Montana Department of Environmental Quality WATER PROTECTION BUREAU	**Agency Use** **MTR04_____** **Date Rec'd:** **Amount Rec'd:** **Check No.:** **Rec'd By:**

FORM
MS4-AR

MPDES Storm Water Small MS4 Annual Report Form

Reporting period is for the calendar year, January 1st through December 31st.
Check one. Annual Report is due by March 1st of the following year.

○ 2017 ◉ 2018 ○ 2019 ○ 2020 ○ 2021

Instructions: This Annual Report Form is to be completed by each permittee and co-permittee authorized to discharge storm water under the General Permit for Storm Water Discharges Associated with Small Municipal Separate Storm Water Sewer Systems (MS4s). All authorized permittees and co-permittees are required to complete this Annual Report Form for each calendar year reporting period. For co-permittees authorized under one permit authorization or for co-permittees with multiple authorizations, you are required to complete this form and submit separate required documents/information exclusively for your respective regulated Small MS4 area(s). This completed Annual Report Form must be electronically submitted to the Montana Department of Environmental Quality, Water Protection Bureau. Electronic submission is required through the web-based tool: NetDMR. Additional information is located on DEQ's website: http://deq.mt.gov/Water/WQINFO/ctss/netdmr.

Small MS4 Authorization Number: MTR04 0000

Small MS4 Classification	◉ **Traditional**	○ **Non-Traditional**

Small MS4 Name: City of Helena

Small MS4 Mailing Address: 316 N Park Ave

City, State, and Zip Code: Helena, MT 59601

Small MS4 Contact Person (and Title): Matt Culpo (SWMP Coordinator)

Mailing Address: 316 N Park Avenue

City, State, and Zip Code: Helena, MT 59601

Phone Number: (406)4478073	**E-mail address:** mculpo@helenamt.gov

Storm Water Management Team: Attach an organizational chart identifying a primary SWMP coordinator and the positions responsible for implementing each minimum measure.

Requested above chart:	(•) Attached	( ) Not Attached

Has the permittee established and executed a formalized mechanism for regular communication between storm water management team members?	(•) Yes	( ) No

Permittee's SWMP Resources:

How many FTEs does the permittee designate to the MS4 permit? 3 If needed, provide an explanation. Several people within Engineering and Utility Maintenance divisions of the Public Works Department have duties related to the MS4. 3 FTEs is an estimate of the combined time of all employees with some storm water responsibilities.

If more space is needed, submit on an additional page with corresponding reference or on a data storage device.

Answer the following five (5) questions on an additional page with corresponding reference or on a data storage device.

(1) What are the source(s) of funding for implementation of the MS4 permit and the estimated percentage of the total budget allocated from each source listed?

(2) Specific to the annual reporting calendar year, how did the permittee justify commitment of resources or budget allocations to the implementation of the MS4 permit to decision-makers and the public? Provide a summary of meetings and outcomes held with decision-makers and the public.

(3) Has the permittee demonstrated program effectiveness to obtain budget allocations for this annual reporting calendar year or previous years? Why or why not? If so, what program effectiveness metrics were presented?

(4) How was this annual reporting calendar year's approach to allocate resources different than the previous year's approach?

(5) Was the permittee successful in their request for budget allocations? Describe the outcome and factors that affected or resulted in that outcome.

Illicit Discharge Detection & Elimination: Per the IDDE MCM requirement (Part II (3)(c.i)), has the permittee reviewed, and updated if needed, the storm sewer map during the calendar year?	(•) Yes	( ) No
Per the IDDE MCM requirement (Part II (3)(e.i)), has the permittee dry weather inspected and screened outfalls during the calendar year?	(•) Yes	( ) No

Fill in the blanks with numbers. The permittee has inspected 9 outfalls during this calendar year. Since authorization under the 2017 General Permit, the permittee has inspected 18 total outfalls out of the 34 total MS4 outfalls.

Per the Illicit Discharge Detection & Elimination MCM (Part II (3)(e.i)), the permittee will complete the requirement to inspect and screen all outfalls during dry weather by the end of the permit cycle.	(•) Yes	( ) No
Construction Site Storm Water Management: During the calendar year, how many construction storm water management plan reviews were completed (Part II (4)(b))? 6		
During the calendar year, how many construction projects were inspected for their storm water management controls (Part II (4)(c))? 5		
Pollution Prevention/Good Housekeeping for Permittee Operations: Has the permittee reviewed, and updated if needed, the inventory of permittee-owned/operated facilities and activities (Part II (6)(a.i))?	(•) Yes	( ) No
Has the permittee reviewed, and updated if needed, the map that identifies the locations of facilities and known locations of activities (Part II (6)(a.ii))?	(•) Yes	( ) No
Has the permittee conducted annual storm water pollution prevention training for permittee staff during the next permit year after development of each standard operating procedure (Part II (6)(a.v))? ***Not applicable during calendar year 2017, 2018, and 2019. Check "No" during these years.***	( ) Yes	(•) No
Training: According to Part II (B) Training requirements, has the permittee conducted applicable training during the 1st and 4th calendar years? ***Not required during calendar year 2018, 2019, and 2021. Check "No" during these years.***	( ) Yes	(•) No
According to Part II (B) Training requirements, has the permittee conducted applicable new employee training within 90 days of the hire date?	(•) Yes	( ) No
Special Conditions: Per **Pre-TMDL Approval (Part III.A) requirements**, attach the required information regarding identification of all outfalls that discharge to impaired waterbodies, the impaired waterbodies, and the associated pollutants of impairments. Summarize the BMPs implemented over the reporting period and a schedule of BMPs planned for the following year.		
( ) Attached	( ) Not Attached	(•) Not Applicable
Special Conditions: Approved TMDLs (Part III.B) requirements per calendar year below.		
Calendar Year 2017: The permittee has attached a Sampling Plan that includes strategy rationale, monitoring frequency, monitoring parameters, and monitoring locations.		
( ) Attached	( ) Not Attached	( ) Not Applicable

Calendar Year 2017: The permittee has attached all outfalls that discharge to impaired waterbodies and the associated pollutants of impairment.		
◯ Attached	◯ Not Attached	◯ Not Applicable
Calendar Year 2018: The permittee has attached all outfalls that discharge to impaired waterbodies and the associated pollutants of impairment.		
◉ Attached	◯ Not Attached	◯ Not Applicable
Calendar Year 2019: The permittee has attached all outfalls that discharge to impaired waterbodies and the associated pollutants of impairment.		
◯ Attached	◯ Not Attached	◯ Not Applicable
Calendar Year 2020: The permittee has attached all outfalls that discharge to impaired waterbodies and the associated pollutants of impairment.		
◯ Attached	◯ Not Attached	◯ Not Applicable
Calendar Year 2020: The permittee has attached the TMDL section of the SWMP that identifies the measures and BMPs it plans to implement, describes the MS4's impairment priorities and long term strategy, and outlines interim milestones for controlling the discharge of the pollutants of concern and making progress towards meeting the TMDL.		
◯ Attached	◯ Not Attached	◯ Not Applicable
Calendar Year 2021: The permittee has attached all outfalls that discharge to impaired waterbodies and the associated pollutants of impairment.		
◯ Attached	◯ Not Attached	◯ Not Applicable
Calendar Year 2021: The permittee has evaluated the TMDL section of the SWMP based on monitoring results. The section has been revised, if needed, and is attached.		
◯ Attached	◯ Not Attached	◯ Not Applicable
Monitoring: Per requirements in Part IV (B), has the permittee attached monitoring results, calculations, and evaluations?		
◉ Attached	◯ Not Attached	◯ Not Applicable

INSTRUCTIONS: The permittee will only fill out the Annual Report Attachments section below that corresponds to the calendar in which an Annual Report is being submitted for. Attach the requested documents/information.

2017 Annual Report Attachments (1st Calendar Year)		
Public Education and Outreach:		
Per requirements a.i in the referenced MCM, attach the required information regarding key target audiences and associated pollutants.		
◯ Attached	◯ Not Attached	
Public Involvement and Participation:		
Per requirements a.i in the referenced MCM, attach the required information regarding the public involvement approach and schedule of each key audience.		
◯ Attached	◯ Not Attached	
Illicit Discharge Detection & Elimination:		
Per requirements a.i in the referenced MCM, attach the required information regarding categories of non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
◯ Attached	◯ Not Attached	
Per requirements b.i in the referenced MCM, attach the required information regarding occasional non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
◯ Attached	◯ Not Attached	
Per requirements f.i in the referenced MCM, attach the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.		
◯ Attached	◯ Not Attached	
Construction Site Storm Water Management:		
Per requirements a.iii in the referenced MCM, attach progress towards an Enforcement Response Plan and associated documents.		
◯ Attached	◯ Not Attached	
Specific to Traditional MS4s and per requirements b.i in the referenced MCM, attach the construction storm water management plan review checklist.		
◯ Attached	◯ Not Attached	◯ Not applicable
Specific to Non-Traditional MS4s and per requirements b.iii in the referenced MCM, attach the construction storm water management plan review checklist.		
◯ Attached	◯ Not Attached	◯ Not applicable
Specific to Traditional MS4s and per requirements c.i in the referenced MCM, attach the construction storm water management inspection form or checklist.		
◯ Attached	◯ Not Attached	◯ Not applicable
Specific to Non-Traditional MS4s and per requirements c.ii in the referenced MCM, attach the construction storm water management inspection form or checklist.		
◯ Attached	◯ Not Attached	◯ Not applicable

Post-Construction Site Storm Water Management in New and Redevelopment		
Specific to Traditional MS4s and per requirements b.i in the referenced MCM, attach the post-construction storm water management plan review checklist.		
◯ Attached	◯ Not Attached	◯ Not applicable
Specific to Non-Traditional MS4s and per requirements b.ii in the referenced MCM, attach the post-construction storm water management plan review checklist.		
◯ Attached	◯ Not Attached	◯ Not applicable
Per requirements in b.iii in the referenced MCM, attach the performance standards and associated documents.		
◯ Attached	◯ Not Attached	

2018 Annual Report Attachments (2nd Calendar Year)

Public Education and Outreach:	
Per requirements b.i in the referenced MCM, attach the required information regarding outreach messages.	
◉ Attached	◯ Not Attached
Per requirements c.i in the referenced MCM, attach the required information regarding a description of formats, distribution channels and schedule for key target audiences.	
◉ Attached	◯ Not Attached
Public Involvement and Participation:	
Per requirements a.ii in the referenced MCM, attach the required information regarding participation and key target audience feedback on approaches.	
◉ Attached	◯ Not Attached
Illicit Discharge Detection & Elimination:	
Per requirements a.i in the referenced MCM, attach the required information regarding categories of non-storm water discharges or flows, associated pollutants, and local controls or conditions.	
◉ Attached	◯ Not Attached
Per requirements b.i in the referenced MCM, attach the required information regarding occasional non-storm water discharges or flows, associated pollutants, and local controls or conditions.	
◉ Attached	◯ Not Attached
Specific to Traditional MS4s and per requirements d.i in the referenced MCM, attach the adopted ordinance or other regulatory mechanism to prohibit illicit discharges.	
◉ Attached	◯ Not Attached ◯ Not applicable
Specific to Non-Traditional MS4s and per requirements d.ii in the referenced MCM, attach the summary of legal authority to prohibit illicit discharges.	
◯ Attached	◯ Not Attached ◉ Not applicable
Per requirements d.iii in the referenced MCM, attach the required summary of the cooperative agreements.	

◉ Attached	○ Not Attached	
Per requirements d.iv in referenced MCM, attach the Enforcement Response Plan and associated documents.		
◉ Attached	○ Not Attached	
Per requirements e.ii in referenced MCM, attach the list of high priority outfalls.		
◉ Attached	○ Not Attached	
Specific to Traditional MS4s and per requirements f.iii in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.		
◉ Attached	○ Not Attached	○ Not applicable
Specific to Non-Traditional MS4s and per requirements f.iv in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.		
○ Attached	○ Not Attached	◉ Not applicable
Post-Construction Site Storm Water Management in New and Redevelopment		
Specific to Traditional MS4s and per requirements c.i in the referenced MCM, attach the post-construction storm water management inspection form or checklist.		
◉ Attached	○ Not Attached	○ Not applicable
Specific to Non-Traditional MS4s and per requirements c.ii in the referenced MCM, attach the post-construction storm water management inspection form or checklist.		
○ Attached	○ Not Attached	◉ Not applicable
Per requirements in c.iii in the referenced MCM, attach the inventory of all new permittee-owned and private post-construction storm water management controls.		
◉ Attached	○ Not Attached	
Per requirements in c.vi in the referenced MCM, attach an inspection frequency protocol.		
◉ Attached	○ Not Attached	
Specific to Traditional MS4s and per requirements c.vii, attach the developed inspection program.		
◉ Attached	○ Not Attached	○ Not applicable
Pollution Prevention/Good Housekeeping for Permittee Operations		
Per requirements in a.iii in the referenced MCM, attach completed Standard Operating Procedures.		
◉ Attached	○ Not Attached	

2019 Annual Report Attachments (3rd Calendar Year)

Public Education and Outreach:

Per requirements c.ii in the referenced MCM, attach the required information regarding outreach materials distributions.

◯ Attached ◯ Not Attached

Public Involvement and Participation:

Per requirements a.ii in the referenced MCM, attach the required information regarding participation and key target audience feedback on approaches.

◯ Attached ◯ Not Attached

Illicit Discharge Detection & Elimination:

Per requirements a.i in the referenced MCM, attach the required information regarding categories of non-storm water discharges or flows, associated pollutants, and local controls or conditions.

◯ Attached ◯ Not Attached

Per requirements b.i in the referenced MCM, attach the required information regarding occasional non-storm water discharges or flows, associated pollutants, and local controls or conditions.

◯ Attached ◯ Not Attached

Per requirements e.ii in referenced MCM, attach the list of high priority outfalls.

◯ Attached ◯ Not Attached

Per requirements e.iii in referenced MCM, attach the required summary of screening results.

◯ Attached ◯ Not Attached

Specific to Traditional MS4s and per requirements f.iii in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.

◯ Attached ◯ Not Attached ◯ Not applicable

Specific to Non-Traditional MS4s and per requirements f.iv in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.

◯ Attached ◯ Not Attached ◯ Not applicable

Construction Site Storm Water Management:

Specific to Traditional MS4s and per requirements a.i in the referenced MCM, attach the adopted ordinance or other regulatory mechanism to require construction storm water controls.

◯ Attached ◯ Not Attached ◯ Not applicable

Specific to Non-Traditional MS4s and per requirements a.ii in the referenced MCM, attach the legal authority summary.

◯ Attached ◯ Not Attached ◯ Not applicable

Per requirements a.iii in the referenced MCM, attach the adopted Enforcement Response Plan and associated documents.

◯ Attached ◯ Not Attached

Post-Construction Site Storm Water Management in New and Redevelopment

Per requirements in c.viii in the referenced MCM, attach findings and compliance actions regarding inspections of high priority post-construction storm water management controls.		
◯ Attached	◯ Not Attached	
Specific to Traditional MS4s and per requirements c.ix, attach the findings and resulting actions regarding inspections of high priority privately-owned post-construction storm water management controls.		
◯ Attached	◯ Not Attached	◯ Not applicable
Pollution Prevention/Good Housekeeping for Permittee Operations		
Per requirements in a.iii in the referenced MCM, attach the completed Standard Operating Procedures.		
◯ Attached	◯ Not Attached	

2020 Annual Report Attachments (4th Calendar Year)

Public Education and Outreach:		
Per requirements c.ii in the referenced MCM, attach the required information regarding outreach materials distributions.		
◯ Attached	◯ Not Attached	
Public Involvement and Participation:		
Per requirements a.ii in the referenced MCM, attach the required information regarding participation and key target audience feedback on approaches.		
◯ Attached	◯ Not Attached	
Illicit Discharge Detection & Elimination:		
Per requirements a.i in the referenced MCM, attach the required information regarding categories of non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
◯ Attached	◯ Not Attached	
Per requirements b.i in the referenced MCM, attach the required information regarding occasional non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
◯ Attached	◯ Not Attached	
Per requirements e.ii in referenced MCM, attach the list of high priority outfalls.		
◯ Attached	◯ Not Attached	
Per requirements e.iii in referenced MCM, attach the required summary of screening results.		
◯ Attached	◯ Not Attached	
Specific to Traditional MS4s and per requirements f.iii in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.		
◯ Attached	◯ Not Attached	◯ Not applicable
Specific to Non-Traditional MS4s and per requirements f.iv in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge		

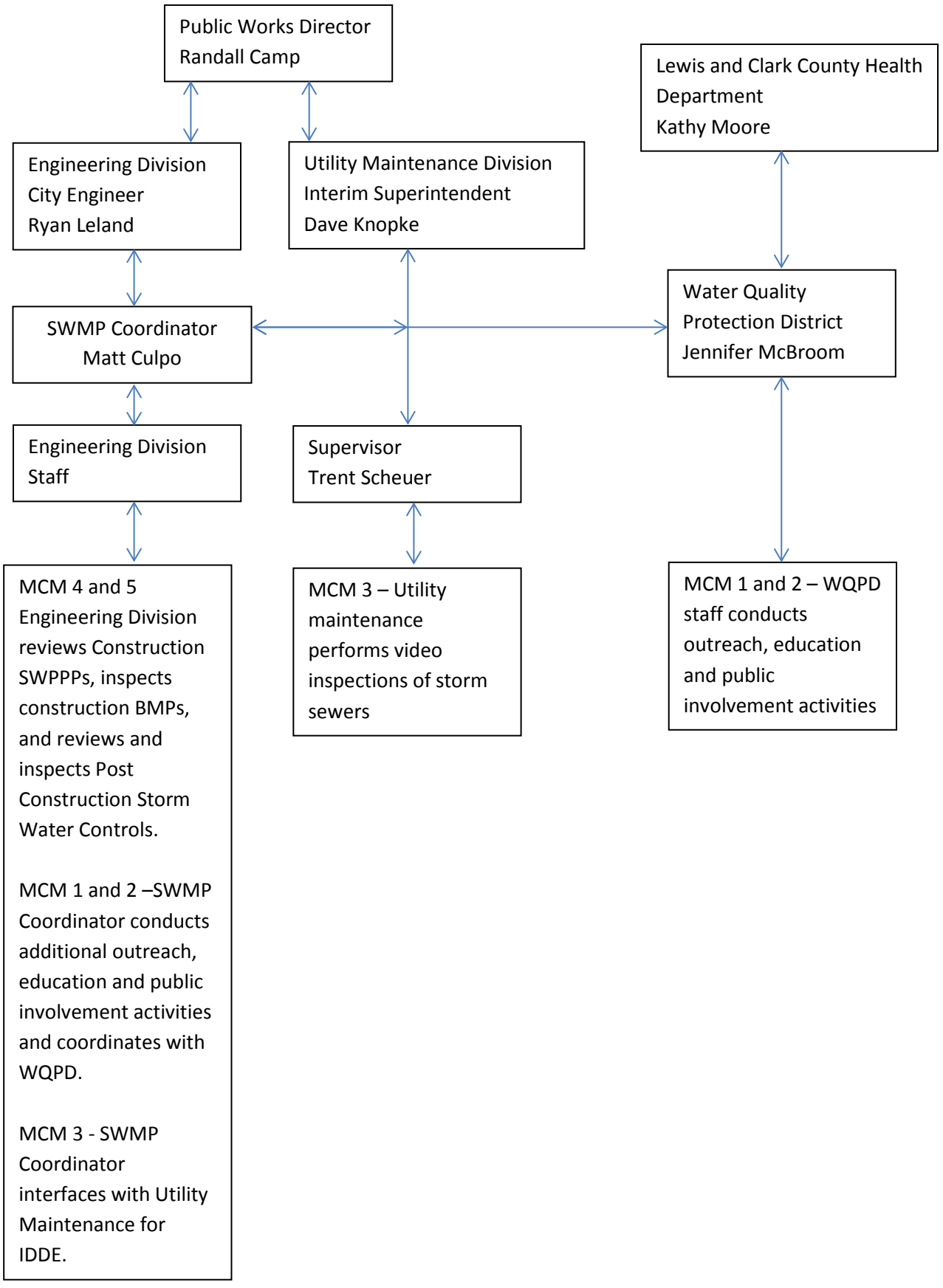
Investigation and Corrective Action Plan and any associated documents.		
◯ Attached	◯ Not Attached	◯ Not applicable
Post-Construction Site Storm Water Management in New and Redevelopment		
Specific to Traditional MS4s and per requirements a.i in the referenced MCM, attach the adopted ordinance or other regulatory mechanism to require post-construction storm water controls.		
◯ Attached	◯ Not Attached	◯ Not applicable
Specific to Non-Traditional MS4s and per requirements a.ii in the referenced MCM, attach the legal authority summary.		
◯ Attached	◯ Not Attached	◯ Not applicable
Per requirements in a.iii in the referenced MCM, attach the Enforcement Response Plan and associated documents.		
◯ Attached	◯ Not Attached	
Per requirements in c.viii in the referenced MCM, attach findings and compliance actions regarding inspections of high priority post-construction storm water management controls.		
◯ Attached	◯ Not Attached	
Specific to Traditional MS4s and per requirements c.ix, attach the findings and resulting actions regarding inspections of high priority privately-owned post-construction storm water management controls.		
◯ Attached	◯ Not Attached	◯ Not applicable
Per requirements in d.i in the referenced MCM, attach a summary of the discussion outcomes.		
◯ Attached	◯ Not Attached	
Pollution Prevention/Good Housekeeping for Permittee Operations		
Per requirements in a.iii in the referenced MCM, attach the completed Standard Operating Procedures.		
◯ Attached	◯ Not Attached	

2021 Annual Report Attachments (5th Calendar Year)

Public Education and Outreach:	
Per requirements c.ii in the referenced MCM, attach the required information regarding outreach materials distributions.	
◯ Attached	◯ Not Attached
Public Involvement and Participation:	
Per requirements a.ii in the referenced MCM, attach the required information regarding participation and key target audience feedback on approaches.	
◯ Attached	◯ Not Attached
Illicit Discharge Detection & Elimination:	
Per requirements a.i in the referenced MCM, attach the required information regarding categories of non-storm water discharges or flows, associated pollutants, and local controls or conditions.	

◯ Attached	◯ Not Attached	
Per requirements b.i in the referenced MCM, attach the required information regarding occasional non-storm water discharges or flows, associated pollutants, and local controls or conditions.		
◯ Attached	◯ Not Attached	
Per requirements e.ii in referenced MCM, attach the list of high priority outfalls.		
◯ Attached	◯ Not Attached	
Per requirements e.iii in referenced MCM, attach the required summary of screening results.		
◯ Attached	◯ Not Attached	
Specific to Traditional MS4s and per requirements f.iii in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.		
◯ Attached	◯ Not Attached	◯ Not applicable
Specific to Non-Traditional MS4s and per requirements f.iv in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.		
◯ Attached	◯ Not Attached	◯ Not applicable
Post-Construction Site Storm Water Management in New and Redevelopment		
Per requirements in c.viii in the referenced MCM, attach findings and compliance actions regarding inspections of high priority post-construction storm water management controls.		
◯ Attached	◯ Not Attached	
Specific to Traditional MS4s and per requirements c.ix, attach the findings and resulting actions regarding inspections of high priority privately-owned post-construction storm water management controls.		
◯ Attached	◯ Not Attached	◯ Not applicable
Pollution Prevention/Good Housekeeping for Permittee Operations		
Per requirements in a.iii in the referenced MCM, attach completed Standard Operating Procedures.		
◯ Attached	◯ Not Attached	
Attach any updates, changes, or improvements to the Small MS4 Storm Water Management Program per requirements in Part IV (E).		
● Attached	◯ Not Attached	◯ Not applicable

Annual Report Form Signature	
This Annual Report Form must be completed, signed, and certified as follows: • **For a corporation, by a principal officer of at least the level of vice president;** • **For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or** **For a municipality, state, federal, or other public facility, by either a principal executive officer or ranki elected official.**	
All Permittees Must Complete the Following Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]. ***Certification of this form indicates conformance with the 2017 General Permit for Storm Water Discharge Associated with Small Municipal Separate Storm Sewer Systems and the required Annual Reporting upon receipt of permit coverage.***	
Name (Type or Print) Ana Cortez	
Title (Type or Print) City Manager	**Phone Number** 406-447-8000
Signature	**Date Signed** 3/13/19


Public Works Director
Randall Camp
Lewis and Clark County Health Department
Kathy Moore
Engineering Division
City Engineer
Ryan Leland
Utility Maintenance Division
Interim Superintendent
Dave Knopke
Water Quality Protection District
Jennifer McBroom
SWMP Coordinator
Matt Culpo
Engineering Division Staff
Supervisor
Trent Scheuer
MCM 4 and 5 Engineering Division reviews Construction SWPPPs, inspects construction BMPs, and reviews and inspects Post Construction Storm Water Controls.
MCM 1 and 2 –SWMP Coordinator conducts additional outreach, education and public involvement activities and coordinates with WQPD.
MCM 3 - SWMP Coordinator interfaces with Utility Maintenance for IDDE.
MCM 3 – Utility maintenance performs video inspections of storm sewers
MCM 1 and 2 – WQPD staff conducts outreach, education and public involvement activities

RESPONSES TO QUESTIONS 1 -5

Page 2: Questions 1-5

1) The City of Helena has a storm water utility which charges property owners based on the amount of impervious land they own. The storm water utility collects approximately 1 million dollars annually. 100% of the funds from the storm water utility are used to operate, maintain and manage the City's MS4.

   The City of Helena also teams up with Lewis and Clark County to assess property owners between $8 and $10 per year which amounts to approximately $350,000 to fund the Water Quality Protection District (WQPD). These funds are used to preserve, protect and improve water quality with the WQPD, of which, the City of Helena is part of. The WQPD encompasses Prickly Pear Creek and Ten Mile Creek watersheds which the City of Helena is tributary to. The WQPD conducts restoration planning, monitoring, outreach and education activities.

2) The City prepares annual budgets for projects and expenditures based on priority. The City prepared a Storm Water Master Plan (Master Plan) in 2003. The 2003 Master Plan was updated in 2018. The Master Plan analyzes the storm water system for capacity, treatment and condition and establishes an overall Capital Improvement Plan and identifies priority projects. Priority projects include life/safety concerns, flooding, failing infrastructure, water quality and maintenance improvements. City management and staff meet on a regular basis throughout the year to discuss projects and assign priorities. City management and staff also meet bimonthly in administration meeting with City Commission and at City Commission meetings which are open to the public to discuss projects and priorities of City staff.

3) The City has demonstrated program effectiveness to obtain budget allocations by utilizing the Storm Water Master Plan and actively pursuing and updating the Storm Water Master Plan; by responding to MS4 requirement s and needs through the development of a Storm Water Management Plan and Engineering Design Standards; by continuing ongoing storm water quality programs, operation, inspection and maintenance of the storm water system; and by development of additional activities and reporting as needed or as required by the MS4 program. The program effectiveness metrics presented include: storm water monitoring results, capital expenditures on storm water projects, quantity of storm water treated, quantity of storm water system inspected, completion of maintenance projects, quantity of material removed from streets and the storm water system, ability to clean up illicit discharges, coordination/review/implementation of storm water treatment facilities for developments, and inspections of construction project and storm water system components.

4) This year's approach to allocated resources built upon the program developed in prior years. Effective programs were continued, existing programs were updated and new programs where added as needed. Some examples of resource allocations include: continuation of the storm

sewer inspection and street sweeping programs, preparing updates to the Storm Water Master Plan and the Storm Water Management Plan, and focused staff reviews of development projects to incorporate effective low impact development and water quality treatment.

5) The permittee was successful in their requests for budget allocations. The outcome of the budget allocation requests include continuation of storm water programs described above in question 4. The outcome of some of the budget allocation requests include completion of the Henderson Street Drainage and Erosion Control Improvement Project, a $300,000 capital improvement project; which included planting of 56 trees. A storm sewer emergency repair project was also conducted in 2018. The emergency repair from installed 48 inch diameter storm pipe along two city blocks along 11th Avenue and Dakota Street from Montana Ave to 9th Ave and abandoned a collapsed 36 inch corrugated metal pipe. This project cost approximately $500,000 and utilized city staff for design, construction oversight and construction administration. Funding for an outreach and education flyer and information page on the use of raingardens were mailed out to all utility costumers and posted on the City's website at a cost of $6,000.

Outfalls for the City of Helena

	Outfall No.	Drainage Basin	Outfall BMP	Outfall Conveyance	Street Location
	1	Westside	East Simmons Detention Pond	30 inch	Broadwater Ave and spring meadow
	2		West Simmons Detention Pond	12 inch	Broadwater and Motor Ave
High Priority Outfalls	3		Henderson Retention Pond Complex	24 inch 24 inch	Silsbee Ave and Mitchell near Fairgrounds
	4		Fairgrounds Detention Pond	16 inch	Fairgrounds east of Arena
	5		North Stone Meadows Detention Pond	8 inch	Andesite Ave and crystal springs creek
	6		Central Stone Meadows Detention Pond	10 inch	Benton Ave and Flagstone Ave
	7		South Stone Meadows Detention Pond	8 Inch	Benton Ave south of Obsidian Ave
	8		Crystal Springs Detention Pond	Open Channel	Benton and Willowbrook
	9		County Shop Detention Basin	Open Channel	E of N Benton and Willowbrook Drive
	10	Last Chance	Nature Park Retention Pond, and on-site detention/ret ponds	24 inch	McHugh Lane north of Golden Estates subdivision
	11		Golden Estates Detention Pond	18 inch	Jade Street and Amethyst Ave (golden estates)
	12		Skelton Detention 1, 2, 3, and 4	24 inch	North of Ptarmigan and Montana Ave
	13		Anderson BP Detention and open channel	Open Channel	S of Road Runner and Sand Piper
	14	Davis	Target Retention Pond	36 inch	Jordan Drive behind Macy's
	15		Davis Region Pond and Kmart Pond	48 inch	I-15 Regional Ponds
	16	Bull Run West	Burnham Ranch Retention Pond		
	17		Helena Regional Detention and York and Custer Detention	55 inch	York Road north of Custer
	18	Airport	Airport Detention 4, 5.1, and 5.2 and 1400ft of open channel	21 inch	Canyon Ferry Road east of Y-county
	19		Airport Retention R-13 and National Guard, Helena Aviation, Fire and D10 Detention	48 x 60 inch	Helena Valley Canal Crossing east of National Guard
	20		Airport Retention R-910 and Detention Pond 2	54 inch	Helena Valley Canal Crossing east end Airport
	21	Bull Run Upstream of Airport	Walmart Detention 1 and 2	36 in	NW of Miller and Carter
	22		Staples Detention	18 in	NW of Miller and Carter
	23		Future Nichole St Pond	36 in	N of Nichole St and RR Tracks

Outfall No.	Drainage Basin	Outfall BMP	Outfall Conveyance	Street Location
24		Open Channel	Open Channel	N of Dick Anderson Construction
25		Hunters Point and Mountain West Bank Detention	Open Channel	N of I15, upstream of Synness Auto Salvage
26		Nob Hill Retention 1 and 2, and Nob Hill Detention 1, Grass swale along I15	24 in	NW of I15 and Mendocino Drive
27		Nob Hill Detention 4	Open Channel	Colonial drive south of Nob Hill Lift station
28		Aspen Meadows Detention	84 inch	Alice street East of Crossroads Pkwy
29		Grass channel, small basin at culvert inlet	2-24 inch	Crossroads Pkwy and Prospect Ave (highway 12)
30	Far East	West Aspen Meadows Retention	24 inch	Alice street East of Cascade Ave
31		East Aspen Meadows Retention	42 inch	Twilight and Stillwater streets
32		East Aspen Meadows Retention	12 inch	Runkle Pkwy between Still water and Alpine View
33		Open Channel for 700ft	12 inch	Runkle Pkwy and Highway 282
34		Aspen Meadows Detention North and South	36 inch	Highway 282 south of Runkle Parkway

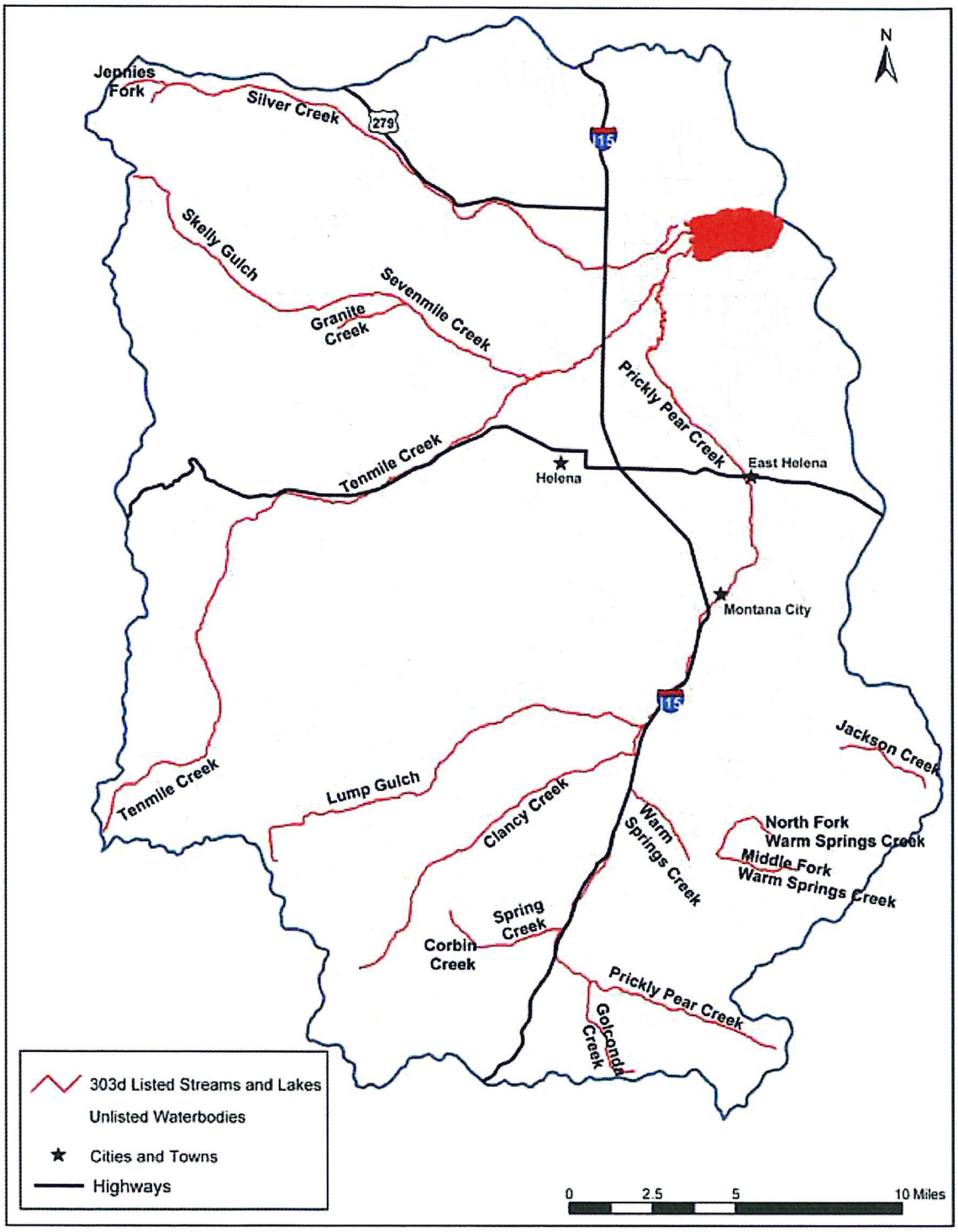


Figure 3-1. Locations of 1996–2004 303(d)-listed stream segments in the Lake Helena watershed.

Table 3-2. Probable causes of water quality impairment in the Lake Helena watershed identified in 1996–2004 Montana 303(d) lists.

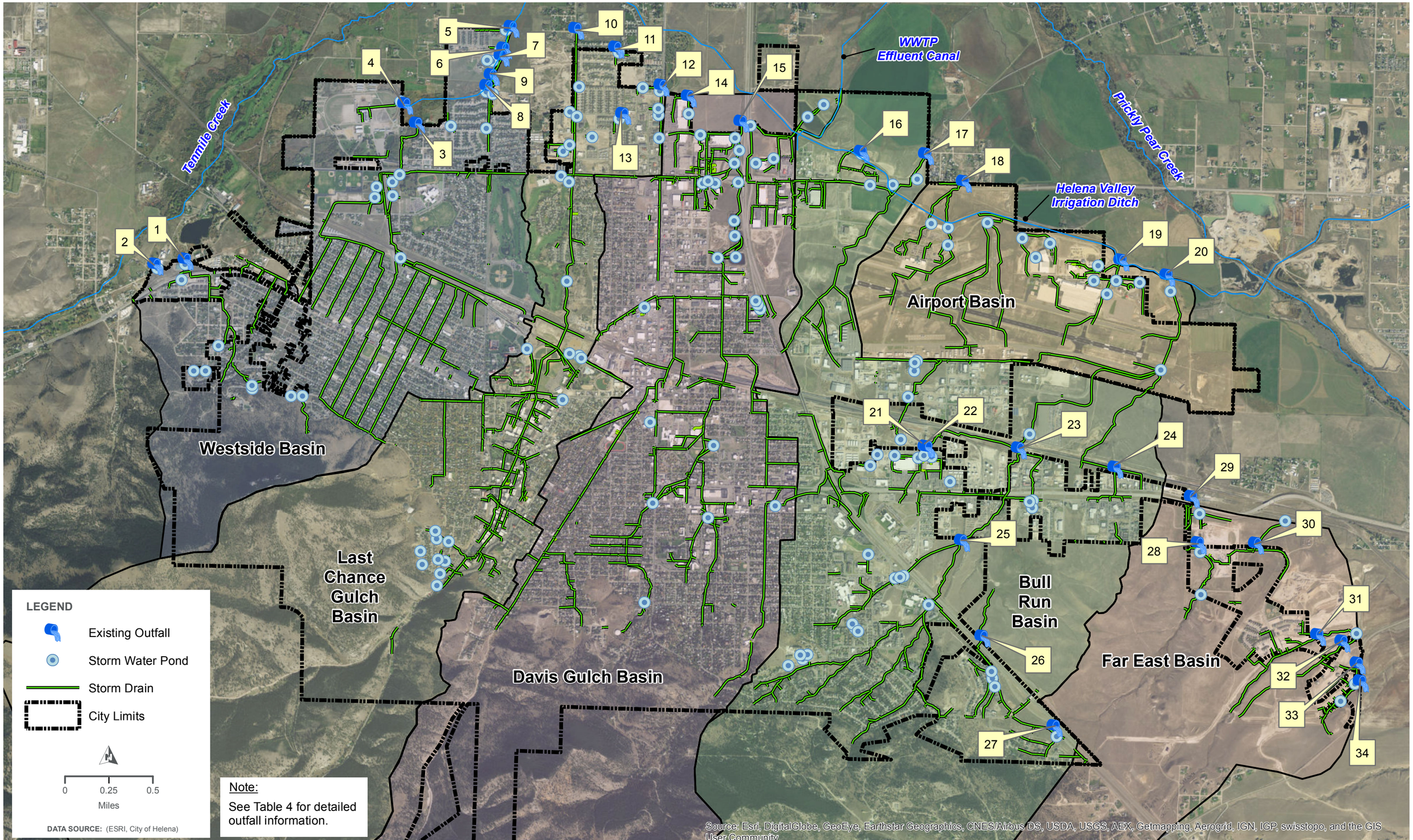
Water body	1996 Causes	2000 Causes	2002 Causes	2004 Causes
Clancy Creek	Metals Nutrients Habitat alterations Siltation Suspended solids	Metals (Did not meet SCD for Primary Contact Recreation)	*Arsenic* *Channel incisement* *Lead* *Mercury* *Metals* *Other habitat alterations* *Siltation*	*Arsenic* *Channel incisement* *Lead* *Mercury* *Metals* *Other habitat alterations* *Siltation*
Corbin Creek	Metals Other inorganics Salinity/TDS/ chlorides Suspended solids pH	Metals Suspended solids pH Thermal modifications Habitat alterations	*Metals* *Other habitat alterations* *pH* *Suspended solids* *Thermal modifications*	*Metals* *Other habitat alterations* *pH* *Suspended solids* *Thermal modifications*
Golconda Creek	Metals Suspended solids Turbidity Unknown toxicity	Metals	*Metals*	*Metals*
Granite Creek	Habitat alterations	Arsenic Cadmium	*Arsenic* *Cadmium* *Metals*	*Arsenic* *Cadmium* *Metals*
Jackson Creek	**1998 Listing:** Siltation	*(Did not meet SCD)*	*(Did not meet SCD for Aquatic Life, Cold-water Fishery)*	*(Did not meet SCD for Aquatic Life, Cold-water Fishery)*
Jennie's Fork	Metals Siltation	*(Did not meet SCD)*	*(Did not meet SCD for Aquatic Life, Cold-water Fishery)*	*(Did not meet SCD for Aquatic Life, Cold-water Fishery)*
Lake Helena	Metals Nutrients Suspended solids Thermal modifications	Lead Arsenic	*Arsenic* *Lead* *Metals*	*Arsenic* *Lead* *Metals*
Lump Gulch	Metals Suspended solids	Cadmium Mercury Copper Lead Zinc	*Cadmium* *Copper* *Lead* *Mercury* *Metals* *Zinc*	*Cadmium* *Copper* *Lead* *Mercury* *Metals* *Zinc*
Middle Fork Warm Springs Creek	Metals Habitat alterations Siltation	Arsenic Mercury Copper Zinc	*Arsenic* *Copper* *Mercury* *Metals* *Other habitat*	*Arsenic* *Copper* *Mercury* *Metals* *Other habitat*

Water body	1996 Causes	2000 Causes	2002 Causes	2004 Causes
			alterations *Siltation* *Zinc*	*alterations* *Siltation* *Zinc*
North Fork Warm Springs Creek	**1998 Listing:** Siltation	*(Did not meet SCD)*	*Arsenic* *Bank erosion* *Fish habitat degradation* *Metals* *Organic enrichment/Low dissolved oxygen* *Other habitat alterations* *Siltation*	*Arsenic* *Bank erosion* *Fish habitat degradation* *Metals* *Organic enrichment/Low dissolved oxygen* *Other habitat alterations* *Siltation*
Prickly Pear Creek MT41I006_060	Metals Suspended solids	Metals Fish habitat degradation Habitat alterations	*Fish habitat degradation* *Metals* *Other habitat alterations*	*Fish habitat degradation* *Metals* *Other habitat alterations*
Prickly Pear Creek MT41I006_050	Siltation Suspended solids	Metals Fish habitat degradation Bank erosion Habitat alterations Siltation	*Bank erosion* *Fish habitat degradation* *Metals* *Other habitat alterations* *Siltation*	*Bank erosion* *Fish habitat degradation* *Metals* *Other habitat alterations* *Siltation*
Prickly Pear Creek MT41I006_040	Flow alteration Metals Habitat alterations	Metals Siltation Fish habitat degradation Habitat alterations	*Fish habitat degradation* *Metals* *Other habitat alterations* *Siltation*	*Fish habitat degradation* *Metals* *Other habitat alterations* *Siltation*
Prickly Pear Creek MT41I006_030	Flow alteration Metals Habitat alterations Siltation Suspended solids	Metals Dewatering Siltation Fish habitat degradation Riparian degradation Nutrients Thermal modifications	*Dewatering* *Fish habitat degradation* *Flow alteration* *Metals* *Nutrients* *Other habitat alterations* *Riparian degradation* *Siltation* *Thermal modifications*	*Dewatering* *Fish habitat degradation* *Flow alteration* *Metals* *Nutrients* *Other habitat alterations* *Riparian degradation* *Siltation* *Thermal modifications*

Water body	1996 Causes	2000 Causes	2002 Causes	2004 Causes
Prickly Pear Creek MT41I006_020	Flow alteration Metals Nutrients Habitat alterations Siltation Suspended solids Un-ionized ammonia	Metals Un-ionized ammonia Nutrients Thermal modifications Siltation Dewatering Fish habitat degradation Bank erosion	*Bank erosion* *Dewatering* *Fish habitat degradation* *Flow alteration* *Metals* *Nutrients* *Other habitat alterations* *Siltation* *Thermal modifications* *Un-ionized ammonia*	*Bank erosion* *Dewatering* *Fish habitat degradation* *Flow alteration* *Metals* *Nutrients* *Other habitat alterations* *Siltation* *Thermal modifications* *Un-ionized ammonia*
Prickly Pear Creek MT41I006_010	Nutrients Suspended solids Thermal modifications	Arsenic	*Arsenic* *Metals*	*Arsenic* *Metals*
Sevenmile Creek	Habitat alterations Siltation	*(Did not meet SCD)*	*Flow alteration* *Metals* *Nutrients* *Other habitat alterations* *Riparian degradation* *Siltation*	*Flow alteration* *Metals* *Nutrients* *Other habitat alterations* *Riparian degradation* *Siltation*
Silver Creek	Flow alteration Metals Habitat alterations Priority organics	Metals Habitat alterations Flow alteration Priority organics	*Flow alteration* *Metals* *Other habitat alterations* *Priority organics*	*Flow alteration* *Metals* *Other habitat alterations* *Priority organics*
Skelly Gulch	Siltation	*(Did not meet SCD)*	*Metals* *Siltation*	*Metals* *Siltation*
Spring Creek	Metals Nutrients Habitat alterations Suspended solids pH	Metals Dewatering Fish habitat degradation Habitat alterations Riparian Degradation	*Dewatering* *Fish habitat degradation* *Flow alteration* *Metals* *Other habitat alterations* *Riparian degradation*	*Dewatering* *Fish habitat degradation* *Flow alteration* *Metals* *Other habitat alterations* *Riparian degradation*

Water body	1996 Causes	2000 Causes	2002 Causes	2004 Causes
Tenmile Creek MT41I006_141	Flow alteration Metals Habitat alterations Siltation pH	Mercury Lead Arsenic Copper Cadmium Zinc Metals Turbidity Habitat alterations	*Arsenic* *Cadmium* *Copper* *Lead* *Mercury* *Metals* *Other habitat alterations* *Siltation* *Zinc*	*Arsenic* *Cadmium* *Copper* *Lead* *Mercury* *Metals* *Other habitat alterations* *Siltation* *Zinc*
Tenmile Creek MT41I006_142	Flow alteration Metals Habitat alterations Siltation pH	Arsenic Cadmium Lead Zinc Copper Flow alteration Metals	*Arsenic* *Cadmium* *Copper* *Flow alteration* *Lead* *Metals* *Siltation* *Zinc*	*Arsenic* *Cadmium* *Copper* *Flow alteration* *Lead* *Metals* *Siltation* *Zinc*
Tenmile Creek MT41I006_143	Flow alteration Metals Habitat alterations Siltation pH	Arsenic Lead Cadmium Copper Mercury Zinc Flow alteration Siltation Habitat alterations	*Arsenic* *Cadmium* *Copper* *Flow alteration* *Lead* *Mercury* *Metals* *Nutrients* *Other habitat alterations* *Siltation* *Zinc*	*Arsenic* *Cadmium* *Copper* *Flow alteration* *Lead* *Mercury* *Metals* *Nutrients* *Other habitat alterations* *Siltation* *Zinc*
Warm Springs Creek	Metals Suspended Solids	Arsenic Lead	*Arsenic* *Cadmium* *Lead* Metals Siltation	*Arsenic* *Cadmium* *Lead* Metals Siltation

Source: MDEQ, 2003, 2004.
SCD = Sufficient Credible Data



HELENA MONTANA
QUEEN CITY OF THE ROCKIES

OVERALL STORM SYSTEM AND BASIN MAP

CITY OF HELENA, MT

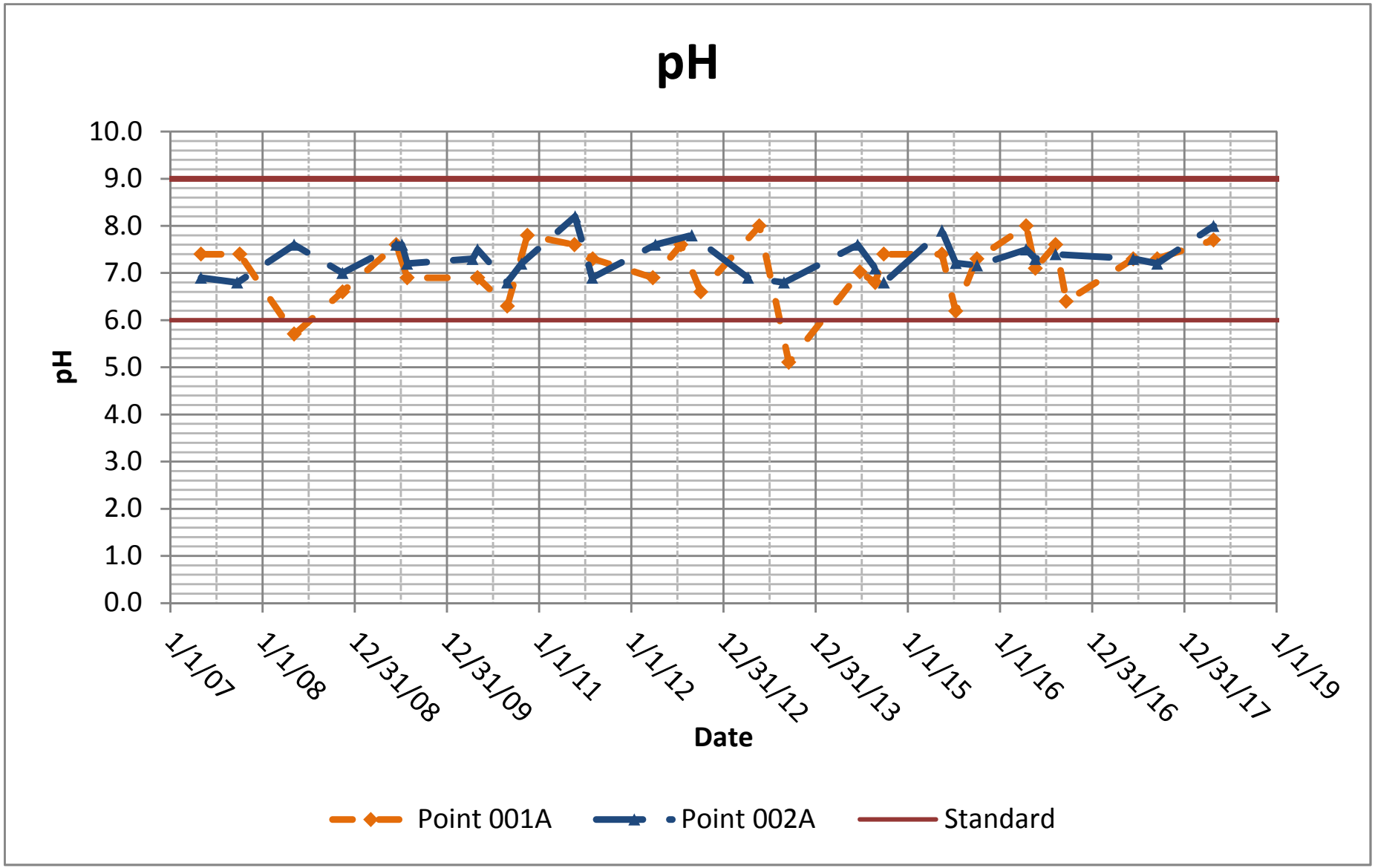
FIGURE A.1

Helena Storm Water Sample Results

Sample Location	Discharge Number	Date	Parameter (mg/L unless shown)									
			Flow Rate (gal/min)	pH (s.u.)	TSS	Oil & Grease	Nitrogen	Phosphorus	Zinc	Lead	Copper	COD
EPA NURP Median Concentration				6 to 9	125	10	2.00	0.41	0.210	0.165	0.040	80
Industrial/ Commercial Area	**001A**	5/3/2007	14	7.4	88	**19**	0.15	0.25	0.090	0.020	0.020	29
		10/3/2007	98	7.4	68	4.9	1.02	**0.71**	0.140	0.010	0.030	**330**
18th Street near Walmart		5/6/2008	87	**5.7**	**384**	9	**2.69**	**2.40**	**2.150**	**0.440**	**0.330**	**900**
GIS id: BR-1-92-7-3		11/13/2008	39	6.6	**140**	8.8	0.86	**0.48**	**0.300**	0.050	**0.070**	**410**
		6/14/2009	50	7.6	112	9.3	1.31	**0.46**	**0.380**	0.030	**0.060**	**390**
		7/28/2009	1400	6.9	44	4.1	0.46	0.08	0.070	ND	0.030	**130**
		5/3/2010	350	6.9	**390**	7.3	0.92	**0.70**	**0.520**	0.060	**0.100**	**490**
		8/29/2010	225	6.3	**368**	**14**	0.05	0.37	**0.830**	0.080	**0.110**	**320**
		11/16/2010	91	7.8	**244**	9	0.64	**0.47**	**0.260**	0.030	0.040	**65**
		5/22/2011		7.6	38	6.5	0.43	0.07	0.110	0.010	0.030	**130**
		8/2/2011	350	7.3	**349**	8.4	0.49	**0.42**	**0.280**	0.050	**0.050**	75
		3/28/2012		6.9	**1260**	5	0.39	**0.66**	**0.740**	**0.174**	**0.137**	**130**
		7/17/2012	550	7.6	**442**	5	1.46	**0.82**	**0.790**	0.066	**0.129**	**92**
		10/3/2012	180	6.6	50	5	**2.52**	**1.71**	**0.920**	0.034	**0.122**	**1300**
		5/23/2013	269	8.0	60	<1	0.15	0.29	0.150	0.030	0.030	22
		9/17/2013	314	**5.1**	**196**	4	0.04	**0.45**	0.070	0.004	0.012	**470**
		6/25/2014	283	7.0	**604**	2	0.19	**1.73**	**0.308**	0.126	**0.073**	**298**
		8/25/2014	426	6.8	**188**	<1	<0.01	0.32	0.162	0.017	0.006	**145**
		9/29/2014	247	7.4	**189**	1	0.1	0.27	0.117	0.021	0.013	58
		5/16/2015	202	7.4	**1500**	5	1.01	0.20	**0.711**	0.142	**0.135**	**180**
		7/10/2015	404	6.2	**380**	<1	0.21	**1.01**	**0.348**	0.043	**0.089**	**338**
		10/1/2015	539	7.3	53	1	0.17	0.19	0.061	0.008	0.023	17
		4/14/2016	134	8.0	**264**	<1	0.50	**0.74**	**0.330**	0.090	**0.060**	**100**
		5/20/2016	718	7.1	**408**	<1	<.01	**0.71**	**0.280**	0.040	**0.050**	**288**
		8/9/2016	582	7.6	**964**	3	<.01	**1.05**	**0.530**	0.070	**0.080**	**372**
		9/20/2016	157	6.4	**224**	<1	0.37	**0.48**	0.020	0.020	**0.050**	**415**
		6/13/2017	20	7.3	33	<1	0.04	0.14	0.039	0.004	0.001	31.6
		9/15/2017	1	7.3	84	<1	0.12	0.18	0.098	0.012	0.012	**411**
		4/27/2018	1	7.7	**484**	<1	0.35	**0.91**	**0.303**	0.049	**0.099**	**463**
Residential Area	**002A**	5/3/2007	6.46	6.9	**160**	**12**	**2.23**	**3.88**	0.100	0.020	0.040	**350**
		9/24/2007	85	6.8	76	**13**	0.76	**0.53**	0.150	ND	0.030	**340**
Broadway and Sanders		5/6/2008	215	7.6	**2970**	**25**	1.17	**0.79**	**0.590**	0.120	**0.130**	**240**
GIS Id: DG-3-9		11/13/2008	51.34	7.0	124	6.1	0.35	0.36	0.130	0.020	0.040	**190**
		6/15/2009	5400	7.6	56	3.4	0.88	0.40	0.120	ND	0.040	**330**
		7/7/2009	400	7.6	**610**	5.3	0.53	0.23	0.140	0.020	**0.050**	**310**
		7/28/2009	3000	7.2	**ND**	4.1	0.50	0.11	0.050	ND	0.010	80
		4/13/2010	30	7.3	**520**	5.1	1.58	**0.70**	**0.310**	0.050	**0.090**	**250**
		5/3/2010	1250	7.5	**485**	7.2	0.41	**0.64**	**0.340**	0.050	**0.090**	**180**
		8/28/2010	115	6.8	**134**	7.8	0.89	0.24	0.160	0.020	0.040	**140**
		10/24/2010	19	7.2	56	4.8	0.52	**12.20**	0.170	ND	**0.050**	**260**
		5/24/2011	1000	8.2	**386**	5.1	0.31	0.28	**0.220**	0.040	**0.050**	36
		7/31/2011	3500	6.9	50	7.1	0.61	0.28	**1.100**	0.150	**0.190**	**250**
		4/6/2012	100	7.6	**908**	5	1.14	**0.82**	**0.300**	0.041	**0.063**	**170**
		8/28/2012	21	7.8	**201**	4	0.33	0.21	**0.330**	0.035	**0.056**	26
		4/8/2013	1122	6.9	**1670**	6	**2.20**	**1.41**	**0.730**	0.152	**0.187**	**450**
		8/29/2013	358	6.8	**484**	3	0.17	0.37	**0.400**	0.066	**0.077**	**130**
		6/17/2014	359	7.6	70	<1	0.08	0.23	0.041	<0.01	**0.083**	33
		8/25/2014	673	7.1	**276**	<1	0.58	**0.49**	0.084	**0.018**	<0.01	**87**
		9/29/2014	112	6.8	121	1	<0.01	**0.50**	0.087	0.008	0.039	**224**
		5/16/2015	76	7.9	**956**	3	1.42	**1.52**	**0.334**	0.053	**0.065**	**230**
		7/10/2015	22	7.2	**772**	3	0.41	**1.16**	**0.247**	0.034	**0.079**	**258**
		10/3/2015	49	7.2	85	1	0.01	**0.46**	0.073	0.007	0.018	**128**
		4/14/2016	112	7.5	**540**	1	0.60	**0.84**	**0.220**	0.030	**0.040**	**102**
		5/20/2016	157	7.3	**500**	1	0.03	**0.81**	**0.250**	0.030	**0.060**	**232**
		8/9/2016	1792	7.4	**1320**	4	0.02	**1.72**	**0.600**	0.060	**0.070**	**347**
		6/13/2017	1	7.3	121	<1	0.25	0.28	0.036	0.004	0.023	49.6
		9/15/2017	1	7.2	**1792**	<1	0.53	**0.83**	0.03	0.05	**0.093**	**633**
		4/27/2018	1	8.0	**408**	2	0.03	**2.24**	**0.22**	0.04	**0.067**	**190**
Last Chance Gulch at Confluence of Oro Fino and Grizzly Gulches	**003A**											
		5/18/2018	No Flow									
		8/27/2018	No Flow									
Nature Park Inlet (north of RR)	**004A**	1/14/2010	NA	7.7	**432**	**13**	1.35	**0.45**	**0.330**	0.060	**0.070**	**82**
		2/22/2012	NA	7.9	**387**	4	0.40	**0.70**	0.180	0.047	**0.045**	32
		5/18/2018	NA	8.0	**126**	1	1.03	0.31	0.073	0.017	0.015	29
		8/27/2018	NA	7.9	67	1	0.78	0.24	0.080	0.009	0.015	58
Nature Park Outlet d.s. of Cole Avenue	**004B**	5/18/2018	No Flow									
		8/27/2018	No Flow									
Henderson Pond Complex Inlet d.s. of Allision St Pond	**005A**											
		5/18/2018		7.9	53	ND	0.43	0.17	0.040	0.007	0.009	38
		8/27/2018	No Flow									
Henderson Pond Complex Outlet into Custer Wetlands	**005B**											
		5/18/2018	No Flow									
		8/27/2018	No Flow									
Kmart Pond Inlet	NA	1/14/2010	NA	7.5	**944**	**20**	**2.72**	**0.65**	**0.52**	0.10	**0.09**	**200**
		5/24/2011	NA	8.0	**58**	**1.5**	**0.86**	**0.09**	**ND**	ND	**0.09**	34
		2/22/2012	NA	8.2	**578**	4	0.43	**0.70**	**0.31**	0.12	**0.07**	47
		7/16/2013	NA	8.2	<10	<1	**6.64**	0.04	<0.01	<0.001	<0.005	11
		3/10/2014	NA	8.1	**250**	2	0.62	**0.69**	0.07	0.03	0.04	**92**
Kmart Pond Outlet		7/16/2013	NA	8.3	**ND**	1	0.01	0.07	ND	ND	ND	39
Hunters Pointe at Outlet Structure	NA	5/24/2011	NA	8.0	58	1.5	0.86	0.09	0.04	ND	ND	34
		2/22/2012	NA	8.0	78	6	0.33	0.33	0.04	0.01	0.01	77
		7/16/2013	NA	8.3	<10	<1	0.01	0.07	<0.01	<0.001	<0.005	30
		3/10/2014	NA	7.9	72	<1	0.44	**0.45**	0.03	0.01	0.027	39
Henderson Pond Complex at Silsbee	NA	2/22/2012	NA	8.3	**490**	4	0.20	**0.74**	**0.29**	0.06	**0.061**	44
		3/10/2014	NA	7.8	6	<1	**2.51**	0.20	0.01	<0.01	0.023	29
Nature Park Inlet (north of RR)	NA	1/14/2010	NA	7.7	**432**	**13**	1.35	**0.45**	**0.330**	0.060	**0.070**	**82**
		2/22/2012	NA	7.9	**387**	4	0.40	**0.70**	0.180	0.047	**0.045**	32
Custer Wetland at crossing near Fairgrounds	NA	3/10/2014	NA	7.8	34	<1	0.22	0.37	0.027	0.009	0.029	43
I-15 Crossing to Regional Pond	NA	3/10/2014	NA	7.9	96	<1	0.42	**0.44**	0.037	0.014	0.030	48
Custer Regional Pond 6 Overflow	NA	3/10/2014	NA	7.7	49	<1	0.70	0.32	0.023	0.008	0.027	41
DNRC Pond West Inlet	NA	9/14/2017	NA	7.0	**300**	<1	1.41	**0.43**	0.056	0.072	**0.114**	**317**
DNRC Pond East Inlet	NA	9/14/2017	NA	7.2	**868**	<1	1.51	**0.69**	0.271	0.036	**0.072**	**435**
DNRC Pond Outlet	NA	9/14/2017	NA	7.2	**140**	<1	1.96	0.33	0.322	0.018	0.105	245
EPA NURP Median Concentration				6 to 9	125	10	2.00	0.41	0.210	0.165	0.040	80

Notes:

Bold = Measured parameter exceeds receiving water standards or 1992 EPA NURP median concentration.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6.0
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4.0
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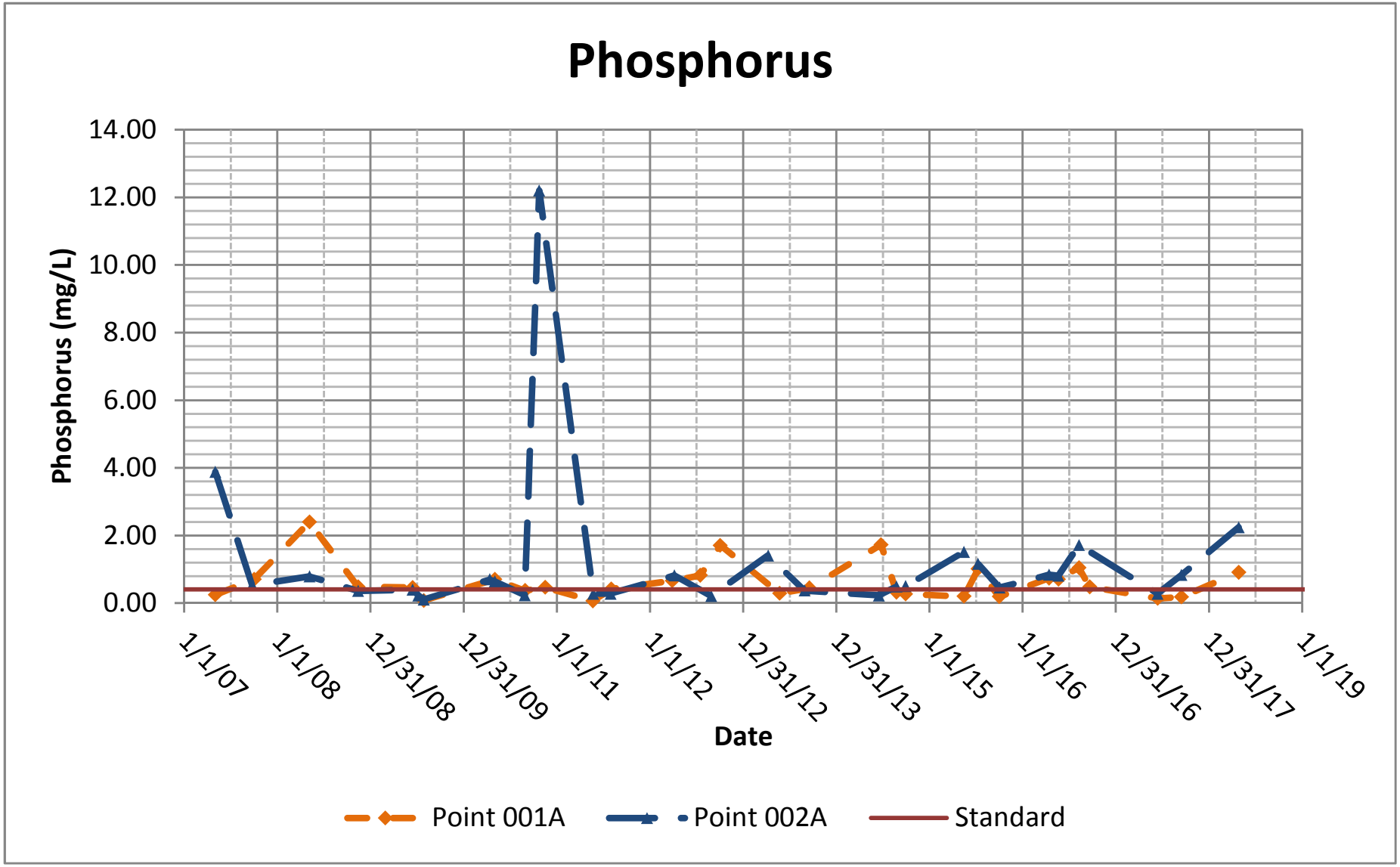
pH
1/1/07
1/1/08
12/31/08
12/31/09
1/1/11
1/1/12
12/31/12
12/31/13
1/1/15
1/1/16
12/31/16
12/31/17
1/1/19
Date
Point 001A
Point 002A
Standard


Phosphorus
Phosphorus (mg/L)
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10.00
8.00
6.00
4.00
2.00
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1/1/11
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12/31/12
12/31/13
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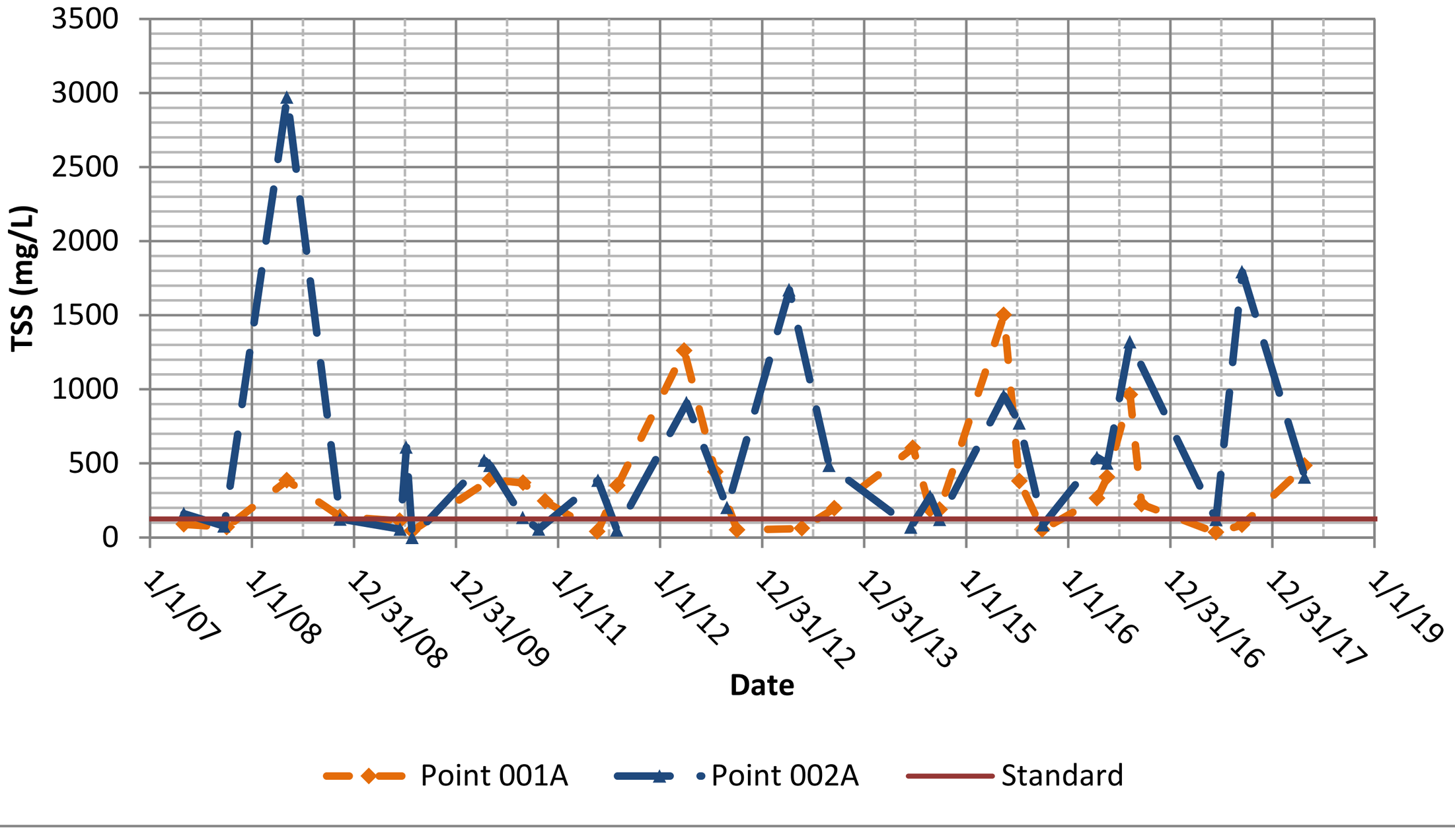
12/31/16
12/31/17
1/1/19
Date
Point 001A
Point 002A
Standard

TSS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3000
2500
2000
1500
1000
500
0
TSS (mg/L)
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1/1/08
12/31/08
12/31/09
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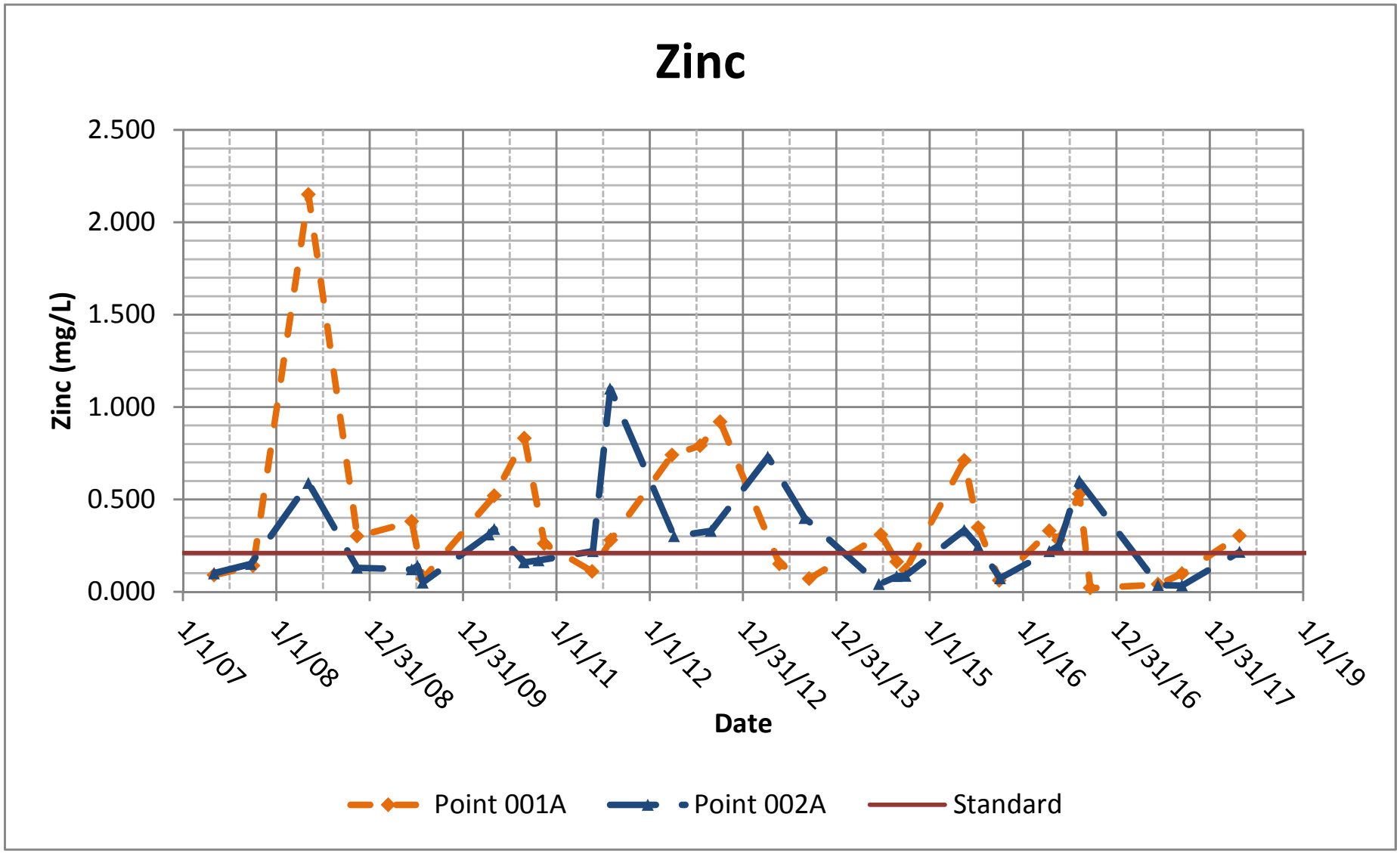
1/1/12
12/31/12
12/31/13
1/1/15
1/1/16
12/31/16
12/31/17
1/1/19
Date
Point 001A
Point 002A
Standard


Zinc
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2.000
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1.000
0.500
0.000
Zinc (mg/L)
1/1/07
1/1/08
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12/31/09
1/1/11
1/1/12
12/31/12
12/31/13
1/1/15
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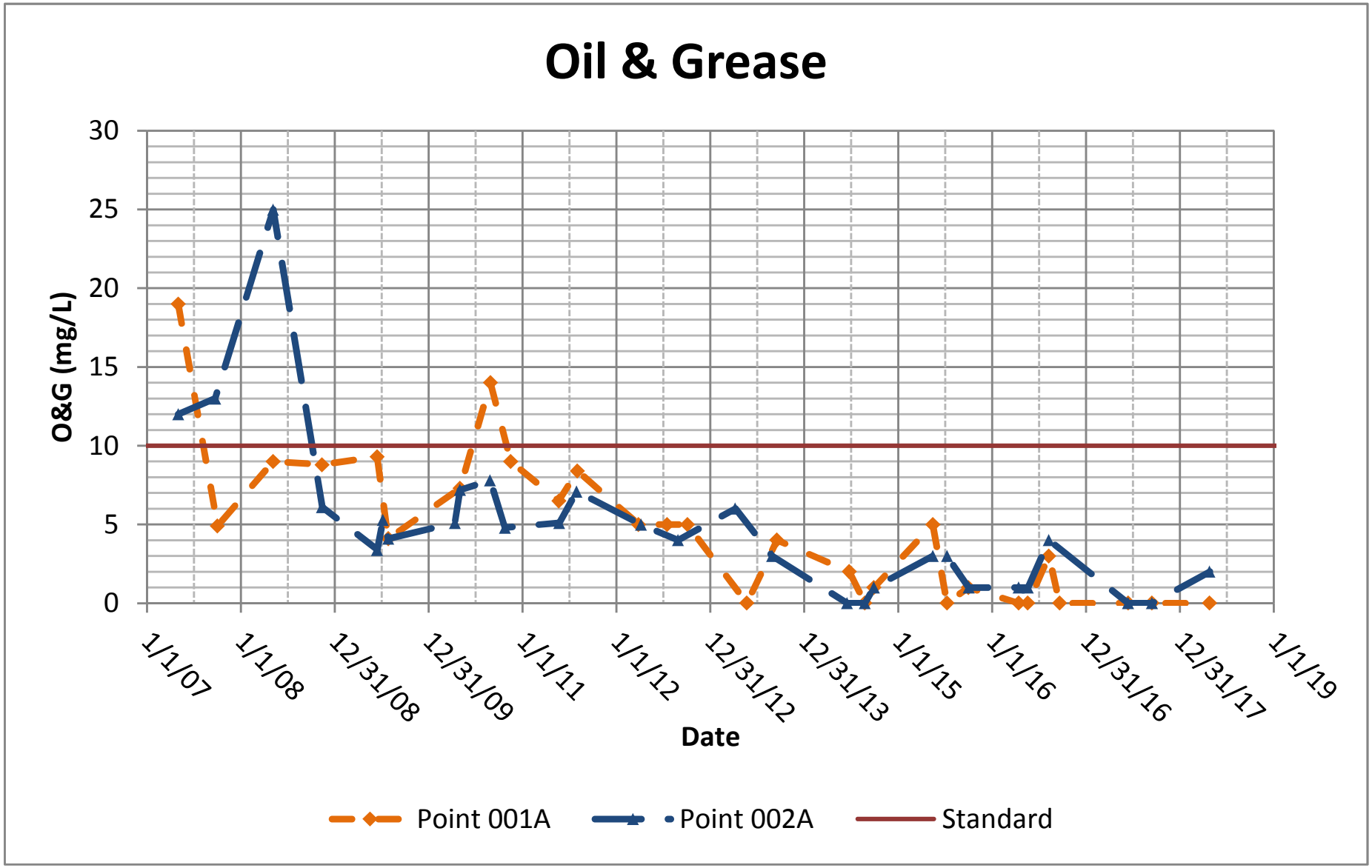
Standard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O&G (mg/L)
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1/1/11
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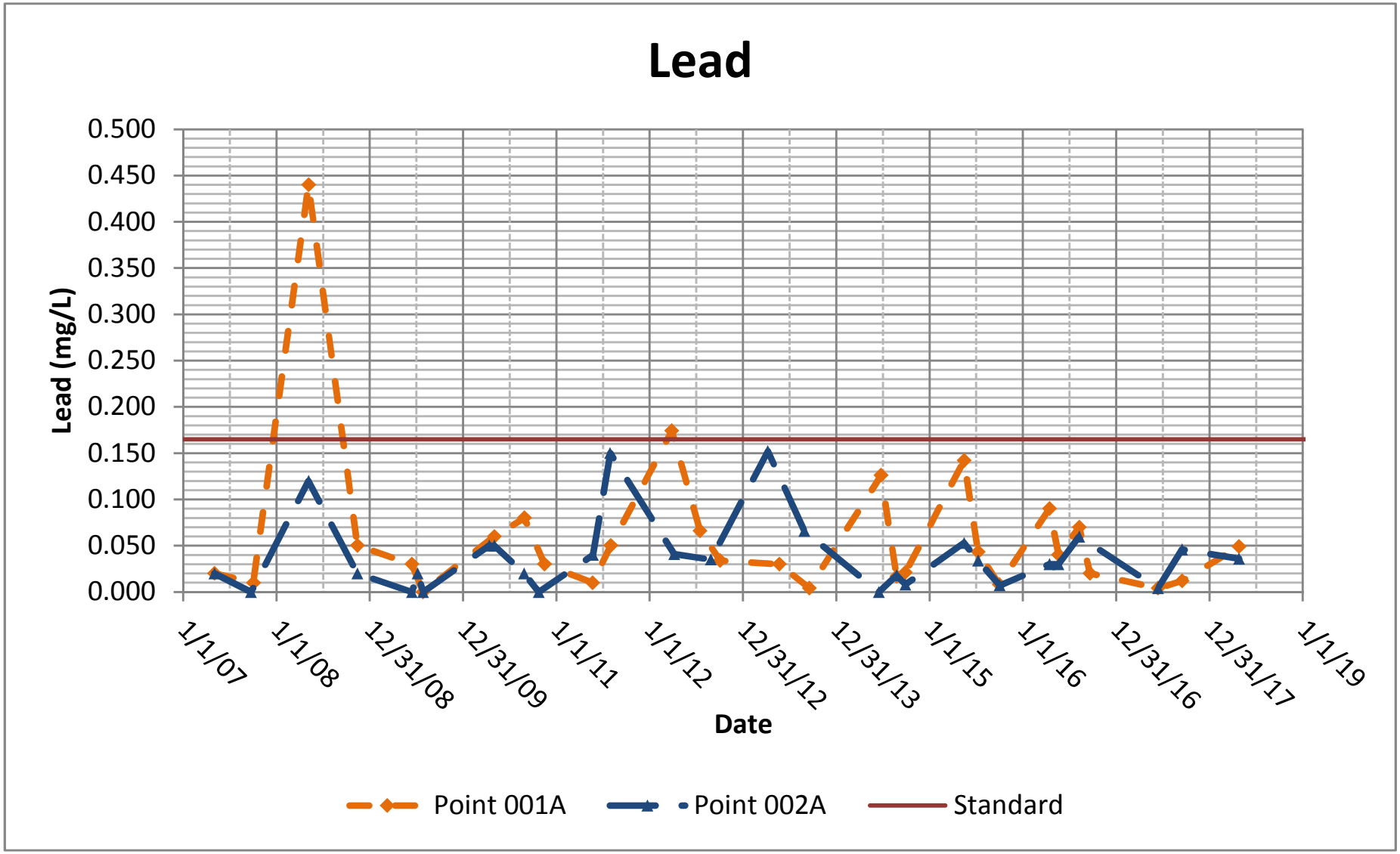
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Lead (mg/L)
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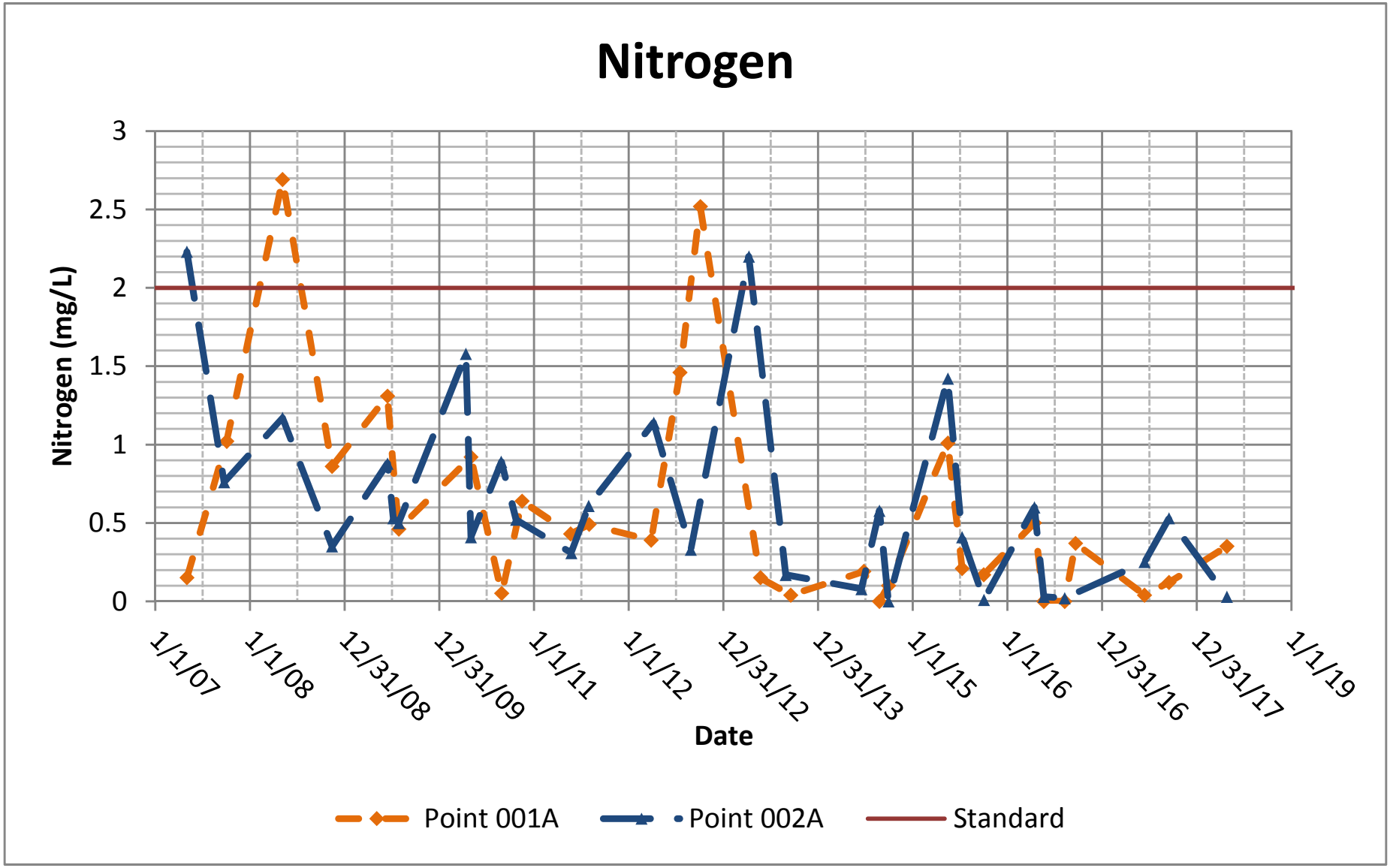
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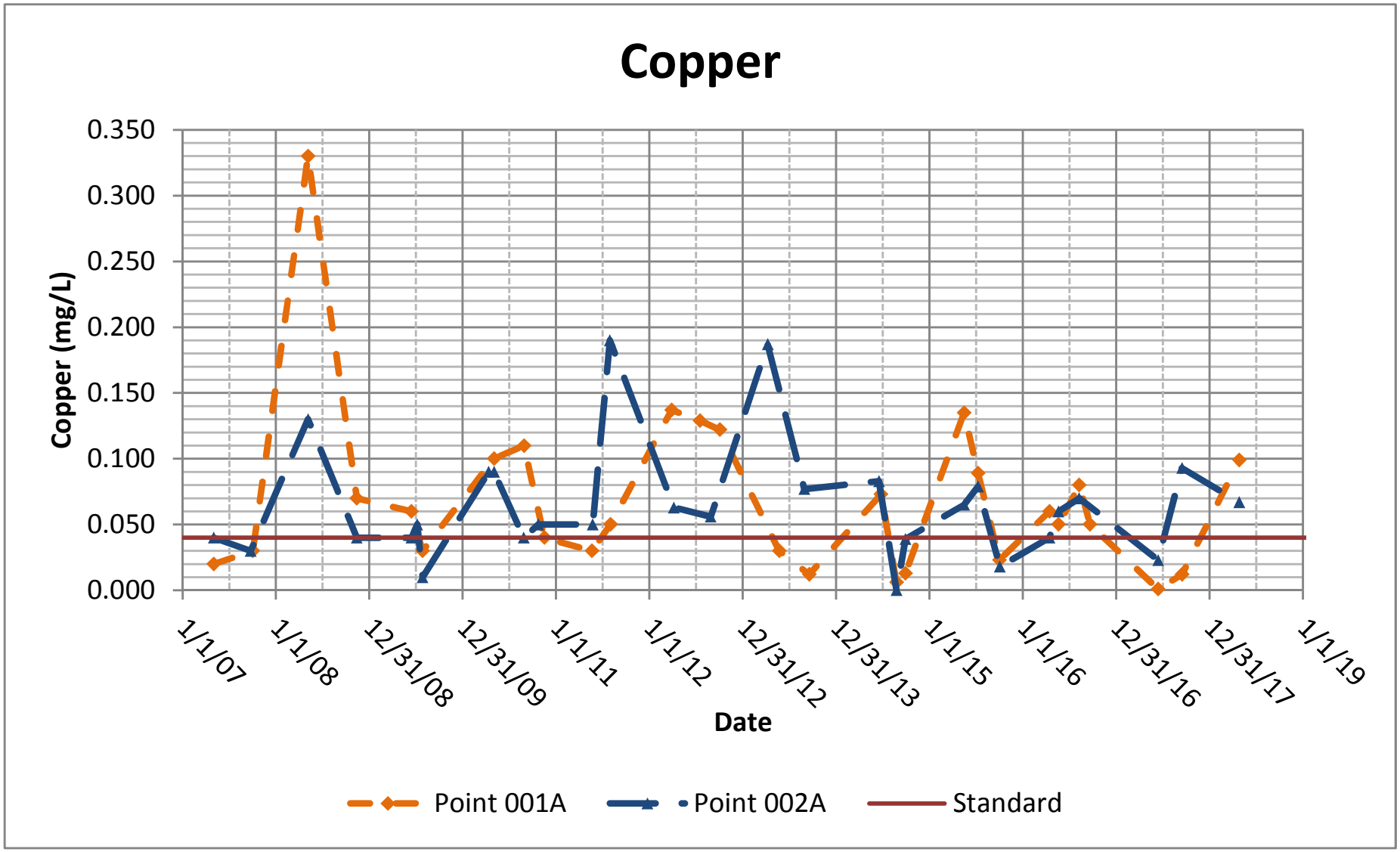
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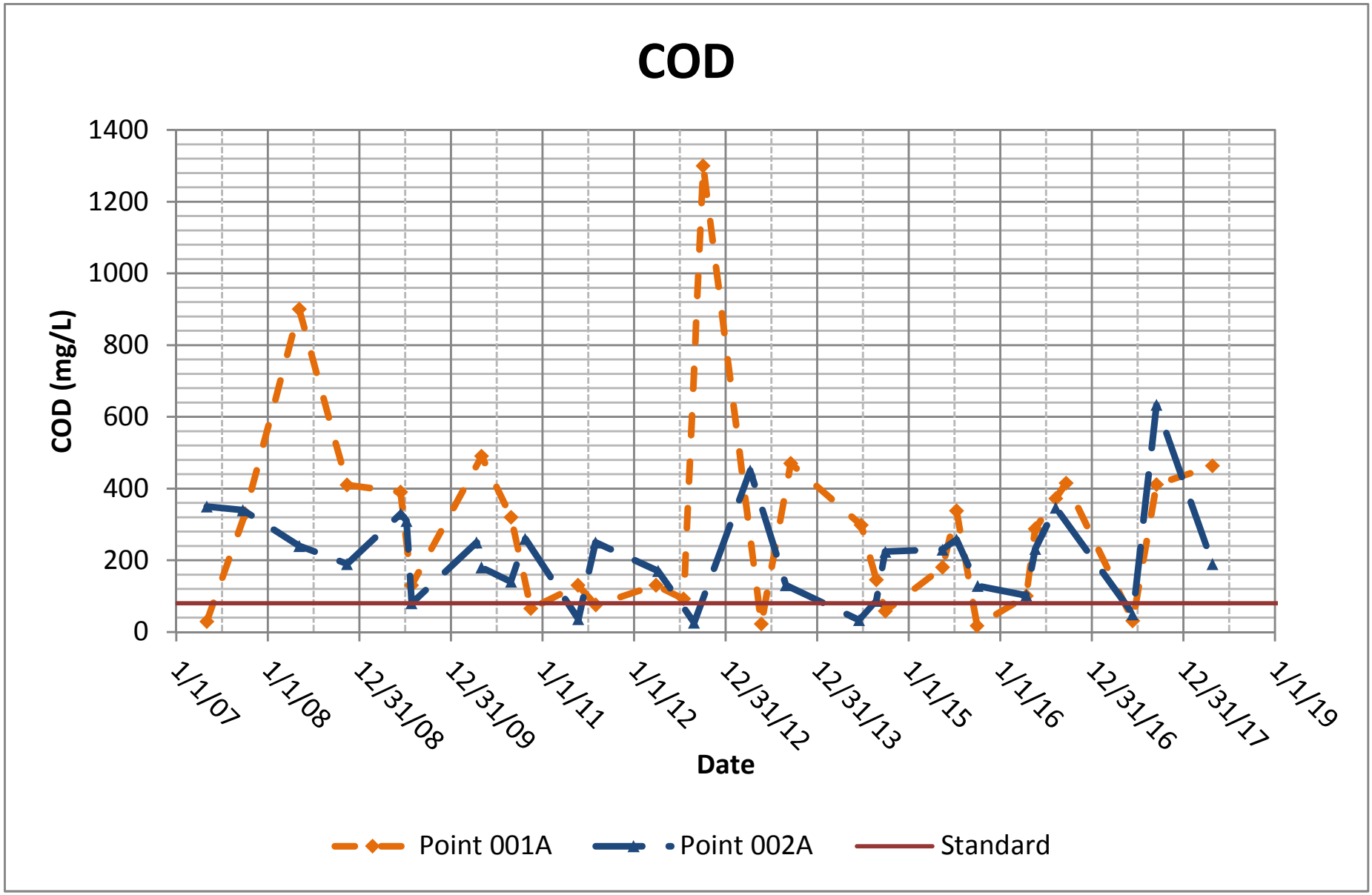
COD
COD (mg/L)
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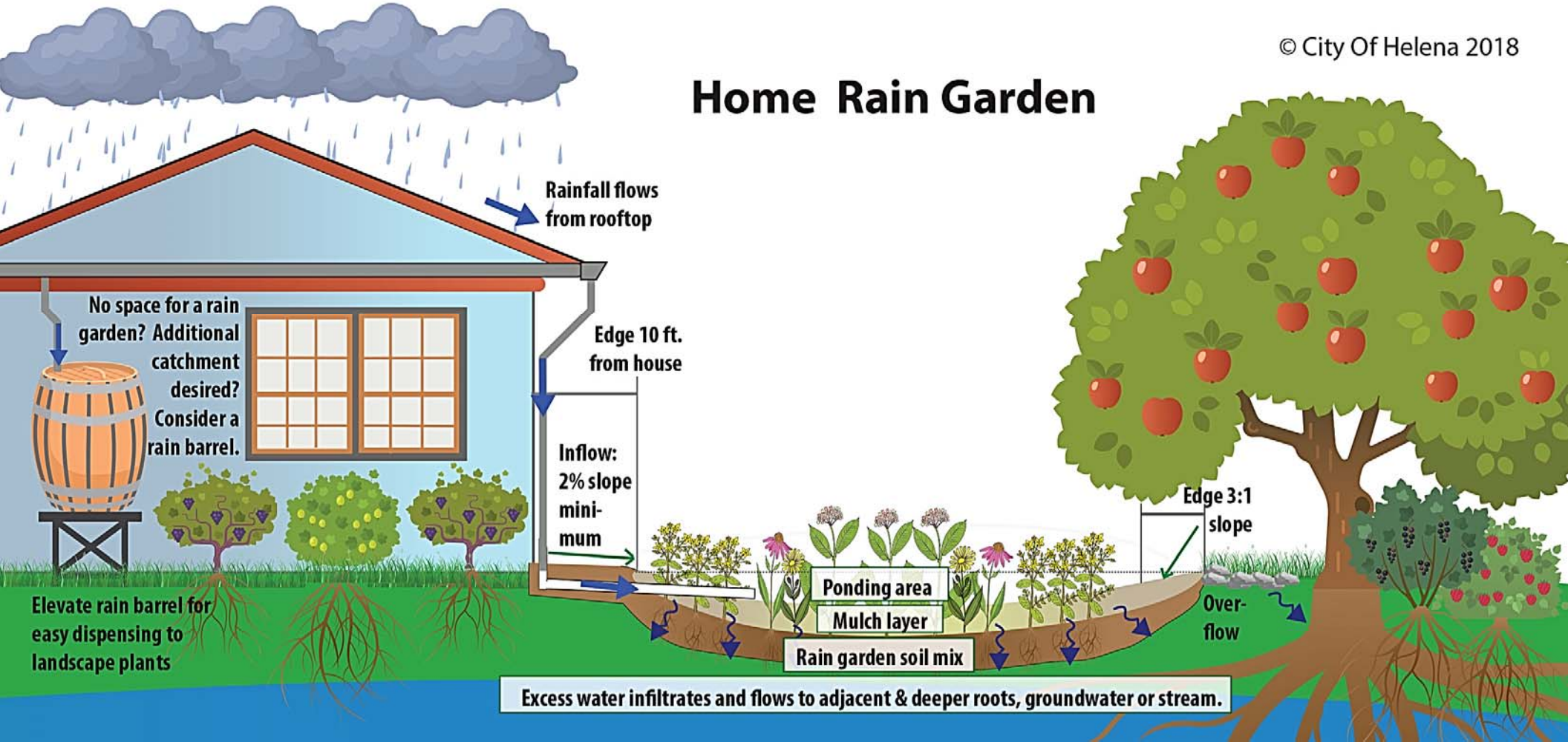
MCM 1 AND 2

Public Education and Outreach

Public Involvement and Participation

The following flier was mailed to over 12,000 residents and businesses that receive a utility bill.

Home Rain Garden



CATCH IT. STORE IT. CLEAN IT. SINK IT.

Create a Home Rain Garden to Collect and Filter Stormwater Run Off & Save $$$

+ **SAVE $$** Every rain event is an opportunity for water to gush out of downspouts, cascade across lawns and into storm drains, picking up pesticide & herbicide residue on its way and taking away important soil nutrients from residential and commercial landscapes. This can pollute our watersheds and also create a need to purchase expensive fertilizers for a thriving landscape to replace the lost nutrients.

+ **INCREASE VALUE** Rain gardens can reduce your water bill, leave nutrients on your property, irrigate your landscape (including edible landscaping) reduce flooding, help clean our community's groundwater, increase forage for butterflies, birds, and other pollinators, all while increasing aesthetic value for your property.

+ **GO TO THE CITY OF HELENA WEBSITE** For information about specifics on your soil mix, garden size, list of necessary materials, and plants for our region, go to the City of Helena's website page:

http://www.helenamt.gov/pw/utility-maintenance/stormwater.html

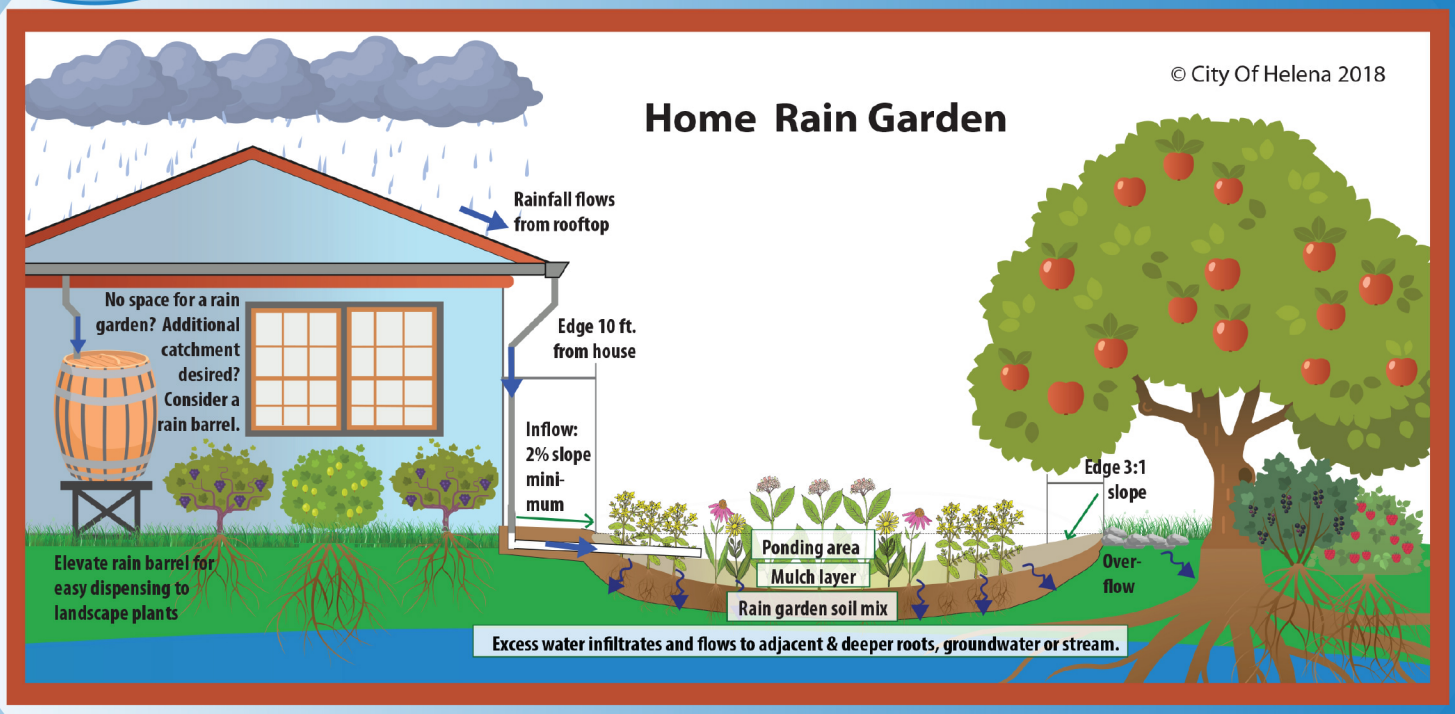
Then you'll be ready to build!

City of Helena
Matt Culpo
Stormwater Engineer
(406) 447-8073
mculpo@helenamt.gov

Water Quality Protection District
Jennifer McBroom
Community Outreach & Watershed Coordinator
(406) 457-8584
jmcbroom@lccountymt.gov

Create a Home Rain Garden to Collect and Filter Stormwater Run Off While Saving $$$.

CATCH IT. STORE IT. CLEAN IT.



SAVE $$

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INCREASE VALUE

Rain gardens can reduce your water bill, leave nutrients on your property, irrigate your landscape (including edible landscaping), reduce flooding, help clean our community's groundwater, increase forage for butterflies, birds, and other pollinators, all while increasing aesthetic value for your property.

8 Easy Steps to Build Your Home Rain Garden

Nature's Water Filter:
Rain gardens are shallow landscaped depressions, clean and absorb stormwater runoff from roofs, parking lots and roads.

STEP 1: How to Create a Rain Garden Overview

Work with plants, amended soil, and mulch to filter water runoff. Think about your rain garden as consisting of 3 Zones. Zone 1, the lowest point is the wettest, and plants that can handle "wet feet" are best for this area. The next level up is Zone 2 and should contain plant species that can handle occassional standing water. The highest level, Zone 3, will rarely or never have standing water and is best planted with species that prefer drier climates. **Location:** Rain gardens must be located to intercept runoff from impervious areas. They can be placed anywhere good soils with adequate drainage rates exist. It is best to keep rain gardens at least 10 feet from building foundations and at least 50 feet from a septic system or slopes greater than 15 percent. Call 811 to make sure underground utilities aren't in the way.

STEP 2: Find a site that can absorb water & determine size, depth & shape

Take a good look at your yard: You'll need a low spot or depression in order to make a rain garden. Clay soils work best to make a rain garden because they slow the percolation of water, holding water while allowing it to slowly drain. If you are unsure of the type of soil you have, complete a soil test, which can usually be done for a small fee through your state's extension service. If your test indicates sandy soil, you will need to add water-absorbing compost and topsoil to the rain-garden area. The most common reason for rain garden failure is soil compaction, so the correct soil composition is key. **Size:** Rain gardens sited for single-family homes are typically 5 to 10 percent the size of the impervious surface generating the runoff entering the garden. Measure the square footage of the impervious area (length x width); then multiply this by 0.07 (7 percent). Determine a length and width of the rain garden that best fits the site. For example, a 2,000-square-foot roof, when multiplied by 7 percent, would call for a rain garden 140 square feet in size, or 14 feet long by 10 feet wide. **Garden Depth:** A typical rain garden is between four and eight inches deep. A rain garden less than four inches deep will need too much surface area to provide enough water storage to infiltrate larger storms. Storm water runoff should spread evenly across the entire rain garden, to increase the opportunity for infiltration. **Shape:** Ovals, kidneys, and teardrops often look best, but rain gardens can also be long and skinny. Use a garden hose to test possible shapes. Once you settle on a design, decide where the water will flow in and where any overflow will exit. Mark the shape with chaulk powder, paint, or flags. On your lawn, mark 18 inches farther out for sod removal, since grass has a way of creeping into planting beds.

STEP 3: Select appropriate plants, and mulch, mulch, mulch!

Choose native plants based on site considerations for light, moisture, and soil. Vary plant structure, height, and flower color for seasonal appeal and butterfly habitat. For the space just below the overflow, consider a fruit/nut tree with companion perennial plantings of fruiting shrubs and other native herbacious plants. An excellent informational resource for native, benefiical and edible plants that will grow in Helena, go to the website for the 6th Ward Garden Park (https://6thwardgardenpark.com/plants). Remeber to consider the Zones 1-3 and research your plants' needs. Seedlings are easier to establish than direct-sown seed when you are going to make a rain garden so you don't have to worry about the seed washing away. It is important to water rain gardens regularly throughout the first season. Once established, they may require additional watering during drought or extended dry periods. A shredded wood mulch - about 3 inches thick - is an important part of a rain garden. Mulch helps retain moisture and discourages weed seeds from germinating. Use straw or wood mulch that has not been chemically treated. If you plant perennial ground covers, they will fill in over time, reducing the need to continually add mulch. On the following page you will find a short plant list and their corresponding zones/uses. For more comprehensive information, see the ***Additonal Resources*** list at the end of this document.

	ZONE 1	ZONE 2	ZONE 3	USES
Butterfly weed		■		pollinator
Yarrow			■	pollinator, medicinal, edible
Current, golden		■		edible, pollinator
Raspberry, red		■		edible, pollinator
Grape (Valient)			■	edible, pollinator
Milkweed	■			pollinator
Sweetgrass	■			pollinator, medicinal
Arnica		■		pollinator, medicinal
Beebalm		■		pollinator, medicinal
Coneflower			■	polinator, medicinal
Rocky Mountain Iris	■			pollinator, erosion control
Rabbitbrush, green			■	pollinator

STEP 4: Remove the grass

Strip away any lawn by slicing off the roots with a sharp spade directed at as low an angle as you can manage, or use a sod cutter, which you can rent for about $80 a day. You should be able to roll up sections of the stripped lawn as if they were pieces of carpet.

STEP 5: Excavate the basin

Using a shovel or an excavator—you can rent one for about $230 a day or just hire an operator—dig down to the depth you need. Create a flat bottom so that water will percolate down evenly. If the rain garden is on a slope, you can pile some of the excavated soil into a berm on the low side to retain the water. For stability, stomp the berm soil down well and make the base at least 2 feet wide and the top at least 1 foot wide. The peak of the berm should be at least 6 inches higher than the water level when the rain garden is full.

STEP 6: Lay the inlet pipe

Dig a trench for a pipe that will carry water from one or more gutter downspouts to the rain garden. (Note: If you can corral helpers, this can be done at the same time you excavate the rain garden.) Install the piping. Rigid piping with smooth walls is the most durable, but corrugated tubing is easier to work with; get the kind without perforations. Extend the piping into the rain garden basin by a foot or so. Line the area underneath with stones to prevent erosion. You can also place stones over and beside the pipe to hide it and to keep corrugated tubing from curling up. When all the piping is in place, fill in the rest of the trench with excavated soil.

STEP 7: Fill the basin

Fill all but the top 6 to 12 inches of the excavated area with rain-garden soil. Slope the sides gently. If the soil you excavated is relatively free of clay, you can use a mixture of 65 percent native soil to 35 percent compost, or 2 scoops of soil for each scoop of compost. If you dug out clay soil, refill with a mixture of 60 percent screened sand and 40 percent compost. If you are creating a dry well, fill that with washed round stones 1½ to 2 inches in diameter. Also pack stones around the overflow area to prevent erosion.

STEP 8: Add your plants, then add your mulch!

Additional Resources

City of Helena, Matt Culpo, Stormwater Engineer, (406) 447-8073, mculpo@helenamt.gov
MT Native Plant List: http://www.mtnativeplants.org/wp-content/uploads/2018/07/Kelsey-Chapter-Recommended-Species-Helena-Area-Barton.pdf
Rain Gardens in Greater Detail: https://www.nrcs.usda.gov/wps/portal/nrcs/mt/water/resources/NRCS144P2_057466/
6th Ward Garden Park Plant List: https://6thwardgardenpark.com/plants

Table 1: Public Outreach and Education Key Target Audiences

	Business Type or Residential Behavior with Potential for Illicit Discharge	Description and Rationale of Potential Illicit Discharge	Primary Potential Pollutants	BMP for Pollutant Disposal, Treatment or Behavioral Change to Reduce or Eliminate Potential Illicit Discharge
Business Types	Auto Service/Gas Stations	Use of automotive fluids. Potential for spilling and need for proper disposal.	Petroleum Products	Require Oil/Water separators for new facilities. City/County Disposal and Recycling available.
	Restaurants	Use of cooking materials such as oils, fats and grease. Potential for spilling and need for proper disposal.	Oils, fats and grease.	Industrial pretreatment program. Fats, oils and grease brochure. Required to use and operate a grease trap. Fats, oil, grease disposal and recycling. Inspections and record keeping.
	Commercial Car Washes	Use of soaps and water to wash off Oil/Sand from vehicles.	Oil, sand, phosphorous.	Oil/Sand separators. Discharge to sanitary sewer.
	Industrial Facilities	Use of chemicals and heavy metals. Potential for spilling and need for disposal.	Various Heavy Metals and Chemicals	Industrial pretreatment program. Industrial User Permit Required. Inspections and record keeping.
	Construction Activities	Use of construction materials such as wastewater form concrete washouts, which have the potential to pollute downstream waterways if not properly contained.	Sediment, wastewater from concrete washouts, fuels, paints and fertilizers.	Require that regulated construction activities obtain coverage under the Construction General Permit. SWPPP review. Site inspections.
	Parking Lots and Vehicle Storage Facilities	Potential for spilling and leaking automotive fluids.	Petroleum Products	Oil/Sand separators.
Residential Behaviors	Vehicle Maintenance	Potential for spilling and leaking automotive fluids.	Petroleum Products	Landfill disposal and recycling. Informational brochure distribution. City website information.
	Lawn Care	Use of fertilizers, pesticides and weed control products.	Fertilizers, pesticides, and weed control products.	Landfill accepts yard debris. Informational brochure distribution. City website information.
	Home Maintenance	Use of paints and household chemicals.	Petroleum products, paint, cleaning products.	Normal household waste disposal to sanitary sewer. Landfill disposal and recycling. Informational brochure distribution. City website information.

MCM 3

ILLICIT DISCHARGE DETECTION AND ELIMINATION

Permit Reference: Part II.A.3.a.i.

The City conducts video surveys of its storm water system on a regular basis and has not seen any evidence of significant non-storm water discharges to its system. As such, the City is not currently aware of any non-storm water discharges that contribute a significant amount of pollutants to the storm water system. An Ordinance is in affect which prohibits illegal discharges which contain pollutants that cause or contribute to a violation of applicable water quality standards or that could cause the City to be in violation of the General Permit. The specific section of the Ordinance that addresses illegal discharges can be found in Title 6, Chapter 6-10 of the City Code and a copy of the Ordinance is provided in Appendix I. Potential for non-storm water discharges which are significant contributors of pollutants will be reviewed annually and addressed in each years' annual report.

The following non-storm water discharges are exempt from the Ordinance and are not considered an illegal discharge: water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising groundwater, groundwater infiltration to storm drains, uncontaminated and pumped groundwater, foundation or footing drains (not including active groundwater dewatering systems), springs, noncommercial washing of vehicles, natural riparian habitat or wetland flows, firefighting activities, routine street and utility maintenance, including chip sealing and spreading of gravel and other materials necessary to provide safe streets, and any other water source not containing pollutants.

Occasional Incidental Non-Storm Water Discharges not to be addressed as Illicit Discharges

Occasional Incidental non-storm water discharge	Potential Pollutants	Local Controls or Conditions	Reason for non-significance
Charity Car Washes	Sediment and Phosphorous	None	Infrequent occurrence
Sprinkler System Overspray and breaks	Chlorine	None	Overspray and breaks are usually repaired by the owner or reported by residences or City personnel.
Residential Car Washes	Sediment and Phosphorous	None	Infrequent and small scale
Waterline flushing	Chlorine	Use of de-chlorination equipment	Use of water main flushing rules and de-chlorination equipment (Appendix D)
Main Breaks	Chlorine	Isolation/Termination	Rare and unpredictable
Fire Fighting	Chlorine and Fire Suppression Chemicals	Standard Operating Procedures	Emergency Response

Chapter 6
STORMWATER CONTROL

6-6-1: TITLE:

This chapter may be cited as the *HELENA STORMWATER CONTROL CHAPTER*. (Ord. 3120, 12-21-2009)

6-6-2: PURPOSE:

The purpose of this chapter is to provide for the health, safety, and general welfare of the citizens of the city of Helena by protecting water quality through the regulation of nonstormwater discharges to the stormwater drainage system to the maximum extent practicable as required by federal and state law. This chapter establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the Montana pollutant discharge elimination system (MPDES) permit process. The objectives of this chapter are:

A. To regulate the contribution of pollutants to the municipal separate storm sewer system from stormwater discharges by any user.

B. To prohibit illegal connections to and discharges into the municipal separate storm sewer system.

C. To establish legal authority to carry out all inspection, surveillance, and monitoring procedures necessary to ensure compliance with this chapter.

D. To establish legal authority to develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects. (Ord. 3120, 12-21-2009)

6-6-3: DEFINITIONS:

For purposes of this chapter, the following definitions apply:

BEST MANAGEMENT PRACTICES (BMPs): Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

CONSTRUCTION ACTIVITY: Development and redevelopment projects resulting in any land disturbance including, but not limited to, clearing and grubbing, grading, excavating, and demolition.

DEPARTMENT: City of Helena public works department.

DETENTION/RETENTION BASINS: A normally dry area designed to capture and hold stormwater. The stormwater may be captured and released at a uniform rate after the storm peak flow has passed (detention) or the stormwater may be held for evaporation or infiltration into the ground and not released at all (retention).

DISCHARGE: Any direct or indirect nonstormwater discharge to the storm drain system.

HAZARDOUS MATERIALS: Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. This includes materials defined as hazardous by the United States environmental protection agency and the Montana department of environmental quality.

ILLEGAL CONNECTIONS: Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including, but not limited to, any conveyances that allow any nonstormwater discharge, including sewage, processed wastewater, and wash water to enter the storm drain system, and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drains or connections had been previously allowed, permitted, or approved by the department, or any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records, and approved by the department.

INDUSTRIAL ACTIVITY: Activities subject to MPDES industrial permits as defined in 40 CFR, section 122.26(b)(14).

MS4: The municipal separate storm sewer system including stormwater drainage facilities and system.

MANMADE DRAINAGEWAY: An open channel designed to carry stormwater.

MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (MPDES) STORMWATER DISCHARGE PERMIT: A permit issued by the Montana department of environmental quality that authorizes the discharge of pollutants to surface waters of the United States, whether the permit is applicable on an individual, group, or general areawide basis. Also includes permits issued by the United States environmental protection agency.

NATURAL DRAINAGEWAY: A recognizable drainage which has historically carried storm or runoff water. The drainageway may still be in its native state or may be partially or totally encroached upon. The limits of the drainageway are considered to be the outermost area of flow for the design storm or the prescribed easement for

the drainageway.

NONSTORMWATER DISCHARGE: Any discharge to the storm drain system that is not composed entirely of stormwater.

PERSON: Any individual, association, organization, partnership, firm, corporation or other entity recognized by law.

POLLUTANT: Anything which causes or contributes to pollution. Pollutants may include, but are not limited to, paints, varnishes, and solvents; oil and other automotive fluids; nonhazardous liquid and solid wastes; and refuse, rubbish, garbage, litter, or other discarded or abandoned objects and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous materials and wastes; sewage, fecal coliform, and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

PREMISES: Any building, lot, parcel of land, or portion of land, whether improved or unimproved, including adjacent sidewalks and parking strips.

STORM DRAINAGE SYSTEM OR FACILITIES: City owned or controlled facilities that are part of the MS4 by which stormwater is collected or conveyed, including, but not limited to, any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and humanmade or altered drainage channels, reservoirs, and other drainage structures.

STORMWATER: Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

STORMWATER POLLUTION PREVENTION PLAN: A written document which describes the best management practices and activities to be implemented by a person to identify sources of pollution or contamination at a site, and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyance systems, or receiving waters to the maximum extent practicable.

STORMWATER UTILITY: A funding mechanism for maintenance and operation of, as well as capital improvements to, the stormwater drainage system. The utility is a user fee charged equitably to all property within the service area which benefits from the utility.

WASTEWATER: Any water or other liquid, other than uncontaminated stormwater, discharged from a facility. (Ord. 3120, 12-21-2009)

6-6-4: APPLICABILITY:

This chapter applies to all water entering the city's separate stormwater system that is generated on any developed and undeveloped land. (Ord. 3120, 12-21-2009)

6-6-5: STORMWATER UTILITY SERVICE AREA:

The stormwater utility service area is inclusive of all premises annexed to the city and bounded by the incorporated city limits as the same may be adjusted by the city commission.

The city reserves the right to plan for drainage improvements outside the service area. The city may also construct storm drainage improvements out of the service area when needed as an integral part of the storm drain facilities located within the service area. (Ord. 3120, 12-21-2009)

6-6-6: RESPONSIBILITY FOR ADMINISTRATION:

The department shall administer, implement, and enforce the provisions of this chapter. Any powers granted or duties imposed upon the department may be delegated by the department to persons or entities acting in the beneficial interest of or in the employ of the city. (Ord. 3120, 12-21-2009)

6-6-7: COOPERATION WITH THE COUNTY:

The city shall, in all ways and within the limits of its powers, solicit the county to cooperate in providing drainage facilities in stormwater basins, or parts thereof, extending outside the city and, in general, to carry out the drainage plan developed therein. (Ord. 3120, 12-21-2009)

6-6-8: STORM DRAINAGE MASTER PLAN:

The storm drainage master plan prepared by Stahley and Wright-McLaughlin Engineers and dated April 9, 1980, as well as the application updates of the Davis Gulch Basin dated May 1985, prepared by Robert Peccia and Associates, and the updates of the Last Chance Gulch Basin, Bull Run Basin and West Area Basin prepared by Stahley Engineering and Associates, dated May 1989, are hereby adopted by reference and declared to be part of this chapter. The plans are on file in the office of the city engineer. The city may adopt additional master drainage plan updates by reference and declare them to be a part of this chapter, and copies of such master drainage plan updates shall be on file in the office of the city engineer. Modifications of the plans may be initiated by the department and submitted to the city commission for approval. Approved modifications are to be filed in the office of the city engineer. (Ord. 3120, 12-21-2009)

6-6-9: ULTIMATE RESPONSIBILITY:

The standards set forth herein and promulgated pursuant to this chapter are minimum standards; therefore, this chapter does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, or unauthorized discharge of pollutants. (Ord. 3120, 12-21-2009)

6-6-10: PROHIBITION OF ILLEGAL DISCHARGES:

A. A person may not discharge or cause to be discharged into the MS4 any materials, including, but not limited to, pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards or that could cause the city to be in violation of its MPDES phase II permit, other than stormwater. Any such prohibited discharge is an illegal discharge.

B. The commencement, conduct, or continuance of any illegal discharge to the MS4 is prohibited except as follows:

1. Water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising groundwater, groundwater infiltration to storm drains, uncontaminated and pumped groundwater, foundation or footing drains (not including active groundwater dewatering systems), springs, noncommercial washing of vehicles, natural riparian habitat or wetland flows, firefighting activities, routine street and utility maintenance, including chip sealing and spreading of gravel and other materials necessary to provide safe streets, and any other water source not containing pollutants;

2. Discharges specified in writing by the department as being necessary to protect public health and safety;

3. Any nonstormwater discharge permitted under an MPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the federal environmental protection agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system; and

4. Other nonstormwater discharges which are not a source of pollutants to the city's MS4 or waters of the United States and are exempted in writing by the department.

C. It is unlawful to introduce hazardous materials into any drainage system. The originator of any hazardous material spill or introduction is responsible for the material, and shall pay all applicable investigation and cleanup costs, including the cost of equipment, materials, staff time with fringes, and consultant charges.

D. The city may use available and reasonable testing to identify the source of an illegal discharge including, but not limited to, visual inspections, sample collection and testing, dye testing, and smoke testing. (Ord. 3120, 12-21-2009)

6-6-11: DRAINAGEWAY PROTECTION:

A. It is unlawful to encroach upon natural or manmade drainageways with:

1. Temporary or permanent structures not approved by the city manager; or

2. Fill material or other material obstructing or restricting natural stormwater flow.

B. Natural or manmade drainageways may be altered under the supervision of, and upon application to, the department under the following circumstances:

1. A roadway crossing, provided drainage is considered in the design and culverts are designed to handle proper flow as specified in the master plan and updates, or bridges are designed such that the opening is adequate;

2. Improvements such as detention basins; and

3. Slope improvements.

All improvements or changes to drainageways must be designed by a registered professional engineer and submitted for approval to the department. Approval must be obtained before any on site work commences. (Ord. 3120, 12-21-2009)

6-6-12: PROHIBITION OF ILLEGAL CONNECTIONS:

A. The construction, use, maintenance or continued existence of illegal connections to the storm drain system is prohibited.

B. This prohibition expressly includes, without limitation, illegal connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

C. A person who wishes to connect to the MS4 shall obtain permission from the department to install the connection in accordance with city engineering standards. (Ord. 3120, 12-21-2009)

6-6-13: SUSPENSION OF MS4 ACCESS:

A. The department may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the department may take such steps as deemed necessary to prevent or minimize damage to the MS4 or waters of the United States, or to minimize danger to persons.

B. A person discharging to the MS4 in violation of this chapter may have their MS4 access terminated if such termination would abate or reduce an illegal discharge. The department will notify a violator of the proposed termination of its MS4 access. The violator may petition the department for a reconsideration and hearing.

C. A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this section, without the prior approval of the department. (Ord. 3120, 12-21-2009)

6-6-14: MONITORING OF DISCHARGES:

A. This section applies to all facilities that have stormwater discharges including construction activity.

B. The department is permitted to enter and inspect MS4 facilities subject to regulation under this chapter as often as may be necessary to determine compliance with this chapter. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the department.

C. Facility operators shall allow the department ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an MPDES permit to discharge stormwater, and the performance of any additional duties as defined by state and federal law.

D. The department has the right to set up on any permitted facility such devices as are necessary in the opinion of the department to conduct monitoring or sampling of the facility's stormwater discharge.

E. The department has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment must be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality must be calibrated to ensure their accuracy.

F. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected or sampled must be promptly removed by the operator at the written or oral request of the department and may not be replaced. The cost of clearing such access is borne by the operator.

G. Unreasonable delay in allowing the department access to a permitted facility is a violation of a stormwater discharge permit and of this chapter. A person who is the operator of a facility with an MPDES permit to discharge stormwater associated with industrial activity commits an offense if the person denies the department reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this chapter.

H. If the department has been refused access to any part of the premises from which stormwater is discharged, and it is able to demonstrate probable cause to believe that there may be a violation of this chapter, or that there is a need to inspect or sample as part of a routine inspection and sampling program designed to verify compliance with this chapter or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the city may seek issuance of a court order from any court of competent jurisdiction. (Ord. 3120, 12-21-2009)

6-6-15: DEVELOPMENT AND REDEVELOPMENT ACTIVITY AND POSTCONSTRUCTION STORMWATER CONTROL:

A. A construction activity stormwater permit is required for construction activity that disturbs one acre or more, including projects disturbing less than one acre that are part of a larger common plan of development, redevelopment, or sale. A permit may only be issued subsequent to a properly submitted and reviewed permit application, pursuant to this section.

B. An owner or developer of land required to obtain a construction activity stormwater permit must submit an executed copy of the state standard notice of intent ("NOI") and a stormwater pollution prevention plan prepared and stamped by a licensed professional engineer prior to performing any construction activity.

C. A construction activity stormwater permit will require erosion and sediment controls through the design, installation, and construction of stormwater management and control practices on the permitted construction site including structural BMPs and elements of site design for construction stormwater management other than structural BMPs.

D. The permittee is required to perform regularly scheduled construction activity site inspections at least every fourteen (14) calendar days and within twenty four (24) hours of a precipitation event to ensure that all BMPs have been constructed and are functioning properly. The permittee must document all inspections in writing and make inspection records available to the department for review.

E. Commencement of construction work on development or redevelopment projects that disturbs one acre or more, including projects disturbing less than one acre that are part of a larger common plan of development, may not begin until such time as a permit is issued and final approval of the drainage plan if required below is obtained in accordance with this chapter.

F. Any person subject to a construction activity MPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the department prior to the allowing of discharges to the MS4.

G. In order to address postconstruction stormwater runoff, all owners or developers of property that are required to submit a drainage plan shall provide the stormwater facilities necessary for the drainage and control of flood and surface waters within stormwater basins and shall provide the facilities required to convey such waters from the stormwater basin to major drainageways. The cost of installing stormwater facilities in the service area is charged in whole or in part against the property in the service area.

H. All owners or developers applying for any of the following permits or approvals shall submit a drainage plan for approval, prepared and stamped by a professional engineer, with the application or request:

1. Major subdivision plat approval;

2. Minor subdivision plat approval;

3. Building permits where the impervious development coverage within the property is five thousand (5,000) or more square feet, or where development is in an area critical to the functioning of the MS4 as determined by the department; and

4. Planned unit development (PUD).

I. The same plan submitted during one permit or approval process may be subsequently submitted with other required applications. The plan must be supplemented with such additional information as may be requested by the department.

J. The drainage plan requirement established in this section applies except when the owner or developer demonstrates to the satisfaction of the department that the proposed use of the property:

1. Will neither seriously nor adversely impact the water quality conditions of any affected receiving bodies of water;

2. Will not alter the surface discharge location, alter the drainage pattern on adjoining properties, alter drainage patterns, increase the discharge, or cause any other adverse effects in the drainage area; and

3. Will not alter the subsurface drainage patterns, flow rates and discharge points, or result in any significant adverse effects to property or residents.

K. Drainage plans shall be prepared by a certified engineer in accordance with current hydraulic hydrology practices and hydrology design standards and shall be consistent with the storm drain master plan. Drainage plans shall consist of drainage calculations and mitigation of stormwater drainage and include contour lines as necessary and explicitly describe the stormwater drainage system, including any required detention areas.

L. All required storm drainage plans must be submitted for review by and approval of the department. At the time of approval of the drainage plan for the subject property, a schedule for inspection of required construction and facilities will be established by the department. (Ord. 3120, 12-21-2009)

6-6-16: CREDIT FOR CONSTRUCTION OF STORM DRAINAGE FACILITIES:

If the department requires an owner or developer to construct stormwater facilities that serve more than that development and are identified in the storm drain master plan, a portion of the actual costs incurred may be eligible for credit from the city's stormwater drainage assessment. To be eligible for credit, prior to final approval of the development agreement, the owner or developer must submit a report to the stormwater utility detailing the proposed improvements and obtain the city's approval of the report. The report must identify all elements of the project eligible for credit and include a detailed project description, a project bid form with estimated quantities, unit prices, engineering design and construction management costs. The report also must provide an accurate quantity and cost delineation between the proposed stormwater improvements necessary to meet the standard requirements of the development. The books and records of the owner or developer relating to the stormwater facilities for which the utility is providing reimbursement must be open to the city at all reasonable times for the purpose of auditing or verifying costs. The department will recommend inclusion of the cost of improvements eligible for credit in the next available budget submitted to the city commission. Upon approval and appropriation by the city commission, such costs will be credited from the storm drainage fund. (Ord. 3120, 12-21-2009)

6-6-17: RESPONSIBILITY FOR ACCEPTED STORMWATER FACILITIES:

All stormwater facilities constructed, installed, or provided hereunder, upon acceptance by the city, are the property of the city and thereafter the city is responsible for the operation and maintenance of the facilities. The city shall maintain all accepted public stormwater facilities located within city owned land, city rights of way and city

easements. (Ord. 3120, 12-21-2009)

6-6-18: RESPONSIBILITY FOR PRIVATE STORM DRAINAGE FACILITIES:

Property owners who install private storm drainage facilities that are not connected to the MS4 and not accepted by the city are required to perform maintenance of all private storm drainage facilities to ensure that those facilities function as designed. (Ord. 3120, 12-21-2009)

6-6-19: APPLICABILITY TO GOVERNMENTAL ENTITIES:

All governmental entities are required to submit a drainage plan and comply with the terms of this chapter when developing or improving land including, but not limited to, road construction and reconstruction and other improvements that can affect stormwater runoff within the city. (Ord. 3120, 12-21-2009)

6-6-20: REQUIREMENT TO USE BEST MANAGEMENT PRACTICES:

The department will adopt requirements identifying BMPs for any activity, operation, or facility which may cause or contribute to pollution or contamination of stormwater, the storm drain system, or waters of the U.S. The owner or operator of a commercial or industrial establishment shall provide, at the owner's own expense, reasonable protection from the accidental discharge of prohibited materials or other wastes into the MS4 or watercourses through the use of these structural and nonstructural BMPs. Further, any person responsible for a property or premises that is or may be the source of an illegal discharge, may be required to implement, at said person's expense, additional structural and nonstructural BMPs to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid MPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, is deemed compliance with the provisions of this section. Adopted BMPs shall be part of a stormwater pollution prevention plan (SWPPP) as necessary for compliance with requirements of the MPDES permit. (Ord. 3120, 12-21-2009)

6-6-21: NOTIFICATION OF SPILLS:

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into stormwater, the storm drain system, or waters of the U.S. that person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials that person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of nonhazardous materials, said person shall notify the department in person or by phone, electronic mail, or facsimile no later than the next business day. Notification in person or by phone must be confirmed by written notice addressed and mailed to the department within three (3) business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on site written record of the discharge and the actions taken to prevent its recurrence. Such records must be retained for at least three (3) years. (Ord. 3120, 12-21-2009)

6-6-22: MANAGEMENT OF MUNICIPAL SEPARATE STORMWATER SYSTEM:

A. The purpose of the stormwater utility rates and charges established by the city commission is to generate sufficient revenue to pay all costs for the operation, maintenance, administration and routine functions of the existing MS4 and the operation, maintenance and administration of such future storm drainage facilities as may be established within or without the service area and to pay for the review of drainage plans, and the design, right of way acquisition and construction or reconstruction of stormwater facilities. All of the proceeds are deemed to be in payment for use of the city stormwater system.

B. The department shall determine the total annual cost of operation and maintenance of the stormwater system. The total annual cost of operation and maintenance includes, but is not limited to, labor, repairs, equipment replacement, maintenance, necessary modifications, power, sampling, laboratory tests and a reasonable contingency fund. Capital improvement priorities are determined by the city commission, and utility rates shall be passed in the same manner as all other special assessments. All assessments are set by resolution after public hearing.

C. The city may assess a user fee upon all assessable property within the service area. This charge must appear on yearly property tax statements distributed by the county or by individual billing where necessary. The property owner shall pay the fee directly to the county and the county shall then pay the city the fee in the same manner as all other special fees and assessments. The city reserves the right to pursue further legal action to remedy nonpayment. Nonpayment constitutes a lien on the property, as are other taxes and assessments, in accordance with state law.

D. The rates, charges, and rentals are deemed prima facie fair, reasonable, and equitable. In any case where any contention is made that the rates are unfair, inequitable, or unreasonable, the party objecting thereto shall apply to the city, stating the facts and grounds of the complaint, and the city shall investigate and report with recommendations to the city commission. The city shall consider each and every such complaint and report, and communicate such findings in respect thereto to the city commission within one month after the filing of each such complaint. The city commission has the right to order public hearings as to any such matter and, if convinced that an adjustment of stormwater utility rates or charges for such lot or parcel of land is necessary to provide equality with those charged to others, it shall so provide. (Ord. 3120, 12-21-2009)

6-6-23: VIOLATIONS AND CIVIL ENFORCEMENT:

A. Whenever the department finds that a person has violated a prohibition or failed to meet a requirement of this chapter, the department may order compliance by written notice of violation to the responsible person. Such notice may require without limitation:

1. The performance of monitoring, analyses, and reporting;

2. The elimination of illegal connections or discharges;

3. That violating discharges, practices, or operations shall cease and desist;

4. The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;

5. Payment of restitution for remediation costs;

6. The implementation of source control or treatment BMPs; and

7. The cessation of any construction or postconstruction work not permitted according to this chapter.

B. If abatement of a violation or restoration of affected property is required, the notice will set forth a deadline within which such remediation or restoration must be completed. Said notice will further advise that, should the violator fail to remediate or restore within the established deadline, the work may be done by the city and the expense thereof may be levied against the real property of the violator.

C. If the violation has not been corrected pursuant to the requirements set forth in the notice of violation, then the department may enter upon the subject private property and is authorized to take any and all measures necessary to abate the violation or restore the property. The total cost thereof may be assessed against the real property of the violator in the same manner as a property tax. It is unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the department or designated contractor to enter upon the premises for the purposes set forth above. (Ord. 3120, 12-21-2009)

6-6-24: VIOLATIONS AND CRIMINAL ENFORCEMENT:

Violations of this chapter may also subject the violator to a fine in any sum not to exceed five hundred dollars ($500.00), or imprisonment in the county jail for a period not to exceed thirty (30) days, or both such fine and imprisonment. The department may recover all attorney fees, court costs, and other expenses associated with enforcement of this chapter, including sampling and monitoring expenses. (Ord. 3120, 12-21-2009)

6-6-25: INJUNCTIVE RELIEF:

It is unlawful for any person to violate any provision or fail to comply with any of the requirements of this chapter. If a person has violated or continues to violate the provisions of this chapter, the city may petition for a preliminary or permanent injunction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation. (Ord. 3120, 12-21-2009)

6-6-26: REMEDIES NOT EXCLUSIVE:

The remedies listed in this chapter are not exclusive of any other remedies available under any applicable federal or state law, and it is within the discretion of the city to seek cumulative remedies. (Ord. 3120, 12-21-2009)

ENFORCEMENT RESPONSE PLAN FOR STORMWATER MANAGEMENT WITHIN THE CITY OFHELENA, MONTANA

December 2018

Introduction

In accordance with the General Permit for Storm Water Discharge Associated with Small Municipal Separate Storm Sewer System (MS4), issued by the Montana Department of Environmental Quality (DEQ), the City of Helena is required to develop and implement an Enforcement Response Plan (ERP) to ensure compliance with stormwater regulations. The purpose of this ERP is to specify criteria by which City personnel can determine the enforcement action most appropriate to instances of non-compliance and communicate how the enforcement tools available to City personnel will be used to achieve compliance following violations of the City's stormwater regulations. This document addresses the Montana DEQ MS4 General Permit's ERP requirements for the following Minimum Control Measures (MCM's):

- MCM 4: Illicit Discharge Detection and Elimination
- MCM 5: Construction Site Storm Water Management
- MCM 6: Post-Construction Site Storm Water Management in New and Redevelopment

The procedures within this ERP have been developed with the following objectives in mind:

- Prevent pollutants from entering the MS4 and causing environmental harm.
- Communicate definitions for non-compliance.
- Establish appropriate enforcement action based on the nature and severity of the violation.
- Promote consistent and timely use of enforcement tools.
- Ensure that violators return to compliance in a timely manner.
- Recover costs incurred by the City due to operator non-compliance.
- Promote compliance through education and compliance assistance first and, if necessary, penalties second.

The City of Helena has the authority to enforce stormwater regulations under Title 6: Public Utilities, Chapter 6: Stormwater Control of its municipal code which covers:

- Illicit Discharge Detection and Elimination under 6-6-10
- Construction Site Storm Water management under 6-6-15
- Post-Construction Site Storm Water Management under 6-6-15
- *Enforcement under 6-6-24*

A complete copy of the City Code regulating stormwater is included in Appendix I of the Storm Water Management Plan.

Acronyms

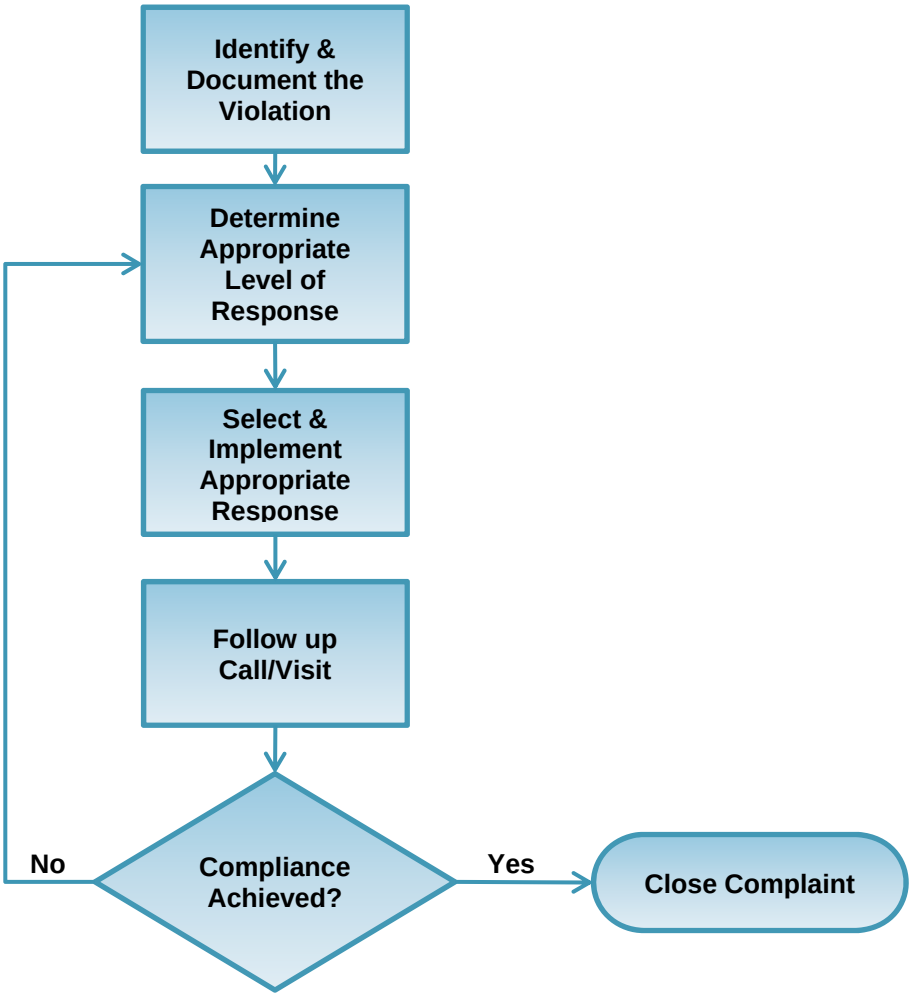
The following acronyms shall have the following meaning:

DEQ	Department of Environmental Quality
ERP	Enforcement Response Plan
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
NOV	Notice of Violation
SWO	Stop Work Order

1. Enforcement Response Plan Overview

The enforcement process consists of six basic steps beginning with identification of a violation and concluding with closing the complaint. The overall process is shown within the flowchart below and is further explained within the following sections.

Enforcement Response Flowchart for the City of Helena Stormwater Management Program



2. Determining the Appropriate Level of Response

Once a potential violation is identified, the appropriate level of response should be determined and an appropriate response remedy should then be selected. The City has five levels of responses, each of which is briefly described below.

2.1 Level 1: No Enforcement Action

There may be situations where city personnel are made aware of a potential violation; however, sufficient evidence does not exist to prove a violation is taking place. An example of such situation may be if a complaint is received stating that a private stormwater control has not been properly maintained; however, after a brief site inspection and/or verbal discussion, the City staff determines the stormwater control is within compliance and no enforcement action is required. In such situations the potential violation and response should be documented using the Enforcement Response Documentation Form (Attachment A) so that it can be referenced in the future, if necessary.

2.2 Level 2: Informal Response

The City will pursue compliance to stormwater violations through informal methods whenever reasonable. Informal responses include telephone notification, verbal notice or meeting These methods are appropriate for situations where education is needed, violations do not pose a significant threat to human health or the environment, or the City believes that compliance can be achieved without the use of formal measures. In addition, implementation of informal measures often establishes the documentation necessary to implement formal enforcement actions if informal measures do not result in compliance.

i.) Telephone Notification/Verbal Notice

A telephone notification or verbal notice will be used to obtain additional information pertaining to a potential violation or to resolve an infrequent violation. The initial contact will take place within 24 hours of determining a potential violation. At a minimum, the conversation shall be documented with the following information: date/time call placed, the City staff member who initiated contact, the person contacted (responsible party), and the content of the conversation.

ii.) Meetings

A meeting will be requested with the responsible party when necessary to implement clean up. The meeting will serve to educate the responsible party regarding the violation and to discuss measures which shall be taken to correct the violation. The meeting will be conducted by Storm Water Coordinator or Utility Maintenance Supervisor. At a minimum, the meeting shall be documented with the following information: meeting location, date/time of meeting, meeting attendees, content of the conversation, and agreements made at the meeting.

2.3 Level 3: Civil Enforcement

As allowed by City Ordinance: Whenever the City of Helena finds that a person has violated a prohibition or failed to meet a requirement of the Helena Stormwater Control Chapter, the City of Helena may order compliance by written notice of violation to the responsible person. Such notice may require without limitation:

1. The performance of monitoring, analyses, and reporting;

2. The elimination of illegal connections or discharges;

3. That violating discharges, practices, or operations shall cease and desist;

4. The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;

5. Payment of restitution for remediation costs;

6. The implementation of source control or treatment BMPs; and

7. The cessation of any construction or postconstruction work not permitted according to this chapter.

B. If abatement of a violation or restoration of affected property is required, the notice will set forth a deadline within which such remediation or restoration must be completed. Said notice will further advise that, should the violator fail to remediate or restore within the established deadline, the work may be done by the city and the expense thereof may be levied against the real property of the violator.

C. If the violation has not been corrected pursuant to the requirements set forth in the notice of violation, then the department may enter upon the subject private property and is authorized to take any and all measures necessary to abate the violation or restore the property. The total cost thereof may be assessed against the real property of the violator in the same manner as a property tax. It is unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the department or designated contractor to enter upon the premises for the purposes set forth above. (Ord. 3120, 12-21-2009)

i.) Administrative Order

An administrative order is a formal enforcement document which requires the responsible party to either cease the specified activity or implement specified corrective measures. An administrative order will be issued when informal remedies have been pursued and have not resulted in compliance.

ii.) Notice of Violation

A NOV is an official communication from the City to the responsible party which informs the party that a violation has occurred. It will be issued for relatively minor or infrequent violations of the City's stormwater ordinances and requirements. It is a prompt response to violations and documents the initial attempts of the City to resolve the violation.

The NOV will include the following information: the specific violation, photos (if possible), timeframe and actions required to return to compliance, and a warning that further enforcement action may be taken for failure to comply.

NOV's shall be sent via certified mail/return receipt or hand delivered and signed by the responsible party within 10 working days after discovery of the violation.

iii.) Stop Work Order

A SWO is applicable to construction site stormwater management violations. It is a notice which informs the construction site operator that a stormwater management violation is ongoing and work is not allowed to continue until the matter is resolved. The SWO will be issued for failure to comply with a NOV or for significant violations of the City's construction site stormwater requirements that require immediate action. The SWO will include the following information: the specific violation, contact information for the City personnel who must be contacted to discuss required remediation procedures, the timeframe for which the City must be contacted to discuss the situation, and a warning which notifies the site operator that failure to comply will result in formal enforcement actions.

iv.) Compliance Schedule

A compliance schedule directs the responsible party to address the violation and restore compliance by a specified date. A compliance schedule will be issued when clean up does not occur within 10 business days of the date of the NOV. The schedule will include the following: the specific violation, noncompliance (document the City's previous attempts to achieve compliance), state required actions to be completed by the responsible party, and the dates by which the actions must be completed to return to compliance.

Note that issuance of a compliance schedule does not necessarily relieve the responsible party of having to meet any existing stormwater control commitments, nor protect the responsible party from having additional fines levied for other violations during the compliance schedule period.

v.) Monetary Penalty

As allowed by City Ordinace The originator of any hazardous material spill or introduction is responsible for the material, and shall pay all applicable investigation and cleanup costs, including the cost of equipment, materials, staff time with fringes, and consultant charges.

2.4 Level 4: Violations and Criminal Enforcement

As allowed by City Ordinance: Violations of this chapter may also subject the violator to a fine in any sum not to exceed five hundred dollars ($500.00), or imprisonment in the county jail for a period not to exceed thirty (30) days, or both such fine and imprisonment. The department may recover all attorney fees, court costs, and other expenses associated with enforcement of this chapter, including sampling and monitoring expenses. (Ord. 3120, 12-21-2009)

i.) Civil Penalties

If necessary, a civil suit will be used to recover costs borne by the City in responding to the responsible party's noncompliance.

ii.) Criminal Penalties

Criminal prosecution is a formal process of charging the responsible party with violations of ordinance provisions that are punishable, upon conviction, by fines and/or imprisonment.

2.5 Additional Considerations

The following criteria will be considered to aid in determining the correct level of response:

i.) Magnitude

A minor isolated instance of non-compliance will typically be considered non-significant and addressed with informal responses; however, isolated incidents which may cause damage to the MS4 or pose a threat to human health and/or the environment will be considered significant and necessitate a formal enforcement action.

ii.) Duration

Regardless of magnitude, violations which continue over prolonged periods of time will result in escalated enforcement actions.

iii.) Compliance History

The responsible party's compliance history will be an important factor in determining the appropriate remedy to apply. The City has the authority to issue informal notices for the less severe violation if the responsible party has a good compliance history; however, recurring violations may lead the City to escalate the level of response in a shorter time-frame than usual.

iv.) Good Faith of the Operator

Good Faith is a characteristic of actions which show that the responsible party is intending to achieve compliance in a timely manner. If the responsible party is attempting in good faith to correct the violation the City's enforcement responses may be less severe; however, potential threats to human health and the environment will always take precedence when considering whether or not to base the City's level of response on the good faith of the responsible party.

In addition, while the responsible party's good faith in correcting its noncompliance may be a factor in determining which enforcement response is suitable, good faith does not preclude the responsible party from enforcement action.

3. Notification of Spills

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into stormwater, the storm drain system, or waters of the U.S. that person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials that person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of nonhazardous materials, said person shall notify the department in person or by phone, electronic mail, or facsimile no later than the next business day. Notification in person or by phone must be confirmed by written notice addressed and mailed to the department within three (3) business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records must be retained for at least three (3) years.
(Ord.3120, 12-21-2009)

4. Enforcement Roles and Responsibilities

All significant violations and the responses shall be reported to the Storm Water Coordinator or Utility Maintenance Supervisor and the Public Works Director. The Public Works Director and City Attorney will be copied on all formal Enforcement Responses. The Public Works Director will consult with the City Attorney and City Administrator in Judicial Actions.

Glossary of Terms

Administrative Fine - A monetary penalty assessed by the City to the responsible party for a violation of the City's stormwater management requirements.

Administrative Order - A formal enforcement document which requires the responsible party to either cease the specified activity or implement specified corrective measures.

Compliance Schedule - A schedule of required activities necessary for a responsible party to achieve compliance with specified stormwater program requirements.

Consent Decree - An agreement between the City and the responsible party reached after a lawsuit has been filed.

Criminal Prosecution - A formal process of charging the responsible party with violations of ordinance provisions that are punishable, upon conviction, by fines and/or imprisonment.

Good Faith Effort - A characteristic of actions which show that the responsible party is intending to achieve compliance in a timely manner.

Injunctive Relief - A court order which directs the responsible party to cease a specified action or behavior.

Judicial Action - An enforcement action that involves a court. (The action may either be civil or criminal in nature).

Notice of Violation - An official communication from the City to the responsible party which informs the party that a violation has occurred.

Responsible Party – The person or organization responsible for a violation.

ATTACHMENT A
ENFORCEMENT RESPONSE DOCUMENTATION FORM

City Personnel Involved | Date

Description of Violation

Location of Violation (address)

( ) -

Responsible Party | Telephone

Street | City | Zip

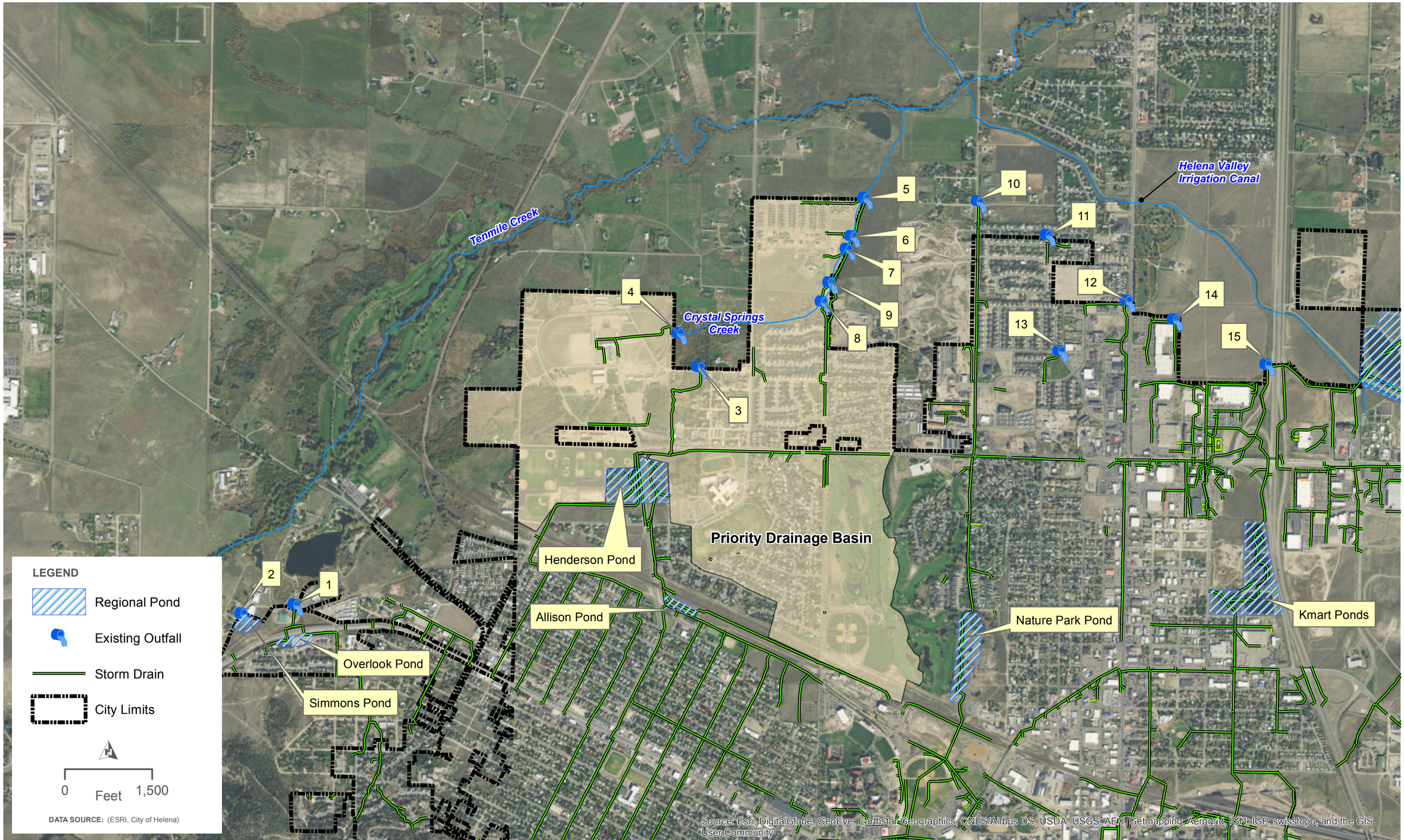
Description of Violation:

Level of Response | Selected Remedy | Date for Follow-Up

Additional Notes:

High Priority Outfalls for the City of Helena

Outfall No.	Drainage Basin	Outfall BMP	Outfall Conveyance	Street Location
3		Henderson Retention Pond Complex	24 inch 24 inch	Silsbee Ave and Mitchell near Fairgrounds
4		Fairgrounds Detention Pond	16 inch	Fairgrounds east of Arena
5		North Stone Meadows Detention Pond	8 inch	Andesite Ave and crystal springs creek
6		Central Stone Meadows Detention Pond	10 inch	Benton Ave and Flagstone Ave
7		South Stone Meadows Detention Pond	8 Inch	Benton Ave south of Obsidian Ave
8		Crystal Springs Detention Pond	Open Channel	Benton and Willowbrook
9		County Shop Detention Basin	Open Channel	E of N Benton and Willowbrook Drive



HELENA MONTANA
QUEEN CITY OF THE ROCKIES

PRIORITY DRAINAGE BASINS MAP

CITY OF HELENA, MT

FIGURE A.5

PATH: G:\PROJECTS\HELENA_CITY_OF\SWMP 2017\MAP_DOCS\FIGURE A.5_PRIORITY DRAINAGE BASINS MAP.MXD - USER: SSAVAGE - DATE: 12/21/2016

Specific to Traditional MS4s and per requirements f.iii in the referenced MCM, attach the summary of investigations conducted and corrective actions taken per the required Illicit Discharge Investigation and Corrective Action Plan and any associated documents.

No illicit discharges were reported or detected during 2018.

MCM 5

POST CONSTRUCTION SITE STORM WATER MANAGMENT

POST-CONSTRUCTION STORMWATER MANAGEMENT CONTROL INSPECTION FORM

General Information	
Site Name (if Applicable):	Type of Control:
Location:	
Site Owner:	Phone Number:
Responsible Party:	Phone Number:
Date of Inspection:	Start/End Time:
Inspector's Name:	Inspector's Title:
Inspector's Contact Information (phone):	
Type of Inspection: ❑ Routine, Dry Weather ❑ Routine, Wet Weather ❑ Complaint Response ❑ Other _____	
Weather Information	
Weather at time of this inspection: ❑ Clear ❑ Cloudy ❑ Raining ❑ Sleet ❑ Fog ❑ Snowing ❑ High Winds ❑ Other: Temperature:	
Do you suspect that any physical changes or damages to the stormwater management control may have occurred since the last inspection? ❑Yes ❑No	
Are there any stormwater discharges at the time of inspection? ❑Yes ❑No If yes, provide location(s) and a description of stormwater discharged from the site (presence of suspended sediment, turbid water, discoloration and/or oil sheen, odor, etc…)	
Prohibited Discharges	
Are there any prohibited discharges at the time of inspection and/or any signs of prohibited discharges since the last inspection? ❑Yes ❑No If yes, provide location(s) and a description:	

	Desired Conditions	Findings	Corrective Action Needed & Notes
1	There is no excessive sediment deposition.	❑Yes ❑No ❑N/A	
2	Slopes are well stabilized and are not contributing sediment to the stormwater management control.	❑Yes ❑No ❑N/A	
3	There is no scour in swales or other vegetated areas.	❑Yes ❑No ❑N/A	
4	Trash racks, inlets, outlets, and low flow orifices are clear of trash, debris, and sediment.	❑Yes ❑No ❑N/A	
5	There is no woody vegetation impeding the performance of any structural component of the stormwater management control.	❑Yes ❑No ❑N/A	
6	Outfall structures do not show signs of settling, cracking, bulging, misalignment or other structural deterioration.	❑Yes ❑No ❑N/A	
7	Embankments, emergency spillways, side slopes or inlet/outlet structures show no signs of erosion.	❑Yes ❑No ❑N/A	
8	Pipes going into and/or out of any stormwater management control are unclogged and unobstructed.	❑Yes ❑No ❑N/A	
9	There is no evidence of animal burrows.	❑Yes ❑No ❑N/A	
10	There is no trash or debris in the stormwater management control.	❑Yes ❑No ❑N/A	
11	There are no encroachments on the stormwater management control.	❑Yes ❑No ❑N/A	

	Desired Conditions	Findings	Corrective Action Needed & Notes
12	All necessary repairs to safety devices such as fences, gates, covers or locks are complete.	❑Yes ❑No ❑N/A	
13	There is not excessive algae or vegetation in the pond/ditch.	❑Yes ❑No ❑N/A	
14	The ground surface stabilization is retaining any highly erosive or unstable soils, seed germination is being properly facilitated, and any netting or blankets are properly fastened to obtain full contact with the ground.	❑Yes ❑No ❑N/A	
15	Stormwater control appears to be functioning properly.	❑Yes ❑No ❑N/A	
16	Are there locations where additional stormwater management controls appear to be necessary?	❑Yes ❑No ❑N/A	
17	(Other)	❑Yes ❑No ❑N/A	
Describe any incidents of non-compliance or need for maintenance not described above:			
Follow-up inspection required? ❑Yes ❑No			

Inspector's Signature

Date

The City of Helena uses a GIS database to record all new post-construction storm water controls.

Following is summary of 2018 activity:

Inventory of all new permittee-owned post-construction storm water management controls

- None in 2018

Inventory of all private post-construction storm water management controls.

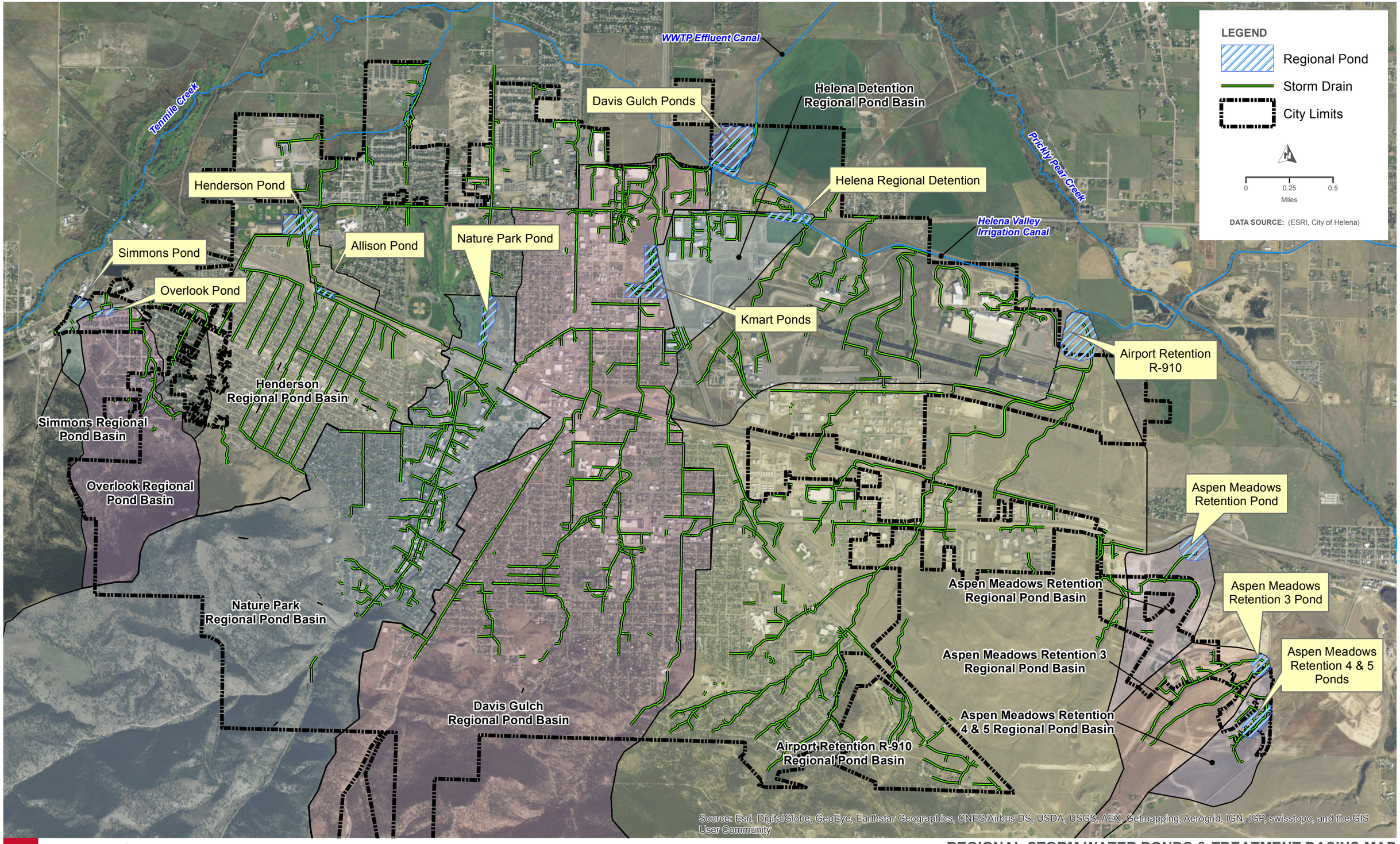
- Winco - storm water pond and storm pipe
- Bryant School - storm water quality pond and LID facilities
- Central School – storm water quality pond and storm pipe
- Willowbrook Apartments – storm water retention ponds

CITY OF HELENA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
POST-CONSTRUCTION STORMWATER MANAGEMENT CONTROL
INSPECTION FREQUENCY DETERMINATION PROTOCOL

Criteria	Rating System	INSPECTION FREQUENCY
Pre-determined priority of the control	Non High-Priority	Per below
	High-Priority	Annually
Proximity to a surface water	Drains to a regional storm water pond	*Complaint based*
	Drains overland and through storm system prior to MS4 outfall	*Every 5 years*
	Discharges to a waterbody	*Annually*
Drainage Area Treated	Up to 10 acres	*per this table*
	Greater than 10 acres	*Every 5 years*
Type of Facility	City owned priority stormwater pond	*Annually*
	City owned regional stormwater pond	*Every 5 years*
	Private regionals storm water pond	*Every 5 years*
	Private storm water pond serving one lot	*Complaint based*

High Priority and Regional Post Construction Storm Water Management Controls (PCSWMC)

Regional Watershed	MS4 Drainage Basin	High Priority PCSWMC (Annual Inspection)	Regional PCSWMC	MS4 Outfall Basin
Prickly Pear Creek	Bull Run and Airport	Yes	Airport Retention R-910	Outfall to Bull Run
	Bull Run Area		Crossroads Detention	R910
			Aspen Meadows Detention	R910
			Jeanette Rankin Detention	R910
			Aspen Meadows Retention	R910
			Airport Detention Pond 2	R910
			Hunter's Point Detention	R910
			Mountain West Bank Detention	R910
			Nob Hill Retention Pond 1	R910
			Nob Hill Retention Pond 2	R910
			Nob Hill Detention Pond 1	R910
			Nichole Street Detention	R910
			Nob Hill Detention 4	R910
			Helena Regional Detention	Outfall to Bull Run
	Far East Area	Yes	Aspen Meadows Retention Pond 3	Outfall to Far East
		Yes	Aspen Meadows Detention Pond 4	Outfall to Far East
		Yes	Aspen Meadows Detention Pond 5	Aspen Meadows Detention Pond 4
	Davis Gulch	Yes	Davis Gulch Pond	Outfall to Davis Gulch
		Yes	Kmart Pond	Davis Gulch Pond
			DNRC Pond	Davis Gulch Pond
			Helena High Pond	Davis Gulch Pond
Tenmile Creek	Last Chance Gulch	Yes	Nature Park Pond	Outfall to Last Chance Gulch
	Westside Area	Yes	Overlook Pond	Outfall to Spring Meadows Ponds
		Yes	Simmons Pond	Outfall to Spring Meadows Ponds
		Yes	Henderson Pond	Outfall to Spring Creek
		Yes	Allison Street Pond	Henderson Pond



HELENA MONTANA
QUEEN CITY OF THE ROCKIES

REGIONAL STORM WATER PONDS & TREATMENT BASINS MAP

CITY OF HELENA, MT

FIGURE A.2

MCM 6

POLLUTION PREVENTION AND GOOD HOUSEKEEPING

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

The City of Helena (City) operates and maintains permittee owned facilities and conducts activities including training with the intent of reducing pollutant runoff from permittee operations, and ultimately from its MS4 outfalls. Under MCM 6, the General Permit requires permittees to develop and implement an operation and maintenance program that has three primary components:

- An inventory of permittee owned/operated facilities and activities that have the potential to release contaminants to the MS4.
- Standard operating procedures (SOPs) for facilities and activities that identify storm water pollution prevention controls to be installed, implemented and/or maintained to minimize the discharge of pollutants.
- A program to conduct annual storm water pollution prevention training for all permittee staff directly involved with implementing SOPs.

The following sections describe the City's approach to addressing the General Permit's Pollution Prevention/Good Housekeeping requirements.

1.0 Inventory of Permittee Owned/Operated Facilities and Activities

In accordance with Part II.A.6.a.i of the MS4 General Permit, this section provides an inventory of the City's facilities and activities that have the potential to release contaminants to the MS4.

1.1 Facility Inventory

The City's facilities are separated into two categories, Tier 1 and Tier 2 facilities.

- Tier 1 facilities have an increased potential to release contaminants to the MS4 due to the type of pollutants generated or stored at these facilities (e.g., oils, hazardous materials, etc.). Examples of Tier 1 facilities include waste handling areas and vehicle fleet maintenance areas. Tier 1 facilities are identified in Table 1. The City has developed facility-specific storm water pollution prevention SOPs for these facilities.
- Tier 2 facilities have less potential to release contaminants to the MS4 due to the decreased risk of exposure associated with activities taking place at these facilities. Examples of Tier 2 facilities include parks and parking lots. A summary of tier 2 facilities is provided in Table 2 and a comprehensive list is provided in Table A-1 (Appendix A). The City has developed activity-based storm water pollution prevent SOPs for these facilities (the type of activities being conducted at each Tier 2 facility will govern which SOP(s) are to be implemented).

A map that shows locations of City facilities is provided in Appendix A.

Table 1: Tier 1 City Facilities that have the Potential to Release Contaminants to the MS4

Facility Information		Person Responsible for Pollution Prevention		Potential Contaminants								
Name	**Address**	**Name**	**Title**	Sediment	Nutrients[1]	Trash	Metals	Bacteria	Oil, Grease, Fuel	Organics	Pesticides/Herbicides	Hazardous Waste[2]
Wastewater Treatment Facility	2218 E Custer Ave	Mark Fitzwater	Supervisor	X	X			X		X		X
Solid Waste Transfer Station	1975 N Benton Ave	Pete Anderson	Superintendent	X	X	X	X	X	X	X	X	X
Utility Maintenance Shop	2218 E Custer Ave	Kevin Hart	Superintendent	X					X			X
Sanitation Storage	3001 East Lyndale Ave	Pete Anderson	Superintendent	X	X			X		X		X
Vehicle Maintenance	3001 East Lyndale Ave	David Knoepke	Superintendent	X					X			X
Capital Transit	1415 North Montana Ave	Elroy Goleman	Superintendent	X					X			X
Parks Maintenance Shop	1201 N Ewing St	Craig Marr	Superintendent	X	X				X	X	X	X
Missouri River Water Treatment Plant	2560 Canyon Ferry Rd	Jason Fladland	Supervisor	X					X			X
Ten Mile Water Treatment Plant	1115 Rimini Rd	Jason Fladland	Supervisor	X					X			X
Fire Department	300 Neill Ave	Mark Emert	Fire Chief	X					X			X

[1] Nutrients in runoff are typically nitrogen and phosphorus pollutants from fertilizers, pet, and yard waste

[2] Hazardous waste is typically any biological, chemical, or physical material that are potentially harmful to human health or the environment. Examples include antifreeze, householder cleaners, and paints.

Table 2. Tier 2 Facility Summary

Facility Information		Person Responsible for Pollution Prevention		Potential Contaminants								
Facility Type	**Department**	**Name**	**Title**	Sediment	Nutrients	Trash	Metals	Bacteria	Oil, Grease, Fuel	Organics	Pesticides/Herbicides	Hazardous Waste
Building	Community Facilities	Troy Sampson	Director	X		X			X			X
Park	Parks/Recreation	Craig Marr	Director	X	X	X			X	X	X	
Open Space	Parks/Recreation	Brad Langsather	Manager	X							X	
Parking Lot	Parking Commission	Dave Hewitt	Director	X		X			X			
Parking Garage	Parking Commission	Dave Hewitt	Director	X		X			X			
City Streets	Public Works	David Knoepke	Superintendent	X	X	X	X	X	X	X		X
Utilities[1]	Public Works	David Knoepke	Interim Superintendent	X	X	X	X	X	X	X	X	
Lift Station	Public Works	Jason Fladland	Supervisor		X			X		X		
Storage Tank	Public Works	Jason Fladland	Supervisor									

[1] Water distribution, wastewater collection and conveyance, and storm water collection and conveyance.

1.2 Activity Inventory

Table 3 identifies City activities that have the potential to release contaminants to the MS4. Similar activities have been grouped into nine categories. The City will develop one SOP for each category to describe procedures to be used to minimize the potential discharge of contaminants associated with these activities.

Table 3. City Activities that have the Potential to Release Contaminants to the MS4

SOP Category	Activity	Potential Pollutants								
		Sediment	Nutrients	Trash	Metals	Bacteria	Oil, Grease, Fuel	Organics	Pesticides/Herbicides	Hazardous Waste
Landscaping	Mowing						X	X		
	Tree Trimming						X	X		
	Fertilizer/pesticide/herbicide application		X						X	
	Planting	X								
	Equipment fueling						X			
Street Maintenance and Repairs	Street sweeping	X	X	X	X	X	X		X	
	Chip sealing	X					X			
	Asphalt and concrete cutting	X					X			
	Asphalt and concrete resurfacing	X					X			
	Curb and crosswalk painting						X			X
	Pothole repair						X			
Winter Street Operations	Street sanding	X					X			
	Snow removal and storage	X		X			X			
	Street deicing						X			X
Parking Lot Maintenance	Sweeping/cleaning	X	X	X	X	X	X		X	
	Parking lot striping						X			X
	Snow removal and storage	X		X			X			
Utility Maintenance	Water line repairs	X					X			
	Water line flushing	X					X			
	Sanitary sewer line repairs	X	X			X	X	X		
	Storm sewer line repairs	X					X			
	Catch basin cleaning	X	X	X	X	X	X	X	X	
	Excavation and stockpiles	X					X			
Solid Waste Management	Dumpster and receptacle management		X	X	X	X	X	X		X
	Solid waste collection		X	X	X	X	X	X		X
Building Maintenance	Sidewalk snow removal	X		X			X			
	Dumpster and receptacle management		X	X	X	X	X	X		X
Shop and Fleet Services	Vehicle fueling						X	X		
	Vehicle and equipment storage						X			X
	Vehicle washing	X					X			
	Materials storage						X			X
	Vehicle maintenance						X			X
Spills	Spill response and containment			X		X	X	X	X	X

Table 4 identifies applicable SOPs to be implemented for Tier 2 facilities. A comprehensive list of Tier 2 facilities is provided in Table A-1 (Appendix A).

Table 4. SOPs for Tier 2 Facilities

Facility Information		Applicable SOPs								
Tier 2 Facility Type	**Department Responsible for Pollution Prevention**	Landscaping	Street Maintenance and Repairs	Winter Street Operations	Parking Lot Maintenance	Utility Maintenance	Solid Waste Management	Building Maintenance	Shop and Fleet Services	Spills
Building	Community Facilities	X			X		X	X		X
Park	Parks/Recreation	X			X					
Open Space	Parks/Recreation	X								
Parking Lot	Parking Commission				X					X
Parking Garage	Parking Commission				X					X
City Streets	Public Works		X	X						X
Utilities	Public Works					X				X
Lift Station	Public Works									X
Storage Tank	Public Works									

1.3 SOP Development

The City has two categories of storm water pollution prevention SOPs: facility-specific and activity-based. The list of SOPs to be developed is provided in Table 5.

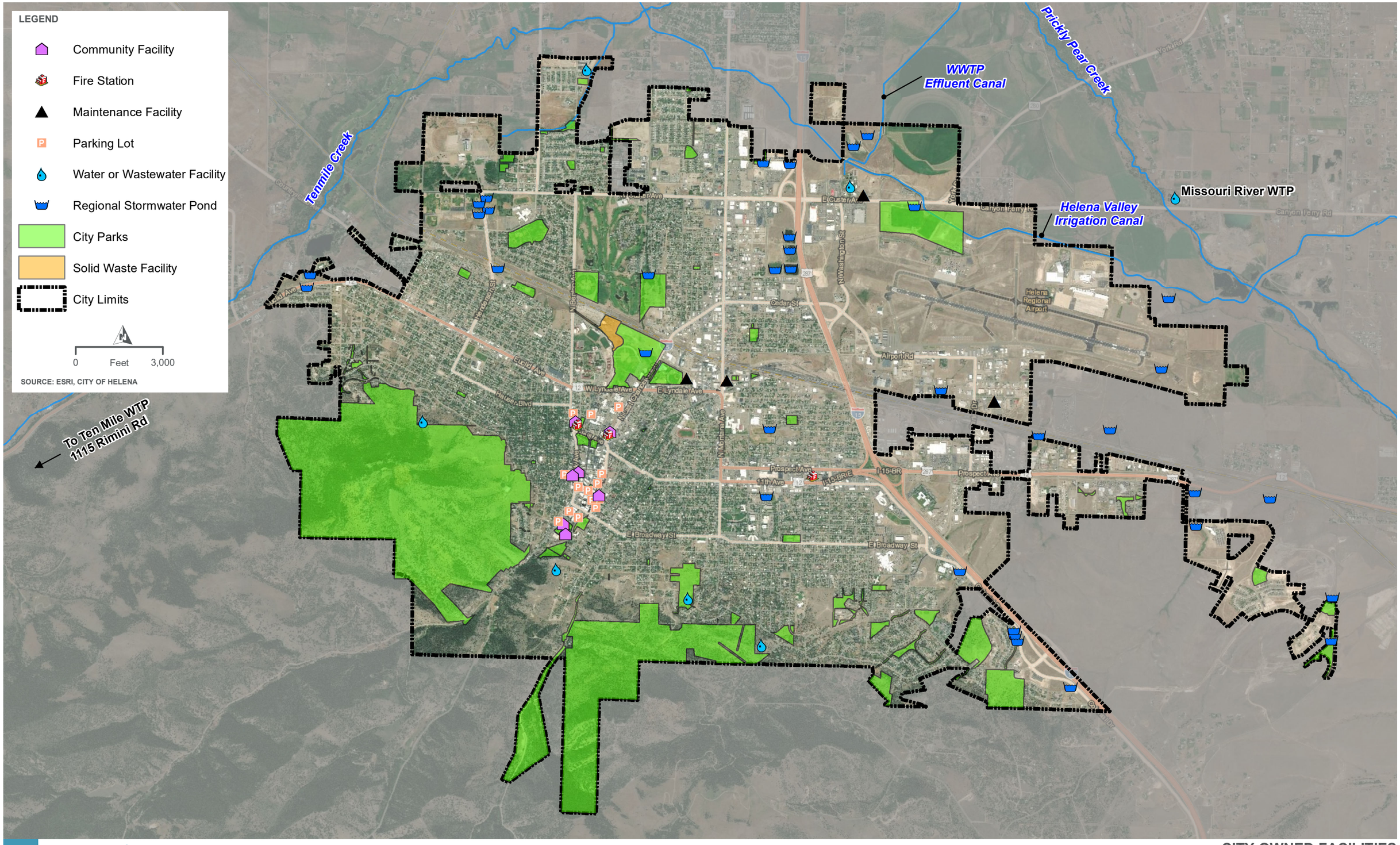
Table 5. Storm Water Pollution Prevention SOPs

	SOP Name
Facility-Based SOPs (Tier 1 Facilities)	Wastewater Treatment Facility
	Solid Waste Transfer Station
	Utility Maintenance Shop
	Sanitation Storage
	Vehicle Maintenance Facility
	Capital Transit
	Parks Maintenance Shop
	Missouri River Water Treatment Plant
	Ten Mile Water Treatment Plant
	Fire Department
Activity-Based SOPs (Tier 2 Facilities)	Landscaping
	Street Maintenance and Repairs
	Winter Street Operations
	Parking Lot Maintenance
	Utility Maintenance
	Fire Department
	Solid Waste Management
	Building Maintenance
	Shop and Fleet Services
	Spills

1.4 SOP Training

Persons responsible for pollution prevention at City facilities will conduct or oversee annual storm water pollution prevention training for all permittee staff directly involved with implementing SOPs. For newly created SOPs, trainings will be conducted during the next permit year after development of the SOP.

Appendix A. Tier 2 Facility List and Map



HELENA MONTANA
QUEEN CITY OF THE ROCKIES

CITY OWNED FACILITIES

CITY OF HELENA - 2018 SWMP

Table A-1. Tier 2 City Facilities

Department	Name	Address
Community Facilities	Capital Transit Office Building	1415 N Montana Ave
	Chamber of Commerce Building	225 Cruse Ave
	City County Admin Building	316 N Park Ave
	Grandstreet Theater	325 N Park Ave
	Helena Civic Center	340 Neill Ave
	Lewis and Clark Library	120 S Last Chance Gulch
	Helena Police Department	221 Breckenridge St
Parks/Recreation	Bill Roberts Golf Course	2201 N Benton Ave
	Barney Park	1950 Cleveland St
	Batch Park	2101 N Benton Ave
	Bausch Park	1200 N Last Chance Gulch
	Beattie Park	1400 Helena Ave
	Bullrun Park	766 S California St
	Centennial Park	1977 N Benton Ave
	Charles Van Hook Wetland	55 Silsbee Ave
	Cherry Hill Park	900 Cherry Ave
	Clinton Park	350 S Beattie St
	Constitution Park	301 N Last Chance Gulch
	Cruse Park	551 N Last Chance Gulch
	Crystal Springs Park	232 Willowbrook Dr
	Cunningham Park	1234 Flowerree St
	Dale Harris Park	279 S Cruse Ave
	Diehl Hill	575 Diehl Dr
	Donaldson Park	3187 Cabernet Dr
	Fire Tower Park	111 S Cruse Ave
	Gold Park	2250 Gold Ave
	Heritage Park	201 S Last Chance Gulch
	Hill Park	561 N Park Ave
	Janet Park	525 Janet St
	Jaycee Park	3276 N Benton Ave
	Kay McKenna Park	740 Getchell St
	Kessler Park	501 N Davis St
	Last Chance Splash Waterpark	1203 N Last Chance Gulch
	Leo Pocha Park	310 State St

Department	Name	Address
Parks/Recreation	Lincoln Park	1398 Poplar St
	Lockey Park	1700 E Broadway St
	Meatloaf Hill Park	Touch Stone Dr
	Memorial Park & Adjacent Area	1203 N Last Chance Gulch
	Mount Helena Park	81 Reeders Village Dr
	Mountain View Park	375 S Alice St
	Mountain View Park 2	2964 Powderhorn Ct
	Nob Hill Park	3010 Saddle Dr
	Northwest Park	100 Valley Dr
	Oakes Street Parcel	S Oakes St & Belt View Dr
	Performance Square	11 N L Chance Gulch
	Pioneer Park	201 S Park Ave
	Pioneer Village Park	1 Colter Loop Dr
	Reber PUD	2000 University St
	Reeder's Alley	525 Adams St
	Ridge View Condos	73 Comstock Rd
	Robinson Park	1724 Townsend Ave
	Ryan Park	30 W Custer Ave
	Selma Held Park	2749 Belt View Dr
	Siebel Soccer Complex	2250 Skyway Dr
	Sixth Ward Park	1235 Bozeman St
	Skelton Park	875 Road Runner St
	Tracy Park	2450 Tracy Dr
	Waukesha Park	1600 Waukesha Ave
	Wesleyan Park	801 Helena Ave
	Women's Park	575 Fuller Ave
	Yund Park	601 N Benton Ave
Parking Commission	Parking Lot	230-314 S Park Ave
	Parking Lot	49 S Park Ave
	Parking Lot	5 Wong St
	Parking Lot	308 N Jackson St
	Parking Lot	350 N Jackson St
	Parking Lot	225 Cruse Ave
	Parking Lot	150 Cruse Ave
	Parking Lot	91 E Broadway St
	Parking Lot	340 N Benton Ave

Department	Name	Address
Parking Commission	15th St. Parking Garage	15 W 15th St
	6th Ave Parking Garage	39 W 6th Ave
	Getchell St. Parking Garage	801 Getchell St
	Jackson St Parking Garage	201 Jackson St
	Jackson St Parking Lot	336 N Jackson St
	Last Change Gulch Parking Garage	125 N L Chance Gulch
Public Works	Waste Water Lift Station	444 Andesite Ave
	Municipal Storage Tank	1301 MT Helena Dr
	Municipal Storage Tank	1966 Lime Kiln Rd
	Municipal Storage Tank	250 Clancy St
	Municipal Storage Tank	702 Touchstone Dr

[1] Activities associated with each SOP category are provided in Table 3

Appendix B. Stormwater Pollution Prevention SOPs

CITY OF HELENA **STORM WATER POLLUTION PREVENTION** **STANDARD OPERATING PROCEDURE** **CATEGORY:** Landscaping	**SOP NUMBER:** 01 **ISSUE DATE:** 2/15/2019	City of Helena

ACTIVITIES:	**TARGET POLLUTANTS:**
Mowing **Tree Trimming** **Fertilizer/Pesticide/Herbicide Application** **Planting** **Equipment Fueling**	Sediment Nutrients Oil & Grease Organics Pesticides/Herbicides

GENERAL

THIS SOP IS NOT EXPECTED TO COVER ALL NECESSARY PROCEDURE ACTIONS. OPERATORS ARE ALLOWED TO ADAPT SOPS TO UNIQUE SITE CONDITIONS IN GOOD JUDGMENT WHEN IT IS NECESSARY FOR SAFETY AND THE PROPER AND EFFECTIVE CONTAINMENT OF POLLUTANTS.

DESCRIPTION OF ACTIVITIES AND POLLUTANT SOURCE

Landscaping activities that have the potential to discharge pollutants to storm water runoff include mowing, tree trimming, fertilizer/pesticide/herbicide application, planting, and equipment fueling. These activities occur at most City owned buildings and City parks.

APPLICABILITY

The procedures outlined in this SOP shall be implemented by all employees conducting landscaping activities at City owned facilities.

BEST MANAGEMENT PRACTICES (TO BE IMPLEMENTED FOR ALL LANDSCAPING ACTIVITIES)

- Locate all storm drain collection structures and inlets prior to starting work.
- Use temporary catch basin protection when necessary.
- Inspect equipment for gas and oil leaks prior to use.
- Promptly clean up spills in accordance with the spill response and containment SOP.
- Collect and dispose of all trash in the work area.
- Equipment cleaning and maintenance is to be completed at the Vehicle or Parks Maintenance Shop.

THE FOLLOWING ACTIVITY PROCEDURES SHOULD BE FOLLOWED FOR EACH LISTED ACTIVITY

MOWING

City staff are responsible for maintaining grassy areas at City owned buildings and City parks. Mowing includes the operation of mowers, trimmers, edgers, and blowers to maintain aesthetics of City managed grassy areas. A variety of pollutants can be introduced to the storm water system while mowing. Implement the following procedures to minimize potential for storm water pollution during the mowing process:

- Adjust mower height to match the area's intended use and minimize clippings.
- Avoid excessive soil and vegetation damage by varying mowing patterns.
- When bagging clippings ensure appropriate collection, transportation, and disposal of all clippings.
- Sweep or blow clippings from sidewalks and streets to grass areas when work is complete.

- Dispose of clippings at the City Transfer Station.

TREE TRIMMING

City Staff perform routine care for trees and shrubs at City owned buildings and City parks. Tree trimming includes the operation of trimmers, chippers, and blowers to maintain aesthetics of City managed trees and shrubs. Oil, grease, fuel, and organics can be introduced to the storm water system while trimming. Implement the following procedures to minimize potential for pollution during the trimming process:

- Collect all trimmings and debris in the area when work is complete.
- Sweep or blow chips from pavement(s) into soil areas.
- Dispose of trimmings and debris at the City chip and mulch processing yard.

FERTILIZER/PESTICIDE/HERBICIDE APPLICATION

Properly trained and certified persons perform routine care for grassy areas at City owned buildings and City parks. Fertilizer, pesticide, and herbicide application includes the operation of sprayers and spreaders to maintain health of City managed grassy and vegetated areas. A variety of nutrients and chemicals can be introduced to the storm water system during treatment. Implement the following procedures to minimize potential for pollution in the fertilizer/pesticide/herbicide application process:

- Avoid application within a minimum of 20 feet of surface water and 100 feet of a City well head.
- Read and review all product information prior to use. This information includes but is not limited to, safety data sheets, product instructions, and federal and state regulations governing use.
- Calibrate application equipment to avoid excessive material application.
- Check the weather forecast. Wind and or rain conditions (current and future) may not be acceptable for application. Do not use pesticides if rain is expected within a 24-hour period and only apply when wind speeds are less than 5 mph.
- Mix and prepare pesticides away from storm drains and soils, preferably inside a protected area within a watertight secondary container.
- Employ appropriate techniques to minimize off-target application of fertilizer and pesticides, spray drift and over broadcasting are possible pollutants to the storm water system.
- Clean spills immediately and follow product specified procedures.
- Rinse application equipment away from water bodies and storm drains. Do not dispose of chemicals to storm drain, sewer, or ground surface.
- Dispose of excess material following manufacturer's instructions.

PLANTING

Planting includes digging, planting/seeding, and backfilling to maintain aesthetics of City managed land. Sediment and nutrients can be introduced to the storm water system during planting if proper procedures are not followed. Implement the following procedures to minimize potential for pollution when planting:

- Prior to digging call Montana 811 by dialing 811 or 800-424-5555 to locate underground facilities.
- While digging place spoils near the hole for ease of backfilling, avoid placing spoils in or near the gutter, a storm drain, or water body.
- Do not add excessive amounts of compost or fertilizer while backfilling.
- Apply seed and cover using pre-determined application method and rate.
- Sweep dirt from surrounding pavement(s) into the planter area.

- Remove extra spoils from the site responsibly, use a tarp if necessary to contain spoils during transport.
- Transport spoils to at the City chip and mulch processing yard.
- Larger planting projects may require installation of temporary storm water BMPs such as silt fence and biorolls. Contact the City storm water engineer to discuss pollution prevention for planting projects that are near water bodies and will take more than two days to complete.

EQUIPMENT FUELING

Equipment fueling applies to all gas, diesel, or kerosene vehicles and equipment required for maintenance of City facilities. Harmful chemicals can be introduced to the storm water system if spills occur while fueling equipment. Implement the following procedures to minimize pollution during fueling:

- Use the fuel automatic shut off (where applicable) to prevent overfilling, and do not 'top off' the tank.
- Mobile fueling should be minimized, whenever practical transport vehicles and equipment to designated fueling areas.
- When fueling small equipment from portable containers, fuel in an area a minimum of 50 feet away from storm drains and water bodies.
- If a large fuel spill occurs (greater than 1 gallon), contact the City storm water engineer and your supervisor to determine if specialized sill response procedures are necessary.

CITY OF HELENA **STORM WATER POLLUTION PREVENTION** **STANDARD OPERATING PROCEDURE** **CATEGORY:** Shop and Fleet Services	**SOP NUMBER:** 02 **ISSUE DATE:** 2/15/2019	City of Helena

ACTIVITIES:	**TARGET POLLUTANTS:**
Vehicle Fueling **Vehicle and Equipment Storage** **Vehicle Washing** **Material Storage** **Vehicle Maintenance**	Sediment Oil, Grease, Fuel Organics Hazardous Waste

GENERAL

THIS SOP IS NOT EXPECTED TO COVER ALL NECESSARY PROCEDURE ACTIONS. OPERATORS ARE ALLOWED TO ADAPT SOPS TO UNIQUE SITE CONDITIONS IN GOOD JUDGMENT WHEN IT IS NECESSARY FOR SAFETY AND THE PROPER AND EFFECTIVE CONTAINMENT OF POLLUTANTS.

DESCRIPTION OF ACTIVITIES AND POLLUTANT SOURCE

The shop and fleet service activities that have the potential to discharge pollutants to storm water runoff include vehicle fueling, vehicle and equipment storage, vehicle washing, material storage, and vehicle maintenance. Pollutants associated with these activities include sediment, oil, grease, fuel, organics, and hazardous waste. The majority of the City's shop and fleet service activities occur at the Vehicle Maintenance facility, Parks Maintenance Shop, and Capital Transit facility.

APPLICABILITY

The procedures outlined in this SOP shall be implemented by all employees conducting shop and fleet services at City owned facilities.

BEST MANAGEMENT PRACTICES (TO BE IMPLEMENTED FOR ALL SHOP AND FLEET SERVICE ACTIVITIES)

- Inspect vehicles and equipment for gas and oil leaks prior to use.
- Promptly clean up spills in accordance with the spill response and containment SOP.
- Collect and dispose of all trash in the work area.
- Keep work and storage areas clean for easy detection of leaks and spills.
- Equipment cleaning and maintenance is to be completed at the Vehicle, Parks, or Capital Transit Maintenance facility.

THE FOLLOWING ACTIVITY PROCEDURES SHOULD BE FOLLOWED FOR EACH LISTED ACTIVITY

VEHICLE FUELING

Vehicle fueling applies to all gas and diesel vehicles used by City facilities staff. Harmful chemicals can be introduced to the storm water system if spills occur while fueling. Implement the following procedures to minimize potential pollution during fueling:

a) Shut off the vehicle prior to fueling.
b) Fuel vehicles at approved locations.
c) Inspect fueling location for corrosion, leaks, cracks, scratches, and other physical damage that may lead to spills.
d) Follow all posted warnings.

e) Use the fuel automatic shut off (where applicable) to prevent overfilling, and do not 'top off' the tank.
f) Remain by the fill nozzle while fueling.
g) Mobile fueling should be minimized, whenever practical transport vehicles to designated fueling areas.
h) If a large fuel spill occurs (greater than 1 gallon), contact the City storm water engineer and your supervisor to determine if specialized spill response procedures are necessary.

VEHICLE AND EQUIPMENT STORAGE

Vehicles and equipment stored for any period of time have the potential to leak, spill, or release chemicals or hazardous materials into the storm water system. Storage occurs at numerous City owned facilities. Implement the following procedures to minimize potential pollution during vehicle and equipment storage:

a) Whenever possible, store vehicles and equipment inside where floor drains are not connected to the storm sewer system.
b) Vehicles and equipment stored outside shall be in approved locations away from storm drain inlets.
c) Monitor stored vehicles and equipment closely for leaks, use a drip pan as needed.
d) Drain fluids from leaking or wrecked vehicles as soon as possible. Dispose of fluids properly, as directed by the facility's superintendent.

VEHICLE WASHING

Vehicle washing removes snow, ice, mud, and dirt from the surface of vehicles. Washing occurs in the Vehicle Maintenance facility washing bay, the Capital Transit facility washing bay, or other approved locations. Pollutants associated with vehicle washing include sediment, oil, grease, and fuel. Implement the following procedures to minimize potential pollution during vehicle washing:

a) Wash vehicles in designated areas only, with drainage connecting to the sanitary sewer system.
b) Avoid using excess water and soap when washing vehicles.
c) Never wash vehicles over or near a storm drain.
d) Use hoses with automatic shut off nozzles to minimize water usage.

MATERIAL STORAGE

Material storage applies to automotive products, fertilizers, pesticides, paints, chemicals, and other similar materials. Material storage includes proper handling through unloading, use, storage, and disposal. Indoor and outdoor storage occurs at the Vehicle Maintenance, Capital Transit, and Parks Maintenance facilities. Implement the following procedures to minimize potential pollution during material storage:

a) Store materials indoors or under cover whenever possible.
b) Store materials on elevated surfaces, limiting contact with storm water run-off when possible.
c) Provide an adequate storage container for all materials.
d) Inspect storage areas and containers regularly for leaks, spills, and proper storage of all materials.
e) Properly dispose of materials that are outdated or beyond use.
f) All hazardous materials must be labeled and stored according to manufacturer instructions.
g) Use secondary containment as needed to prevent contact with storm water in the event of a leak.

CITY OF HELENA **STORM WATER POLLUTION PREVENTION** **STANDARD OPERATING PROCEDURE** **CATEGORY:** Shop and Fleet Services	**SOP NUMBER:** 02 **ISSUE DATE:** 2/15/2019	GUARDIAN OF THE GULCH City of Helena

VEHICLE MAINTENANCE

Vehicle maintenance is routine for all city owned vehicles. Preventative maintenance will occur at the Vehicle Maintenance facility and Capital Transit facility, while emergency repairs may require off-site work. Potential pollutants associated with vehicle maintenance are oil, antifreeze, brake fluid, solvents, batteries, fuels, and cleaners. Implement the following procedures to minimize potential pollution during vehicle maintenance:

a) Perform maintenance activities in a designated maintenance bay at the Vehicle Maintenance facility or Capital Transit facility whenever possible.
b) If outdoor work is required, prevent spilling through use of oil pans or similar devices.
c) Use absorbent pads and drip pans when necessary.
d) Keep equipment clean and do not allow excessive build-up of oil and grease.
e) Perform regular preventative maintenance to minimize occurrence of leaks and major repairs.
f) Dispose of used fluids, rags, and absorbent pads appropriately at the landfill.

Storm Water Pollution Prevention Standard Operating Procedures

for:

Vehicle Maintenance Facility

3001 East Lyndale Ave
Helena, MT, 59601
(406) 447-1565

SOP Preparation Date: January 2019

City of Helena Public Works Department

Storm Water Management Program

SECTION 1.0 Facility Description and Contact Information

1.1 Facility Information

Facility Information

Name of Facility: Vehicle Maintenance Facility
Street: 3001 East Lyndale Ave
City: Helena State: MT ZIP Code: 59601

Discharge Information

Drainage Basin: Bull Run
Drainage Basin Receiving Waterbody: Prickly Pear Creek
Does this facility discharge storm water *directly* into any segment of a receiving waterbody?[1]
☐Yes ☒No

Permit Information

Is this facility permitted by an MPDES Permit (in addition to MS4)? ☐Yes ☒No
If Yes, identify other discharge permits: _____

1.2 Contact Information/Responsible Parties

Facility Superintendent:

Name: David Knoepke
Telephone number: (406) 447-1565
Email address: dknoepke@helenamt.gov

City Storm Water Management Program Coordinator:

Storm Water Management Contact Name (Primary): Matt Culpo
Telephone number: (406) 447-8073
Email address: mculpo@helenamt.gov

1.3 Storm Water Pollution Prevention Team

The storm water pollution prevention team is responsible for implementing and maintaining storm water control measures/BMPs, and taking corrective actions when required.

Name	Position/Title	Individual Responsibilities
David Knoepke	Utilities Maintenance Division Interim Superintendent	Site storm water lead
J.D. Foreman	Fleet Coordinator	Fleet maintenance storm water lead
Robert Williamson	Traffic Tech III	Traffic storm water lead
Harlan Erskine	Street Supervisor	Streets storm water lead

[1] For purposes of this document, direct discharge refers to site runoff discharging directly into a stream or other receiving waterbody immediately upon leaving the bounds of the site or facility.

1.4 Site Description

The Vehicle Maintenance Facility, located at 3001 East Lyndale Ave, includes Fleet Maintenance (City Shop), Streets Division, and the Traffic Division. Fleet Maintenance services include preventative maintenance and repairs to the City's fleet of vehicles and equipment, acquisition and disposal of vehicles and equipment, and fuel billing services. Streets Division services include sweeping, plowing, sanding, snow removal, asphalt projects, pothole repair, and street maintenance. The Traffic Division is primarily a maintenance division responsible for pavement and curb markings, signal repair and maintenance, sign installation and repairs, and traffic data collection. A site plan of the approximately 5 acre facility is provided in Figure 1.

1.5 Purpose and Limitations

This standard operating procedures (SOP) document identifies potential storm water pollutants that could be discharged from the site and storm water pollution best management practices (BMPs) to be installed, implemented, and maintained to minimize the discharge of pollutants from storm water runoff. The potential pollutants and BMPs identified in the document only address management of storm water associated with municipal activities. Management of potential pollutants covered under separate permits (i.e., storm water discharges associated with industrial activity) are not addressed in this document.

This document is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper and effective containment of pollutants.

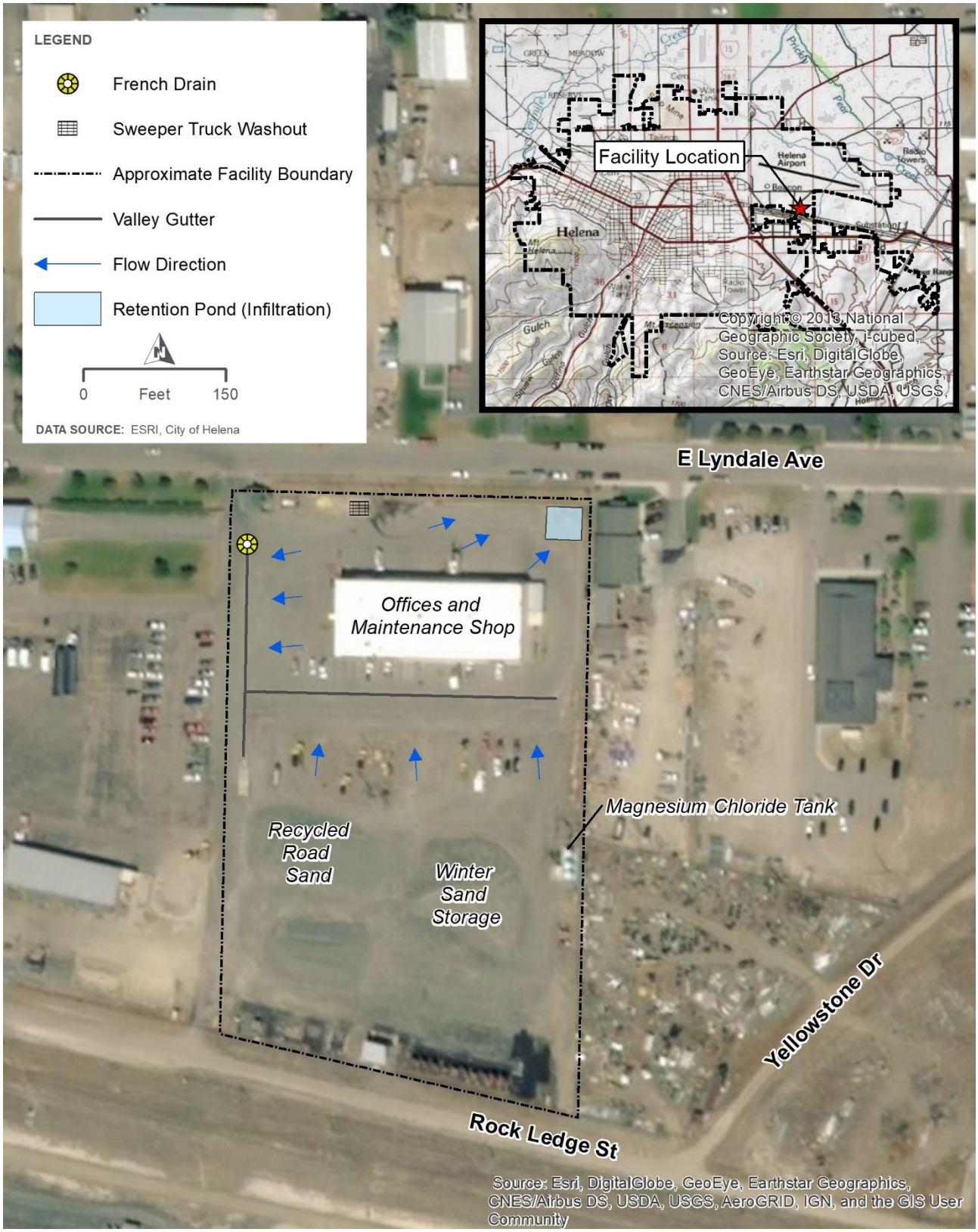


Figure 1. Vehicle Maintenance Facility Site Plan

SECTION 2.0 Potential Storm Water Pollutant Sources

This section describes potential storm water pollutant sources associated with the Vehicle Maintenance facility.

2.1 Potential Storm Water Pollutants Associated with Facility Activities

The Vehicle Maintenance facility's primary operations consist of shop and fleet services, street maintenance and repairs, winter street operations, and parking lot maintenance. A list of activities with the potential to discharge pollutants to the storm drainage system associated with this facility is provided in Table 1. Measures to be taken to reduce the potential for discharge of pollutants associated with these activities are identified in Section 3.2.2.

Table 1. Vehicle Maintenance Facility Activities and Potential Storm Water Pollutants

Activity	Potential Pollutants								
	Sediment	Nutrients	Trash	Metals	Bacteria	Oil, Grease, Fuel	Organics	Pesticides/Herbicides	Hazardous Waste
Landscaping	X	X				X	X	X	
Street Maintenance and Repairs [1]	X	X	X	X	X	X		X	X
Winter Street Operations [1]	X		X			X			X
Parking Lot Maintenance [1]	X	X	X	X	X	X		X	X
Catch basin cleaning [1]	X	X	X	X	X	X	X	X	
Excavation and stockpiles (only stockpiles)	X					X			
Building Maintenance	X	X	X	X	X	X	X		X
Shop and Fleet Services						X	X		X

1. Activity performed off-site.

2.2 Spills and Leaks

Table 2 provides a list of locations where spills that would discharge contaminants to the storm drain system could occur. Spill response protocol is described in Section 3.2.3.

Table 2. Areas Where Potential Spills/Leaks Could Occur

Location	Discharge Point
Vehicle bays	Interior
Magnesium chloride storage tank	Sheet flow to valley gutter, then to French drain

SECTION 3.0 Storm Water Control Measures

This section describes the storm water BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants from storm water runoff at the facility.

3.1 Structural BMPs

3.1.1 Storm Water Drainage System

The site is located within the Bull Run watershed which discharges to Prickly Pear Creek. The facility drainage system is composed of a French drain, concrete valley gutter, and a retention pond:

- The French drain is located northwest of the vehicle maintenance facility.
- The retention pond is located in the northeast corner of the property.
- The concrete valley gutter runs parallel to the south and west walls of the building, connecting to the French drain.

The facility's storm water drainage system features are shown on the site plan in Figure 1.

3.1.2 Permanent Storm Water Management BMPs

BMP Locations
Site storm water runoff quality and quantity is controlled by the French drain northwest of the Vehicle Maintenance facility and the retention pond located at the northeast corner of the site. A sweeper truck washout facility is located north of the maintenance shop as shown in Figure 1.

BMP Inspection and Maintenance
The facility superintendent is responsible to inspect and direct maintenance of the site's storm water BMPs:

- Inspect the valley gutters on a monthly basis and following rain events for sediment, debris, and structural damage. Sediment and debris should be removed to prevent clogging of the facility's French drain.
- The French drain and retention pond should be inspected annually in the spring. Debris should be removed. The BMPs should also be monitored during rainfall events to verify they are functioning properly. If water does not infiltrate within 48 hours contact Dave Knopke to request rehabilitation of the BMP.
- The sweeper truck washout should be inspected prior to each use by the sweeper truck operator. If the facility is full of sediment or debris excavate material and dispose of in the landfill.

3.1.3 Chemical and Bulk Fuel Storage

The facility has a magnesium chloride storage tank onsite in an enclosed container east of the winter sand storage. Contact Dave Knopke if the tank is leaking or there is a spill present, and begin to contain the leaking or spilled fluid.

3.2 Non-Structural BMPs

3.2.1 Employee Training

Fleet maintenance staff, streets staff, and traffic staff shall all receive annual training on updates to the division SOPs. Additionally, new hires are to be trained on the SOPs within 90 days of their hire date. Training should be conducted by the division's storm water lead.

3.2.2 Good Housekeeping

Good housekeeping procedures to be implemented by facility staff are listed in Table 3.

Table 3. Vehicle Maintenance Facility Storm Water Management Good Housekeeping Procedures

Activity	Responsible Person/Position	BMP to Reduce Potential for Pollution
Landscaping	Craig Marr	Follow Landscaping SOP
Street Maintenance and Repairs	Dave Knopke	Follow Street Maintenance and Repairs SOP
Winter Street Operations	Dave Knopke	Follow Winter Street Operations SOP
Parking Lot Maintenance	Dave Knopke	Follow Parking Lot Maintenance SOP
Catch basin cleaning	Dave Knopke	Follow Utility Maintenance SOP
Excavation and stockpiles (only stockpiles)	Dave Knopke	
Building Maintenance	Troy Sampson	Follow Building Maintenance SOP
Shop and Fleet Services	Dave Knopke	Follow Shop and Fleet Services SOP

3.2.3 Spill Response

Spill response and cleanup is addressed by employee training, discussed in Section 3.2.1. Spill response procedures are provided below.

Facility Spill Kit

The facility has two spill kits located in the mechanics office and in the vehicle bay area, both are in 5-gallon buckets. The spill kit contains the following items:

- Absorbent Pads
- Bags of Floor Dry
- Booms
- Disposal Bags
- Safety Goggles
- Rubber Gloves
- Respirator

Minor Spill Response Procedure

A minor spill is defined as one that poses no significant threat to human health or the environment. These spills generally involve less than 5 gallons and can usually be cleaned up by City personnel. Other characteristics of a minor spill include:

- The spilled material is easily stopped or controlled at the time of the spill
- The spill is localized
- The spilled material is not likely to reach surface water or groundwater

- There is little danger to human health
- There is little danger of explosion

Use the following procedures in response to a minor spill:

1. Immediately notify the facility superintendent of the spill.
2. If necessary, physically contain the spill to prevent further migration from the facility or project site.
    a. Stop or reduce continued release by ceasing activity, closing valves or flipping switches.
    b. Block or slow the migration of spilled material.
    c. Close or plug drains when possible.
2. Using proper personal protective equipment, obtain and use supplies from the spill kit for containment and absorption.
3. In consultation with the facility superintendent, clean up small spills that can be effectively cleaned up by City staff or hire a spill cleanup contractor.
4. Dispose of all contaminated products in accordance with applicable federal, state and local regulations.
5. Document the spill material, location, size, and date.

Major Spill Response Procedure

A major spill is defined as one involving a spill that cannot be safely and or adequately controlled or cleaned up by on-site personnel. Characteristics of a major spill include:

- The spill is large enough to spread beyond the immediate area
- The spill material entered surface water or ground water (regardless of the size)
- The spill requires special training and equipment to cleanup
- The spill material is a threat to human health
- There is a danger of fire or explosion

Use the following procedures in response to a major spill:

1. All workers shall immediately evacuate the spill site to a safe distance away from the spill.
2. Notify the facility superintendent of the spill and details regarding the spill.
3. If there is not an immediate health or safety danger and if actions can be implemented safely, a trained employee shall conduct obvious and immediately implementable containment measures in the following sequence:
    a. Stop or reduce continued release by ceasing activity, closing valves or flipping switches.
    b. Block or slow the migration of spilled material.
    c. Close or plug drains when possible.
4. The facility superintendent will contact the Fire Department to notify the Hazardous Response Team.
5. The facility superintendent will coordinate cleanup with the Hazardous Response Team.
6. Document the spill material, location, size, and date.

Attachments: Activity SOPs

Landscaping SOP
Street Maintenance and Repairs SOP
Winter Street Operations SOP
Parking Lot Maintenance SOP
Utility Maintenance SOP
Building Maintenance SOP
Shop and Fleet Services SOP

Storm Water Pollution Prevention Standard Operating Procedures

for:

Wastewater Treatment Facility

2108 East Custer Ave
Helena, MT, 59602
(406) 457-8558

SOP Preparation Date: January 2019

City of Helena Public Works Department

Storm Water Management Program

SECTION 1.0 Facility Description and Contact Information

1.1 Facility Information

Facility Information

Name of Facility: Wastewater Treatment Facility (WWTF)

Street: 2108 East Custer Ave

City: Helena State: MT ZIP Code: 59602

Discharge Information

Drainage Basin: Davis Gulch

Drainage Basin Receiving Waterbody: Prickly Pear Creek

Does this facility discharge storm water *directly* into any segment of a receiving waterbody?[1]

☐Yes ☒No

Permit Information

Is this facility permitted by an MPDES Permit (in addition to MS4)? ☒Yes ☐No

If Yes, identify other discharge permits: Domestic Wastewater Treatment Plant (MT0022641)

1.2 Contact Information/Responsible Parties

Facility Superintendent:

Name: Mark Fitzwater

Telephone Number: (406) 457-8558

Email address: mfitzwater@helenamt.gov

City Storm Water Management Program Coordinator:

Storm Water Management Contact Name (Primary): Matt Culpo

Telephone number: (406) 447-8073

Email address: mculpo@helenamt.gov

1.3 Storm Water Pollution Prevention Team

The storm water pollution prevention team is responsible for implementing and maintaining storm water control measures/BMPs, and taking corrective actions when required. The facility superintendent is the facility's storm water pollution prevention lead. All facility staff engage in storm water pollution prevention measures and are part of the storm water pollution prevention team.

1.4 Site Description

The WWTF is located on a 17 acre site at 2108 East Custer Ave on the north-east side of the City (see Figure 1). The WWTF uses biological nutrient removal process to treat approximately 3.5 million gallons of raw sewage per day. The facility is authorized to discharge treated wastewater effluent to Prickly Pear Creek under the Montana Pollution Discharge Elimination System (MPDES). Storm water runoff from the site drains to a large self-contained dry retention basin located in the northeast corner of the site and two smaller retention ponds located near the administrative building and belt filter press building.

[1] For purposes of this document, direct discharge refers to site runoff discharging directly into a stream or other receiving waterbody immediately upon leaving the bounds of the site or facility.

Access to the WWTF is through a shared access with the Utility Maintenance Facility (located east of and adjacent to the WWTF) and the Lewis and Clark County Humane Society animal shelter from East Custer Avenue. This access is used for employees, visitors, deliveries, and maintenance vehicles. Two additional access locations are located on the east side of North Washington Street. The southern access is used for sewage disposal vehicles and for access to an interpretive/meeting building, as well as, limited access through a locked gate to the WWTF. The northern access is gated, and used for maintenance and operation of WWTF. A site plan of the WWTF is provided in Figure 1.

1.5 Purpose and Limitations

This standard operating procedures (SOP) document identifies potential storm water pollutants that could be discharged from the site and storm water pollution best management practices (BMPs) to be installed, implemented, and maintained to minimize the discharge of pollutants from storm water runoff. The potential pollutants and BMPs identified in the document only address management of storm water associated with municipal activities. Management of potential pollutants covered under separate permits (i.e., domestic wastewater treatment plant) are not addressed in this document.

This document is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety and the effective containment of pollutants.

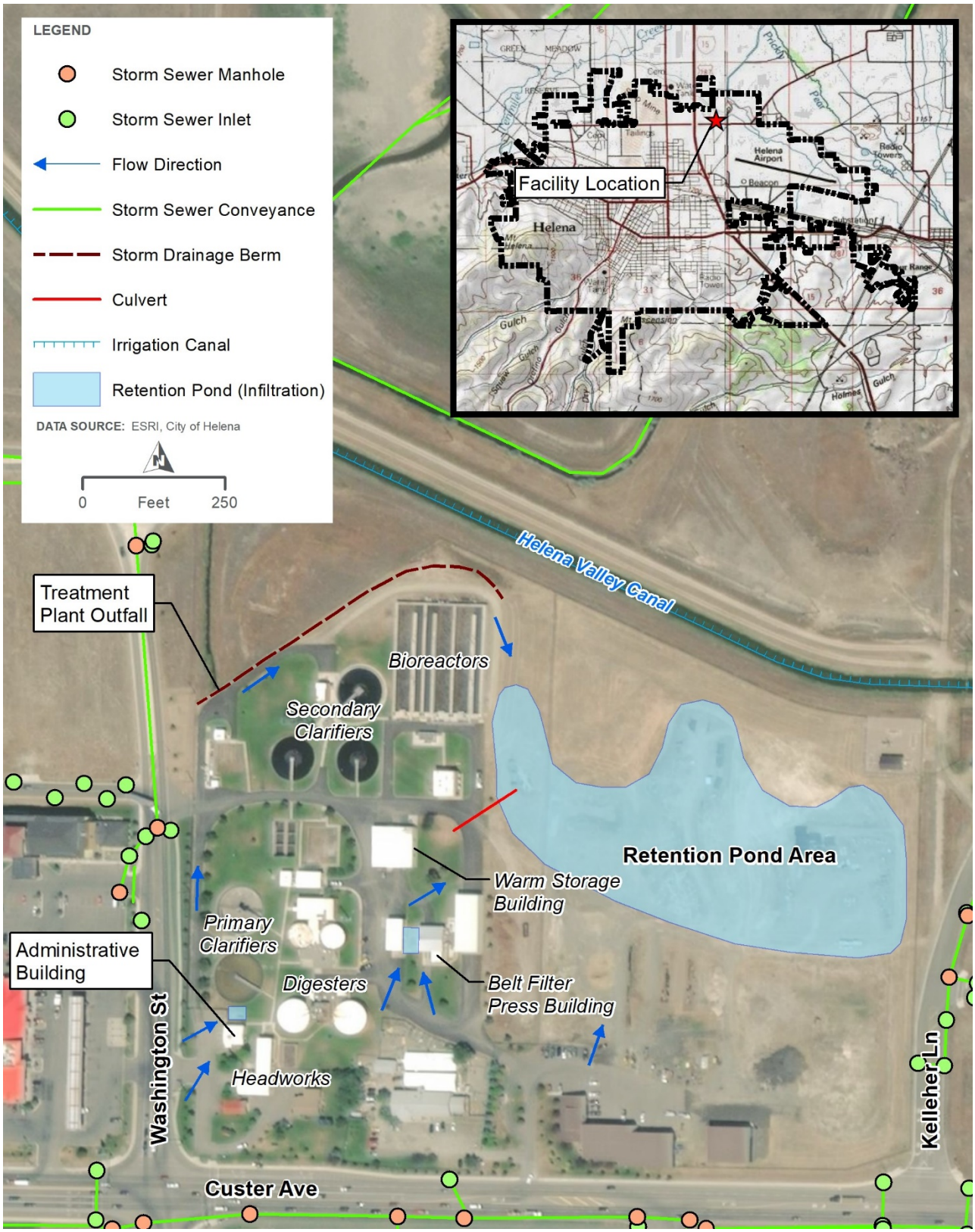


Figure 1. WWTF Site Plan

SECTION 2.0 Potential Storm Water Pollutant Sources

This section describes potential storm water pollutant sources associated with the WWTF.

2.1 Potential Storm Water Pollutants Associated with Facility Activities

WWTF primary operations consist of treatment of waste water from the City's sewer system, sludge collections, handling and disposal, mulch storage and application for odor control, and septic tank sewage disposal. The majority of the facility operations, along with standard operating procedures to prevent pollution, are described in the facility's multiple operating plans and manuals. A list of WWTF activities with the potential to discharge pollutants to the storm drainage system is provided in Table 1. Measures to be taken to reduce the potential for discharge of pollutants associated with these activities are identified in Section 3.2.2.

Table 1. WWTF Activities and Potential Storm Water Pollutants

Activity	Potential Pollutants								
	Sediment	Nutrients	Trash	Metals	Bacteria	Oil, Grease, Fuel	Organics	Pesticides/Herbicides	Hazardous Waste
Landscaping	X	X				X	X	X	
Parking lot maintenance	X	X	X	X	X	X		X	X
Building maintenance	X	X	X	X	X	X	X		X
Utility maintenance	X	X	X	X	X	X	X	X	
Solid waste management (screenings & grit removal)	X	X	X		X	X	X		
Biosolids handling	X	X		X	X		X		
Odor control mulch maintenance	X	X			X		X		

2.2 Spills and Leaks

Table 2 provides a list of locations where spills that would discharge contaminants to the storm drain system could occur. Spill response protocol is described in Section 3.2.6~~3.2.3~~.

Table 2. Areas Where Potential Spills/Leaks Could Occur

Location	Discharge Point
Warm storage building used oil tank	Self-contained, see Section 3.1.3.
Belt press room used oil tank	Self-contained, see Section 3.1.3.

SECTION 3.0 Storm Water Control Measures

This section describes the storm water BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants from storm water runoff at the facility.

3.1 Structural BMPs

3.1.1 Storm Water Drainage System

The site is located within the City's Davis Gulch watershed which discharges to Prickly Pear Creek; however, the site itself is a closed basin which drains to dry on-site retention/infiltration basins. A berm exists along the northern edge of the loop road to direct runoff east to the large retention area and to prevent runoff from discharging offsite or into the WWTF effluent channel. One culvert exists to convey runoff under an access road to the large retention basin. The facility's storm water drainage system features are shown on the site plan in Figure 1.

3.1.2 Permanent Storm Water Management BMPs

BMP Locations

Site storm water runoff quality and quantity is controlled by the retention area located in the northeast corner of the site. This site is designed as a zero discharge site for storm events up to the 100-year event. All impounded water in the retention ponds infiltrates, evaporates or evapotranspires. Two smaller retention ponds located near the administrative building and belt filter press building control storm water runoff within this site for local drainage control (see Figure 1).

BMP Inspection and Maintenance

The City's storm water management program is generally responsible for maintenance of the facility's storm water management BMPs; however, WWTF staff members should always be aware of the condition of BMPs. WWTF staff should inspect the retention basins following runoff events to verify that water is infiltrating and not ponding for excessive periods of time. The berm along the northern edge of the loop road should also be visually inspected following runoff events to confirm that it is in good condition (no erosion). Contact the City Storm Water Management Program Coordinator (listed on Page 1) if a BMP is in need of maintenance.

3.1.3 Chemical and Bulk Fuel Storage

The facility has two used oil storage tanks located onsite:

- The used oil storage tank in the warm storage building has a capacity of 5,000 gallons. The building floor is sloped towards the center of the building to serve as secondary containment if the tank develops a leak. Contact the facility superintendent if a crack in the tank or leak is discovered.
- The used oil storage tank in the belt press room has a capacity of 1,200 gallons. There is a sump pit in the building to serve as secondary containment if the tank develops a leak. Contact the facility superintendent if a crack in the tank or leak is discovered. Material in the sump can be pumped to the waste storage tank, if necessary.

3.2 Non-Structural BMPs

3.2.1 Employee Training

Training Procedures

All new employees have training and/or are trained for the duties of their position and the environment at the facilities. All employees receive specialized training stormwater pollution prevention, BMPs, illicit discharges and operation within a regulated Phase II, Small Municipal Separate Storm Sewer System (MS4). This training includes speaker and video instruction of the following courses by Excal Visual, Inc.:

- *Storm Watch – Municipal Stormwater Pollution Prevention*
- *IDDE – "a grate concern"*
- *Rain Check – Storm Water Pollution Prevention for MS4s*

Employee training with regard to illicit discharges includes proper storage, handing, disposal, and spill recognition and response. Additionally, WWTF staff shall all receive annual training on updates to the facility's SOPs and new hires are to be trained on the SOPs within 90 days of their hire date.

Training Schedule

The storm water pollution management training procedures identified above are to be implemented annually for all WWTF staff. New WWTF staff are to receive training within 90 days of hire date.

3.2.2 Good Housekeeping

Good housekeeping procedures to be implemented by facility staff are listed in Table 3.

Table 3. WWTF Storm Water Management Good Housekeeping Procedures

Activity	Responsible Person/Position	BMP to Reduce Potential for Pollution
Landscaping	Craig Marr, Director	Follow Landscaping SOP
Parking lot maintenance	Troy Sampson, Director	Follow Parking Lot Maintenance SOP
Building maintenance	Troy Sampson, Director	Follow Building Maintenance SOP
Utility maintenance	Dave Knopke, Superintendent	Follow Utility Maintenance SOP
Solid waste management (screenings & grit removal)	Pete Anderson, Superintendent	See Section 3.2.3
Biosolids handling	Mark Fitzwater Superintendent	See Section 3.2.4
Odor control mulch maintenance	Mark Fitzwater Superintendent	See Section 3.2.5

3.2.3 Solid Waste Management

Screenings and grit accumulate in a roll-off container in the Headworks Building as raw wastewater enters the facility. The screenings and grit must be hauled to the landfill once per week. The screenings and grit are within a closed building that is not connected to the storm drain system; however, storm water pollution could occur during the transfer of screenings and grit from the Headworks Building to the landfill. Implement the following procedures to minimize potential for storm water pollution during the screenings and grit management process:

a) Load the roll-off container that contains the screenings and grit onto the hooklift truck
b) Verify that the container is securely attached to the truck prior leaving the facility

c) Drive to the Lewis and Clark County Landfill and deposit the waste as directed by the landfill operator
d) Place the roll-off container in its proper position after returning to the Headworks Building to collect more screenings and grit

3.2.4 Biosolids Handling

Biosolids are an organic waste product that accumulate from the secondary treatment process and are digested to meet environmental regulations. The biosolids are removed from the site on a daily basis (five days per week). Biosolids handling occurs within a closed building that is not connected to the storm drain system; however, storm water pollution could occur during the transfer of Biosolids from the WWTF to the final destination. Implement the following procedures to minimize potential for storm water pollution during the biosolids handling process:

Summer Season (Land application at Diehl Ranch)

a) Pump the biosolids sludge into the septic truck (approximately 4,000 gallons per load)
b) Drive to the Diehl Ranch (an EPA approved location)
c) Coordinate with the ranch manager to spray the biosolids onto the land at the appropriate agronomical uptake rate (as approved for specific crops)

Winter Season (Compost at Lewis and Clark County Landfill)

a) Verify that the roll-off container is placed correctly to collect thickened sludge from the belt filter press
b) Process the biosolids sludge over belt filter press machine to thicken to approximately 14% solids (thickened sludge will automatically drop into the roll-off container)
c) Load the roll-off container containing thickened sludge onto the hooklift truck
d) Verify that the container is securely attached to the truck prior leaving the facility
e) Drive to the Lewis and Clark County Landfill and deposit the biosolids as directed by the landfill operator
e) Place the roll-off container in its proper position after returning to the WWTF to collect thickened sludge

3.2.5 Odor Control Mulch Maintenance

Odor control mulch is located next to the Headworks Building. If the mulch were to need replacement, it should be hauled to the landfill using the Solid Waste Management procedures identified in Section 3.2.3.

3.2.6 Spill Response

Spill response and cleanup is addressed by employee training, discussed in Section 3.2.1. Spill response procedures are provided below.

Facility Spill Kit

The facility has two spill cleanup kits. The first kit, containing absorbent socks, is located in the Headworks Building. The second kit, containing a 30 gallon drum of kitty litter, is located in the Maintenance Shop.

Minor Spill Response Procedure

A minor spill is defined as one that poses no significant threat to human health or the environment. These spills generally involve less than 5 gallons and can usually be cleaned up by City personnel. Other characteristics of a minor spill include:

- The spilled material is easily stopped or controlled at the time of the spill
- The spill is localized
- The spilled material is not likely to reach surface water or groundwater
- There is little danger to human health
- There is little danger of explosion

Use the following procedures in response to a minor spill:

1. Immediately notify the facility superintendent of the spill.
2. If necessary and safe to do so, physically contain the spill to prevent further migration from the facility or project site.
    a. Stop or reduce continued release by ceasing activity, closing valves or flipping switches.
    b. Block or slow the migration of spilled material.
    c. Close or plug drains when possible.
2. Using proper personal protective equipment, obtain and use supplies from the spill kit for containment and absorption.
3. In consultation with the facility superintendent, clean up small spills that can be effectively cleaned up by City staff or hire a spill cleanup contractor.
4. Dispose of all contaminated products in accordance with applicable federal, state and local regulations.
5. Document the spill material, location, size, and date.

Major Spill Response Procedure

A major spill is defined as one involving a spill that cannot be safely and or adequately controlled or cleaned up by on-site personnel. Characteristics of a major spill include:

- The spill is large enough to spread beyond the immediate area
- The spill material entered surface water or ground water (regardless of the size)
- The spill requires special training and equipment to cleanup
- The spill material is a threat to human health
- There is a danger of fire or explosion

Use the following procedures in response to a major spill:

1. All workers shall immediately evacuate the spill site to a safe distance away from the spill.
2. Notify the facility superintendent of the spill and details regarding the spill.
3. If there is not an immediate health or safety danger and if actions can be implemented safely, a trained employee shall conduct obvious and immediately implementable containment measures in the following sequence:
    a. Stop or reduce continued release by ceasing activity, closing valves or flipping switches.
    b. Block or slow the migration of spilled material.
    c. Close or plug drains when possible.
4. The facility superintendent will contact the Fire Department to notify the Hazardous Response Team.
5. The facility superintendent will coordinate cleanup with the Hazardous Response Team.
6. Document the spill material, location, size, and date.

Attachments: Activity SOPs

Landscaping SOP
Parking Lot Maintenance SOP
Building Maintenance SOP
Utility Maintenance SOP