determined revisions to be completed

Specific Components & Notes (optional):

- Chapter V. Planning and Land Use Regulations (Section 515-Zoning)

Responsible Person for this BMP

Name: Mark Ostgarden

Title: City Planner

Phone: (218) 828-2309

E-mail: mostgarden@ci.brainerd.mn.us

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 5-3

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Green Space Requirement

BMP Description:

The City requires green space performance standards for commercial (12%), Industrial (8%), Multifamily (15%), parking lots over 15 spaces (15%), and redevelopment (4%) for all construction within the City. By preserving green space, the City promotes an additional storm water quality benefit by allowing runoff to be conveyed, stored, and/or infiltrated into the ground water.

The existing program in the City is viewed as adequate but the City will review the standards in 2009 and determine if additional requirements should be included based on similar standards by other communities or additional water quality improvements necessary as part of the Restricted Discharge Waters assessment.

Measurable Goals:

- Completed ordinance (y/n)

Timeline / Implementation Schedule:

- 2007-2009: Continue requirements for green space
- 2009-2011: Review standards and revise ordinance provisions accordingly
- 2009-2011: Implement revised ordinance if revisions are conducted.

Specific Components & Notes (optional):

- Section 1415 Green Space
- Section 515.73 (PARKING); Subd. 4

Responsible Person for this BMP

Name: Mark Ostgarden

Title: City Planner

Phone: (218) 828-2309

E-mail: mostgarden@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 5-4

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Wetland Requirements

BMP Description:

The City of Brainerd is the LGU responsible for implementing the Wetland Conservation Act. However, the City coordinates with the Soil and Water Conservation District for all related wetland permits. The wetland regulations are included in Chapter VII Section 715 Subd. 11 of the City Code. According to the requirements: runoff shall not be discharged directly into wetlands without presettlement of the runoff; a natural buffer strip of natural vegetation at least one rod in width shall surround all wetlands; Wetlands must not be drained or filled, wholly or partially, unless replaced by restoring or creating wetland area of at least equal public value as determined by the City Council.

The City plans to review the existing wetland requirements within the next 4 years and update according to feedback, discussions, and recommendations by the Soil and Water Conservation District.

Measurable Goals:

- Updated wetland requirements (y/n)

Timeline / Implementation Schedule:

- 2008: Compare City requirements with County, State, and Watershed regulations
- 2009: Complete necessary revisions according to 2008 analysis
- 2010 - Completed Buffer Regulations

Specific Components & Notes (optional):

- Chapter VII Section 715 Subd. 11

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 5-5

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Comprehensive Plan

BMP Description:

The City uses the Comprehensive Plan to guide development and redevelopment in an orderly manner to protect the valuable resources within the City. It evolved through the interchange of information, analysis and response between citizens, community leaders, staff and public officials within the city and surrounding areas through a planning process which began in 2002 and finalized in 2004. The information within the plan provides a basis for future expectations with regard to growth, housing needs, economic development, land use needs and other important components of the Comprehensive plan. More specifically, the plan includes economic development and housing, natural resources, parks and other community facilities, transportation, environmental setting and characteristics, and land use, growth and development.

Measurable Goals:

- Completed Comprehensive Plan (y/n)

Timeline / Implementation Schedule:

- Continue utilizing the Comprehensive Plan to guide development or redevelopment

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Mark Ostgarden

Title: City Planner

Phone: (218) 828-2309

E-mail: mostgarden@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 5-6

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Mississippi Headwaters Regulations

BMP Description:

The Mississippi Headwater Regulations within the City Code intend to regulate the area of lot, length of lot, width of lot at the waterline, setback of structures, sanitary waste treatment system, structure height, and to protect the quality of the Mississippi River and shorelines, its vegetation, soils, water quality, floodplain areas, and geology; and to regulate alterations of the shoreland vegetation and topography; maintain property values and prevent uncontrolled or poorly planned development; protect and conserve the historic, recreational, archaeological, cultural, fish and wildlife resources of the Mississippi River and adjacent lands.

Measurable Goals:

- Completed requirements (y/n)

Timeline / Implementation Schedule:

- Continue utilizing the Mississippi Headwaters regulations to control development/redevelopment and preserve the Mississippi River Corridor Districts

Specific Components & Notes (optional):

- Chapter V. Planning and Land Use Regulations (Section 525)

Responsible Person for this BMP

Name: Mark Ostgarden

Title: City Planner

Phone: (218) 828-2309

E-mail: mostgarden@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Page

MS4 Name: City of Brainerd

Unique Identifying Number: 5-7

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

<u>BMP Title:</u> Shoreland Management	
<u>BMP Description:</u> The uncontrolled use of shoreland within Brainerd, MN affects the public health, safety and general welfare by contributing to pollution of public waters. Therefore, the City has developed shoreland management ordinance language to regulate the subdivision, use and development of the shorelands of public waters and thus preserve and enhance the quality of surface waters, conserve the economic and natural environmental values of shorelands, and provide for the wise use of waters and related land resources. Current setbacks include 200-400 feet from lakes (depending on the classification) and 300 feet from river/tributaries. The City plans to continue enforcing the shoreland management requirements as outlined in the specific components below.	
<u>Measurable Goals:</u> • Completed requirements (y/n)	<u>Timeline / Implementation Schedule:</u> • Continue shoreland regulations
<u>Specific Components & Notes (optional):</u> • Chapter V. Planning and Land Use Regulations (Section 530) • Shoreland Classification System <ul style="list-style-type: none"> ▪ General Development and Natural Environment Lakes ▪ Rivers and Streams • Specific Land use districts • Grading and filling permits required • Stormwater Management requirements	
<u>Responsible Person</u>	
Name: Mark Ostegarden	
Title: City Planner	
Phone: (218) 828-2309	
E-mail: jhulsether@ci.brainerd.mn.us	
<u>Educational components related to this BMP (description or number – optional):</u>	

BMP Page

MS4 Name: City of Brainerd

Unique Identifying Number: 5-8

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

<u>BMP Title:</u> Long-term Operation and Maintenance of BMPs	
<u>BMP Description:</u> <p>The City currently requires that all SWMP submittals provide access for maintenance purposes and to be structurally sound. All storm water management facilities shall have a plan of operation and maintenance that assures continued effective removal of pollutants carried in storm water management facilities. It is also the responsibility of the applicant to obtain any necessary easements or other property interests to allow access to the storm water management facilities for proper long-term inspection and maintenance purposes.</p> <p>The City plans to review the development and redevelopment standards related to long-term operation and maintenance during the first two years of the permit cycle and make any appropriate revisions to the ordinance to ensure long-term operation and maintenance of the permanent storm sewer system.</p>	
<u>Measurable Goals:</u>	<u>Timeline / Implementation Schedule:</u>
<ul style="list-style-type: none"> • Completed requirements for long-term operation and maintenance (y/n) • Updates to long-term operation and maintenance requirements 	<ul style="list-style-type: none"> • 2007: Review existing long-term operation and maintenance standards • June 30th, 2008: Revise standards as appropriate • 2008: Implement new or existing operation and maintenance standards
<u>Specific Components & Notes (optional):</u>	
<ul style="list-style-type: none"> • Chapter VII. Public Utilities (Section 715, Subd. 15) 	
<u>Responsible Person</u>	
Name: Jeff Hulsether	
Title: City Engineer	
Phone: (218) 828-2309	
E-mail: jhulsether@ci.brainerd.mn.us	
<u>Educational components related to this BMP (description or number – optional):</u>	

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 5-9

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Plan Review Process

BMP Description:

The City's engineering department is responsible for reviewing development and redevelopment plans for Post Construction Runoff according to City standards. SWMPs are reviewed and approved based on the minimum requirements set in the appropriate ordinance provisions and regulations for the particular type of construction project. Through the plan review and requirements within the City ordinance, the City will use this tool as the regulatory mechanism to control Post Construction Runoff.

Measurable Goals:

- Number of plans reviewed
- Revised plan review procedures (y/n)

Timeline / Implementation Schedule:

- 2007-2011: Review existing post construction plan review procedures and make appropriate adjustments annually

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Jeff Hulsether

Title: City Engineer

Phone: (218) 828-2309

E-mail: jhulsether@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

POLLUTION PREVENTION/GOOD HOUSEKEEPING

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 6-1

Minimum Control Measures Addressed by This BMP

<input checked="" type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input checked="" type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Municipal Operation and Maintenance Programs

BMP Description:

The City plans to develop a stormwater operation and maintenance program that includes a training component for each of the specific components listed below. During the first two years, the City will document existing practices, training and education conducted within the engineering and public works department and document standard guidelines and procedures for each of the specific components. Each year thereafter, the City plans to review the written program and make adjustments based on specific stormwater related needs. When possible, the City will use existing training materials that are available from the USEPA, state and regional agencies, or other organizations as appropriate or modified for the community and staff.

Measurable Goals:

- Number of employees trained for each category listed within the specific components
- Completed operation and maintenance program for each category listed within the specific components

Timeline / Implementation Schedule:

- 2007-2008: Collect and review all existing O &M information programs and procedures
- 2008: Develop and document program including training component
- 2009-2011: Review training programs and revise as necessary; implement program

Specific Components & Notes (optional):

- Park and open space,
- Stormwater Maintenance
- Fleet and Building Maintenance
- New Construction and Land Disturbances

Responsible Person for this BMP

Name: Daniel Vogt

Title: City Administrator

Phone: (218) 828-2307

E-mail: dvogt@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

Audience: City employees

Educational Goal: Provide knowledge and technical abilities to implement the SWPPP

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 6-2

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input checked="" type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Municipal Street Sweeping Program

BMP Description:

All city streets are swept in the spring and fall each year. Spot sweeping is conducted on an as needed basis. The City currently owns two mechanical sweepers and all leaves and other biodegradable material is composted.

The City will review potential funding and need for the purchase of a vacuum type sweeper in 2008. Street sweeping training will be included within the operation and maintenance plans identified in BMP 6-1. In addition, the City will provide educational messages to private businesses or landowners and educate them on the importance of sweeping their parking lots.

Measurable Goals:

- Total hours of pavement sweeping
- Number of scheduled road cleanings
- Employees trained on proper street sweeping procedures (y/n)
- Documentation of analysis of vacuum sweeper necessity

Timeline / Implementation Schedule:

- 2007-2011: Continue spring, fall, and spot sweeping practices
- 2008: Determine need for vacuum sweeper

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Andy Swift

Title: Street and Sewer Superintendent

Phone: (218) 828-2313

E-mail: aswift@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 6-3

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input checked="" type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Street Deicing Program

BMP Description:

The City currently applies approximately 14-20% salt mix on City streets during the winter reducing the amount of chloride entering the receiving waters. Mechanical spreaders are used to apply the sand/salt mix. Current salt storage pile is covered to eliminate runoff into adjacent water bodies.

Employee training on proper street deicing practices will be outlined in BMP 6-1. Currently, select maintenance staff receives periodic training by vendors which provide knowledge on appropriate application procedures and equipment to minimize impacts to stormwater.

Measurable Goals:

- Amount of salt used
- Amount of sand used
- Number of employees trained on salt application procedures

Timeline / Implementation Schedule:

- 2007: Analyze current program and determine possible alternate deicing products or procedures
- 2008: Develop and document salt training program

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Andy Swift

Title: Street and Sewer Superintendent

Phone: (218) 828-2313

E-mail: aswift@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 6-4

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input checked="" type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: MS4 Outfall, Pond and Sediment Basin Inspection

BMP Description:

A minimum of 20% of the ponds, sediment basins and outfalls in the City will be inspected annually in rotation until all have been inspected during the Permit period. The City plans to develop standard inspection checklists for MS4 outfalls and ponds/sediment basins. All inspection records will show the date, antecedent weather conditions, sediment storage and capacity remaining, potential illicit discharges, and any maintenance performed or recommended.

When possible, the City will attempt to conduct the MS4 outfall and pond/sediment basin inspections during dry weather flow to identify any illicit discharges into the stormsewer system.

Measurable Goals:

- Completed 20% inspection of outfalls, ponds, and basins. (y/n)

Timeline / Implementation Schedule:

- 2007: Identify all MS4 outfalls and ponds/sediment basins for inspection
- 2007: Develop standard inspection forms/checklists for MS4 outfalls and ponds/sediment basins
- 2007-2011: Annual inspect 20%, at a minimum, of all known outfalls and ponds/sediment basins owned or maintained by the City.

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Andy Swift

Title: Street and Sewer Superintendent

Phone: (218) 828-2313

E-mail: aswift@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Description Sheet

MS4 Name: City of Brainerd

Unique Identifying Number: 6-5

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction stormwater management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input checked="" type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Structural Pollution Control Device (SPCD) Inspection

BMP Description:

Each structural pollution control device owned and/or operated by the City will be inspected annually. The City will develop a standard inspection form/checklist which identifies the date, antecedent weather conditions, sediment storage and capacity remaining, potential illicit discharges, and any maintenance performed or recommended.

When possible, the City will attempt to conduct the structural pollution control devices inspections during dry weather flow to identify any illicit discharges into the stormsewer system.

Measurable Goals:

- Number of SPCDs in the city
- Number SPCDs inspected

Timeline / Implementation Schedule:

- 2007: Identify all structural pollution control devices for inspection
- 2007: Develop standard inspection forms/checklist for structural pollution control devices

Specific Components & Notes (optional):

Responsible Person for this BMP

Name: Andy Swift

Title: Street and Sewer Superintendent

Phone: (218) 828-2313

E-mail: aswift@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Page

MS4 Name: City of Brainerd

Unique Identifying Number: 6-6

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction storm water management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input checked="" type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Exposed Stockpile, Storage and Material Handling Area Inspection

BMP Description:

The City will inspect all exposed stockpile, storage and material handling areas at least annually. A standard checklist and form will be developed which lists the site location and identifies any stormwater impacts identified during the inspection. Corrective actions will be documented and a summary will be provided in the annual report.

The City currently has the following exposed stockpile, storage, and material handling areas.

- Sweepings (salt)
- Sand, aggregate, millings
- Scrap metal

Measurable Goals:

- Annual inspection of all exposed stockpile, storage and material handling areas.

Timeline / Implementation Schedule:

- 2007: Develop standard checklist/forms for inspection
- 2007-2011: Annually inspect 100% of exposed stockpiles, storage and material handling areas.

Specific Components & Notes (optional):

Responsible Party

Name: Andy Swift

Title: Street and Sewer Superintendent

Phone: (218) 828-2313

E-mail: aswift@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Page

MS4 Name: City of Brainerd

Unique Identifying Number: 6-7

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction storm water management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input checked="" type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Inspection Analysis and Frequency

BMP Description:

The City will keep records of inspection results, date, antecedent weather conditions, sediment storage and capacity remaining, and any maintenance performed or recommended. After two years of inspections, if patterns of maintenance become apparent, the frequency of inspections will be adjusted to at least two (2) times annually, or more frequently as needed to prevent carry-over or washout of pollutants from the structures and maximize pollutant removal. If maintenance or sediment removal is not required as a result of both the first two annual inspections, the frequency will be reduced to once every two years.

Measurable Goals:

- Number of inspection modifications
- Annual Report summary of inspection results.

Timeline / Implementation Schedule:

- 2008: Review patterns of inspections from first two years and revise accordingly
- 2009-2011: Continue analysis of inspections and adjust annually based on previous two year results.

Specific Components & Notes (optional):

Responsible Party

Name: Andy Swift

Title: Street and Sewer Superintendent

Phone: (218) 828-2313

E-mail: aswift@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

BMP Page

MS4 Name: City of Brainerd

Unique Identifying Number: 6-8

Minimum Control Measures Addressed by This BMP

<input checked="" type="checkbox"/>	Public education & outreach	<input checked="" type="checkbox"/>	Construction site runoff controls
<input checked="" type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction storm water management
<input checked="" type="checkbox"/>	Illicit discharge detection & elimination	<input checked="" type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Record Keeping and Reporting

BMP Description:

The City will submit an annual report according to the requirements outlined in the current MS4 permit and retain all records required for the last three (3) years beyond the term of the permit. All records, including the approved SWPPP, will be available to the public at reasonable times during regular business hours after a 7 day advance notice and reasonable charge for requested copies.

The City will develop standard annual tracking documents to record the progress towards reaching the measurable goals. Each year, the City will complete the tracking document and submit information in the Annual Report as requested by the MPCA.

Measurable Goals:

- Develop record keeping procedure
- Implement record keeping procedure

Timeline / Implementation Schedule:

- 2007-2011: Annually submit annual report and retain records as required
- 2007-2011: Provide records at reasonable times during regular business hours after 7 day advanced notice and reasonable charge for requested copies

Specific Components & Notes (optional):

Responsible Party

Name: Andy Swift

Title: Street and Sewer Superintendent

Phone: (218) 828-2313

E-mail: aswift@ci.brainerd.mn.us

Educational components related to this BMP (description or number – optional):

ADDITIONAL BMP REQUIREMENTS

BMP Page

MS4 Name: City of Brainerd

Unique Identifying Number: 7-1

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input type="checkbox"/>	Post-construction storm water management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Discharge Affecting Source Water Protection Areas

BMP Description:

The Minnesota Department of Health (MDH) has approved a Part II Wellhead Protection Plan (WPP) which describes the DWSMA and implementation strategies to protect water resources and the ground water aquifer. In addition, the plan included the necessary map illustrating the wells and source waters for drinking water supply management areas identified as vulnerable under Minn. R. 4720.5205, 4720.5210, and 4720.5330. A copy of this map is included in the SWPPP as appendix C.

At this time, the City has determined the jurisdictional area does not include land within the source water protection area for surface water intakes identified in the source water assessments conducted by the Mn Dept. of Health under the federal Safe Drinking Water Act, U.S.C. 300j-13. If identified at a later date, the City will work with the appropriate organizations to address potential impacts to the areas to the maximum extent practical and revise the SWPPP accordingly.

Measurable Goals:

- Implement Part II Wellhead Protection Plan and approval by MDH.
- Determine areas within the source water protection area for surface water intakes identified in the source water assessments conducted by the Mn Dept. of Health under the federal Safe Drinking Water Act, U.S.C. 300j-13.
- Coordinate with appropriate organizations and revise SWPPP accordingly.

Timeline / Implementation Schedule:

- 2007-2011
- According to MDH schedule
- 2007-2011

Specific Components & Notes (optional):

Responsible Party

Name: Darwin Cole
 Title: Brainerd Public Utilities
 Phone: (218) 829-8726
 E-mail: dcole@bpu.org

Educational components related to this BMP (description or number – optional):

BMP Page

MS4 Name: City of Brainerd

Unique Identifying Number: 7-2

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction storm water management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Restricted Discharge Waters

BMP Description:

According to Minnesota State Rule 7050.0180, subpart 6, the Mississippi River is designated a “Restricted Water” from the those portions of the Mississippi River from Lake Itasca to the southerly boundary of Morrison County that are included in the Mississippi Headwaters Board comprehensive plan dated February 12, 1981. A portion of the City has been identified within the DNR minor subwatershed level for the Mississippi River. A map of the area is attached as appendix A.

The City will prepare and submit a map and assessment as required under Part IX. Appendix C. Section B.2.a-b. The City will present the assessment, together with the proposed changes to the SWPPP, for public comment during the annual public comment period, prior to the first annual report required under Part VI.D.

During the MPCA review, notice, and preliminary determination processes, the City will work with the MPCA, if appropriate, to respond to comments and/or revise the submittal materials to prepare them for final approval.

After final determination by the MPCA, the City will modify and implement the SWPPP as per the approved submittal materials and as needed to meet the restricted discharge requirements.

Measurable Goals:

- Prepare and submit map of discharge area as required above
- Prepare and submit narrative estimate of percent impervious surface as required above
- Present proposed assessment and SWPPP revisions to general public
- Submit proposed assessment and SWPPP revisions to MPCA
- The City will respond to and coordinate with the MPCA, as appropriate, during the MPCA review, notice, and preliminary determination processes
- Modify and implement the SWPPP as per the approved modifications and as needed to meet the restricted discharge

Timeline / Implementation Schedule:

- Submitted as part of the MS4 Permit Application on February 15th, 2007
- 90 days after permit effective date
- Prior to first annual report
- First annual report or another later date if established by the Commissioner.
- To be determined
- To be determined

requirements.	
<u>Specific Components & Notes (optional):</u>	
Responsible Party	
Name: Jeff Hulsether	
Title: City Engineer	
Phone: (218) 828-2309	
E-mail: jhulsether@ci.brainerd.mn.us	
<u>Educational components related to this BMP (description or number – optional):</u>	

BMP Page

MS4 Name: City of Brainerd

Unique Identifying Number: 7-3

Minimum Control Measures Addressed by This BMP

<input type="checkbox"/>	Public education & outreach	<input type="checkbox"/>	Construction site runoff controls
<input type="checkbox"/>	Public participation & involvement	<input checked="" type="checkbox"/>	Post-construction storm water management
<input type="checkbox"/>	Illicit discharge detection & elimination	<input type="checkbox"/>	Pollution prevention/Good housekeeping

BMP Title: Trout Waters

BMP Description:

According to Minnesota Rule 6264.0050 subp. 2 and 4, Whitely creek and adjacent tributaries are designated trout waters. A portion of the City jurisdiction has been identified within the DNR minor subwatershed for Whitely creek and designated tributaries. At this time, the City is not aware of new or expanded discharges within the City's jurisdiction.

For future developments and redevelopments which discharge to trout waters, the City plans to establish administrative procedures or other measures to ensure appropriate determination and documentation of the basis for the decision have been implemented according to the following:

- That there is no feasible and prudent alternative to the proposed discharge; and
- All prudent and feasible measures needed to avoid or reduce impacts to trout waters, and to preserve the existing high quality of the water will be implemented

If the discharge cannot be avoided, the city will consider measures to protect water quality and prevent temperature increases. Acceptable measures include reduce the impervious surfaces, diversion away from the stream and use of filter strips, infiltration, biofiltration, or enhanced grass swales to treat runoff before discharge to the trout water. Innovative alternatives to ponds will be specifically encouraged for trout water discharges if they provide equivalent treatment.

Measurable Goals:

- Number of discharges from City storm sewer into trout waters
- Number of new or expanded discharges from City storm sewer into trout waters
- Development of administrative procedures (y/n)

Timeline / Implementation Schedule:

- 2007: Review past development to verify no new or expanded discharges to date
- 2007: Identify any discharges from City's storm sewer into trout waters
- 2010: Develop administrative procedures as outlined in description

Specific Components & Notes (optional):

Responsible Party

Name: Jeff Hulsether
 Title: City Engineer
 Phone: (218) 828-2309
 E-mail: jhulsether@ci.brainerd.mn.us