

STORMWATER MANAGEMENT PLAN



Kennett
MO



CITY OF KENNETT, MISSOURI

JANUARY 2022

Prepared by:



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EXHIBITS

- 1: Stormwater Outfalls – General Map
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INTRODUCTION

Kennett, Missouri, hereinafter referred to as the City, is located in the Bootheel region of Southeast Missouri between the Mississippi and St. Francis Rivers. The City has a population of 10,932 at the time of the 2010 census, and because it has a population over 10,000, the City is classified as a regulated Municipal Separate Storm Sewer System (MS4) under the national Phase II Stormwater Rule. As a result, the City is required to develop, implement, and enforce a Stormwater Management Plan (SWMP) in order to protect water quality and satisfy the appropriate water quality requirements of the Missouri Clean Water Law.

In 2021, the MS4 stormwater permit issued by the Missouri Department of Natural Resources (DNR) was revised. MS4s which fall under the Phase II Stormwater Rule now have the option to choose between General or Comprehensive permit. The requirements for the two permit options are generally the same. The general permit is designed for communities who have well established stormwater programs and need flexibility to continue on their established path. Under a general permit, a community's SWMP must be reviewed and approved by DNR. The comprehensive permit gives more specific direction on how the stormwater program is carried out to make sure DNR and local communities are on the same page. The comprehensive permit is intended for smaller MS4s, such as Kennett. Under the comprehensive permit, a SWMP must be developed for carrying out the stormwater program, but it does not have to be formally approved by DNR. Kennett's current stormwater permit is a comprehensive permit with a permit number of MOR04C017. It was issued on October 1, 2021 and expires on September 30, 2026.

The DNR stormwater permit categorizes MS4s by the following groups based on the population served as determined by the most recent decennial census at the time of permit issuance, the type of regulated MS4, and the co-permittee situation. Kennett falls under Group B based on the following classifications.

Group A	Group B	Group C
Traditional Small MS4s (cities) that serve a population of less than 10,000 within a UA; OR	Traditional Small MS4s that serve a population of at least 10,000 but less than 40,000; OR	Traditional Small MS4s that serve a population of 40,001 or more; OR
Class 2 counties; Non-traditional such as Universities, Federal facilities.	Class 1 counties	Co-permit Small MS4s

MS4s under coverage by the stormwater permit must develop and implement a stormwater program that covers the following six areas, also referred to as Minimum Control Measures (MCMs).

The six Minimum Control Measures (MCMs) are:

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

The following sections address each MCM and the requirements laid out in the DNR stormwater permit. General permit language is quoted at the beginning of each MCM in this SWMP. This language is a small sample of what is contained within the permit and does not list all of the permit requirements that this Plan addresses.

The City of Kennett has established Victor Mode, Code Enforcement Officer, and Keith Westerfield, Street Commissioner, as the people primarily responsible for carrying out each MCM within the City's SWMP.

Annual Report & Review Process

All records related to the stormwater management program shall be maintained for a minimum period of at least three years in accordance with Section 5 of the stormwater permit. The stormwater management program should be reviewed and updated each year in accordance with Section 3.3. An annual report is to be submitted to DNR on or before February 28th each year in accordance with Section 5.3. This report shall cover the previous year from January 1 to December 31. The report will be submitted on the DNR approved MS4 stormwater management program report form unless an alternative report format has been approved by DNR. The annual reports will be submitted through the eDMR system, which is accessible through the Missouri Gateway for Environmental Management (MoGEM) at <https://dnr.mo.gov/mogem/>.

MCM 1 – PUBLIC EDUCATION AND OUTREACH

General Permit Requirement: *“The MS4 Operator shall implement a public education program to distribute educational materials to the community and/or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.”*

PURPOSE

In order to fully implement a successful stormwater program, the public must understand the importance of protecting stormwater quality and how they can take steps to reduce pollutants in stormwater runoff.

TARGET AUDIENCES & POLLUTANTS

Kennett is a “Traditional MS4” based on the DNR stormwater permit, so MCM 1 is intended to reach the residents of Kennett. In addition, target audiences will also include local business with a focus on litter and trash, as well as homeowners with a focus on grass clippings, leaf litter, and swimming pool discharge.

OUTREACH & EDUCATION BMPS

Table III in section 4.1.C of the DNR stormwater permit lists eleven outreach and education BMPS. Because Kennett is considered a Group B MS4, based on the population being between 10,000 and 40,000, it must choose a minimum of four BMPS from Table III to implement during the permit cycle. Table III is shown on the following pages with the selected BMPS shaded.

Table III – Outreach and Education BMPs
From Section 4.1.C of the DNR Stormwater Permit

	BMPs:	Measurable goals (The quantity or frequency required to count as a full BMP)	Tracking & Adaptive Management
1	Information on the MS4 Operator's website;	Maintain a webpage with up to date information, & working links. All links shall be checked, and the page shall be updated as necessary at minimum annually. Must be maintained the entire year.	The number of hits shall be tracked. The MS4 Operator shall use this to see which messages get reactions, and if certain messages may need more education.
2	Social Media posts, social media campaign;	Post a minimum of four (4) times a year, on a minimum of one social media platform. The messages shall address ways attendees can minimize or avoid adverse stormwater impacts or practices to improve the quality of stormwater runoff. The messages shall be seasonally appropriate. Must be continued for the full year.	The number of views, impressions, and other interactions shall be tracked. The MS4 Operator shall use this to see which messages get reactions, and if certain messages may need more education.
3	Maintain, or mark storm inlet with "No Dumping – Drains to Stream" or similar message. In addition to, or instead of, permanent wording cast into the structure of the inlet;	Placard, stencil, or paint, a minimum of 10% of all known stormwater inlets in the MS4 area per year.	Number of inlets, the location of the inlets and how they were marked shall be tracked. These areas shall be noted on MCM #3 dry weather screenings, and illicit discharge investigations as a method to determine if the markings are effective or if areas could benefit from the markings.
4	Require installation of permanent embossed, or precast inlets with "No Dumping-Drains to Stream" or similar message.	Requirement for all new inlets in the MS4 area.	Number of inlets, the location of the inlets shall be tracked. These areas shall be noted on MCM #3 dry weather screenings, and illicit discharge investigations as a method to determine if the markings are effective or if areas could benefit from the markings

5	Media/ advertising campaign: Billboard; Bus shelter/ bench; radio/ television/ movie theatre/ areas of high visibility.	Develop topics that address activities and/or pollutants of concern. Advertisement must be active for a minimum of three weeks; OR must have an estimated exposure for the duration of the campaign that is 2 times the most recent U.S. Census Bureau decennial population value for the permit area.	To the extent possible, evaluate the pollutant before the advertising campaign, and again after to see if there has been a change. The dates, time, and/or estimated media exposure for each spot broadcast shall be documented. Consider including a mechanism to track active response such as a QR Code, following the social media account(s) or a website to visit. Track those responses to determine if the advertisement was effective in reaching people.
6	Publish articles in local newsletter, may be electronic;	Develop topics that are group specific and address activities and or pollutants of concern at a seasonally appropriate time. A minimum of two articles annually shall be published or emailed.	To the extent possible evaluate the pollutant before the article, and again after to see if there has been a change. Consider including a mechanism to track active response such as following the social media account or a website to visit. Track those responses to determine if the article was effective in reaching people.
7	Permanent Stormwater related signage;	Place signage in a location where the message is relevant, and highly-visible to target audience. Signage will count as an annual BMP for the year it was put in place and for each subsequent year of this permit cycle as long as each of those years tracking is taking place to message effectiveness and to ensure the signage is maintained.	Evaluate the pollutant before the signage, and again after to see if there has been a change. Consider including a mechanism to track active response such as following on social media, a QR Code, or a website to visit. Track those responses to determine if the signage was effective in reaching people.
8	Promote, host, or develop educational meetings, seminars, or trainings;	The events shall address ways attendees can minimize or avoid adverse stormwater impacts or practices to improve the quality of stormwater runoff. A minimum of two events shall be held, hosted or promoted annually. These events may address different pollutants/audiences.	Attendance, and any distributed education materials shall be tracked. This shall be used to gauge interest in the topic. Consider using a questionnaire or follow up survey to track if the attendees retained information or found the event beneficial.

9	Fact sheets/ brochures/ utility bill insert/ door hangers.	The sum of all fact sheets, brochures, bill inserts, handouts, or e-mails distributed in one year shall be at minimum equal to the most recent U.S. Census Bureau decennial housing units value for the permit area.	The applicable U.S. Census housing units value shall be recorded, and the amount of material shall be recorded. This may be a combination of materials, using a targeted approach to get the appropriate material to the applicable audience.
10	Paid membership in a regional or watershed group.	The organization must focus on stormwater runoff.	The group may enact BMPs on behalf of all members, the permittee must participate to ensure their MS4 has representation, and receives some of the educational BMPs.
11	Targeted education campaign, via mail, email, or in person.	Minimum of one annually OR with a specific event. (Examples: Sediment control with small building permit; leaf litter email during street sweeping season, or education brochure to all businesses conducting certain activity.)	Education material distributed, or amount of people contacted shall be tracked. Follow up on if noticeable behavior has changed.

INVOLVEMENT BMPs

Table IV in Section 4.1.D of the DNR stormwater permit lists eight involvement BMPs. These BMPs are intended to create opportunities, or support activities that are coordinated by citizen groups, for residents and others to become involved with the stormwater management program. Group B MS4s such as Kennett must choose a minimum of two involvement BMPs from Table IV to implement during the permit cycle. Table IV is shown on the following pages with the selected BMPs shaded.

Table IV – Involvement BMPs
From Section 4.1.D of the DNR Stormwater Permit

BMPs	Measurable goals (The quantity or frequency required to count as a full BMP)	Tracking & Adaptive Management
Stream/lake or Watershed clean-up events; Litter clean-up events such as Missouri Stream Team, Adopt-A-Spot, Adopt-A-Street, Adopt-A-Stream;	To be considered an event, the land area cleaned must be at minimum 2 acres, or 400 yards of stream/ streambank/ watershed, or 2 miles of road side. (These may be combined such as 1 acre of land and 200 yards of stream.)	Track the area or distance cleaned (by acre, yard or lane miles), the amount of waste removed (by tonnage, cubic yard, or Stream Team bag count) and the attendance. Use the waste measurements to determine if there are priority areas for litter entering stormwater, or areas for illegal dumping.
Habitat improvement; Tree planting; Invasive vegetation removal; Stream restoration.	To be considered an event, the project must be a minimum of .5 acres or 25 yards. These may be a combination. This may take place in streams, parks, areas adjacent to public waterways, and/or other green space.	Track the location(s) along with the amount planted or remove, or miles improved or restored. Analyzing the areas improved upon, the MS4 Operator shall see if there are opportunities to join the improve areas, or work on a watershed basis.
Volunteer water quality monitoring;	To be considered an event, the monitoring must be conducted at minimum once a year.	Record the sites for the volunteers, what parameters were measured/monitored, and the dates of the monitoring.
Hold events to train residents, or work a project for homeowner associations (HOAs), or other public groups. The event or training must cover stormwater related topics such as: building rain barrels; Fertilizer application training; Rain garden/ bio retention creation or maintenance; How to recognize illicit discharge activities and communicate observations to appropriate MS4 staff.	Provide one project or training at minimum annually.	Record the attendance, the topic covered, and any training materials distributed. Use these numbers and interactions during the event to determine if the project or training covered a topic of interest and/or a topic that could be brought to a different or wider audience.

School, public event, etc. educational display/booth; Provide information or displays that work to improve public understanding of issues related to water quality.	Provide one booth or display at minimum annually. The booth or display must be staffed by staff of the MS4 at minimum 50% of the time the event is open to the public.	Record the number of interactions, the overall attendance, or the number of hours the event was staffed. Record the topic covered, and any educational materials distributed. Use these numbers and interactions during the event to determine if the project or training covered a topic of interest and/or a topic that could be brought to a different or wider audience.
Stormwater related speaker series;	Provide a minimum of two sessions a year. These may be different speakers and/or audiences.	Record the attendance, the topic covered, and any training materials distributed. Use these numbers and interactions during the event to determine if the project or training covered a topic of interest and/or a topic that could be brought to a different or wider audience.
Ongoing yard waste collection, designated yard waste collection area, household hazardous waste collection, or street sweeping program.	Provide the service as an annual occurrence or at readily accessible location. For street sweeping, this shall be conducted at minimum twice a year.	Track the amount collected. If educational information is being used in conjunction with this activity track for changes due to the education. Tracking can be used with illicit discharge tracking, to determine if the rate of this type of discharges or dumping were reduced.
MS4 area wide stormwater survey.	A series of public survey to establish a baseline in the first year of the permit and then a minimum of annually throughout the permit cycle.	Use the same or similar questions to evaluate BMPs and/or full program effectiveness. Surveys can be done with utility bills, online, social media, or a combination. All participation should be tracked.

MEASURING SUCCESS

To evaluate the success of the City's public education and outreach program, the number of people reached will be tracked for each measurable goal in order to determine which actions are the most successful at reaching and instructing the public that stormwater quality is important.

PROGRAM REVIEW & UPDATE PROCESS

The the public education and outreach process used by the city will be reviewed annually and updated as needed if changes need to be made.

Annual Review of MCM 1			
Year being reviewed	Date of review	Reviewer(s)	Were changes made and noted?
2022			
2023			
2024			
2025			
2026			

MCM 2 – PUBLIC INVOLVEMENT/PARTICIPATION

General Permit Requirement: *“The permittee shall develop and implement a comprehensive public participation program that provides opportunities for public participation in the development and oversight of the permittee’s Stormwater Program.”*

PURPOSE

Stormwater pollution comes from a variety of sources, so it is important that any solution involve participation from the public. This program will provide opportunities for public participation in activities related to developing and implementing the stormwater management program.

PUBLIC NOTICE

Prior to the submission of the permit renewal application to DNR, the city held a 30 day public notice period to allow the public to review the draft permit and provide comments. The draft permit was posted on the Kennett website during this period. No comments were received during the public notice period.

A public meeting was also held to provide information on the draft stormwater permit which outlines the requirements of the stormwater program. This was advertised for a minimum of 30 days prior to the meeting. The meeting was held during a regular, public City Council meeting at City Hall on March 16th, 2021. The council approved moving forward with implementing the new permit requirements. An opportunity was given for public comments or questions, but none were received.

PUBLIC INQUIRIES

The city maintains a stormwater focused website at www.cityofkennettstormwater.com. This website contains contact information including email, stormwater division phone number, city hall phone number, and an emergency phone number for illicit discharge reporting. Reports of potential illicit discharges will be tracked by the MS4 Operator.

STORMWATER COMMITTEE

Kennett has a stormwater committee made up primarily of city personnel. If a resident would like to be a part of the stormwater committee, there is contact information on the stormwater website for them to call to obtain additional information.

CITY COUNCIL

The City Council is updated on the status of the stormwater program at a minimum of once a year at a regularly scheduled City Council meeting. The following table can be used to track updates to the City Council.

City Council Stormwater Update			
	Date the governing board was updated	Method used to update the governing board	Name of MS4 representative(s)
Permit year 1 (2022)			
Permit year 2 (2023)			
Permit year 3 (2024)			
Permit year 4 (2025)			
Permit year 5 (2026)			

PROGRAM REVIEW & UPDATE PROCESS

The public involvement/participation process used by the city will be reviewed annually and updated as needed if changes need to be made.

Annual Review of MCM 2			
Year being reviewed	Date of review	Reviewer(s)	Were changes made and noted?
2022			
2023			
2024			
2025			
2026			

MCM 3 – ILLICIT DISCHARGE DETECTION AND ELIMINATION

General Permit Requirement: *“Implement and enforce a program to detect and eliminate illicit discharges (as defined in 10 CSR 20-6.200 at 40 CFR 122.26(b)(2)) into the regulated MS4.”*

PURPOSE

An illicit discharge is defined as a release of anything other than stormwater to the stormwater drainage system. Examples of illicit discharges include untreated sewage, industrial waste, improperly disposed oil, and concentrated pollutants from roads and parking lots. The goal of MCM 3 is to identify and correct illicit discharges. First, this is accomplished by informing the public about the dangers of illicit discharges and providing a mechanism for them to report illicit discharges. Second, because illicit discharges may discharge into the stormwater system, an accurate, up to date storm sewer system map is critical in being able to determine the source of illicit discharges. Lastly, procedures for reducing illicit discharges, including enforcement mechanisms, will be used.

STORM SEWER SYSTEM MAP

At a minimum, Kennett is required to maintain a storm sewer system map that includes the location of all MS4 outfalls, the names and locations of all receiving waters of the state that receive discharges from MS4 outfalls, and the boundary of the MS4 area. Stormwater outfalls have been mapped and numbered using GIS software. Examples of the GIS map can be seen in exhibits one through four. The map also includes the stormwater collection system, and the City is working to update and refine the map. The map shall be readily available for field staff to use. Sources of information used to update the map should be tracked as well as dates the the outfalls were last field surveyed and the date when new outfalls are added.

ORDINANCE

The current Kennett stormwater management ordinance is attached in Exhibit 6. As part of the stormwater requirements outlined in the ordinance, it is unlawful to discharge any material other than stormwater into the city’s storm sewer system other than the listed exceptions. The ordinance also states that it is unlawful for any person to construct, use, maintain, or have an illicit connection.

DRY WEATHER FIELD SCREENING

The city will conduct field assessments of the outfalls during dry weather conditions to check for the presence of a discharge. These assessments should occur a minimum of 72 hours after

the last precipitation event. All outfalls shall be screened during the 5 year permit cycle. A checklist or other tracking device is to be used to ensure a complete inspection of each outfall. When a discharge is present, the checklist or tracking device shall note the following general observations and physical characteristics at a minimum:

- Date and time
- Weather conditions and temperature (air & water)
- Color of discharge
- Estimate of flow rate (this may be noted qualitatively)
- Odor
- Surface scum, algal bloom, floatables or oil sheen present
- Deposits or stains (note the color)
- Turbidity (may be noted qualitatively)
- Stream impact including vegetation, fish, wildlife;
- Length of impacted stream
- Notes of an obvious source of flow (such as lawn irrigation, etc.)

The MS4 operator shall maintain diagnostic monitoring procedures to detect and investigate unknown non-stormwater flows as part of the dry weather screening program. This diagnostic monitoring shall include sampling the unknown discharge that is considered to be an illicit discharge to determine if a pollutant is involved. This sampling and testing can be performed by a contracted laboratory.

If initial screening indicates that a dry weather discharge contains pollutants, or if an illicit discharge is suspected from another reporting method, the source shall be traced. This shall be done by visually following the flow and using storm sewer maps to trace the discharge to its source. Storm sewer sampling, closed circuit television, and smoke or dye tracing may be used if necessary to find the source. Once located, the source of the pollutant must be removed by the owner. If illicit discharges are detected, priority areas will be developed for future screenings. The MS4 operator must immediately respond to all illicit discharges which are determined to constitute a threat to human health, welfare, or the environment. Potential illicit discharges that do not constitute a threat to human health, welfare, or the environment must be investigated within five business days.

All dry weather field screenings, spills, incidents, and investigations shall be tracked in a database or other centralized system. The specific procedures for the illicit discharge detection and elimination (IDDE) program will be written down and maintained to ensure continuity and

consistency. The following table will be used to summarize the field screenings conducted each year.

Outfalls - Dry Weather Field Screening		
	Amount (% or #) per year of permit cycle	Any specific priority areas included:
Permit year 1 (2022)		
Permit year 2 (2023)		
Permit year 3 (2024)		
Permit year 4 (2025)		
Permit year 5 (2026)		

TRAINING

As part of the training program in MCM 6, all municipal field staff who may come into contact with, or observe, an illicit discharge as part of their normal job responsibilities will be given training to assist them in their responsibilities. Training will be revised as needed to ensure municipal staff respond as required to illicit discharge incidents.

PROGRAM REVIEW & UPDATE PROCESS

The the illicit discharge detection and elimination process used by the city will be reviewed within the first year of the new DNR stormwater permit, and updated as needed to comply with any new requirements. The program will also be evaluated each year to determine if additional changes need to be made.

Annual Review of MCM 3			
Year being reviewed	Date of review	Reviewer(s)	Were changes made and noted?
2022			
2023			
2024			
2025			
2026			

MCM 4 – CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

General Permit Requirement (Section 4.4): *“The permittee shall develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to their regulated small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre shall be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.”*

PURPOSE

The purpose of MCM 4 is to reduce pollutants in stormwater runoff from construction activities, specifically construction activities that disturb greater than or equal to one acre. Sites of less than one acre may be required by the City to reduce pollution in stormwater runoff if the City deems the activities are creating pollutants in the stormwater runoff.

ORDINANCE

The current Kennett stormwater management ordinance is attached in Exhibit 6. As part of the stormwater requirements outlined in the ordinance, a stormwater management plan must be submitted to, and approved by, the City prior to construction. This plan must include provisions for sediment and erosion control during construction, and it will be reviewed in accordance with section 4.4.B of the DNR stormwater permit.

INSPECTIONS & ENFORCEMENT

The ordinance requires that the City be permitted to enter and inspect facilities. The construction site operator will be required to conduct regular inspections at a minimum of every fourteen days when construction is active, within 72 hours of any storm event, and within 48 hours after any storm event equal to or greater than a 2 year, 24 hour storm has ceased. The City will track their oversight inspections. Inspections will be performed in accordance with Section 4.4.C of the DNR stormwater permit which states following guidelines:

- Identify priority sites for inspection based on nature of the construction activity, topography, disturbed area, and the characteristics of soils and sensitivity of, or proximity to, receiving water.
- Construction site inspections shall include assessment of compliance with the MS4 Operator’s construction site storm water runoff control ordinance or regulatory mechanism, and other applicable ordinances.

- The inspections shall evaluate any structure that functions to prevent pollution of stormwater or to remove pollutants from stormwater and use enforcement polices to require BMPs are implemented and effective.
- Final inspection, upon completion of the land disturbance and prior to final approval of construction project. Ensure all disturbed areas have been stabilized, that all temporary erosion and sediment control measures are removed.
- The inspections conducted by the MS4 Operator shall be documented with a checklist. The checklist must include structural BMPs and check on the self-inspection which are conducted by the construction site operator. These MS4 Operator checklists may be electronic.

Enforcement of construction site stormwater runoff control requirements will be in accordance with the city stormwater ordinance.

TRAINING

As part of the training program in MCM 6, all MS4 inspectors and plan reviewers shall receive construction site runoff control training a minimum of one time during this permit cycle.

PROGRAM REVIEW & UPDATE PROCESS

The construction site stormwater runoff control process used by the city will be reviewed within the first year of the new DNR stormwater permit, and updated as needed to comply with any new requirements. The program will also be evaluated each year to determine if additional changes need to be made.

Annual Review of MCM 4			
Year being reviewed	Date of review	Reviewer(s)	Were changes made and noted?
2022			
2023			
2024			
2025			
2026			

MCM 5 – POST-CONSTRUCTION STORMWATER MANAGEMENT

General Permit Requirement (Section 4.5): *“The MS4 Operator shall continue or develop, implement, and enforce a program to address the quality of long-term stormwater runoff from new development and redevelopment projects that disturb equal to and greater than one acre, including projects less than one acre that are part of a larger common plan of development or sale that would disturb one acre or more and that discharge into the regulated MS4. The MS4’s program shall ensure that controls are in place that have been designed and implemented to prevent or minimize water quality impacts.”*

PURPOSE

Post-construction stormwater management is the long-term control of stormwater runoff from new development and redevelopment projects, specifically those that disturb greater than or equal to one acre. The intent of the post-construction permit requirements is to prevent or minimize water quantity and quality impacts by reasonably mimicking pre-construction runoff conditions. This is accomplished through the use of post-construction BMPs to control the quantity and quality of stormwater runoff.

ORDINANCE

The current Kennett stormwater management ordinance is attached in Exhibit 6. Stormwater requirements outlined in this ordinance include items such as:

- Replicating pre-development hydrology and preserving natural hydrologic functions.
- Design requirements for reducing post-development flow.
- Using overland flood routes.
- Dissipating velocity at outfalls and protecting channels to reduce erosion.
- Restricting discharges to adjacent properties.
- Reducing flow in streets for traffic safety.
- Riparian buffers to protect natural drainageways.
- How to convey off-site stormwater flows.

Meeting stormwater quantity and quality requirements may require the use of both structural and non-structural BMPs. Structural controls include, but are not limited to, extended detention basins, grass swales, bio-retention, permeable surfaces, sand filter basins, stormwater planters, and proprietary BMPs. Non-structural controls include, but are not

limited to, stream buffers, no mow zones, preservation of open spaces, tree preservation, impervious cover reduction, land use planning, and low impact development.

INSPECTIONS & ENFORCEMENT

All plans will be reviewed before construction may begin. The city stormwater ordinance requires that the city be permitted access to enter and inspect facilities. Enforcement of post-construction stormwater management requirements will be in accordance with the city stormwater ordinance.

MAINTENANCE

A maintenance agreement and maintenance plan is also required to be submitted to the city before construction. The maintenance agreement and plan must be in a form approved by the city and shall, at a minimum:

- Designate who will be responsible for the long-term operation and maintenance of the stormwater BMPs.
- Pass maintenance responsibility on to successors.
- Grant the city and it's representatives the right of entry for the purposes of inspecting all stormwater facilities and BMPs.
- Ensure the continued performance of the maintenance obligations required through a maintenance plan including a list of inspection and maintenance tasks, a schedule for routine inspection and maintenance, and actions to be taken when maintenance is required.

PROGRAM REVIEW & UPDATE PROCESS

The post-construction stormwater management process used by the city will be reviewed within the first year of the new DNR stormwater permit, and updated as needed to comply with any new requirements. The program will also be evaluated each year to determine if additional changes need to be made.

Annual Review of MCM 5			
Year being reviewed	Date of review	Reviewer(s)	Were changes made and noted?
2022			
2023			
2024			
2025			
2026			

MCM 6 – POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

General Permit Requirement: *“Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.”*

PURPOSE

In order to protect the quality of stormwater runoff, the City must also review its own operations and procedures. The goal of this MCM is to reduce pollutant runoff from municipal operations. This includes updating the operation and maintenance program and employee training to address this goal.

TRAINING

Training is to be given annually, at a minimum, to all Kennett staff who work with material handling, at vehicle or equipment maintenance areas, storage yards, and material storage facilities in order to prevent and reduce stormwater pollution. A written schedule for training will be kept and coordinated with all other minimum control measures. The training will cover a minimum of the following topics, if applicable, in accordance with section 4.6.B of the stormwater permit:

1. Vehicle and equipment washing
2. Fluid disposal and spills
3. fleet, equipment, and building maintenance
4. Park and open space maintenance procedures (including fertilizer, herbicide, pesticide application)
5. New construction, road maintenance, and land disturbances
6. Stormwater system maintenance
7. MS4 operated salt and de-icing operations
8. Fueling
9. Solid waste disposal
10. Street sweeper operations
11. Illicit Discharges

FACILITIES

The City facilities that fall under MCM 6 are:

City Facilities	
FACILITY	ADDRESS
City Hall	200 Cedar Street
Fire Station 1	309 Sait Francis Street
Fire Station 2	1701 First Street
Fire Station 3	1424 Saint Francis Street
City Compost Facility	18464 County Road 508
City Parks Department	207 Williams Street
Airport	400 Airport Road
Street Department	813 East 5 th Street
Compress Area	515 Compress Road

PRACTICES & PROCEDURES

The City will develop and maintain controls for reducing or eliminating the discharge of floatables and pollutants from the listed municipal facilities.

1. This includes listing potential pollutant sources at each facility.
2. Inspecting facilities for stormwater issues on an annual basis.
3. Using structural BMPs to prevent pollutants from entering waters of the state.
4. Properly storing paints, solvents, and petroleum products where they will not be exposed to stormwater.
5. Practicing proper spill prevention, control, and/or management.
6. Tracking the use of rock salt/brine and other deicers.
7. Maintaining municipal salt storage areas by cleaning up spillage and keeping loaded salt hoppers covered when not in use.
8. Have procedures for proper disposal of waste such as street sweeper washout, accumulated sediment, and trash.
9. When washing municipal vehicles and equipment, soap or detergent should only be used when there is a connection to the sanitary sewer or equivalent treatment.

Practices and procedures including inspection schedules will be written in an operations and maintenance plan (O&M Plan) which can be seen in Exhibit 7. Facilities are inspected once a month by the Code Enforcement Officer. The facilities stormwater inspection checklist can be seen in Exhibit 8.

PROGRAM REVIEW & UPDATE PROCESS

The pollution prevention / good housekeeping for municipal operations used by the city will be reviewed within the first year of the new DNR stormwater permit, and updated as needed to comply with any new requirements. The program will also be evaluated each year to determine if additional changes need to be made.

Annual Review of MCM 6			
Year being reviewed	Date of review	Reviewer(s)	Were changes made and noted?
2022			
2023			
2024			
2025			
2026			

EXHIBIT 1

STORMWATER OUTFALLS

GENERAL MAP

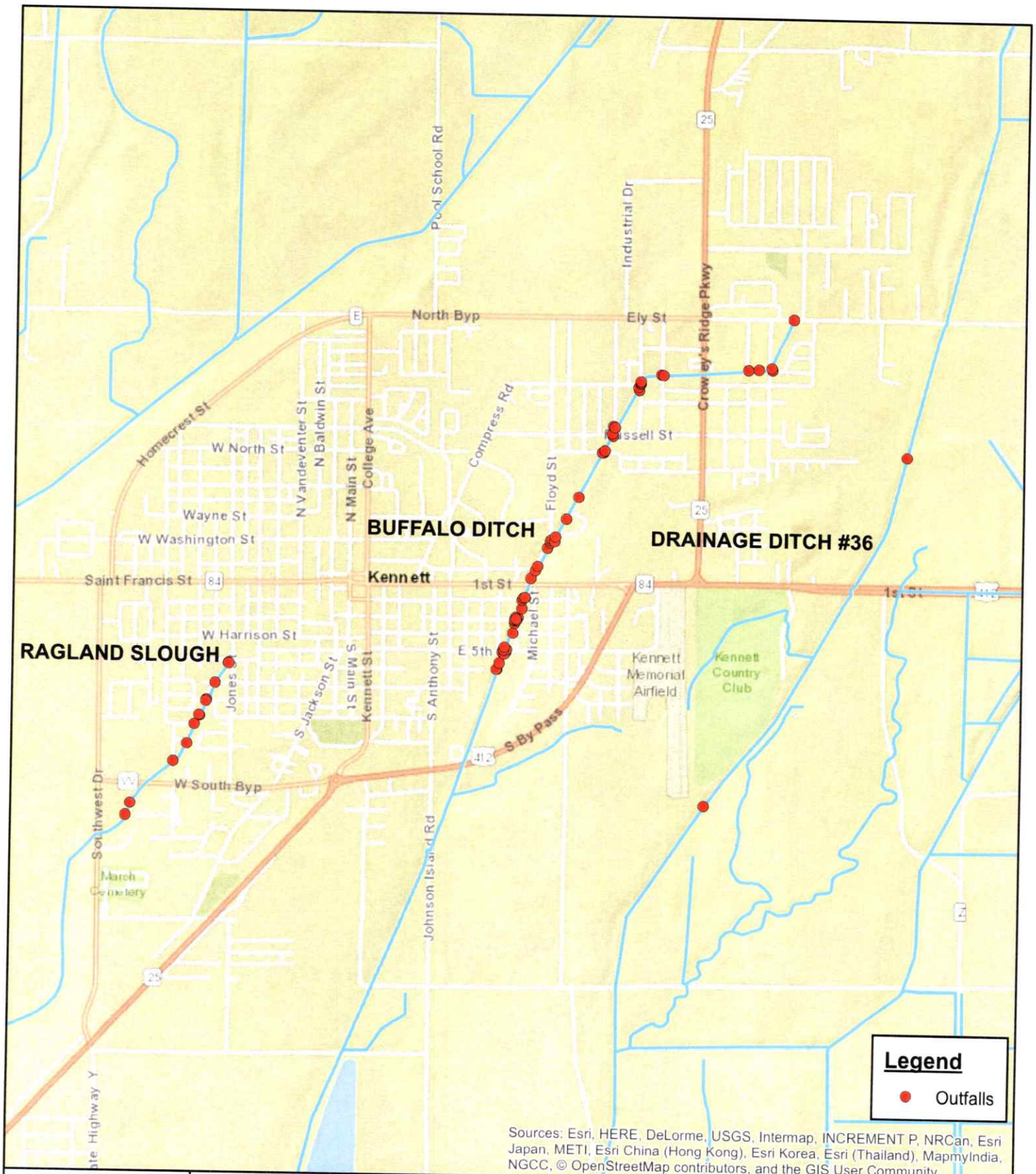
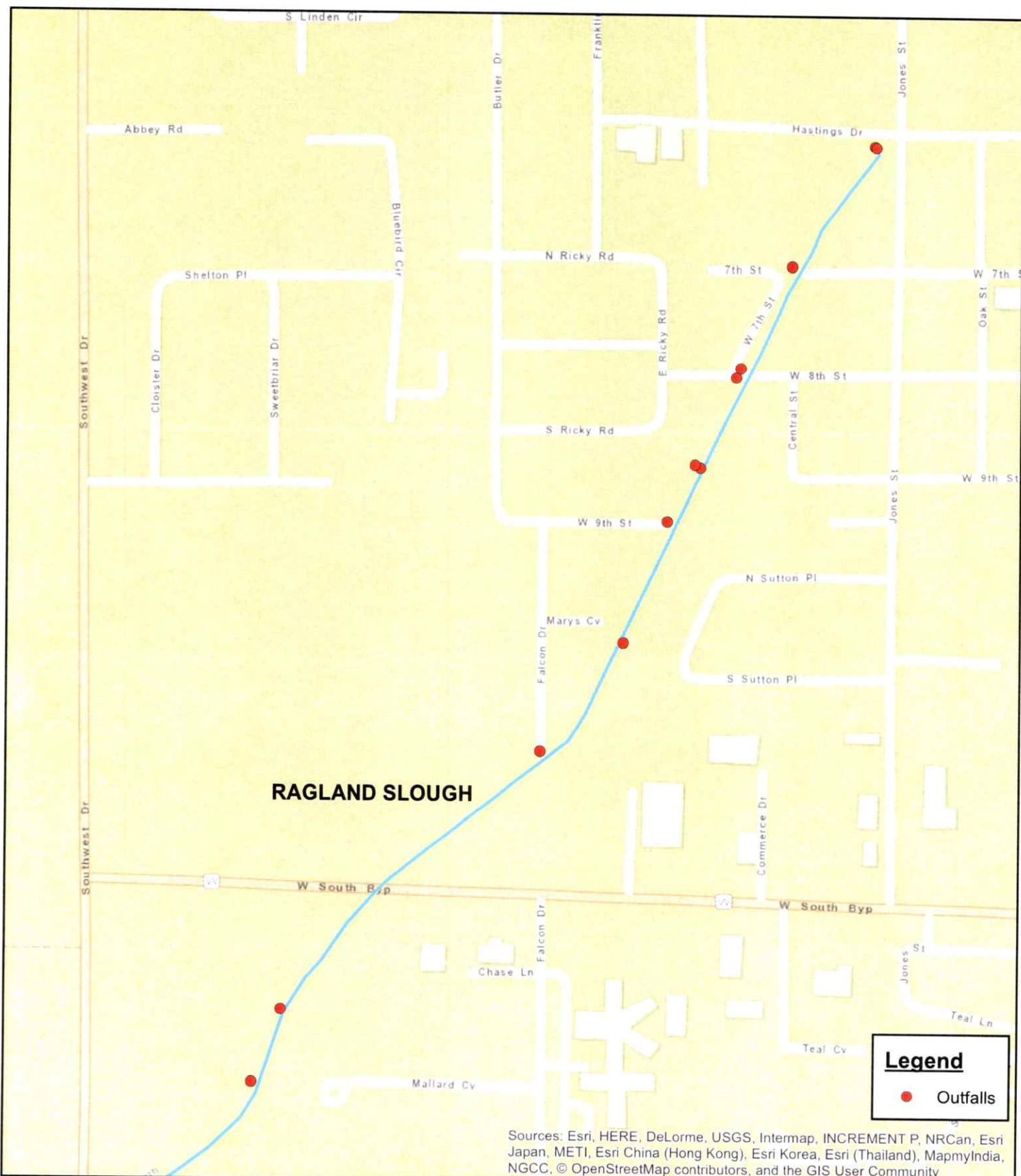


EXHIBIT 2

STORMWATER OUTFALLS

RAGLAND SLOUGH



STORMWATER OUTFALLS
RAGLAND SLOUGH

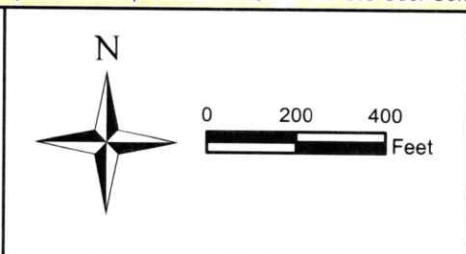


Exhibit
2

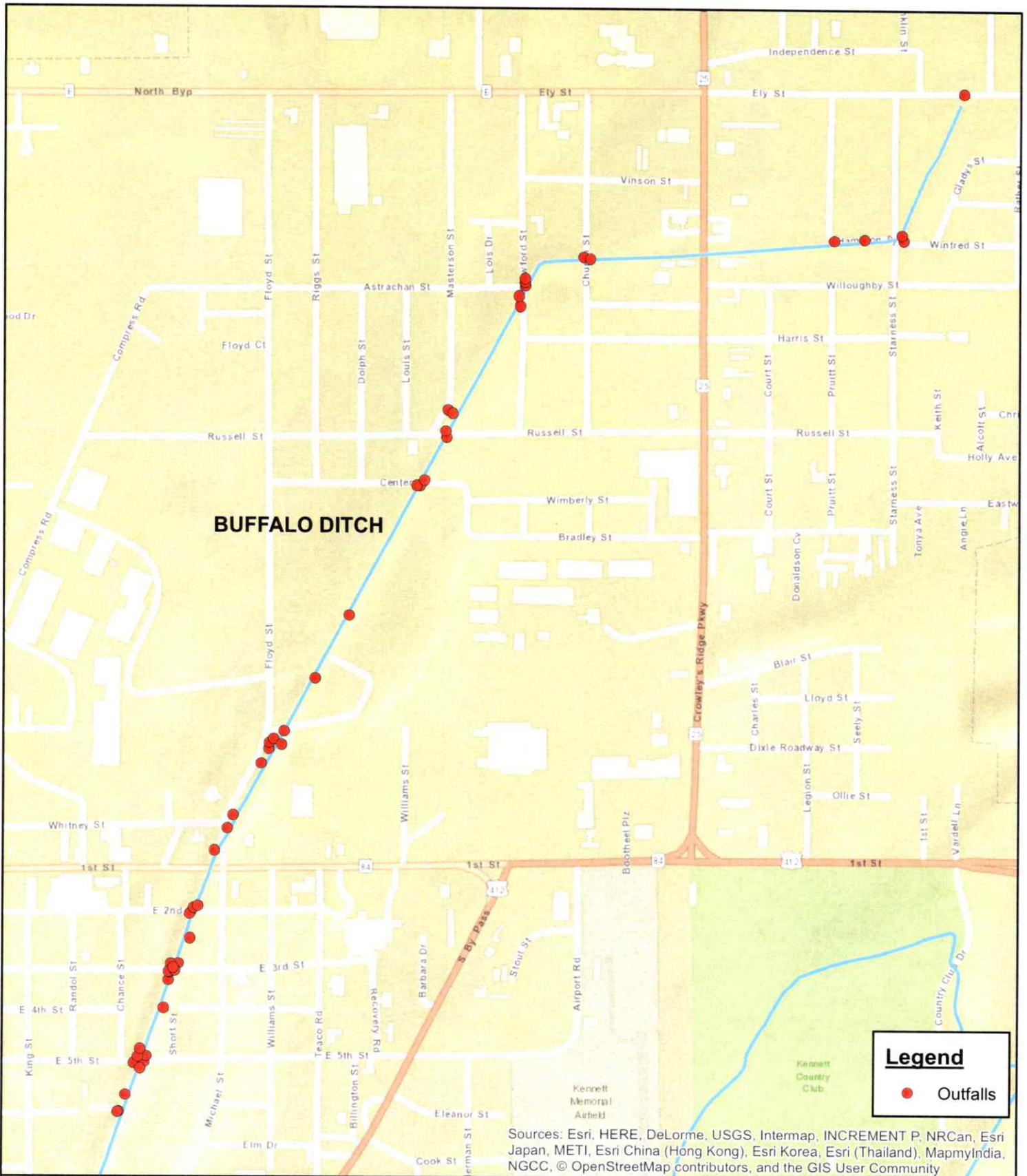
Ragland Slough Outfalls

#	General Locations	Latitude				Longitude			
		Deg.	Min.	Sec.		Deg.	Min.	Sec.	
1	Hastings	90	3	53.648	W	36	13	55.859	N
2	Hastings	90	3	53.597	W	36	13	55.114	N
3	End of Seventh Street	90	3	56.947	W	36	13	51.708	N
4	North side of Eighth	90	3	58.987	W	36	13	48.757	N
5	South side of Eighth	90	3	59.141	W	36	13	48.446	N
6	End of Ninth West side	90	4	0.797	W	36	13	45.63	N
7	End of Ninth East side	90	4	0.604	W	36	13	45.185	N
8	End of Mary's Cove	90	4	1.914	W	36	13	43.777	N
9	West of Sutton Place	90	4	3.685	W	36	13	39.18	N
10	End of Falcoln	90	4	6.87	W	36	13	36.374	N
11	Ditch off Falcoln South of bypass	90	4	17.264	W	36	13	28.029	N
12	West of Mallard Cove	90	4	18.419	W	36	13	25.689	N

EXHIBIT 3

STORMWATER OUTFALLS

BUFFALO DITCH



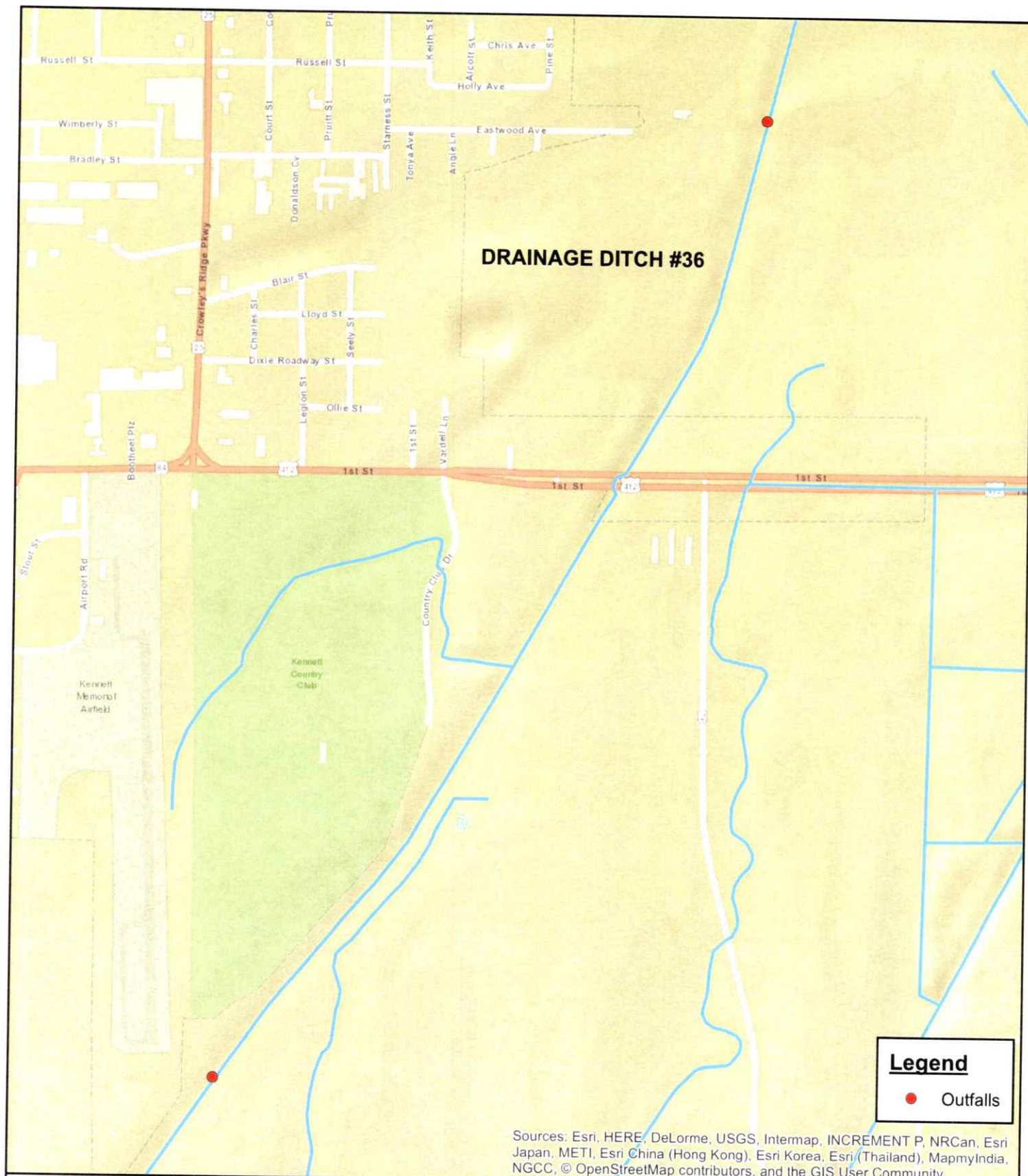
Buffalo Ditch Outfalls

#	General Locations	Latitude				Longitude			
		Deg.	Min.	Sec.		Deg.	Min.	Sec.	
1	Ely Road and Ditch	90	1	37.342	W	36	15	4.247	N
2	Under Winfred Starnes and Windred	90	1	42.465	W	36	14	54.307	N
3	Ditch Northside of Winfred Starnes and Winfred	90	1	42.596	W	36	14	54.508	N
4	Under Hampton East End	90	1	45.776	W	36	14	54.338	N
5	Under Hampton from small ditch West end	90	1	48.297	W	36	14	54.321	N
6	Church Street East side	90	2	8.833	W	36	14	53.103	N
7	Church Street West side	90	2	9.390	W	36	14	53.180	N
8	Crawford Street East Side	90	2	14.342	W	36	14	51.809	N
9	Crawford Street East Side	90	2	14.331	W	36	14	51.559	N
10	Crawford Street East Side	90	2	14.320	W	36	14	51.335	N
11	Crawford Street West Side	90	2	14.855	W	36	14	50.636	N
12	Crawford Street West Side	90	2	14.748	W	36	14	49.998	N
13	Masterson Street West	90	2	20.877	W	36	14	42.933	N
14	Masterson Street East	90	2	20.492	W	36	14	42.407	N
15	Russell Street North	90	2	21.080	W	36	14	41.096	N
16	Russell Street South	90	2	20.984	W	36	14	41.061	N
17	Center St North	90	2	22.845	W	36	14	38.163	N
18	Center Street Southwest	90	2	23.465	W	36	14	37.783	N
19	Center Street Southeast	90	2	23.219	W	36	14	37.792	N
20	Shelton Parkway	90	2	29.208	W	36	14	28.821	N
21	Shelton Parkway	90	2	32.086	W	36	14	24.085	N
22	Shelton Parkway coming off Floyd	90	2	34.717	W	36	14	20.608	N
23	Floyd South of Shelton Parkway Eastside	90	2	34.909	W	36	14	20.220	N
24	Floyd South of Shelton Parkway Westside	90	2	35.572	W	36	14	20.626	N
25	Floyd South of Shelton Parkway Westside	90	2	35.947	W	36	14	20.134	N
26	Floyd South of Shelton Parkway Westside	90	2	35.989	W	36	14	19.547	N
27	Floyd South of Shelton Parkway Westside	90	2	36.621	W	36	14	18.926	N
28	Floyd and Whitney North Side	90	2	38.963	W	36	14	15.398	N
29	Floyd and Whitney South Side	90	2	39.476	W	36	14	14.509	N
30	Floyd Street North of First Street	90	2	40.567	W	36	14	12.447	N
31	Northeast side of Second Street	90	2	41.947	W	36	14	9.255	N
32	Northwest side of Second Street	90	2	42.311	W	36	14	9.126	N
33	Southwest side of Second Street	90	2	42.664	W	36	14	8.695	N
34	Ditch coming from Michael	90	2	42.642	W	36	14	7.038	N
35	Northeast on Third Street	90	2	43.626	W	36	14	5.037	N
36	Northwest on Third Street	90	2	44.225	W	36	14	5.313	N
37	North side in middle Third Street	90	2	44.065	W	36	14	4.795	N
38	Southeast on Third Street	90	2	43.904	W	36	14	3.225	N
39	Southwest on Third Street	90	2	44.418	W	36	14	4.778	N
40	South side in middle Third Street	90	2	44.343	W	36	14	4.252	N
41	South of Third Street	90	2	44.460	W	36	14	3.337	N
42	End of Fourth Street	90	2	44.824	W	36	14	2.250	N
43	North of Fifth Street West side	90	2	46.820	W	36	13	59.473	N
44	Northeast side Fifth Street	90	2	46.298	W	36	13	58.990	N

EXHIBIT 4

STORMWATER OUTFALLS

DRAINAGE DITCH #36



Drainage Ditch #36 Outfalls

#	General Locations	Latitude				Longitude			
		Deg.	Min.	Sec.		Deg.	Min.	Sec.	
1	East of Eastwood Ave.	90	1	9.723	W	36	14	32.437	N
2	East of old Airport landing strip	90	1	58.255	W	36	13	28.554	N

EXHIBIT 5

ILLICIT DISCHARGE & OUTFALL INSPECTION FORMS

ILLCIT DISCHARGE REPORT FORM

Report Environmental Emergencies to DNR 800-361-4872 or Nonemergencies to the City of Kennett 573-888-4622

Date: _____

Name: _____

Email: _____

Phone: _____

What type of incident do you wish to report? (check all that apply)

- ☐ Dumping Down Storm Drain
- ☐ Suspicious Discharge from a pipe into a Stream
- ☐ Unusual Color of Water i Stream
- ☐ Strange Smell in Stream
- ☐ Suspicious Suds or other Substances Floating on Water
- ☐ Death of Aquatic Creatures

Where did the incident take place?

Address? _____

Name of Cross Street? _____

Name of Body of Water? _____

Please provide a brief description of the area affected that might help locate the site. _____

Date _____ Time of incident _____

Please send this form along with any additional information and photographs to

Victor Mode

Code Enforcement Officer

200 Kennett Street

Kennett Mo. 63857

kfdce@kennettfd.org

(573) 717-5015

SECTION 1 DATA

DATE:		OUTFALL I.D.	
TEMPERATURE	TIME		
PREVIOUS 48 HOUR PRECIPITATION	INSPECTOR		
PHOTO'S	IF YES PHOTO NUMBERS		
LAND USE IN AREA (CHECK ALL THAT APPLY)			
INDUSTRIAL	☐	OPEN SPACE	☐
RESIDENTIAL	☐	INSTITUTIONAL	☐
COMMERCIAL	☐	OTHER	☐

SECTION 2 OUTFALL DISCRPTION

LOCATION	MATERIAL	SHAPE	SUBMERGED
STORM	☐	CORCULAR	IN WATER
SEWER	☐	ELLIPTICAL	NO
	☐	BOX	PARTIALLY
	☐	SINGLE	FULLY
	☐	DOUBLE	SEDIMENT
	☐	OTHER	PARTIALLY
			FULLY

SECTION 3 PHYSICAL INDICATORS

INDICATOR		
OUTFALL DAMAGE	☐	CRACKING
DEPOSITS/STAIN	☐	CORROSION
VEGETATION	☐	OILY
POOR QUALITY	☐	PAINT
ALGAE GROWTH	☐	ODORS
		COLORS
		FLOATABLES
		SUDS

SECTION 4 PHYSICAL INDICATORS

INDICATOR	IF PRESENT	DISCRIPTION	SEVERITY
ODOR	☐	SEWAGE	FAINT
		RANCID	
		PETROLEUM	
		SULFIDE	
COLOR	☐	CLEAR	FAINT
		GRAY	
		BROWN	
FLOATABLES	☐	SEWAGE	FEW SOME ALOT
		PETROLEUM	
		GREASE	
		SUDS FOAM	

DO PHYSICAL INDICATORS SUGGEST AN ILLICIT DISCHARGE IS PRESENT Y/N _____

EXHIBIT 6

STORMWATER ORDINANCE

Chapter 420. Water Runoff and Stormwater Management

Article I. General

Section 420.010. Findings Of Fact.

[Ord. No. 3025, 8-7-2018]

A. It is determined that:

1. Illicit and non-stormwater discharges to the storm drain system can contribute a wide variety of pollutants to waterways, and the control of these discharges is necessary to protect public health and safety and water quality;
2. Clearing and grading during construction increase soil erosion and add to the loss of native vegetation;
3. Substantial economic losses can result from these adverse impacts on the waters of the City;
4. Stormwater runoff, soil erosion and non-point source pollution can be controlled and minimized through the regulation of stormwater runoff from land development activities;
5. The regulation of stormwater runoff discharges from land development activities in order to control non-point source pollution associated with stormwater runoff is in the public interest and will minimize threats to public health and safety;
6. Land development activities and associated increases in site impervious cover alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, flooding, stream channel erosion, sediment transport and deposition;
7. This stormwater runoff contributes to increased quantities of water-borne pollutants;
8. Improper design and construction of stormwater best management practices (BMPs) can increase the velocity of stormwater runoff thereby increasing stream bank erosion and sedimentation;
9. Impervious surfaces allow less water to percolate into the soil, thereby decreasing groundwater recharge and stream base flow;
10. Regulation of land development activities by means of performance standards governing stormwater management and site design will produce development compatible with the natural functions of a particular site or an entire watershed and thereby mitigate the adverse effects of stormwater runoff from development.

Section 420.020. Intent And Purpose.

[Ord. No. 3025, 8-7-2018]

- A. The purpose of this Chapter is to establish minimum requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing in watersheds within the

City. This Chapter seeks to meet that purpose through the following objectives:

1. To protect the safety and welfare of citizens, property owners, and businesses by minimizing the negative impacts of land disturbance and illicit discharges.
2. To control non-point source pollution.
3. To protect the condition of the drainage ditches, state (and federal) waters for all reasonable public use.
4. To establish legal authority to carry out all the inspection and monitoring procedures necessary to ensure compliance with this Chapter.
5. To enable the City to comply with the national pollution discharge elimination system permit and applicable federal and state regulations.
6. To protect the safety and welfare of citizens, property owners, and businesses by minimizing the negative impacts of increased stormwater discharges from new land development and redevelopment.
7. To control the rate, quality and volume of stormwater originating from development and redevelopment sites so that surface water and groundwater are protected and flooding and erosion potential are not increased.
8. To encourage responsible development to occur in the City of Kennett.
9. To control drainage ditch erosion.
10. To maintain the integrity of the drainage ditches and networks for their biological functions, drainage, and natural recharge of groundwater.
11. To provide long-term responsibility for and maintenance of stormwater BMPs.

Section 420.030. Applicability.

[Ord. No. 3025, 8-7-2018]

- A. This Chapter shall be applicable to all land development, including, but not limited to, site plan applications, subdivision applications, and grading applications, unless exempt pursuant to Section **420.040**. These provisions apply to any new development or redevelopment site within the City that meets one (1) or more of the following criteria:
1. Land development that disturbs one (1) acre or more.
 - a. It is highly recommended for all land disturbance where erosion could leave the developed property.
 2. Land development activities that are smaller than the minimum applicability criteria set forth above if such activities are part of a larger common plan of development, even though multiple, separate and distinct land development activities may take place at different times on different schedules.
 3. Land development that results in ten thousand (10,000) square feet or more of additional impervious surface.
 4. Land development activities that are smaller than the minimum applicability criteria may also be required to obtain authorization under this Chapter if:
 - a. The City of Kennett has determined that the stormwater discharge from a site is causing, contributing to, or is likely to contribute to a violation of a state or federal water quality standard;

- b. The City of Kennett has determined that the stormwater discharge is, or is likely to be, a significant contributor of pollutants to waters of the state;
- c. Changes in state or federal rules require sites of less than ten thousand (10,000) square feet that are not part of a larger common plan of development or sale to obtain a permit from the authorizing MS4 authority; and
- d. Any development, regardless of size, that is defined by the City of Kennett to be a hot spot land use.

Section 420.040. Exemptions.

[Ord. No. 3025, 8-7-2018]

A. The following activities are exempt from this Chapter:

- 1. Projects That Are Exclusively For Agricultural Uses. Agricultural roads that are used to access other lands subject to this Chapter are not exempt. Agricultural structures that are used for other uses subject to this Chapter are not exempt.
- 2. Maintenance and repair to any stormwater BMP deemed necessary by the stormwater committee.
- 3. Any emergency project that is immediately necessary for the protection of life, property, or natural resources.
- 4. Linear construction projects, such as pipeline or utility line installation that does not result in the creation of impervious cover or land disturbance greater than one (1) acre, as determined by the stormwater committee. Such projects must be designed to minimize the number of stream crossings and width of disturbance.
- 5. Any part of a land development that was approved by the City prior to the effective date of the ordinance from which this Chapter is derived.

Section 420.050. Compatibility With Other Permit And Ordinance Requirements.

[Ord. No. 3025, 8-7-2018]

This Chapter is not intended to interfere with, abrogate, or annul any other ordinance, rule or regulation, statute, or other provision of law. The requirements of this Chapter should be considered minimum requirements, and where any provision of this Chapter imposes restrictions different from those imposed by any other ordinance, rule or regulation, or other provision of law, whichever provisions are more restrictive or impose higher protective standards for human health or the environment shall be considered to take precedence.

Section 420.060. Limitations On Liability.

[Ord. No. 3025, 8-7-2018]

Floods from stormwater runoff may occur which exceed the capacity of stormwater drainage facilities constructed and maintained under this Chapter. This Chapter does not guarantee that property will always be free from stormwater flooding or flood damage. This Chapter shall not create a liability on the part of, or cause of action against, the City or any officer or employee thereof for any flood damage. This Chapter does not purport to reduce the need or the necessity for obtaining flood insurance.

Section 420.070. Definitions.

[Ord. No. 3025, 8-7-2018]

Unless specifically defined below, words or phrases in this Chapter shall be interpreted so as to give them the meaning they have in common usage and to give this Chapter its most reasonable application:

APPLICANT

A property owner or agent of a property owner who has filed an application for a permit.

BANKFULL

An established river stage/elevation at a given location along a river which is intended to represent the maximum safe-water level that will not overflow the river banks or cause any significant damage within the river reach.

BEST MANAGEMENT PRACTICE (BMP)

Activities, practices and procedures which control soil loss and reduce or prevent water-quality degradation caused by nutrients, animal wastes, toxins, organics and sediment in the runoff. BMPs may either be structural (grass swales, terraces, retention and detention ponds, and others); or non-structural (disconnection of impervious surfaces, directing downspouts onto grass surfaces, ordinances and educational activities).

BUFFER

A vegetated area, including trees, shrubs, managed lawn areas, and herbaceous vegetation which exists or is established to protect a stream system. Alteration of this natural area is strictly limited.

BUILDING

Any structure, either temporary or permanent, having walls and a roof, designed for the shelter of any person, animal, or property, and occupying more than one hundred twenty (120) square feet of area.

CHANNEL

A natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.

CLEARING

Any activity which removes the vegetative surface cover through disturbance of the root zone.

DEDICATION

The deliberate appropriation of property by its owner for general public use.

DETENTION

The temporary storage of storm runoff in a stormwater BMP with the goals of controlling peak discharge rates. Extended detention allows for storage and providing gravity settling of pollutants.

DEVELOPER

A person directing or participating in the direction of improvements on or to land, including, but not limited to, the owner of the land, a general contractor or a commercial agent engaged for such activity.

DEVELOPMENT

Any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations. Development must meet the applicability requirements in Section **400.030**.

DIRECTOR

The Code Enforcement Officer or designee.

DRAINAGE FACILITY

A manmade structure or natural watercourse used for the conveyance of stormwater runoff. Examples are channels, pipes, ditches, swales, catch basins and street gutters.

EASEMENT

A legal right granted by a landowner to a grantee allowing the use of private land for conveyance or treatment of stormwater runoff and access to stormwater practices.

EROSION AND SEDIMENT CONTROL PLAN

A plan designed to minimize the loss of soil at a site during construction activities, by implementation of practices that will prevent accelerated runoff.

GRADING

Excavation or fill of material, including the resulting condition thereof.

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.

ILLEGAL DISCHARGE

Any direct or indirect non-stormwater discharge to the storm drain system, except as exempted by this Chapter.

ILLICIT CONNECTIONS

Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system. These include, but are not limited to, any conveyances that allow any non-stormwater discharge, including sewage, process 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 the drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency. The term "illicit connections" also includes 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 an authorized enforcement agency.

IMPAIRED WATERS

Those streams, rivers and lakes that currently do not meet their designated use classification and associated water quality standards under the Clean Water Act.

IMPERVIOUS COVER

Includes those surfaces that cannot effectively infiltrate rainfall (e.g., building rooftops, pavement, sidewalks, driveways, etc.).

INDIGENOUS VEGETATION

Any species that was present in the state prior to European settlement or any plant identified as native or indigenous on lists maintained by agencies such as the state department of conservation or United States Department of Agriculture.

INDUSTRIAL STORMWATER PERMIT

A National Pollutant Discharge Elimination System permit issued to a commercial industry or group of industries that regulates the pollutant levels associated with industrial stormwater discharges or specifies on-site pollution control strategies.

INFILL DEVELOPMENT

Land development that occurs within designated areas based on local land use, watershed, or utility plans where the surrounding area is generally developed, and where the site or area is

vacant.

INFILTRATION

The process of percolating stormwater into the subsoil.

INFILTRATION FACILITY

Any structure or device designed to infiltrate retained water to the subsurface. These facilities may be above grade or below grade.

JURISDICTIONAL WETLAND

Those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

LAND DISTURBANCE PERMIT

An authorization for the permittee to develop land and conduct activities in accordance with City ordinances and erosion and sediment control practices outlined in an approved stormwater pollution prevention plan.

LAND DISTURBING ACTIVITY

Any activity that changes the volume or peak flow discharge rate of rainfall runoff from the land surface. This may include the grading, digging, cutting, scraping, or excavating of soil, placement of fill materials, paving, construction, substantial removal of vegetation, or any activity that bares soil or rock or involves the diversion or piping of any natural or manmade watercourse.

LANDOWNER

The legal or beneficial owner of land, including those holding the right to purchase or lease the land, or any other person holding proprietary rights to the land.

MAINTENANCE AGREEMENT

A legally recorded document that acts as a property deed restriction and that provides for long-term maintenance of stormwater BMPs.

MANAGED LAWN AREAS

Any area greater than one thousand (1,000) square feet where the vegetative ground cover is maintained at a uniform height of less than five (5) inches.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

A publicly owned facility by which stormwater is collected or conveyed, including, but not limited to, any roads with drainage systems, municipal streets, gutters, curbs, catch basins, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage ditches/channels, reservoirs, and other drainage structures.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGE PERMIT

A permit issued by the state under authority delegated pursuant to 33 U.S.C. § 1342(b) that authorizes the discharge of pollutants to waters of the state, whether the permit is applicable on an individual, group, or general area-wide basis.

NON-POINT SOURCE POLLUTION

Pollution from any source other than from any discernible, confined, and discrete conveyances, and shall include, but not be limited to, pollutants from agricultural, construction, subsurface disposal and urban runoff sources.

NON-STORMWATER DISCHARGE

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

NON-STRUCTURAL MEASURE

A stormwater control and treatment technique that uses natural processes, restoration or enhancement of natural systems, or design approaches to control runoff or reduce pollutant levels. Such measures are used in lieu of or to supplement structural practices on a land development site. Non-structural measures include, but are not limited to, minimization or disconnection of impervious surfaces; development design that reduces the rate and volume of runoff; creation, restoration or enhancement of natural areas such as riparian areas, wetlands, and forests; and on-lot practices such as rain barrels, cisterns, and vegetated areas that intercept rainfall and surficial runoff.

OFF-SITE FACILITY

A stormwater BMP located outside the subject property boundary described in the permit application for land development activity.

ON-SITE FACILITY

A stormwater BMP located within the subject property boundary described in the permit application for land development activity.

OWNER

The owner of the freehold of the premises or lesser estate therein, a mortgagee or vendee in possession, assignee of rents, receiver, executor, trustee, lessee or other person, firm or corporation in control of a piece of land. As used herein, the term "owner" also refers to, in the appropriate context:

1. Any other person authorized to act as the agent for the owner;
2. Any person who submits a stormwater management concept or design plan for approval or requests issuance of a permit, when required, authorizing land development to commence; and
3. Any person responsible for complying with an approved stormwater management design plan.

PERIMETER CONTROL

A barrier that prevents sediment from leaving a site either by filtering sediment-laden runoff or diverting it to a sediment trap or basin.

PERMANENT STORMWATER BMP

A stormwater best management practice (BMP) that will be operational after the construction phase of a project and that is designed to become a permanent part of the site for the purposes of managing stormwater runoff.

PHASING

Clearing a parcel of land in distinct phases, with the stabilization of each phase before the clearing of the next.

POINT SOURCE

Any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. Point source does not include agricultural stormwater discharges and return flows from irrigated agriculture.

POLLUTANT

Anything that causes or contributes to pollution. Pollutants may include, but are not limited to, paints, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse; rubbish, garbage, litter, or other discarded or abandoned objects, ordinances, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances 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.

PROFESSIONAL ENGINEER

A licensed engineer who is registered with and authorized to practice engineering in the state.

RECEIVING STREAM OR CHANNEL

The body of water or conveyance into which stormwater runoff is discharged.

RECHARGE

The replenishment of underground water reserves.

REDEVELOPMENT

A site that has previously been built on with structures and/or impervious areas, and additional improvements are proposed, or demolition of the existing improvements and new improvements are proposed.

RESPONSIBLE PARTY

Any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity, or any other legal entity; or their legal representatives, agents, or assigns that are named on a stormwater maintenance agreement as responsible for long-term operation and maintenance of one (1) or more stormwater BMPs.

RIPARIAN ZONE/RIPARIAN BUFFER

The land adjacent to streams, rivers, and lakes that actively interfaces with the water body through physical and chemical processes. Riparian zones filter nutrients and sediments, increase stream bank stability, and provide shade that reduces stream temperatures.

RUNOFF REDUCTION

The total annual runoff volume reduced through canopy interception, soil infiltration, evaporation, transpiration, rainfall harvesting engineered infiltration or extended filtration.

SEDIMENT CONTROL

Measures that prevent eroded sediment from leaving the site.

SENSITIVE AREA

Areas containing features that are of critical importance to the protection of ecological or environmental resources and include bluffs, springs, and wetlands.

STABILIZATION

The use of practices that prevent exposed soil from eroding.

START OF CONSTRUCTION

The first land-disturbing activity associated with a development, including land preparation such as clearing, grading and filling; installation of streets and walkways; excavation for basements, footings, piers or foundations; erection of temporary forms; and installation of accessory buildings such as garages.

STOP-WORK ORDER

An order issued that requires that all construction activity on a site be stopped except as necessary to remedy the issues for which the order was issued.

STORMWATER

Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation (such as rain or snow), and resulting from such precipitation.

STORMWATER DRAINAGE SYSTEM

All drainage facilities used for collecting and conducting stormwater to, through and from drainage areas to the points of final outlets, including, but not limited to, any and all of the following: conduits and appurtenant features, canals, ditches, streams, flumes, culverts, streets, gutters and pump stations.

STORMWATER MANAGEMENT

The use of structural or non-structural practices that are designed to reduce stormwater runoff pollutant loads, discharge volumes, peak flow discharge rates and detrimental changes in stream temperature that affect water quality and habitat.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A narrative plan, usually required by a permit, to manage stormwater associated with industrial, commercial, institutional, or other land use activities, including construction. The term "SWPPP" commonly describes and ensures the implementation of practices that are to be used to reduce pollutants in stormwater and non-stormwater discharges.

STORMWATER RETROFIT

A stormwater BMP designed for an existing development site that previously had either no stormwater BMP in place or a practice inadequate to meet the stormwater management requirements of the site.

STORMWATER RUNOFF

Flow on the surface of the ground resulting from precipitation.

STREAMS

Perennial and intermittent watercourses identified through site inspection and United States Geological Survey (USGS) maps and further defined as follows: solid blue lines on the United States Geological Survey seven and one-half (7 1/2) minutes series topographical map and have a drainage area of greater than fifty (50) acres, dashed blue lines on the United States Geological Survey seven and one-half (7 1/2) minutes series topographical map and have a drainage area of greater than fifty (50) acres, and natural channels which are not shown on the United States Geological Survey seven and one-half (7 1/2) minutes series topographical map as either blue or dashed blue lines but which have drainage areas of greater than fifty (50) acres.

WATER QUALITY VOLUME (WQV)

The storage needed to capture and treat ninety percent (90%) of the runoff from a storm that produces the average annual stormwater runoff volume.

WATERCOURSE

A permanent or intermittent stream or other body of water, either natural or manmade, which gathers or carries surface water.

WATERSHED MANAGEMENT PLAN

A document, usually developed cooperatively by government agencies and other stakeholders, to protect, restore, or otherwise manage the water resources within a particular watershed or sub-watershed. The plan commonly identifies threats, sources of impairment, institutional issues, and technical and programmatic solutions or projects to protect or restore water resources.

WATERSHED or CATCHMENT

The entire geographical area drained by a river and its tributaries; an area characterized by the conveyance of all runoff to the same outlet.

Article II. Plan Submittal/Review Requirements

Section 420.080. Plans Required.

[Ord. No. 3025, 8-7-2018]

Each developer/owner subject to this Chapter shall submit plans as required by this Article to the City stormwater committee for review and approval.

Section 420.090. Grading And Erosion And Sediment Control Plans.

[Ord. No. 3025, 8-7-2018]

- A. Submittal. A grading plan as well as an erosion and sediment control plan containing all appropriate information as specified in this Chapter and outlined in the City stormwater design manual shall be submitted to the director in conjunction with the final subdivision plat, final site plan, construction plan, or any other land development plan subject to this Chapter.
- B. Application Requirements. The plan submittal shall contain:
 - 1. A completed application form provided by the City for any applicable permits as outlined in Article **VII**, Permits, of this Chapter;
 - 2. The fees required by Section **420.450**;
 - 3. A grading plan that satisfies the requirements of this Section and the City stormwater design manual;
 - 4. An erosion and sediment control plan that satisfies the requirements of this Section and the City stormwater design manual; and
 - 5. A stormwater pollution prevention plan (SWPPP) that satisfies the requirements of this Section and the City stormwater design manual.
 - 6. All plans shall be submitted in both paper and electronic (thumb drive) format.

Section 420.100. Coordination With Other Approvals And Permits.

[Ord. No. 3025, 8-7-2018]

- A. Approval Of Other City Permits. Unless exempt, no land disturbance permit or building permit shall be issued for land development without approval of a grading plan, erosion and sediment control plan and stormwater pollution prevention plan.
- B. Coordination With Other Plans. Approval of the permit shall be coordinated by City with regard to the location, schedule, or phasing for temporary and permanent erosion and sediment control measures. If natural drainage features or other natural areas are to be preserved, then these areas must be shown and measures provided for their protection on both the erosion and sediment control plan and the stormwater management construction plan.
- C. Other Entity Permits Or Approvals May Be Needed. Approvals issued in accordance with this Chapter do not relieve the applicant of responsibility for obtaining all other necessary permits or approvals from other federal, state, or local agencies. If requirements vary, the most restrictive shall prevail. These permits may include, but are not limited to, applicable state and federal permits for stream and wetland impacts. Applicants are required to show proof of compliance with these regulations before the City will issue a land disturbance or building permit.
- D. Stormwater Measures Within Designated Flood Hazard Areas. Construction of stormwater measures or facilities within a Federal Emergency Management Agency (FEMA) designated floodplain or floodway shall be avoided to the extent possible. When this is unavoidable, all

stormwater BMP construction shall be in compliance with all applicable requirements of the City's floodplain management regulations.

Section 420.110. Pre-Application Meeting Documents.

[Ord. No. 3025, 8-7-2018]

All applicants shall participate in a pre-application meeting with the stormwater and planning departments to discuss potential approaches for stormwater design and opportunities to use design techniques to reduce runoff rates, volumes, and pollutant loads. During the pre-application meeting, the applicant shall provide information regarding design considerations.

Section 420.120. Preliminary Stormwater Management Plan.

[Ord. No. 3025, 8-7-2018]

- A. Plan Requirements. After the pre-application review, the applicant shall prepare a preliminary stormwater management plan describing, in general, how stormwater runoff through and from the development will be treated and conveyed.
- B. Maximize Use Of Techniques To Reduce Runoff By Design. The stormwater management preliminary plan shall utilize to the maximum extent practicable site planning and design technique that reduce runoff rates, volumes, and pollutant loads. Such techniques include, but are not limited to, minimization or disconnection of impervious surfaces; development design that reduces the rate and volume of runoff; restoration or enhancement of natural areas such as riparian areas, wetlands; and distributed practices that intercept and treat runoff from developed areas.
- C. Preliminary Plan Prior To Design Plan. The preliminary stormwater management plan must be approved by the City stormwater committee prior to submission of a stormwater management design plan (as part of the construction or final site plan) for the entire development, or portions thereof. In addition, the applicant or his/her representative shall meet on site with the Director prior to approval of the stormwater management construction plan for the purposes of verifying the conditions of the site and all receiving channels. If the development is a subdivision, the preliminary stormwater management plan must be submitted with the preliminary plat.

Section 420.130. Clearing And Rough Grading.

[Ord. No. 3025, 8-7-2018]

If the developer/owner only desires to obtain a land disturbance permit for purposes of clearing and grading, they may do so upon approval of the preliminary plan, erosion and sediment control plan and a stormwater pollution prevention plan.

Section 420.140. Stormwater Management Construction Plan.

[Ord. No. 3025, 8-7-2018]

- A. Submittal. A stormwater management design plan containing all appropriate information shall be submitted to the Director in conjunction with the final development plan, final site plan, final subdivision construction plan, or any other land development plan subject to this Article.
- B. Application Requirements. The stormwater management design plan submittal shall contain:
 - 1. A completed application form provided by City for any applicable permits as outlined in Article **VII**, Permits, of this Chapter.

2. The fees required by Section **420.450**.
 3. A stormwater management construction plan that satisfies the requirements of this Section and the City stormwater design manual.
 4. A stormwater facilities or BMP maintenance plan for the period of construction and for post-construction.
- C. Consistency Between Preliminary Plans And Construction Plans. A copy of the approved preliminary stormwater management plan shall be submitted with the construction plans. The Director shall check the construction plan for consistency with the preliminary plan.
- D. Stormwater Management Design Plan Content. The stormwater management design plan shall contain maps, charts, graphs, tables, photographs, narrative descriptions, explanations, calculations, citations to supporting references, a record of all major permit decisions, and other information as may be necessary for a complete review of the plan.

Section 420.150. Construction Plan Review Procedures.

[Ord. No. 3025, 8-7-2018]

- A. Review Period. A thirty-calendar-day review period begins on the day the complete stormwater management construction plan is accepted for review by the City. During the thirty-day review period, the City shall either approve or disapprove the plan and communicate the decision to the applicant, in writing. Approval or denial shall be based on the plan's compliance with this Article and the City stormwater design manual. Within thirty (30) days after receiving an application, the City shall, in writing:
1. Approve the permit application; or
 2. Approve the permit application subject to such reasonable conditions as may be necessary to secure substantially the objectives of this regulation, and issue the permit subject to these conditions; or
 3. Disapprove the permit application, indicating in general the deficiencies and the procedure for submitting a revised application or submission.
- B. Modifications Needed For Approval. In cases where modifications are required to approve the plan, the City stormwater committee shall have an additional thirty (30) days to review the revised plan from the initial and any subsequent resubmission dates. If the plan is approved, one (1) copy bearing certification of such approval shall be returned to the applicant. If the plan is disapproved, the applicant shall be notified, in writing, of the reasons.
- C. Substantive Changes To Plan. No substantive changes shall be made to an approved plan without review and written approval by the Director; the City may request additional data with a plan amendment as may be necessary for a complete review of the plan and to ensure that changes to the plan will comply with the requirements of this Article. This does not apply to the land disturbance plan, which may be changed as construction warrants.
- D. Expiration Of Plan Approval. The stormwater management construction plan's approval expires two (2) years from the date of approval unless work has begun on the site or an extension request from the owner or design engineer has been received by the Director. If the stormwater management construction plan approval expires and is not granted an extension, the applicant shall file with the Director for renewal of the stormwater management construction plan.

Section 420.160. Maintenance Agreement And Plans.

[Ord. No. 3025, 8-7-2018]

- A. Prior to approval of a stormwater management construction plan, each owner shall submit a maintenance agreement and maintenance plan in accordance with the following:
1. Responsible Party. The owner shall be responsible for the operation and maintenance of such measures and shall pass such responsibility to any successor owner, unless such responsibility is accepted by the City.
 2. Requirement For Maintenance Agreement And Plan. If a stormwater management construction plan requires structural or non-structural measures, the owner shall execute a stormwater maintenance agreement prior to City Public Works Department granting final approval for the plan, or any plan of development or other development for which a permit is required under this Article. The agreement shall be recorded in the office of the Dunklin County Recorder of Deeds and shall run with the land.
 3. Required Elements For Maintenance Agreement And Plan. The stormwater maintenance agreement shall be in a form approved by the City and shall, at a minimum:
 - a. Designate Responsible Party. Designate for the land development the owner, governmental agency, or other legally established entity (responsible party) which shall be permanently responsible for maintenance of the structural or non-structural measures required by the plan.
 - b. Pass Responsibility To Successors. Pass the responsibility for such maintenance to successors in title.
 - c. Right Of Entry For Stormwater Authority. Grant the Director and its representatives the right of entry for the purposes of inspecting all stormwater facilities and BMPs at reasonable times and in a reasonable manner. This includes the right to enter a property when Director or its representatives has a reasonable basis to believe that a violation of this Article is occurring or has occurred and to enter when necessary for correction of a violation of this Article.
 - d. Maintenance Plan. Ensure the continued performance of the maintenance obligations required by the plan and this Article through a maintenance plan (which may be an attachment to the actual maintenance agreement). The plan shall include a list of inspection and maintenance tasks, a schedule for routine inspection and maintenance, actions to be taken when maintenance is required, and other items listed in the City stormwater design manual.

Article III. Performance Criteria

Section 420.170. General Criteria.

[Ord. No. 3025, 8-7-2018]

- A. Compliance With Federal And State Regulations. All stormwater facilities and conveyance systems shall be designed in compliance with all applicable state and federal laws and regulations, including the Federal Clean Water Act and all applicable erosion and sediment control, wetland and floodplain regulations.
- B. Protect Public Health, Safety And General Welfare. The design of stormwater BMPs shall consider public health, safety, and general welfare. These considerations include, but are not limited to, preventing the flooding of structures; safe passage of vehicles on roadways; preventing standing water in facilities, manholes, inlets, and other structures in a manner that promotes breeding of mosquitoes; preventing attractive nuisance conditions and dangerous conditions due to velocity or depth of water or access to orifices and drops; and preventing aesthetic nuisances due to excessive slopes, cuts and fills, and other conditions.

- C. Adherence To City Stormwater Design Manual. All stormwater facilities and BMPs shall be designed to the standards of the City stormwater design manual, unless a variance is granted or the applicant is exempt from such requirements. The design manual provides guidance for minimum requirements. A variance is not needed to exceed the requirements.
- D. Stormwater Authority Discretion. If hydrologic, geologic, topographic, or land use conditions warrant greater control than that provided by the minimum control requirements, the Director may impose additional requirements prior to the approval of the preliminary stormwater management plans, as deemed reasonable and necessary to control the volume, timing, rate or quality of runoff. The Director may restrict the use of certain stormwater BMPs, require additional pretreatment, or require a post-construction stormwater pollution prevention plan in certain circumstances. These include, but are not limited to, stormwater generated from stormwater hot spots, stormwater discharges that are conveyed with non-stormwater discharges, or areas where geologic conditions are conducive to groundwater contamination.
- E. Hydrologic Computation Assumptions. Hydrologic parameters shall reflect the ultimate land development and shall be used in all engineering calculations. All pre-development calculations shall consider wooded areas and fields to be in good condition, regardless of actual conditions at the time of application.
- F. Location Of Stormwater Facilities On Lots. Stormwater facilities within residential subdivisions that serve multiple lots or a combination of lots and roadways shall be on a lot owned and maintained by an entity of common ownership unless an alternative arrangement is approved by the Director. Stormwater practices located on individual lots shall be placed within an easement and either maintained by the lot owner or maintained by an entity of common ownership.

Section 420.180. Engineered Systems.

[Ord. No. 3025, 8-7-2018]

- A. Replicating Pre-development Hydrology. Stormwater management designs shall preserve the natural hydrologic functions, drainage ditch characteristics, and groundwater recharge of the predeveloped site as outlined in the City stormwater design manual and to the maximum extent practical. This shall be accomplished by treating runoff at the source, disconnecting impervious surfaces, preserving or enhancing natural flow paths and vegetative cover, preserving or enhancing natural open spaces and riparian areas, and other measures that replicate pre-development hydrologic conditions. The Director shall exercise discretion in the application of this standard, especially in cases of infill development, redevelopment, or other unique circumstances.
- B. Overland Flood Routes. Overland flood routing paths shall be used to convey stormwater runoff from the one-hundred-year storm event to an adequate receiving water resource or stormwater BMP such that the runoff is contained within the drainage easement for the flood routing path and does not cause flooding of buildings or related structures. The peak one-hundred-year water surface elevation along flood routing paths shall be at least one (1) foot below the finished grade elevation at the structure. When designing the flood routing paths, the conveyance capacity of the site's storm sewers shall be taken into consideration.
- C. Velocity Dissipation. Velocity dissipation devices shall be placed at discharge locations of the stormwater conveyance system and along the length of any outfall to provide non-erosive flow velocity from the structure to an adequate receiving stream or channel so that the natural physical and biological characteristics and functions of the receiving stream are maintained and protected.
- D. Discharges To Adjacent Property. Concentrated discharges from the stormwater conveyance system or stormwater best management practices shall not be discharged onto adjacent property without adequate conveyance in a natural stream or storm sewer system. Drainage easements are required where stormwater discharges must cross an adjacent or off-site property before reaching an adequate conveyance.

- E. Flow Toward Streets. In order to have sufficient traffic safety, any concentration of surface flow in excess of two (2) cubic feet per second (cfs) for the ten-year frequency rain shall be intercepted before reaching the street right-of-way and shall be carried by a storm drain to connect with a drainage structure at the low point in the street right-of-way or to discharge to a watercourse, or be captured in a BMP.

Section 420.190. Natural Systems/Riparian Buffers.

[Ord. No. 3025, 8-7-2018]

- A. Riparian Buffers. Riparian buffers will be required as part of all new development and redevelopment in the City in order to promote the health, safety, comfort, or general welfare; conserve the values of property throughout the City; and lessen or avoid undue impact of stormwater runoff on adjoining properties and the environment. Buffers adjacent to stream systems provide numerous environmental protection and resource management benefits which can include restoring and maintaining the chemical, physical and biological integrity of the water resources, removing pollutants delivered in urban stormwater, reducing erosion and controlling sedimentation, stabilizing drainage ditch banks, providing infiltration of stormwater runoff, maintaining the base flow of the drainage ditches, contributing the organic matter that is a source of food and energy for the aquatic ecosystem, providing tree canopy to shade streams and promote desirable aquatic organisms, providing riparian wildlife habitat, furnishing scenic value and recreational opportunity, protecting the public from flooding, property damage and loss, and providing sustainable, natural vegetation. This Section establishes minimum acceptable standards for the design of riparian buffers to protect the streams, wetlands, floodplains and riparian and aquatic ecosystems of the City.

1. Riparian Buffer Plan Requirements.

- a. General Plan Requirements. All administrative surveys, plats, development plans, subdivision improvement plans and building permit site plans, shall set forth an informative, conceptual and schematic representation of the proposed riparian buffers by means of maps, graphs, charts, or other written or drawn documents so as to enable the Director an opportunity to make a reasonably informed decision regarding the proposed activity.
- b. Specific Plan. Riparian buffer plans shall contain the following information and shall be shown on one (1) or more sheets as required by the Director:
 - (1) A site plan map at a minimum scale of one (1) inch equals two hundred (200) feet.
 - (2) Map delineated and surveyed streams, springs, seeps, bodies of water and wetlands [include a minimum of two hundred (200) feet into adjacent properties].
 - (3) Riparian buffer plans for an individual single-family or two-family dwelling or an administrative survey are not required to survey the features listed above.
 - (4) Delineated riparian buffers.
 - (5) Limits of the one-hundred-year floodplain as shown on the adopted floodplain maps.

2. Plan Submittal. The buffer plan shall be submitted in conjunction with the required development permit application or land disturbance plan for any development, whichever is submitted first. The buffer must be clearly delineated on the site grading plan. Provide a note on the site grading and drainage plans or development site plan stating, "There shall be no clearing, grading, construction or disturbance of vegetation except as specifically approved by the Director."
3. Temporary Boundary Markers. Markers will be installed by the applicant prior to commencing clearing and grading operations and maintained throughout the applicant's development

activities. The markers will be placed on the outside edge of the buffer zone prior to the start of any activity within fifty (50) feet of the buffer or as shown on a land disturbance plan approved by the City. Markers shall be clearly visible and shall be spaced at a maximum of one hundred (100) feet. The markers shall be joined by marking tape or fencing. Orange construction fencing should be used to delineate the limits of the riparian buffer.

4. Plan Preparation. Riparian buffer plans, except for single-family dwellings, or two-family dwellings, shall be prepared by a professional surveyor, engineer or architect licensed to practice in the state.
5. Design Standards For Riparian Buffers.
 - a. General. An adequate buffer for a drainage system shall consist of a predominantly undisturbed strip of land extending along both sides of the drainage ditches and their adjacent wetlands. The buffer width may be adjusted to include contiguous sensitive areas, such as steep slopes or erodible soils, where disturbance may adversely affect water quality, drainage ditches, wetlands, or other water bodies. All specified riparian buffer widths are minimums and may be increased as specified in these regulations or on a voluntary basis by the property owner.
 - b. Buffer Measurement. The buffer shall begin and be measured from the ordinary high-water mark of the channel during base flows.
 - c. Minimum Buffer Width. The required base width for all buffers shall be thirty (30) feet or the width of the one-hundred-year floodplain as shown on the City flood insurance rate map, whichever is greater.
 - d. No Buffer Required. A riparian buffer shall not be required for portions of a drainage ditch that are less than one hundred fifty (150) feet in length due to the drainage ditch having been previously enclosed within a pipe or box structure immediately upstream and downstream of the subject location. In such cases, the ditch portion may be similarly enclosed in a pipe or box structure. Also, this Article shall not be construed so as to prevent modifications to drainage ditches or wetlands if such modifications have been approved and permitted by a federal agency such as the U.S. Army Corps of Engineers.
 - e. Riparian Buffer Averaging. The riparian buffer width may be relaxed and the buffer permitted to become narrower at some points to allow for structures existing on the date of adoption of these regulations, provided:
 - (1) The average width of the riparian buffer must meet the minimum requirement specified.
 - (2) There is no reduction in the width of the streamside zone.
 - (3) No new structures are built in the one-hundred-year floodplain. This does not restrict allowable uses in the streamside zone as defined below.
 - f. Waivers And Variances. The Director may grant a waiver for those projects or activities serving a public need, where no feasible alternative is available, or for projects where the repair and maintenance of public improvements is necessary, where avoidance and minimization of adverse impacts to wetlands and associated aquatic ecosystems have been addressed.
 - (1) Application. The applicant shall submit a written request for a waiver to the Director. The application shall include information specified by the Director and specific reasons justifying the variance and any other information necessary to evaluate the proposed variance request. The Director may require an alternatives analysis that clearly demonstrates that no other feasible alternatives exist and that minimal impact will occur as a result of the project or development.

- (2) Review By Director. Upon receipt of all application materials, the Director shall have twenty (20) working days from the date of the complete application in which to issue a decision. If during review of the application the Director requests additional information, then the time between when the request was made and when the information is submitted shall not count against the review period.
- (3) Other Variances. Where undue hardships or practical difficulties may result from strict compliance with this Section, the developer may file a variance in accordance with Section **420.490**.

6. Uses.

- a. All uses allowed in Ditchside Zone, and surfaced biking/hiking paths, detention/retention structures, utility corridors, stormwater BMPs, residential yards, landscaped areas.

7. Function.

- a. Protect the physical and ecological integrity of the stream ecosystem.
- b. Protect key components of the stream, filter and slow velocity of water runoff.

B. Ditchside Zone. The zone immediately adjacent to the drainage ditch, twenty (20) feet in width.

1. Function. The function of the streamside zone is to protect the physical, biological and ecological integrity of the stream ecosystem. The vegetative target for the streamside zone is undisturbed indigenous vegetation.
2. Allowable uses in the streamside zone: flood-control structures, stream-gauging and water-quality-monitoring equipment, stormwater treatment facilities in accordance with an approved plan:
 - a. Utility crossings.
 - b. Permeable-surfaced foot and bicycle paths.
 - c. Road crossings.
 - d. Utilities where no practical alternatives exist as determined by the Director.
 - e. Ditch restoration, ditch bank restoration or restoration of indigenous vegetation in accordance with an approved plan.
 - f. Roads, that exist on or before the date of adoption of these regulations, and associated maintenance activities.
3. Restricted Uses In The Ditchside Zone. The following uses are prohibited except where incidental to an allowable use:
 - a. Clearing of existing vegetation.
 - b. Grading, stripping or other soil-disturbing practices.
 - c. Filling or dumping.
 - d. Draining the buffer area by ditching, underdrains or other systems.
 - e. Use, storage or application of pesticides, except for the spot spraying of noxious weeds or other species consistent with recommendations of the state department of conservation, United States Department of Agriculture or University of Missouri Extension Service.
 - f. Storage or operation of motorized vehicles except for maintenance, inspection or emergency use.

- g. Walls, solid fences, chain-link fences, woven or welded wire fences.
- h. Structures or any type of impervious surface except as provided above.

Section 420.200. Stormwater Quantity Control.

[Ord. No. 3025, 8-7-2018]

- A. **Runoff Reduction.** In order to replicate pre-development hydrologic conditions, and to promote base flow to streams and wetlands, ten percent (10%) of the water quality volume shall be permanently reduced. This may be accomplished by disconnecting impervious areas, maintaining sheet flow to areas of natural vegetation such as riparian corridors, infiltration practices where soil conditions allow for collection and reuse of runoff.
- B. **Channel Protection Criteria.** The stormwater system shall be designed so that post-development discharges will not erode natural channels or steep slopes. This will protect in-channel habitats and reduce in-channel erosion.

Section 420.210. Stormwater Quality Control.

[Ord. No. 3025, 8-7-2018]

- A. **Water Quality Protection.** In order to protect the receiving waters from non-point source pollution, the remainder of the water quality volume that was not removed through runoff reduction shall be treated through filtration BMPs such as sand filters, vegetated swales, or proprietary products.
- B. **Treatment Of The Water Quality Volume.** Post-development runoff from the water quality rainfall event that is not permanently removed through the application of the runoff reduction criterion shall be captured and treated in a water quality BMP to prevent or minimize water quality impacts from land development. Up to ten percent (10%), of a site's total impervious surface may discharge in a sheet flow condition through existing established vegetation such as may exist in a riparian buffer without otherwise being treated.
- C. **Treat Entire Land Development.** The stormwater design shall provide for treatment of runoff from the water quality rainfall event to the maximum extent practicable through the use of structural and non-structural BMPs. Up to ten percent (10%) of a site's total impervious surface may discharge in a sheet flow condition in a non-erosive manner through existing established vegetation such as may exist in a riparian buffer without otherwise being treated.
- D. **Landscape Plan.** The design of vegetative stormwater BMPs shall include a landscape plan detailing both the vegetation to be in the practice and how and who will manage and maintain the vegetation.
- E. **Treatment Of Off-Site Stormwater.** Off-site stormwater conveyed through a land development shall be placed within an easement and conveyed in a manner that does not increase upstream or downstream flooding. Off-site stormwater shall be conveyed around on-site stormwater BMPs unless the facilities are designed to manage the off-site stormwater.

Section 420.220. Redevelopment.

[Ord. No. 3025, 8-7-2018]

- A. Land development that qualifies as redevelopment shall meet (1) one of the following criteria:
 - 1. **Reduce Impervious Cover.** Reduce existing site impervious cover by at least twenty percent (20%).

2. Provide Treatment. Provide runoff reduction and water quality treatment for at least twenty percent (20%) of the site's pre-development impervious cover and one hundred percent (100%) of any new impervious cover through stormwater BMPs designed in accordance with the criteria in this Article and the City stormwater design manual.
3. Apply Innovative Approaches. Utilize innovative approaches to reduce stormwater impacts across the site.
4. Provide Off-Site Treatment. Provide equivalent stormwater treatment at an off-site facility within the same watershed and as immediately downstream of the site as feasible.
5. Address Downstream Issues. Address downstream channel and flooding issues through channel restoration, increase in existing system capacity or other off-site remedies.
6. Combination Of Measures. Any combination of Subsection **A(1)** through **(5)** of this Section that is acceptable to the City.

Article IV. Construction Site Runoff

Section 420.230. Generally.

[Ord. No. 3025, 8-7-2018]

Grading, erosion control practices, sediment control practices, and waterway crossings shall be adequate to prevent transportation of sediment from the site. The design and construction guidance in the City stormwater design manual shall be followed insofar as it is applicable. Other pollutants shall be controlled as necessary to prevent potential discharge to waters of the state.

Section 420.240. Clearing And Grading.

[Ord. No. 3025, 8-7-2018]

- A. Clearing and grading of natural resources, such as forests and wetlands, shall not be permitted, except when in compliance with all other City regulations.
- B. Clearing techniques that retain natural vegetation and retain natural drainage patterns shall be used to the maximum extent practicable.
- C. Clearing, except that necessary to establish sediment control devices, shall not begin until all sediment control devices have been installed and have been stabilized.
- D. Cut and fill slopes shall be no steeper than 2:1, except as approved by the City to meet other community or environmental objectives.
- E. Phasing shall be required on all sites disturbing greater than thirty (30) acres, with the size of each phase to be established at plan review.
- F. Other measures may be required in order to ensure that sediment is not tracked onto public streets by construction vehicles or washed into storm drains.

Section 420.250. Erosion Control.

[Ord. No. 3025, 8-7-2018]

- A. Soil must be stabilized within fourteen (14) days of clearing or inactivity in construction, unless otherwise authorized, and shall be effectively maintained throughout the duration of any inactivity.

- B. Soil stockpiles must be stabilized or covered at the end of each work day unless otherwise protected from allowing sediment to leave the site.
- C. Techniques shall be employed to prevent the blowing of dust or sediment from the site.
- D. Techniques that divert upland runoff past disturbed slopes shall be employed.

Section 420.260. Sediment Controls.

[Ord. No. 3025, 8-7-2018]

- A. Sediment controls shall be provided in the form of settling basins or sediment traps or tanks and perimeter controls.
- B. Where possible, settling basins shall be designed in a manner that allows adaptation to provide long-term stormwater management.
- C. Adjacent properties shall be protected by the use of a vegetated buffer strip in combination with perimeter controls wherever possible.

Section 420.270. Construction Site Access.

[Ord. No. 3025, 8-7-2018]

- A. A temporary access road or driveway shall be provided at all sites.
- B. Regardless of the amount of land disturbance at a particular site, it shall be the responsibility of the permit holder or property owner to ensure streets open to the public surrounding a permitted site are kept free of debris and sediment throughout construction. Upon notification that a problem exists, the permit holder or property owner shall remedy the issue within twenty-four (24) hours.

Section 420.280. Control Of Other Construction Pollutants.

[Ord. No. 3025, 8-7-2018]

- A. Concrete Truck Washout. Concrete truck washout shall not discharge surplus concrete or drum wash water on the site except to a planned containment system, but in no case in such a manner that allows contact with stormwaters discharging from the site.
- B. Construction Waste. All construction waste material shall be collected, deposited, and stored in a manner to prevent contact with stormwaters discharging from the site and shall be disposed of by a licensed solid waste management contractor. No waste shall be buried on the site.
- C. Sanitary Waste. A licensed sanitary waste management contractor shall collect all sanitary waste from portable units that will be maintained on a regular basis for any site that cannot provide other means of sanitary waste disposal.
- D. Petroleum Products. All construction equipment and vehicles shall be monitored for leaks and receive regular preventive maintenance to ensure proper operation and reduce the risk for leaks or spills. Petroleum products shall be stored in clearly labeled and tightly sealed containers or tanks. Any soil contaminated by fuel or oil spills shall be removed and disposed of properly.
- E. Fertilizers. Fertilizers shall only be applied following proper soil sampling and the recommendations of an approved soils lab. Fertilizers shall be stored in a covered area or in watertight containers. Partially used products shall be properly sealed and stored to avoid spills or leaks.

- F. Hazardous Materials. Storage areas for hazardous materials such as oils, greases, paints, fuels, and chemicals shall be provided with secondary containment to ensure that spills in these areas do not reach waters of the state. All hazardous waste materials shall be disposed of according to state regulation or the manufacturer's recommendations.

Article V. Ongoing Maintenance For Stormwater BMPs

Section 420.290. General Maintenance Requirement.

[Ord. No. 3025, 8-7-2018]

All stormwater facilities and BMPs shall be maintained in accordance with the approved and recorded stormwater maintenance agreement and stormwater maintenance plan. If no maintenance agreement or plan is in place, the owner shall maintain the facility as it was designed in order to continue the mitigation of stormwater quantity and quality impacts. This maintenance shall include removal of overgrown vegetation, repair of erosion, repairs to any inlet/outlet structures, and removal of excess silt or any other maintenance deemed necessary to provide the mitigation. The design of stormwater facilities shall incorporate maintenance accommodation and long-term maintenance reduction features.

Section 420.300. Maintenance Responsibility.

[Ord. No. 3025, 8-7-2018]

The responsible party named in the recorded stormwater maintenance agreement (Section **420.160**) shall maintain in good condition and promptly repair and restore all structural and non-structural stormwater facilities and BMPs and all necessary access routes and appurtenances (grade surfaces, walls, drains, dams and structures, vegetation, erosion and sedimentation controls, and other protective devices) in order to maintain the mitigation of stormwater quantity and quality impacts. Such repairs or restoration and maintenance shall be in accordance with the approved stormwater management design plan, the stormwater maintenance agreement, and the stormwater maintenance plan.

Section 420.310. Inspection.

[Ord. No. 3025, 8-7-2018]

- A. The City shall be permitted to enter and inspect facilities subject to regulation under this Article as often as may be necessary to determine compliance with this Article. If the site has security measures in force which require proper identification and clearance before entry into its premises, the responsible party shall make the necessary arrangements to allow access to representatives of the City.
- B. Unreasonable delays in allowing the City access to a permitted facility is a violation of a stormwater discharge permit and of this Article.
- C. If the City has been refused access to any part of the premises from which stormwater is discharged, and is able to demonstrate probable cause to believe that there may be a violation of this Article, 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 Article 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 search warrant from any court of competent jurisdiction.

Section 420.320. Records Of Maintenance Activities.

[Ord. No. 3025, 8-7-2018]

The responsible party shall make records of the installation and of all maintenance and repairs, and shall retain the records for at least five (5) years. These records shall be made available to the director or his/her representative during inspection of the facility and at other reasonable times upon request.

Section 420.330. Failure To Provide Adequate Maintenance.

[Ord. No. 3025, 8-7-2018]

- A. In the event that the stormwater BMP has not been maintained or becomes a danger to public safety or public health, the Director shall notify the responsible party by registered or certified mail. The notice shall specify the measures needed to comply with the maintenance agreement and the maintenance plan and shall specify that the responsible party has thirty (30) days or other time frame mutually agreed to between the Director and the responsible party, within which such measures shall be completed. If such measures are not completed, then the Director shall pursue enforcement procedures pursuant to Section **420.480**.
- B. If a responsible person fails or refuses to meet the requirements of an inspection report, maintenance agreement, or maintenance plan, the Director, after thirty (30) days' written notice (except, that in the event the violation constitutes an immediate danger to public health or public safety, twenty-four-hour notice shall be sufficient), may correct a violation of the design standards or maintenance requirements by performing the necessary work to return the BMP to proper working condition. The Director may assess the responsible party for the cost of repair work which shall be a lien on the property, or prorated against the beneficial users of the property, and may be placed on the tax bill and collected as ordinary taxes by the City.

Section 420.340. Required Easements.

[Ord. No. 3025, 8-7-2018]

- A. Whenever improvements to land are made, easements for the stormwater management facilities, including structural facilities, engineered channels and overflow paths, shall be provided across private property. Easements through existing developments shall be obtained as deemed necessary. Drainage easements shall include access from a convenient public street or parking lot. Minimum dimensions are as follows:
 - 1. Where a storm drain consists of a closed conduit, the width shall be the greater of fifteen (15) feet or the sum of the conduit diameter and twice the cover depth over the conduit.
 - 2. Where the drainage system consists of an engineered channel, easements shall at a minimum be as wide as the top of bank width plus ten (10) feet each side.
 - 3. The width of the easement must contain the overflow from the one-hundred-year (one-percent annual chance) storm event and shall indicate the highest expected water surface elevation of the event.
 - 4. Access easements to and around detention/retention facilities shall be a minimum of fifteen (15) feet wide with cross slopes less than five (5) horizontal to one (1) vertical in order to be safely accessible by a vehicle unless otherwise approved by the Director.

Section 420.350. Interference And Damage.

[Ord. No. 3025, 8-7-2018]

No person shall damage, discharge or place any substance into the drainage system which will or may cause obstruction to flow or other interference with the operation of the stormwater drainage system. Any person violating this Section or damaging the stormwater drainage system shall be liable to the

City for all expense, loss or damage incurred by the City due to such violation or damage in addition to any other penalties set forth herein.

Article VI. Illicit Discharge Detection And Elimination

Section 420.360. General.

[Ord. No. 3025, 8-7-2018]

- A. Purpose. This Article is adopted pursuant to the authority granted in Sections 64.907 and 64.825 through 64.885, RSMo., and is intended to regulate non-stormwater discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This Article establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this Article are:
1. To regulate the contribution of pollutants to the municipal separate storm sewer system (MS4) by stormwater discharges by any user;
 2. To prohibit illicit connections and discharges to the MS4;
 3. To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this Article.
- B. Applicability. This Article shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted.
- C. Ultimate Responsibility. The standards set forth in this Article and promulgated pursuant to this Article are minimum standards. Compliance with this Article does not ensure that there will be no contamination, pollution or unauthorized discharge of pollutants into the waters of the United States. This Article shall not create liability on the part of the City or any agent or employee of the City for any damages that result from any discharges, reliance on this Article or any administrative decision made under this Article.
- D. Stormwater Pollution Prevention. Any owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses through the use of structural and non-structural BMPs. Further, any person responsible for a property or premises, which is, or may be, the source of an illicit discharge, may be required to implement, at the person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, shall be deemed compliant with the provisions of this Section. These BMPs shall be part of a stormwater pollution prevention plan (SWPPP) as necessary for compliance with requirements of the NPDES permit.

Section 420.370. Prohibitions.

[Ord. No. 3025, 8-7-2018]

- A. Illegal Discharges. It shall be unlawful for any person to discharge or cause to be discharged into the municipal separate storm sewer system or into any water course any material other than stormwater, except as provided below. The following discharges are exempt from the discharge prohibitions established by this Article:
1. Waterline flushing or other potable water sources;

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., the 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, the person shall immediately notify emergency response agencies (911 and MO Dept. of Natural Resources, 573-624-2436) of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, the person shall notify the City in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the City within (3) three 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 shall be retained for at least three (3) years.

Section 420.390. Regulations And Monitoring.

[Ord. No. 3025, 8-7-2018]

- A. The City Council may, by ordinance, adopt standards identifying best management practices (BMP) for any activity, operation or facility which may cause or contribute to pollution of stormwater, the storm drain system, waters of the state or waters of the United States. These standards shall be on file at the City Clerk's office. It shall be unlawful for any person undertaking any activity or owning or operating any facility subject to such standards to fail to comply with the standards.
- B. The owner or operator of a commercial or industrial establishment shall provide reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal separate storm sewer system or watercourses through the use of structural and non-structural BMPs. Any person responsible for property which is or may be the source of an illicit discharge may be required to implement additional structural and non-structural BMPs to prevent further discharge. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity to the extent practicable shall be deemed in compliance with provisions of this Section. These BMPs shall be a part of the stormwater pollution prevention plan as necessary for compliance with the requirements of the NPDES permit.

Section 420.400. Nuisance Declared.

[Ord. No. 3025, 8-7-2018]

- A. Any discharge in violation of this Article is a nuisance.
- B. Any illicit connection is a nuisance.

Article VII. Permits

Section 420.410. Promulgation Of Rules.

[Ord. No. 3025, 8-7-2018]

The Director may promulgate rules governing the issuance of the permits required by this Section and may produce forms to effectuate the intent of this Article.

Section 420.420. Stormwater Discharge Permit.

[Ord. No. 3025, 8-7-2018]

- A. **Authorization To Discharge To MS4.** If runoff from a land development will flow to a municipal separate storm sewer system (MS4) or other publicly owned storm sewer system, then the applicant shall obtain authorization from the system's owner to discharge into the system. The applicant must demonstrate that the system has adequate capacity for any increases in peak flow rates and volumes.
- B. **Permit Required.** No stormwater drainage facility shall be constructed, altered or reconstructed without a stormwater discharge permit. To obtain a permit, the application form provided by the City shall be completed and plans must be submitted for review and approval of the Director. All such construction shall comply with the general requirements and design procedures, as set forth in this Article, and the criteria of the City stormwater design manual.
- C. **Stormwater Management Plan Approval Prior To Permit Issuance.** Prior to the issuance by the City a permit for any type of construction on land greater than one (1) acre, the property owner, the developer or their agent shall have a stormwater management plan approved by the City in accordance with Article II of this Chapter **420**. The property owner, developer or their agent shall, at his/her own expense, submit necessary plans, designs and specifications to the City for review and approval. This plan shall:
 - 1. Include a pre- and post-development hydrologic analysis of the site.
 - 2. Identify pollutants of concern for each area of the site.
 - 3. Identify pollution prevention measures.
 - 4. Identify controls that provide treatment and reduce stormwater volumes and velocities.
 - 5. Identify any environmentally sensitive areas and provide a plan for protection of these areas per this Article.
 - 6. Identify low-impact development opportunities that can best mimic the natural hydrology of the site and filter pollutants from the runoff.
 - 7. Provide for long-term operation and maintenance of controls.
- D. **Provisions To Waive Plan Requirement.** Provisions of this Section for plan requirement shall be waived, provided no land is disturbed and no trees, shrubs, grass or vegetation is destroyed or removed for construction, reconstruction, repair or alteration of any building, provided the improvement does not alter or increase the flow of water.
- E. **Features To Be Shown On Plan.** The post-construction stormwater management plan shall show the location of any environmentally sensitive features, the sensitive feature's drainage area, or portions of such items, along with ground contours, a hydrologic analysis of the drainage area and significant physical features on the property, and detailed information on the work to be performed in or near the sensitive area. Upon review of the information presented by the applicant, the site, and such other information as may be available, the director may issue a permit for work to be performed in or near the sensitive area. All work shall be performed in accordance with the permit. The Director may designate certain areas where grading or construction equipment is not permitted or is otherwise limited.

Section 420.430. Land Disturbance Permit.

[Ord. No. 3025, 8-7-2018]

- A. Applicability. No clearing, grading, borrowing or filling of land resulting in a land disturbance greater than one (1) acre shall commence prior to obtaining a land disturbance permit. All such work shall also comply with an approved erosion and sediment control plan in conjunction with an approved site development plan.
- B. Individual Lots Not Separate Land Development. Residential, commercial or industrial developments shall apply these stormwater management criteria to land development as a whole. Individual residential lots in new subdivisions shall not be considered separate land development projects, but rather the entire subdivision shall be considered a single land development project.
- C. Expiration. Every approval under this Section for clearing, grading, borrowing or filling of land shall expire within two (2) years from the date of issuance. This permit may be renewed for up to two (2) years by submitting a written request for an extension to the Director with the appropriate fee as listed in Section **420.450**.

Section 420.440. Performance Bond Or Guarantee.

[Ord. No. 3025, 8-7-2018]

- A. Performance Bond Or Guarantee Required. No land disturbance permits shall be issued unless the applicant furnishes a performance bond or guarantee in the amount of one thousand dollars (\$1,000.00) per acre of disturbance. This is to ensure that action can be taken by the City, at the applicant's expense, should the applicant fail to install or maintain those measures identified in the approved stormwater management construction plan and erosion and sediment control plan in order to control the discharge of pollutants from the site and maintain public safety.
- B. Form. The form of security must be in the following form: The first five hundred dollars (\$500.00) must be cash deposit to the City. The remaining may be in the form of cash deposit, letter of credit, or a bond.
- C. Action On Security. Action on the security will only be taken after the property owner has been given a notice of violation and has not addressed the issue within the time specified by the City Stormwater Committee. If the City takes such action upon such failure by the applicant, the City shall collect from the applicant the difference should the amount of reasonable cost of such action exceed the amount of the security held. This requirement is in addition to any performance bond or guarantee required under Chapter **405**, Subdivision Regulations, of this Code. Costs of erosion and sediment control measures shall not be included in the calculation of cost for the subdivision bond. However, the performance bond or guarantee may be combined with that required under Chapter **405**.
- D. Term Of Performance Bond Or Guarantee. The performance bond or guarantee furnished pursuant to this Section, or the unexpended or unobligated portion thereof, shall be returned to the applicant within sixty (60) days of the closure of the land disturbance permit by the City. Closure will only occur after turf is established and temporary erosion control measures have been removed.
- E. Term Extended For Initial Maintenance. At the discretion of the City, the performance bond or guarantee may be extended beyond the time period specified above to cover a reasonable period of time for testing the practices during storm events and for initial maintenance activities. For the purposes of this Section, the time shall not exceed two (2) years.
- F. Partial Release Of Bond. The City shall have the discretion to adopt provisions for a partial pro-rata release of the performance bond or guarantee on the completion of various stages or phases of development.

Section 420.450. Fees.

[Ord. No. 3025, 8-7-2018]

Each developer/owner seeking a land disturbance or stormwater discharge permit shall pay a fee, upon submittal of the plans, in the amount provided in the City fee schedule.

Section 420.460. Inspection.

[Ord. No. 3025, 8-7-2018]

- A. The City May Periodically Inspect Development Sites. Through such periodic inspections, the City shall ensure that the stormwater pollution prevention plan (SWPPP) is properly implemented and any necessary amendments thereto made in order to protect the environment and the public's health, safety and welfare. The erosion and sediment control measures for the site must be maintained by the developer until the site is stabilized.
- B. The permittee shall notify the City at least two (2) working days before the start of site clearing.
- C. The permittee or his/her agent shall make regular inspections of all control measures in accordance with the inspection schedule outlined on the approved erosion and sediment control plans or in the stormwater pollution prevention plan (SWPPP). The purpose of such inspections will be to determine the overall effectiveness of the control plan and the need for additional control measures or maintenance of existing measures. All inspections shall be documented in written form and kept readily on site.

Article VIII. Violations, Enforcement And Penalties

Section 420.470. Violations And Penalties For Permits.

[Ord. No. 3025, 8-7-2018]

- A. The City may suspend or revoke any permit associated with the site or any permit associated with the persons holding the permits for the site for non-compliance with the land disturbance permit.
- B. Procedure.
 - 1. Upon discovery of a violation of this Article, the contractor will be notified and given up to seven (7) days to remedy the violation in a land disturbance permit. Extensions of time may be granted in the Director's sole discretion.
 - 2. If the violation has not been remedied within the time frame set forth in the notice, a stop-work order may be issued and the permits will be suspended. The stop-work order shall state the reason for the order and the conditions under which the order and suspension will be lifted.
 - 3. Any person who shall continue to engage in activity for which a permit is required after having been served with a stop work order, except in such work as that person is directed to perform to remove a violation or unsafe condition, shall be a violation of this Article.
 - 4. After two (2) stop-work orders of a permit for the same site for similar violations, the permits shall be revoked. All applicable procedures will have to be followed for reissuance of the permits. Additionally, any remediation or abatement costs will be required to be paid prior to reissuance.
 - 5. If the stop-work order has not been lifted through compliance with its terms within thirty (30) days from the date of its issuance, the permit shall be revoked and the violations deemed a nuisance. All applicable procedures will have to be followed for reissuance of the permits. Additionally, any remediation or abatement costs will be required to be paid prior to reissuance.

6. A person aggrieved by a decision to revoke any permit provided for herein may appeal the revocation to the City Board of Adjustment.
- C. Engaging in activity requiring a permit without first obtaining such permit shall be a violation of this Article.

Section 420.480. Administration, Penalties And Remedies.

[Ord. No. 3025, 8-7-2018]

- A. Responsibility For Administration. The provisions of this Article shall be administered and enforced by the Director. The Director shall prescribe forms for attainment of the purposes of this Article and for the proper enforcement thereof. The Director may delegate the administration of this Chapter, or any part thereof, subject to limitations of the ordinances of the City, to duly qualified employees, deputies or agents of the City.
- B. Interpretation. The provisions of this Chapter shall be the minimum requirements for the protection of the public health, safety and general welfare and shall be liberally and broadly construed and applied to the greatest extent permitted by law in order to promote and protect the public health, safety and welfare. These regulations are not intended to conflict with, abrogate or annul any other rule, law or regulation. Where any provisions of these regulations impose restrictions different than from those imposed by any other regulation, rule or law, the provision which is more restrictive or imposes a higher standard shall control. These regulations are intended to be construed harmoniously and consistently with each other, the City stormwater design manual, and all other applicable rules, laws and regulations.
- C. Severability. If any part or provision of these regulations is declared invalid or unconstitutional then the remainder of these regulations shall not be declared invalid or unconstitutional but shall remain in full force and effect to the greatest extent permitted by law.
- D. Penalties And Remedies. In addition to any specific penalties set forth in individual Sections, any person found guilty of violating the provisions of this Chapter shall, upon conviction, be fined not more than five hundred dollars (\$500.00) and in addition shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the City or other appropriate authority from taking such other lawful action as is necessary to prevent or remedy any violation. Where a violation is declared a nuisance, all policies and procedures set forth in Chapter **215**, Nuisances, of this Code, shall apply.

Section 420.490. Variances.

[Ord. No. 3025, 8-7-2018]

- A. General. Where undue hardships or practical difficulties may result from strict compliance with this Chapter, the developer may file an application for a variance. The applications shall be directed to the City Board of Adjustment organized and existing under the zoning regulations of the City, which shall have jurisdiction and shall be charged with the duty of hearing and deciding applications for variances from the strict application of the provisions of this Chapter. The Board may grant a variance only if it finds after public hearing and upon competent and substantial evidence that the applicant meets the following criteria:
 1. The variance shall not have the effect of nullifying the intent and purpose of this stormwater chapter.
 2. The granting of the variance will not be detrimental to the public safety, health or welfare, or injurious to other property or improvements.

3. The conditions upon which the request for a variance is based are unique to the property for which the variance is sought, are not applicable generally to other property, and are not self-imposed.
 4. Because of the particular physical surroundings, shape or topographical conditions of the specific property involved, a particular hardship to the owner would result, as distinguished from a mere inconvenience, if this Chapter was strictly interpreted and carried out.
- B. Conditions. In recommending variances and exceptions, staff may recommend and the Board may require such conditions as will, in the judgment of each, secure substantially the objectives of the standards or requirements of this Chapter.
- C. Application. An application for a variance shall be submitted at the time of filing for a preliminary plat or for application for a building permit, whenever possible. The application shall be on forms provided by the City and shall state fully the grounds for the request and all facts relied upon by the practitioner. The application shall be filed with the Director and after review thereof the Director shall make a recommendation to the Board to grant or deny the application and state the reasons for his/her recommendation. Either the applicant or the Director may appeal or seek judicial review of any decision of the Board as provided by law.

EXHIBIT 7

OPERATION & MAINTENANCE PLAN STREET DEPARTMENT

Stormwater Pollution Prevention Plan (SWPPP)
Operations & Maintenance Plan
Street Department

This SWPPP must be kept on-site and should not be sent to the Missouri Department of Natural Resources unless specifically requested, but is part of the City SWPPP and shall be updated regularly. The City Department shall select, install, use, operate, and maintain Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

Storm Water Management For Industrial Activities, Developing Pollution Prevention Plans and Best Management Activities. (Document number EPA 832-R-92-00) published by the United States Environmental Protection Agency (USEPA) in September 1992.

SWPPP Requirements

- (a) An assessment of all storm water discharges associated with municipal street and road maintenance, and activities listed in 5.2.
- (b) An assessment for the purpose of evaluating how to reduce pollutants and recycle materials used during the activities at this site.
- (c) A listing of Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter the storm water system.
- (d) A schedule for implementing the BMPs if necessary.
- (e) The SWPPP must include a schedule for monthly site inspections and written explanation of any deficiencies found and corrective measures that will be taken. Deficiencies must be corrected within seven (7) work days, and recorded in the monthly inspection report. If a deficiency is found, in additional copy will be sent to the City Storm Water Co-Chairman. All corrective actions must be made available to DNR during annual inspections or at any other time requested.
- (f) The designation of an individual to be responsible for environmental matters.

Owner / Operator contact information

Owner:	City of Kennett
Owners address:	200 Cedar Street, Kennett, MO 63857
Facility name:	Street Department
Facility address:	813 East Fifth Street, Kennett, MO 63857
Legal Description:	Part of the SW1/4NW1/4Sec1 Beg. 20' S of 1024.7 ft E of NW corner of SW1/4
Latitude / Longitude:	36.232429 - 90.047343
Receiving stream:	Buffalo Ditch
First Classified Stream ID:	
USGS Basin & Sub-watershed #:	

1.0 General Facility Description

The Street Department is located at 813 East Fifth Street and is approximately 13.25 acres in two separate tracts. The buildings and operational area of the department is located inside a fenced in area consisting of 3.25 acres on the west side of Buffalo Ditch. The property consisting of 10 acres is located directly across (east side) Buffalo Ditch. The 10 acres are addressed in *Appendix A*.

The total impervious area of the Operational area is 33,494 sq. ft. or 0.7689 A. consisting of 4 building, a concrete apron in front of one of the buildings, a asphalt parking area for employee vehicles, a carport roof over the secondary fuel containment, a concrete pad for a dual wall military spec fuel tank, a concrete pad that was used in the past to wash the street sweeper and occasionally equipment and the old sanitary sewer clarifier area. *Appendix B*

2.0 Fuel and Fluid Storage

- 2.1 There is a 5,000 gallon diesel storage tank. This is a former military storage tank that is double walled and therefore is not within a secondary containment, it is located on a concrete pad.
- 2.2 There are two 1,000 gallon gasoline storage tanks located within a concrete secondary storage containment. Only one of these tanks is in use because of ethanol in the gasoline today does not allow for long term storage of the fuel before the gasoline starts to deteriorate.
- 2.3 Inside the secondary containment is a 300 gallon used oil storage tank. Only Street Department used oil is located in this tank. The secondary containment is still correct in size with only one gas tank in use. There is a covering for the secondary containment. *Appendix B and I*.
- 2.4 Smaller containers of fluids are all stored inside buildings (primarily Building A) in containers suitable for the products. All containers whether portable or fixed will have secondary containment for spill and leak control. This will be accomplished by containment pallets, interior walls or properly sized containment pans with absorbent products stage at various locations around the maintenance work area.

3.0 Buildings

- 3.1 ~~As an old sanitary sewer facilities there is an old pump house remaining because of drinking water pipes still connected and running through the building. This building is used only for extra storage of none pollutants.~~
~~The old sanitary sewer clarifier, used for gravel, chat, sand and asphalt storage.~~
~~*Appendix D. C*~~
- 3.2 Operational work area, consisting of 7 bays, a small storage area, bathroom and office.
~~*Appendix D*~~
- 3.3 Equipment storage building consisting of 4 bays, one of which is a wash bay, with the floor drain connected to the sanitary sewer. ~~*Appendix E*~~

- 3.4 Office building, consisting of two offices, GIS/GPS and sign making room, training room, small storage area and bathroom.

Appendix ~~A~~ *F*

4.0 Drainage for the area

- 4.1 The old wash pit drain inlet (uncovered) is located in the northeastern part of the operational property. This location is not used except to fill water tanks that will transport the water off site.

- 4.2 There is also a drain inlet located in the southwestern part of the operational property. This was installed in the early 1979's and drains an area in front of building A.

Appendix ~~B~~ *G*

5.0 Activities performed at the Kennett Street Department

There have been no significant spills or leaks of toxic or hazardous materials at this site over the past ten (10) years.

- 5.1 While the Street Department does maintenance and construction on the City streets there is very limited road maintenance and construction done at this site.

5.2 General Activities for Public Works/Street Departments

	Applies	Does Not Apply
Building maintenance	<u>X</u>	_____
Ground maintenance	<u>X</u>	_____
Fuel storage	<u>X</u>	_____
Equipment & vehicle maintenance	<u>X</u>	_____
Equipment & vehicle fueling	<u>X</u>	_____
Equipment & vehicle cleaning	<u>X</u>	_____
Storage of road material	<u>X</u>	_____
Culvert / sign post storage	_____	<u>X</u>
Road salt / deicer material	_____	<u>X</u>
Dust Control	<u>X</u>	_____
Mow & Bush-hog open areas	_____	<u>X</u>
Repair concrete streets & sidewalks	_____	<u>X</u>
Repair asphalt streets	_____	<u>X</u>
Paint lines & arrows on streets	_____	<u>X</u>
Remove debris from storm water D I s	<u>X</u>	_____
Install & replace culverts	_____	<u>X</u>
Street Sweeper operation	<u>X</u>	_____
Grade & maintain gravel streets	_____	<u>X</u>

Building maintenance -

Buildings are metal and do not have to be painted, drainage from the buildings is consistently observed. Building A gutters are checked for blockage from leaves and sand from time to time, one side empties onto sod, the front side empties onto the concrete apron attached to the building. Building B has an underground catch basin to

receive most of the storm water falling on this building. Building C has no gutters on the building, roof drains onto sod. *Appendix B*

Ground maintenance -

Routine maintenance consists of normal mowing of the grounds, weed eating and leveling of the gravel parking lot. Minimal herbicide products are applied by Street Department employee (only by employees with a current State Private Pesticide License) to the fence line and possibly under stored items. Herbicides are applied following manufacture's and the Missouri Department of Agriculture instructions. Herbicides are stored inside.

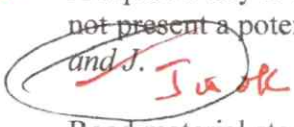
Equipment & vehicle maintenance -

Maintenance is completed inside the buildings unless a breakdown occurs and the equipment can not be pushed or hauled into one of the buildings (rare). Therefore this activity does not present a potential for storm water runoff contamination.

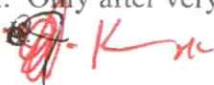
Equipment & vehicle fueling -

All fueling is done at the storage tanks as noted in *Appendix B and I*. 

Equipment & vehicle cleaning (washing) -

A separate bay is set aside for all cleaning of equipment and vehicles. This activity does not present a potential for storm water runoff contamination. Building B. *Appendix B and J*. 

Road material storage -

All gravel, chat, sand, cold asphalt patch material is stored within the old concrete sanitary sewer classifier. Only after very large rains is there a discharge of storm water. *Appendix B and K*. 

Culvert pipe & sign post storage -

Galvanized and plastic pipe is currently stored on the ground. Galvanized sign posts are stored on a concrete pad. Neither create possible storm water runoff contamination potential.

Dust Control – Speed for trucks and equipment is limited to 10 mph at the Street Department. This action does greatly reduce the potential for dust leaving the City property.

5.3 Existing Structural Controls (BMP's)

Roofed/Indoor Storage: Where possible, activities and materials are stored under roof, thereby eliminating contact with storm water. No de-icing or anti-icing materials are used at the Street Department or on City streets.

Wash Bay
Photo needed

Underground Storage: A chamber system is utilized for storm water in one of the buildings at the Street Department. *Appendix B.*

Secondary Containment: This BMP is utilized for bulk fuel storage of gasoline and diesel fuels. *Appendix B and I.*

Designated Washing area: The Kennett Street Department has designated a wash bay in building B. The area is connected to the City sanitary sewer system. *Appendix B and I.*

Designated Dumpster area: The designated area for the trash dumpster is always in a dirt area near the old wash pad. The dumpster is inspected at least weekly and the trash company is asked regularly to check and be sure that the dumpster is in good shape and meets current standards.

Employee Training: Employee training is a yearly activity that takes place to educate the employees on storm water issues. The employee training records are located in the current year MIRMA notebook located in Building A. It is an important part of the training program to keep employees knowledgeable of the current status of the storm water program since they are an important part of the program. This training is an important BMP for their construction work but also for them to be able to identify sources/locations that might be an issues before they become serious. Annual training records will be made available to MO DNR at the time of the annual inspection.

Lay out of the property: There is a very small amount of storm water that exits the property via a drain inlet on the property. Most of the property is positioned so that rain fall remains on the property unless it is a very large rain event and basically all of this amount is exits over a sodded area.

5.4 Spill Prevention and Control -

Minor spills can have an a cumulative effect that adds up to a significant source of potential pollutants in your storm water discharge. The best approach by far is to prevent spills and leaks: maintain a regular inspection and repair schedule, and correct potential spill situations before a spill can occur.

5.5 Outdoor Process Equipment Operations and Maintenance -

All equipment and outdoor process will be inspected monthly during the visual checklist inspection. If issues are found with the equipment or outdoor process it will be noted in the monthly inspection report and corrected.

5.6 Outdoor Materials Storage and Handling -

Materials of concern including gravel, chat, sand, asphalt and lumber. The first three (3) items are stored outside in uncovered areas. The road materials are stored inside a contained area, following a very large rain, storm water discharge does leave the property from time to time. Lumber is stored under roof (carport at gasoline fueling location).

5.7 Waste Handling & Disposal -

While there are many types of waste that could be listed, the most common is business trash (paper, plastic & cardboard), scrap metal and waste oil. There is a dumpster located on site to handle the business trash (some paper and plastic is recycled) only approved items are placed in the dumpster, scrap metal and metal parts are collected and recycled at a scrap metal dealer in town and waste oil is recycled with an approved (licensed) waste hauler when an adequate quantity has been collected.

5.8 Fueling area -

The fueling of vehicles and equipment takes place on chat rather than a impervious surface. All of the fuel nozzles have automatic shut offs and the employee is not allowed to leave the immediate area of the fueling while the fuel is being transferred to the vehicle and equipment fuel tanks.

5.9 Inspections -

Monthly visual inspections are conducted on the first work day of each month as part of the directive to start all vehicles, equipment, small engines and generators. To check needed and emergency supplies, pick up and straighten as needed. Each Friday the employees do basic cleaning of both building A & B and during this time should located issues that need addressing if they have not already been identified.

Semi-Annual / twice a year visual inspections of the Street Department ~~outfalls~~ ^{drain inlets} are conducted at different times during the year due to water levels in the drainage ditches. The results of these inspections will be recorded (*Appendix I*). Each year during the Department of Natural Resources annual inspection of the City they will be able to review them.

6.0 **Significant Spill Response**

6.1 Minor Spill Response -

When a fluid spills occurs, the worker nearest the spill should take immediate action to contain the fluid if it can be done safely by up-righting the container or closing a valve. Followed by spreading oil absorbent material around the edges and then over the spill, or the use of absorbent rolls and pads following this same procedure. Manufactures' methods for spill containment & cleanup of a material will be followed as described on the material's SDS, unless directed differently by emergency response personnel / agencies.

6.2 Larger Spill Response ** Emergency Response -

The first call should be to the local 911 dispatch & request a response from the Kennett Fire Department to a Hazardous Material incident. Then notify the Street Commissioner or supervisor who is in town. Document what has happened and response actions. The scene should be turned over to the Kennett Fire Department upon there arrival, supporting there activity with Street Department personnel and equipment as needed. The Fire Department utilizes the latest version of the Emergency Response Guidebook (ERG) and other locally

available resource materials as well as the MDNR 24 hour Emergency Spill Line (573-624-2436). The Kennett Fire Department will determine the best response if needed & contact MO DNR Emergency Spill Line if the spill is a reportable quantity or if additional support is needed. The Fire Department has a Hazardous Material resource trailer supplied by the Bootheel LEPC at the Fire Department for additional supplies.

Under NO situation will any spill (regardless) of the material be washed away. Dry material should not be swept into grass or a paved area and washed away by employees, responders or by rain.

6.3 Material Management Practices

Properly managing these materials on a daily bases will greatly reduce the potential for storm water pollution of theses materials. Good Housekeeping along with proper use and storage of these materials form the basis for proper management of pollutants (including hazardous material(s) or potentially hazardous material).

6.4 Good Housekeeping / Pollution Prevention

To accomplish the goals set forth in this SWMP the Street Department will continue a number of established procedures. These procedures including the proper use of materials and equipment along with the use of general common sense greatly reduces the potential for contaminating storm water runoff. The following is a list of good housekeeping practices to be used during day to day operations:

- (a) The storage of hazardous materials, chemicals, fuels, oil based products and fueling of vehicles and equipment, shall not be performed within 60 feet of a drainage inlets, receiving ditch, wetland or sensitive area or water supply well.
- (b) Maintain and update SPCC Plans
- (c) Maintain and update Standard Operating Procedures
- (d) Maintain and update SDS information as needed but at least annually
- (e) Materials stored on site will be stored in a neat, orderly manner in their appropriate containers and if practical stored in a covered area.
- (f) Products will be stored in original containers with the original manufacture's label.
- (g) Substances will not be mixed with one another unless recommended by the manufacture.
- (h) Whenever possible, all of the product will be used before disposing of the container and in the case of herbicides, they will be triple rinsed before disposal.
- (i) If surplus product must be disposed of, manufacture's or local and state recommended methods for proper disposal will be followed.

7.0 Sediment and Erosion Prevention

Two areas most likely to have sediment loss are the material's storage area (clairfier) and the area of chat adjoining the concrete pad at Building A. These were both constructed before 1975 and storm water issues were not of a concern. As funding becomes available an additional concrete pad will be poured to extend the concrete apron on the north side of Building A. The plan is to slope the new pad so as to create a swale for the runoff from the guttering on Building A will not run onto the chat before flowing to the storm drain inlet off the corner of Building B. This DI was built with a Sediment bottom in it to assist in reducing the amount of sediment going into the storm water drainage system. The material's storage area will be more difficult to add a BMP to it since the bottom is below the surrounding ground level. At this time no plan has been developed to address this location.

Google Maps



Imagery ©2018 Google, Map data ©2018 Google 100 ft



Work



Set a home address

Updated 1 min ago

Appendix A

Google Maps



Imagery ©2018 Google, Map data ©2018 Google 50 ft



Work



Set a home address

Updated 1 min ago



Appendix B

EXHIBIT 8

FACILITIES STORMWATER INSPECTION CHECKLIST

STORMWATER FACILITY GENERAL INSPECTION

FACILITY _____ DATE _____

GOOD HOUSEKEEPING

	YES	NO	N/A
1. ARE OUTSIDE AREAS KEPT NEAT, CLEAN, AND ORDERLY?			
2. ARE GARBAGE CANS, DUMPSTERS COVERED?			
3. ARE STORMWATER DRAINAGE PATHS CLEAR?			
4. ARE VEHICLES OR EQUIPMENT CLEANED AT FACILITY?			
4a. IF YES ARE BMP'S OBSERVED?			

HAZMAT STORAGE

5. ARE VEHICLES FUELED AT THIS LOCATION?			
5a. IF YES ARE FUEL TANKS LOCKED AND/OR PROPERLY OPERATED			
5b. IF YES ARE STORM DRAINS PROTECTED FROM SPILLS?			
6. DO ABOVE GROUND TANKS HAVE SECONDARY CONTAINMENT?			
7. ARE CONTAINMENT STRUCTURES LIQUID TIGHT?			
8. DOES THIS SITE STORE HAZARDOUS MATERIALS SUCH AS SOLVENTS, PESTICIDES, OR ACIDS?			
8a. IF YES ARE CONTAINERS WEATHERTIGHT OR COVERED?			
9. HAS THE FACILITY HAD A HAZARDOUS WASTE SPILL SINCE THE LAST INSPECTION?			
9a. IF YES, WAS THE PROBLEM RESULTING IN THE SPILL CORRECTED?			

OTHER BEST MANAGEMENT PRACTICES

	YES	NO	N/A
10. DOES THIS SITE STORE HAZARDOUS OR OTHER MATERIALS THAT COULDIMPACT THE STORM DRAIN SUCH AS DETERGENT, PAINT, OR POWDERS?			
10a. IF YES ARE THEY STORED IN A MANNER PROHIBITING EXPOSURE TO RAIN OR RUNOFF?			
11. ARE WASTE MATERIALS KEPT ON SITE IN LEAKTIGHT CONTAINERS?			
12. ARE ERODABLE SOILS UNCOVERED OR EXPOSED TO RAINWATER?			
13. IS THE GROUND SURFACE STAINED BY OIL OR SIGNIFICANT MATERIALS?			
13a. IF YES HAS THE SOURCE BEEN FOUND AND CONTAINED?			
14. HAS THE FACILITY RECEIVED A COMPLAINT REGARDING STORMWATER DISCHARGE?			
14a. IF YES HAS THE PROBLEM BEEN ADDRESSED?			
15. HAVE PERSONNEL RECEIVED TRAINING ON STORMWATER POLLUTION PREVENTION?			
16. ARE SPILL RESPONSE MATERIALS AVAILABLE?			

COMMENTS_____

INSPECTOR_____

EXHIBIT 9

STORMWATER PERMIT APPLICATION

STORMWATER PERMIT APPLICATION

City of Kennett, MO

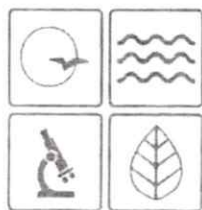
Property Owner	Contractor
Name:	Name:
Address:	Address:
Contact Person:	Contact Person:
Phone:	Phone:
Project Name:	
Location:	
Total Acres Being Disturbed:	
By signing below, applicants hereby apply for a Kennett Stormwater Permit for the aforementioned property and certify as follows: 1. To the best of my knowledge, the information provided in this permit application and included documents is correct; 2. I certify I am legally authorized to sign on behalf of and bind the above-listed entity. The Stormwater Permit is granted with the explicit understanding that it is the Permittee's responsibility to: 1. Allow Kennett unrestricted access to the site to conduct regular site inspections; 2. Comply with all stormwater requirements of the City of Kennett Municipal Codes including land disturbance, illicit discharge, and post-construction stormwater control.	
Property Owner	Contractor
Signature:	Signature:
Print Name:	Print Name:
Date:	Date:

Permit Approval (City Use Only)	
Name:	Title:
Signature:	Date:

EXHIBIT 10

DNR STORMWATER PERMIT

MOR04C017



Missouri Department of dnr.mo.gov
NATURAL RESOURCES
Michael L. Parson, Governor Dru Buntin, Director

October 7, 2021

City of Kennett
200 Cedar St
Kennett, MO 63857

Dear City of Kennett:

Pursuant to the Federal Water Pollution Control Act, under the authority granted to the State of Missouri and in compliance with the Missouri Clean Water Law, we have issued and are enclosing a General State Operating Permit for Kennett Small MS4. This letter also serves as notification that Missouri State Operating Permit Number MO-R040069 is hereby terminated

This permit may include requirements with which you may not be familiar. If you would like the Missouri Department of Natural Resources (Department) to meet with you to discuss how to satisfy the permit requirements, an appointment can be set up by contacting this office at 573-840-9750. These visits are called Compliance Assistance Visits (CAV) and focus on explaining the requirements to the permit holder.

This General Permit is both your federal discharge permit and your new state operating permit and replaces all previous state operating permits and letters of approval for the discharges described within. In all future correspondence regarding this permit, please refer to your general permit number as shown on page one of your permit.

As a permitted MS4 you are required to submit your Stormwater Management Program (SWMP) report on an annual basis as outlined in Part 5.3 MS4 Stormwater Management Program Report of your permit. The outfall(s) identified in the permit are listed as representative outfall(s) and are only a subset of the MS4s outfalls. The permittee is responsible for mapping the location of all outfalls for incorporation into the SWMP as outlined in Part 4. Minimum Control Measures of your permit

The requirements found in this permit do not supersede nor liability for compliance with other federal, state, county, or local statutes, regulations, or ordinances. Also, any exemptions found in this permit do not imply an exemption from other permits from the Department. It is your responsibility to insure that any and all necessary permits for this facility have been obtained.

If you were adversely affected by this decision, you may be entitled to an appeal before the administrative hearing commission pursuant to Sections 644.051.6 and 621.250, RSMo. To



STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

General Operating Permit

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No: MOR04C017
Owner: City of Kennett
Address: 200 Cedar St
Kennett, MO 63857

Continuing Authority: City of Kennett
200 Cedar St
Kennett, MO 63857

Facility Name: KENNETT SMALL MS4
Facility Address: 200 CEDAR ST
KENNETT, MO 63857

Legal Description: See Page 2
UTM Coordinates: See Page 2
Receiving Stream: See Page 2
First Classified Stream ID#: See Page 2
USGS# and Sub Watershed#: See Page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein.

FACILITY DESCRIPTION All Outfalls SIC #9511

All Outfalls - Stormwater discharges from Regulated Phase II Municipal Separate Storm Sewer Systems.
Comprehensive permit

SIC 9511/NAICS 924110

This permit authorizes only wastewater, including storm water, discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System, it does not apply to other regulated areas. This permit may be appealed in accordance with RSMo Section 644.051.6 and 621.250, 10 CSR 20-6.020, and 10 CSR 20-1.020.

October 01, 2021

Issue Date


Edward B. Galbraith, Director
Division of Environmental Quality

September 30, 2026

Expiration Date


Arthur Goodin, Regional Director
Southeast Regional Office

appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission. Contact information for the AHC is as follows: Administrative Hearing Commission, Third Floor, 131 West High Street, Jefferson City, MO 65101 (Mailing address: PO Box 1557, Jefferson City, MO 65102-1557), Phone: 573-751-2422, Fax: 573-751-5018, Website: www.oa.mo.gov/ahc.

If you have any questions concerning this permit, please contact Michael Donley at (573) 840-9364 or if you should have questions concerning discharge monitoring reporting, please contact Marletta Cozad at (573) 840-9794 at the Southeast Regional Office at 2155 North Westwood Blvd., Poplar Bluff, MO 63901.

Sincerely,

Southeast Regional Office

A handwritten signature in black ink, appearing to read 'AGD', is positioned above the typed name of the signatory.

Arthur Goodin, CHMM
Regional Director

AG/mdk

Outfall Number: 001
Legal Description: Sec. 31, T19N, R10E, Dunklin County
UTM Coordinates: 767835.752/4014960.726
Receiving Stream: West Ditch(P)
First Classified Stream - ID#: West Ditch (P) 3111.00
USGS# and Sub Watershed#: 08020204 - 0506

Outfall Number: 002
Legal Description: Sec. 06, T18N, R10E, Dunklin County
UTM Coordinates: 766660.163/4012957.289
Receiving Stream: Tributary to West Ditch(U)
First Classified Stream - ID#: West Ditch (P) 3111.00
USGS# and Sub Watershed#: 08020204 - 0506

Outfall Number: 003
Legal Description: Sec. 02, T18N, R09E, Dunklin County
UTM Coordinates: 763794.685/4013702.256
Receiving Stream: Pole Cat Slough(P)
First Classified Stream - ID#: Pole Cat Slough (P) 3120.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 004
Legal Description: Sec. 02, T18N, R09E, Dunklin County
UTM Coordinates: 763693.110/4013570.745
Receiving Stream: Tributary to Pole Cat Slough(U)
First Classified Stream - ID#: Pole Cat Slough (P) 3120.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 005
Legal Description: Sec. 02, T18N, R09E, Dunklin County
UTM Coordinates: 763661.001/4013477.713
Receiving Stream: Pole Cat Slough(P)
First Classified Stream - ID#: Pole Cat Slough (P) 3120.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 006
Legal Description: Sec. 02, T18N, R09E, Dunklin County
UTM Coordinates: 763632.989/4013370.710
Receiving Stream: Pole Cat Slough(P)
First Classified Stream - ID#: Pole Cat Slough (P) 3120.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 007
Legal Description: Sec. 02, T18N, R09E, Dunklin County
UTM Coordinates: 763599.969/4013320.648
Receiving Stream: Pole Cat Slough(P)
First Classified Stream - ID#: Pole Cat Slough (P) 3120.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 008
Legal Description: Sec. 02, T18N, R09E, Dunklin County
UTM Coordinates: 763487.811/4013094.371
Receiving Stream: Pole Cat Slough(P)
First Classified Stream - ID#: Pole Cat Slough (P) 3120.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 009
Legal Description: Sec. 03, T18N, R09E, Dunklin County
UTM Coordinates: 763232.645/4012818.633
Receiving Stream: Pole Cat Slough(P)
First Classified Stream - ID#: Pole Cat Slough (P) 3120.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 010
Legal Description: Sec. 03, T18N, R09E, Dunklin County
UTM Coordinates: 763208.008/4012747.217
Receiving Stream: Pole Cat Slough(P)
First Classified Stream - ID#: Pole Cat Slough (P) 3120.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 011
Legal Description: Sec. 31, T19N, R10E, Dunklin County
UTM Coordinates: 767128.116/4015908.686
Receiving Stream: Tributary to Buffalo Ditch Number 39(U)
First Classified Stream - ID#: 100K Extent-Remaining Streams (C) 3960.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 012
Legal Description: Sec. 31, T19N, R10E, Dunklin County
UTM Coordinates: 766999.669/4015611.052
Receiving Stream: Tributary to Buffalo Ditch(C)
First Classified Stream - ID#: 100K Extent-Remaining Streams (C) 3960.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 013
Legal Description: Sec. 31, T19N, R10E, Dunklin County
UTM Coordinates: 766862.345/4015595.957
Receiving Stream: Tributary to Buffalo Ditch(C)
First Classified Stream - ID#: 100K Extent-Remaining Streams (C) 3960.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 014
Legal Description: Sec. 36, T19N, R09E, Dunklin County
UTM Coordinates: 766354.360/4015539.634
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 015
Legal Description: Sec. 36, T19N, R09E, Dunklin County
UTM Coordinates: 766219.625/4015488.513
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 016
Legal Description: Sec. 36, T19N, R09E, Dunklin County
UTM Coordinates: 766065.634/4015211.260
Receiving Stream: Tributary to Buffalo Ditch(U)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 017
Legal Description: Sec. 36, T19N, R09E, Dunklin County
UTM Coordinates: 766055.157/4015173.628
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 018
Legal Description: Sec. 36, T19N, R09E, Dunklin County
UTM Coordinates: 766008.275/4015071.348
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 019
Legal Description: Sec. 36, T19N, R09E, Dunklin County
UTM Coordinates: 765865.886/4014773.495
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 020
Legal Description: Sec. 36, T19N, R09E, Dunklin County
UTM Coordinates: 765627.937/4014346.445
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 021
Legal Description: Sec. 36, T19N, R09E, Dunklin County
UTM Coordinates: 765608.961/4014258.187
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 022
Legal Description: Sec. 01, T18N, R09E, Dunklin County
UTM Coordinates: 765554.638/4014159.657
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 023
Legal Description: Sec. 01, T18N, R09E, Dunklin County
UTM Coordinates: 765551.675/4014089.399
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 024
Legal Description: Sec. 01, T18N, R09E, Dunklin County
UTM Coordinates: 765530.737/4014037.912
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 025
Legal Description: Sec. 01, T18N, R09E, Dunklin County
UTM Coordinates: 765484.877/4013942.354
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 026
Legal Description: Sec. 01, T18N, R09E, Dunklin County
UTM Coordinates: 765454.232/4013856.356
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 027
Legal Description: Sec. 01, T18N, R09E, Dunklin County
UTM Coordinates: 765426.906/4013758.603
Receiving Stream: Buffalo Ditch(C)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

Outfall Number: 028
Legal Description: Sec. 35, T19N, R09E, Dunklin County
UTM Coordinates: 764646.939/4014380.349
Receiving Stream: Tributary to Buffalo Ditch(U)
First Classified Stream - ID#: Buffalo Ditch (C) 3119.00
USGS# and Sub Watershed#: 08020204 - 0802

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PART 1. PERMIT COVERAGE AND APPLICABILITY

This permit is for coverage under this Comprehensive General Permit for Phase II MS4s

- 1.1.A Permit Area:** This Missouri State Operating Permit (permit) covers all areas served by a Municipal Separate Storm Sewer System (MS4) for which the applicant is identified as the Continuing Authority.
The Permit Area may change based upon areas incorporated into or removed from the permittee's jurisdictional area during the term of this permit, or expansion of the Urbanized Area. Areas added shall be covered under this permit and noted in the Stormwater Management Plan.
- 1.1.B Applicability:** This permit authorizes discharges of stormwater from regulated MS4s, as defined in 10 CSR 20-6.200(D)24. This permit also authorizes the discharge of stormwater commingled with flows contributed by process wastewater, non-process wastewater, or stormwater associated with industrial activity provided such discharges are authorized under separate National Pollutant Discharge Elimination System (NPDES) permits or no exposure certification as defined in 10 CSR 20-6.200(C).
The permittee, or co-permittee, is authorized to discharge under the terms and conditions of this general permit if the permittee:
1. Owns or operates a regulated Small MS4 as defined in 10 CSR 20-6.200 (D)16;
 2. Also is located in the Urbanized Area (UA) as defined by the most recent U.S. Census for which the applicant is identified as the Continuing Authority with a population of at least 1,000;
 3. OR inside the municipal corporate limits of a jurisdiction with a population of at least ten thousand (10,000) and a population density of one thousand (1,000) people per square mile or greater;
 4. OR is inside the service area of a publicly owned separate storm sewer system designated by the Department if it is determined that its discharges from the MS4 have caused, or have the potential to cause, an adverse impact on water quality.
- 1.1.C Categories of Regulated Small MS4s under this comprehensive permit.**
This comprehensive permit categorizes MS4s by the following categories, or Groups, based on the population served as determined by the most the recent Decennial Census at the time of permit issuance, the type of Regulated MS4, and the co-permittee situation.

Group A	Group B	Group C
Traditional Small MS4s (cities) that serve a population of less than 10,000 within a UA; OR	Traditional Small MS4s that serve a population of at least 10,000 but less than 40,000; OR	Traditional Small MS4s that serve a population of 40,001 or more; OR
Class 2 counties; Non-traditional such as Universities, Federal facilities.	Class 1 counties	Co-permit Small MS4s

This is the Comprehensive General Permit to cover Group A, B, and C MS4s.

The population of a Small MS4 may change during the permit term. However, the Group designation of a regulated MS4 will not change during the permit term based on population fluctuation.

1. The Group designation of a regulated MS4 is based on the most recent Decennial Census at the time of permit issuance. Results of the national Census held during a permit term will not affect the Group of an MS4 until the next permit renewal unless the permittee joins another MS4 as co-permittee.
2. For the purpose of this section "serve a population" means the residential population within the regulated portion of the Small MS4 based on the most recent Decennial Census.

- 1.1.D Authorized discharges:** The following are types of discharges authorized by this permit:
1. *Stormwater discharges.* This permit authorizes stormwater discharges to waters of the state from the regulated MS4 identified in Section 2.1.A except as excluded in Section 2.1.F of this permit.
 2. *Non-Stormwater discharges.* The permittee is authorized to discharge the following non-stormwater sources provided the permitting authority has not determined these sources to be substantial contributors of pollutants to the permittee's MS4:
 - Water line flushing;
 - Landscape irrigation and lawn watering;
 - Diverted stream flows;
 - Rising ground waters and springs;
 - Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(b)(20));
 - Discharges from potable water sources;
 - Foundation or footing drains;

- Air conditioning condensation;
- Irrigation water;
- Water from crawl space pumps;
- Individual residential car washing;
- Flows from riparian habitat and wetlands;
- Street and sidewalk wash water, water used to control dust, that does not use detergents;
- Dechlorinated and uncontaminated residential swimming pool discharges; and
- Discharges or flows from emergency firefighting activities. Fire-fighting activities do not include washing of trucks, run-off water from training activities, and similar activities.

1.1.E In the event the regulated MS4 has an oil water separator which is used to exclusively treat stormwater; this permit authorizes the operation of oil water separators solely for the treatment of stormwater. The oil water separators must be appropriately operated and sized per manufacturer's or engineering specifications. The specifications and operating records must be made accessible to Department staff upon request. Oil water separator sludge is considered used oil; sludge must be disposed of in accordance with 10 CSR 25-11.279.

PART 2. PERMIT RESTRICTIONS AND EXEMPTIONS

2.1.A Limitations on coverage: The permittee, shall prohibit non-stormwater discharges and stormwater discharges that combine with sources of non-stormwater into the MS4, except where:

1. Non-stormwater discharges are in compliance with a separate NPDES permit; and
2. Authorized by Section 1.1.D of this permit.

2.1.B This operating permit does not affect, remove, or replace any requirement of the Endangered Species Act; the National Historic Preservation Act; the Comprehensive Environmental Response, Compensation and Liability Act; or the Resource Conservation and Recovery Act. Determination of applicability to the above mentioned acts is the responsibility of the permittee. Additionally, this permit does not establish terms and conditions for runoff resulting from silvicultural activities listed in Section 402(l)(3)(a) of the Clean Water Act.

2.1.C Discharge Limitations

1. The permittee shall implement Best Management Practices (BMPs) via an iterative process to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) into the MS4 for the goal of attainment with Missouri's Water Quality Standards.
2. The permittee shall implement and enforce a Stormwater Management Program per the requirements listed in this operating permit in accordance with section 402(p)(3)(B)(iii) of the CWA, corresponding NPDES regulations, 40 CFR 122.34, 40 CFR 122.28(d)(2), and in accordance with the Missouri Clean Water Law (MCWL) and its implementing regulations under 10 CSR 20-6.200.
3. The permittee shall comply with all provisions and requirements contained in this permit and with their individual Stormwater Management Program including plans, ordinances, and schedules developed in fulfillment of this permit.
4. If the Department determines a regulated MS4 is causing or contributing to instream excursions of Missouri's Water Quality Standards, then the Department may require corrective action(s) or require an application for a site-specific permit to ensure that BMPs are being implemented via an iterative process to reduce pollutants to the MEP.
5. Newly designated regulated MS4s applying for coverage under this general permit and discharging to waterbodies or watersheds subject to an existing EPA approved or established TMDL may be denied coverage under this general permit and required to apply for and obtain a site-specific operating permit for stormwater discharges from their regulated MS4.

2.2 Authorization to Discharge and Application Requirements

2.2.A Authorization to discharge stormwater from a regulated MS4 requires each permittee (existing and recently designated regulated MS4s) to submit a complete application for the MS4 general permit. The permittee shall submit their application on the latest version of the application form(s); either Form K, or Form L and Form M.

2.2.B The application shall be signed and dated by an authorized signatory.

1. All permit applications shall be signed and certified in accordance with 40 CFR 122.22 and 10 CSR 20-6.010(2) by either a principal executive officer or by an individual having overall responsibility for environmental matters for the permittee.
2. All reports required by this permit, and other information requested by the Department shall be signed by a person described in Section 2.2.B.1 of this permit, or by a duly authorized representative of that person. A person is a

duly authorized representative only if the authorization is made in writing by a person designated in Section 2.2.B.1 of this permit.

- 2.2.C Existing regulated permittees seeking renewal of their MS4 permit shall submit a renewal application within 180 days prior to the expiration date of this operating permit unless the permittee has been notified by the Department that an earlier application is required in accordance with 10 CSR 20-6.200 (1)(D)24.B.
- 2.2.D Newly designated regulated MS4s shall submit their permit application within 180 days following notification by the Department that permit coverage is required.

PART 3. STORMWATER MANAGEMENT PROGRAM AND PLAN

3.1 Stormwater Management Program

- 3.1.A To the extent allowable under state and local law, a Stormwater Management Program must be developed, implemented, and enforced according to the requirements of this general permit. This permit includes specific terms and conditions, which are the requirements needed to meet the MS4 regulatory requirements.
1. **Existing permittees** shall assess program elements that were described in the previous permit, modify as necessary, and/or implement new elements, as necessary.
 2. **Newly regulated permittees** shall have the program fully implemented within 5 years of issuance of their permit.
- 3.1.B As part of the Stormwater Management Program, the permittee shall update or develop a document, with appropriate appendices and supplemental attachments explaining the Stormwater Management Program. Permittees shall create and maintain this written Stormwater Management Plan (SWMP) describing schedules, procedures, contacts or other items listed under Part 4 of this permit. This document may be electronic.
1. The SWMP shall be maintained by the MS4 Operator to ensure consistency with the implementation, continuity of the Stormwater Management Program, and iterative reviews of programmatic BMPs and procedures.
 2. The SWMP does not go through Department approval and is not incorporated into this permit.
 3. The SWMP shall be updated or developed within 90 days after the renewal of the permit.
- 3.1.C The MS4 Operator may add supplemental items to the SWMP. These items include but are not limited to:
- Maps;
 - Standard operating procedures (SOPs);
 - Inspection forms;
 - Sample data;
 - Operations and Maintenance Manual;
 - Website or social media account tracking;
 - Stream Team Activity Reports;
 - Tracking and evaluation documents; and
 - Documentation of agreements for co-permittees and/or cooperative agreements.
- 3.1.D Permittees shall implement programmatic BMPs consistent with the provisions of this permit to achieve compliance with the standard of reducing pollutants to the maximum extent practicable per 40 CFR 122.34.
- 3.1.E The MS4 Operator may replace or modify ineffective BMPs with effective BMPs. If the name of a MS4 contact changes, that may be updated on the next Stormwater Management Program Report and/or via email to the Department at MS4@dnr.mo.gov.
- #### 3.2 Sharing Responsibility
- 3.2.A Co-permittees agreements.
1. Implementation of one or more of the minimum control measures may be shared with another governmental entity or the governmental entity can assume responsibility for the measure via the co-permittee option if:
 - a) The co-permittee has a MS4 located within or partially within an Urbanized Area (UA) as determined by the most recent Bureau of Census, which can include, but is not limited, to: municipalities, county, military bases, large hospitals, prison complexes, universities, sewer districts, and highway departments;
 - b) The co-permittee, in fact, implements the control measure(s);
 - c) The specific control measure, or component of a control measure, is at least as stringent as the corresponding permit requirements;
 - d) The co-permittee agrees to implement the control measure on the other permittee's behalf; and
 - e) Written acceptance of this obligation is required.
 2. This co-permittee obligation and written acceptance, shall be described and maintained as part of the SWMP.

3. If the co-permittee agrees to report on the control measure, the co-permittee shall cooperate with the reporting requirements contained in Section 5.3 of this permit.
4. If one co-permittee fails to implement the control measures, then that co-permittee shall remain liable for any discharges due to that failure to implement. Additionally, the Department may require corrective actions(s), require an application for a site-specific permit, or require the co-permittee to apply and obtain their own Phase II MS4 general permit.

3.2.B Other agency agreements. Implementation of one or more of the minimum control measures or BMPs may be contracted out to another entity or organization, such as a non-profit organization or watershed organization. The MS4 Operator may grant responsibility for the MCM or BMP. The agreement must be described in the SWMP detailing which BMPs are being assumed by the other entity or organization. Written agreements between another entity or organization stipulating arrangements and responsibilities for meeting permit requirements shall be made available to the Department upon request. The permittee is responsible for oversight to ensure compliance with this permit.

3.3 Reviewing and Updating the Stormwater Management Program

3.3.A The MS4 Operator shall conduct an annual review of their Stormwater Management Program. This is recommended to be in conjunction with preparation of the MS4 Stormwater Management Program Report required under Section 5.

3.3.B Changes to the Stormwater Management Program requested by the Department must be made in writing, set forth a time schedule for the permittee to develop the changes, and offer the permittee opportunities to propose alternative program changes to meet the objective of the requested modification. All changes required by the Department will be made in accordance with 10 CSR 20-6.200. The Department may require changes to the Stormwater Management Program as needed to:

1. Address impacts on receiving water quality caused or affected by discharges from the MS4.
2. Include more stringent requirements necessary to comply with new federal or state statutory or regulatory requirements; or
3. Include such other conditions deemed necessary by the Department to comply with the goals and requirements of the MCWL and the federal Clean Water Act (CWA).

3.3.C In the event of a transfer of ownership, change in Continuing Authority, or change in responsibility for Stormwater Management Program implementation; the permittee shall implement the Stormwater Management Program on all new areas added to the permittee's portion of the MS4 (or for which the permittee becomes responsible for implementations of stormwater quality controls) as expeditiously as practicable, but not later than one (1) year from the addition of the new areas.

PART 4. MINIMUM CONTROL MEASURES

Entities seeking coverage under this general permit shall develop and implement a Stormwater Program that includes the following six (6) Minimum Control Measures (MCMs).

1. All six MCMs apply to all traditional MS4s (cities and counties) regulated under this permit.
2. For non-traditional MS4s (universities, hospital complexes, prisons, and federal facilities) or MS4s in a co-permit that do not have responsibility over all MCMs. The permittee shall document in the SWMP and on each MS4 Stormwater Management Program Report which MCMs are not applicable. Contact the Department for any questions regarding applicability of MCMs.

4.1 MCM 1. Public Education and Outreach on Stormwater Impacts

The MS4 Operator shall implement a public education program to distribute educational materials to the community and/or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.

The public education and outreach program shall, at a minimum include the following:

- 4.1.A** The MS4 Operator shall target specific audiences who are likely to have significant stormwater impacts.
1. Traditional MS4s (cities and counties) shall address the residents being served by the MS4;
 2. Non-traditional MS4s shall address the community served by the MS4 as listed below:
 - a) Universities shall target the faculty, other staff, and students;
 - b) Military bases shall target military personnel (and dependents), and employees (including contractors);
 - c) Prison complexes or other multi-building complexes shall target staff and applicable contractors.
 3. Additional audiences within the MS4 service area (such as, but not limited to, those listed in **Table 1**) shall be addressed as listed below:

- Group A: No requirement for additional audiences**
Group B: A minimum of one (1) additional audiences
Group C: A minimum of two (2) additional audiences

The target audiences may remain the same for the entire permit cycle or may change if the tracking and adaptive management reviews show a new target may be better for the MS4. Any changes shall be stated and explained in the MS4 Stormwater Management Program Report.

Table I -Target Audiences

- Schools, educational organizations, or youth service and youth groups;
- Businesses, including commercial facilities, home-base and mobile businesses;
- Institutions or formal organizations such as churches, hospitals, service organizations;
- Developers or construction site operators;
- Homeowner or neighborhood associations;
- Industrial facilities;
- Local government;
- Contractors;
- Visitors/ tourist; and
- Other target group, noted in the MS4 Stormwater Management Program Report.

- 4.1.B** The MS4 Operator shall target specific pollutant(s) in the permittee's education program (such as, but not limited to, those listed in **Table II**). Each MS4 shall have a minimum of one target pollutant for each target audience from Section 4.1.A of this permit. The same pollutant may be used for more than one target audience, the target pollutant(s) may change annually as needed.

Table II- Pollutants/ sources

- Grass clippings & leaf litter;
- Fertilizer & pesticides;
- Litter, trash containment, balloon releases;
- Dumping of solid waste;
- Illegal disposal of household hazardous waste;
- Pet waste;
- Failing septic systems;
- Swimming pool discharge, including salt water pools;
- De-icing/ rock salt usage/ storage;
- Oil, grease, fluids from vehicles;
- Sediment runoff from construction/land disturbance;
- Unauthorized discharge of restaurant waste;
- Power washing;
- Unauthorized discharge of industrial waste;
- Vehicle washing; and
- Wash water/ grey water.

- 4.1.C** The MS4 Operator must utilize appropriate educational resources to be used as BMPs (materials, events, activities, etc.) in conjunction with the selected pollutants for the selected target audiences. The message delivered by these BMPs needs to be applicable to the target audience and relate to the target pollution. The distribution of the BMPs needs to be effective, and when possible associated with the target audience or pollutant (such as a swimming pool water disposal flyer when applying for a swimming pool permit). BMPs which are ongoing throughout the year or permit cycle may be counted as one annual BMP. The permittees SWMP shall explain how each BMP relates to the target pollutant and target audience. The MS4 Operator may change BMPs during the permit cycle if determined appropriate through tracking and adaptive management reviews show a different BMP may be more effective for the MS4. Any changes shall be reflected in the SWMP and explained in the MS4 Stormwater Management Program Report.

1. Using **Table III**, over the permit term the MS4 Operator shall implement a minimum of the following, including the tracking and adaptive management processes:

Group A: Each permit cycle; two (2) education and outreach BMPs from Table III.

Group B: Each permit cycle; four (4) education and outreach BMPs from Table III.

Group C: Each permit cycle; five (5) education and outreach BMPs from Table III.

Table III - Outreach and Education BMPs

BMPs:	Measurable goals (The quantity or frequency required to count as a full BMP)	Tracking & Adaptive Management
Information on the MS4 Operator's website;	Maintain a webpage with up to date information, & working links. All links shall be checked, and the page shall be updated as necessary at minimum annually. Must be maintained the entire year.	The number of hits shall be tracked. The MS4 Operator shall use this to see which messages get reactions, and if certain messages may need more education.
Social Media posts, social media campaign;	Post a minimum of four (4) times a year, on a minimum of one social media platform. The messages shall address ways attendees can minimize or avoid adverse stormwater impacts or practices to improve the quality of stormwater runoff. The messages shall be seasonally appropriate. Must be continued for the full year.	The number of views, impressions, and other interactions shall be tracked. The MS4 Operator shall use this to see which messages get reactions, and if certain messages may need more education.
Maintain, or mark storm inlet with "No Dumping – Drains to Stream" or similar message. In addition to, or instead of, permanent wording cast into the structure of the inlet;	Placard, stencil, or paint, a minimum of 10% of all known stormwater inlets in the MS4 area per year.	Number of inlets, the location of the inlets and how they were marked shall be tracked. These areas shall be noted on MCM #3 dry weather screenings, and illicit discharge investigations as a method to determine if the markings are effective or if areas could benefit from the markings.
Require installation of permanent embossed, or precast inlets with "No Dumping-Drains to Stream" or similar message.	Requirement for all new inlets in the MS4 area.	Number of inlets, the location of the inlets shall be tracked. These areas shall be noted on MCM #3 dry weather screenings, and illicit discharge investigations as a method to determine if the markings are effective or if areas could benefit from the markings
Media/ advertising campaign: Billboard; Bus shelter/ bench; radio/ television/ movie theatre/ areas of high visibility.	Develop topics that address activities and/or pollutants of concern. Advertisement must be active for a minimum of three weeks; OR must have an estimated exposure for the duration of the campaign that is 2 times the most recent U.S. Census Bureau decennial population value for the permit area.	To the extent possible, evaluate the pollutant before the advertising campaign, and again after to see if there has been a change. The dates, time, and/or estimated media exposure for each spot broadcast shall be documented. Consider including a mechanism to track active response such as a QR Code, following the social media account(s) or a website to visit. Track those responses to determine if the advertisement was effective in reaching people.

Publish articles in local newsletter, may be electronic;	Develop topics that are group specific and address activities and or pollutants of concern at a seasonally appropriate time. A minimum of two articles annually shall be published or emailed.	To the extent possible evaluate the pollutant before the article, and again after to see if there has been a change. Consider including a mechanism to track active response such as following the social media account or a website to visit. Track those responses to determine if the article was effective in reaching people.
Permanent Stormwater related signage;	Place signage in a location where the message is relevant, and highly-visible to target audience. Signage will count as an annual BMP for the year it was put in place and for each subsequent year of this permit cycle as long as each of those years tracking is taking place to message effectiveness and to ensure the signage is maintained.	Evaluate the pollutant before the signage, and again after to see if there has been a change. Consider including a mechanism to track active response such as following on social media, a QR Code, or a website to visit. Track those responses to determine if the signage was effective in reaching people.
Promote, host, or develop educational meetings, seminars, or trainings;	The events shall address ways attendees can minimize or avoid adverse stormwater impacts or practices to improve the quality of stormwater runoff. A minimum of two events shall be held, hosted or promoted annually. These events may address different pollutants/audiences.	Attendance, and any distributed education materials shall be tracked. This shall be used to gauge interest in the topic. Consider using a questionnaire or follow up survey to track if the attendees retained information or found the event beneficial.
Fact sheets/ brochures/ utility bill insert/ door hangers.	The sum of all fact sheets, brochures, bill inserts, handouts, or e-mails distributed in one year shall be at minimum equal to the most recent U.S. Census Bureau decennial housing units value for the permit area.	The applicable U.S. Census housing units value shall be recorded, and the amount of material shall be recorded. This may be a combination of materials, using a targeted approach to get the appropriate material to the applicable audience.
Paid membership in a regional or watershed group.	The organization must focus on stormwater runoff.	The group may enact BMPs on behalf of all members, the permittee must participate to ensure their MS4 has representation, and receives some of the educational BMPs.
Targeted education campaign, via mail, email, or in person.	Minimum of one annually OR with a specific event. (Examples: Sediment control with small building permit; leaf litter email during street sweeping season, or education brochure to all businesses conducting certain activity.)	Education material distributed, or amount of people contacted shall be tracked. Follow up on if noticeable behavior has changed.

- 4.1.D The MS4 Operator must create opportunities, or support activities that are coordinated by citizen groups, for residents and others to become involved with the Stormwater Management Program. The activities, (BMPs) must have an effort to impact stormwater runoff by improving water quality.

1. Using **Table IV**, the MS4 Operator shall implement a minimum of the follow including the tracking and adaptive management processes:

Group A: Each permit cycle; one (1) involvement BMP from Table IV.

Group B: Each permit cycle; two (2) involvement BMPs from Table IV.

Group C: Each permit cycle; three (3) involvement BMPs from Table IV.

Co-permittees: Each permit cycle; one (1) involvement BMP in the boundaries of each co-permit.

Table IV Involvement BMPs

BMPs	Measurable goals (The quantity or frequency required to count as a full BMP)	Tracking & Adaptive Management
Stream/lake or Watershed clean-up events; Litter clean-up events such as Missouri Stream Team, Adopt-A-Spot, Adopt-A-Street, Adopt-A-Stream;	To be considered an event, the land area cleaned must be at minimum 2 acres, or 400 yards of stream/ streambank/ watershed, or 2 miles of road side. (These may be combined such as 1 acre of land and 200 yards of stream.)	Track the area or distance cleaned (by acre, yard or lane miles), the amount of waste removed (by tonnage, cubic yard, or Stream Team bag count) and the attendance. Use the waste measurements to determine if there are priority areas for litter entering stormwater, or areas for illegal dumping.
Habitat improvement; Tree planting; Invasive vegetation removal; Stream restoration.	To be considered an event, the project must be a minimum of .5 acres or 25 yards. These may be a combination. This may take place in streams, parks, areas adjacent to public waterways, and/or other green space.	Track the location(s) along with the amount planted or remove, or miles improved or restored. Analyzing the areas improved upon, the MS4 Operator shall see if there are opportunities to join the improve areas, or work on a watershed basis.
Volunteer water quality monitoring;	To be considered an event, the monitoring must be conducted at minimum once a year.	Record the sites for the volunteers, what parameters were measured/monitored, and the dates of the monitoring.
Hold events to train residents, or work a project for homeowner associations (HOAs), or other public groups. The event or training must cover stormwater related topics such as: building rain barrels; Fertilizer application training; Rain garden/ bio retention creation or maintenance; How to recognize illicit discharge activities and communicate observations to appropriate MS4 staff.	Provide one project or training at minimum annually.	Record the attendance, the topic covered, and any training materials distributed. Use these numbers and interactions during the event to determine if the project or training covered a topic of interest and or a topic that could be brought to a different or wider audience.
School, public event, etc. educational display booth; Provide information or displays that work to improve public understanding of issues related to water quality.	Provide one booth or display at minimum annually. The booth or display must be staffed by staff of the MS4 at minimum 50% of the time the event is open to the public.	Record the number of interactions, the overall attendance, or the number of hours the event was staffed. Record the topic covered, and any educational materials distributed. Use these numbers and interactions during the event to determine if the project or training covered a topic of interest and/or a topic that could be brought to a different or wider audience.

Stormwater related speaker series;	Provide a minimum of two sessions a year. These may be different speakers and/or audiences.	Record the attendance, the topic covered, and any training materials distributed. Use these numbers and interactions during the event to determine if the project or training covered a topic of interest and/or a topic that could be brought to a different or wider audience.
Ongoing yard waste collection, designated yard waste collection area, household hazardous waste collection, or street sweeping program.	Provide the service as an annual occurrence or at readily accessible location. For street sweeping, this shall be conducted at minimum twice a year.	Track the amount collected. If educational information is being used in conjunction with this activity track for changes due to the education. Tracking can be used with illicit discharge tracking, to determine if the rate of this type of discharges or dumping were reduced.
MS4 area wide stormwater survey.	A series of public survey to establish a baseline in the first year of the permit and then a minimum of annually throughout the permit cycle.	Use the same or similar questions to evaluate BMPs and/or full program effectiveness. Surveys can be done with utility bills, online, social media, or a combination. All participation should be tracked.

- 4.1.E The MS4 Operator shall create or support the involvement BMP(s) in Section 4.1.D. To be considered support given to the coordinating groups the MS4 Operator shall at minimum conduct the following or similar:
- Plan, or assist with planning, the event or activity;
 - Contribute supplies, materials, tools, or equipment;
 - Provide assistance from MS4 staff during the activity;
 - Provide assistance with recruiting volunteers for events;
 - Make a space available for projects, meetings, or events;
 - Advertisement for the events;
 - Supply disposal services;
 - Arrange land or stream access;
 - Financial support; and
 - In-kind donations such as food.
- 4.1.F Using adaptive management as required in parts 4.1.A.3.d and 4.1.B.1.c, all MS4 Operators shall review their Public Education and Outreach on Stormwater Impacts Program, at minimum, annually and update implementation procedures and/or BMPs as necessary within the requirements of this permit.
This may be conducted when preparing the MS4 Stormwater Management Program Report for submittal to the Department.
- 4.2 **MCM 2. Public Participation**
The permittee shall develop and implement a comprehensive public participation program that provides opportunities for public participation in the development and oversight of the permittee's Stormwater Program.
- This program must provide opportunities for public participation of the permittee's permit renewal and shall, at a minimum, comply with any state and local public notice requirements. Additionally, the program must provide opportunities for public participation in activities related to developing and implementing the Stormwater Management Program.
- The public participation program shall, at a minimum include the following:
- 4.2.A The MS4 Operator shall hold a public notice period for a minimum of thirty (30) days to allow the public to review the draft permit, and description of the MS4s Stormwater Management Program (this may be the SWMP) prior to the submission of the renewal application to the Department.
- 4.2.B As part of the public notice, if the MS4 Operator has a public website, the required items shall be posted on their website with a way to submit comments, along with the standard public notice methods for the MS4.
1. The permittee shall respond to comments received during the comment period.

2. The MS4 Operator shall retain copies of any public comments and records of information submitted by the public received as part of the public notice process. These comments and responses shall be made available to the public or the Department upon request.

- 4.2.C The MS4 Operator shall hold a public information meeting to provide information on, or describe the contents of, the proposed Stormwater Management Program. This meeting shall be advertised at least thirty (30) days prior to the public meeting.
1. As part of the notice of public meeting, if the MS4 Operator has a public website, the MS4 Operator shall post on that site, along with the standard public notice methods for the MS4. The notice of the public informational meeting, including the date, time and location.
 2. The meeting must be held within the service area of the MS4. Co-permittees shall hold the meeting within the boundaries of each co-permittee.
- 4.2.D The MS4 Operator shall have a publicly available method to accept public inquiries, or concerns, and to take information provided by the public about stormwater and stormwater related topics.
1. This method, or a combination of method, shall encompass all MCMs of this permit. This method may be a phone number, website comment form, voicemail box, an email address, social media platform, or a combination of these.
 2. All reports shall be tracked, recording the topic, location, and concern. This information can help identify pollutants of concern, priority areas, pollutant sources, educational needs, and other information the MS4 Operator may use to evaluate the Stormwater Management Program.
- 4.2.E If the MS4 Operator utilizes a stormwater management panel or committee, the MS4 Operator shall provide opportunities for citizen representatives on the panel or committee. The attendance of the meeting shall be recorded.
- 4.2.F If the permittee has a governing board such as; County Council, City Council, or Board of Curators, a representative of the MS4 Operator, who is familiar with the MS4 Stormwater Program, shall provide an update to the governing board. This shall be conducted at minimum, annually with the status of, or updates on, the Stormwater Management Program, and compliance with the Stormwater Management Program.
- 4.2.G **Existing permittees:** Shall evaluate their current program to ensure it is in compliance with this permit and promoted to the community. Existing permittees shall modify their program as necessary, and develop and implement elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the maximum extent practicable, following the requirements of Section 4.2 of this permit.
- 4.2.H **Newly regulated permittees:** Shall develop a stormwater Public Participation program. The Permittees shall have the program fully implemented by the end of this permit term.
- 4.2.I Tracking mechanisms shall be used for tracking attendance, inquiries or concerns per the requirements of Section 4.2 of this permit. Using adaptive management, all MS4 Operators shall review their Public Participation Program, at minimum, annually and update implementation procedures as necessary within the requirements of this permit. This shall be used to review how to best reach the public, the effectiveness of the mechanisms, the effectiveness of reaching the public and the MS4 Governing board and if the community and MS4 government are working together for water quality. Any additional events and/or BMPs shall be acknowledged in the Stormwater Management Program report.
- 4.3 **MCM 3. Illicit Discharge Detection and Elimination (IDDE)**
The MS4 Operator shall implement, and enforce a program to detect and eliminate illicit discharges (as defined in 10 CSR 20-6.200 at 40 CFR 122.26(b)(2)) into the regulated MS4.
- The illicit discharge detection and elimination program shall at minimum, include the following:
- 4.3.A A current storm sewer system map that shall be updated as needed to include features which are added, removed, or changed. This map may be paper or electronic.
This storm sewer map, must show at a minimum:
1. The location of all MS4 outfalls. The map shall be detailed enough that the outfalls can be accurately located;
 2. The names and locations of all receiving waters of the state that receive discharges from the MS4 outfalls;
 3. The boundary of the regulated MS4 area;
 4. The map shall be readily available and used by field staff as needed; and
 5. The map and any accompanying necessary information shall be made available to the Department upon request.

4.3.B The MS4 Operator must record the sources of information used for the map and track, at minimum:

1. A numbering or naming system of all outfalls;
2. Dates that the outfall locations were verified/ or last field survey; and
3. For newly added outfalls, the date that it was added to the storm sewer system.

4.3.C The MS4 shall effectively prohibit non-stormwater discharges into the permittee's storm sewer system and implement appropriate enforcement procedures and actions.

This prohibition shall be through ordinance or other regulatory mechanism, to the extent allowable under state or local law. This may be accomplished by more than one ordinance or mechanism.

This may be done through a "nuisance code" however it must be certain that non-stormwater discharges are covered in this code. Such non-stormwater discharges may include, but are not limited to:

- Litter;
- Household hazardous waste disposal;
- Leaf disposal;
- Use of soaps & detergents with discharge to stormsewer;
- Illegal dumping of solid waste;
- Vehicle fluid disposal;
- Grass clippings;
- Pet waste; and
- Sewage.

4.3.D A dry weather field screening strategy.

1. The MS4 Operator shall conduct (or have conducted on their behalf) outfall field assessments. The screening shall be conducted during dry weather conditions (a minimum of 72 hours after the last precipitation event) to check for the presence of a discharge.

Existing permittees:

- a) A minimum of 60% of all outfalls shall be screened during the permit cycle.
- b) Priority areas, such as those listed in 4.3.H, shall be screened each year.

Newly regulated permittees:

- a) All outfalls shall be located and screened during the 5 year permit cycle.
- b) Priority areas shall be established.

2. This screening shall include a checklist or other tracking device to; ensure a complete inspection of each outfall, enhance consistency, and to track the field screening. This shall be used regardless of the presence of dry weather flow.

When discharge is present, the checklist or tracking device shall note the following general observations and physical characteristics at a minimum:

- Date and time;
- Weather conditions and temperature (air & water);
- Color of discharge;
- Estimate of flow rate (this may be noted qualitatively);
- Odor;
- Surface scum, algal bloom, floatables or oil sheen present;
- Deposits or stains (note the color);
- Turbidity (may be noted qualitatively);
- Stream impact including vegetation, fish, wildlife;
- Length of impacted stream; and
- Notes of an obvious source of flow (such as lawn irrigation, etc.)

4.3.E The MS4 Operator shall maintain diagnostic monitoring procedures to detect and investigate unknown non-stormwater flows as part of the dry weather screening program.

These procedures are for possible illicit discharges, and may be collected, and analyzed by a contracted lab, or similar agreement with another entity who is equipped and experienced in sample collect and analysis.

1. This diagnostic monitoring shall include sampling unknown discharge from MS4 outfalls that are found to be flowing or ponding more than 72 hours after the last precipitation event and considered to be an illicit discharge.
2. The samples shall be analyzed for relevant parameters to determine if a pollutant is involved.
 - a) Relevant parameters will need to be determined on a case by case basis depending on the nature of the discharge and what the potential sources may be.
 - b) The MS4 Operator shall have the ability to sample for and analyze the samples. This may be done through a contract lab or similar agreement.
 - c) Possible parameters sampled for and analyzed when deemed applicable include but are not limited to:

- pH;
- Oil and grease;
- *E.Coli* or fecal coliform;
- Surfactants or fluorescence concentration;
- Specific conductivity;
- Ammonia;
- Chlorine;
- Dissolved oxygen; and
- Fluoride/ hardness.

4.3.F The MS4 Operator shall maintain procedures for tracing the source of an illicit discharge. If initial screening indicates that a dry weather discharge contains pollutants, or if an illicit discharge is suspected from another reporting method, the source shall be traced. These procedures shall include mechanisms to locate and follow stormwater infrastructure. A variety of investigative tools may be used as appropriate for each situation, such as, but not limited to;

- Visually following the flow;
- Storm sewer system sampling;
- Full storm sewer map;
- Closed circuit television;
- Smoke or dye tracing; and
- Tunnel entry.

4.3.G The MS4 Operator shall maintain procedures for removing the source of the discharge. After locating the source, the pollutant and source must be removed. While the exact procedure will depend on the source and the circumstances, The MS4 Operator must maintain any necessary contacts with appropriate entities that may be needed for these procedures (such as an environmental cleaning company). This information shall be made available to the responsible staff.

The MS4 Operator is encouraged to work with the source of the illicit discharge to remedy the situation. Possible remedies shall include:

1. Implement source control or treatment BMPs to prevent reoccurrence of the violation;
2. Remediation or restoration of affected property.

4.3.H In order to prevent further illicit discharge, the MS4 Operator shall identify priority areas such as, but not limited to:

- Areas with evidence of ongoing illicit discharges;
- Areas with a past history of illicit discharges;
- Certain land use influencing stormsewer/ proximity of potential pollutant sources;
- Areas of higher population density;
- Neighborhoods with onsite sewage systems;
- Areas with known litter or dumping issues;
- Areas with large or increased number of citizen complaints; and
- Industrial areas

Annually, the MS4 Operators shall evaluate this priority area list and/or map and update as necessary to reflect changing priorities.

If a co-permittee, each co-permittee shall identify priority areas within their boundaries.

4.3.I The MS4 Operator shall maintain written procedures for implementing the IDDE Program, including those components described within this section, to ensure program continuity and consistency.

1. This shall include a description of this dry weather field screening strategy and implementation schedule to detect and address non-stormwater discharges, including discharges from illegal dumping and spills, to the permittee's system.
2. This shall include a description of how the discharge is evaluated and the possible parameters that are tested.
3. If contracted to another entity, the contact information shall be listed.

4.3.J The MS4 Operator must conduct investigations in response to field screening discoveries, spills, or in response to complaints from the public, municipal staff, or adjacent MS4s. The investigation must work to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection.

Responses shall meet the following investigation timelines:

1. Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment.
2. Investigate (or refer to the appropriate agency with the authority to act) within five (5) business days, on average, any complaints, reports or monitoring information that indicates a potential illicit discharge which does not constitute a threat to human health, welfare or the environment.
3. If illicit connections or illicit discharges are observed related to, discharging to, or discharging from, an adjacent MS4 Operator's municipal storm sewer system, the MS4 Operator must notify the other MS4's Operator within 24 hours of discovery or as soon as practicable.

4.3.K The MS4 Operator shall have procedures for appropriate enforcement, this may include fines, the ability to collect cleanup and abatement costs, and actions to ensure that the permittee's illicit discharge ordinance (or other regulatory mechanism) is being implemented.

1. The MS4 Operator shall maintain a written description of the enforcement procedure. This shall include a copy of or link to the ordinance and/or other regulatory mechanism that the MS4 Operator will use to enforce the prohibition of illicit discharges into the MS4.

4.3.L The MS4 Operator shall maintain a database, or other centralized system, to track dry weather field screenings, spills, incidents, and investigations.

1. Tracking mechanisms shall be used for incidents, investigations, enforcement and follow up. This data shall be used to continuously evaluate the effectiveness of the IDDE program. This data shall be reviewed to determine if there is a new priority area.

The MS4 Operator shall record annually at a minimum:

- a) Number of outfalls screened;
- b) Number of complaints received and investigated; and
- c) Number of illicit discharges removed.

2. The MS4 Operator shall document all investigations to track at a minimum:

- a) The date(s) the illicit discharge was observed and investigated;
- b) Summary of procedures used to investigate the illicit discharge;
- c) The outcome of the investigation including sample results and findings;
- d) Any follow-up of the investigation including cleanup, enforcement actions, visits to confirm the illicit discharges have been removed; and
- e) The date the investigation or issue was closed or resolved.

4.3.M The MS4 Operator shall inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste, this may work with part 4.1 and part 4.6 of this permit (MCM #1 and MCM #6).

4.3.N All MS4 Operators shall review their IDDE Program, at minimum, annually and update implementation procedures as necessary.

4.3.O Existing permittees: Shall evaluate their current program to ensure that it is in compliance with this permit.

1. Any revisions to the ordinance or regulatory mechanism shall be complete in the first year of the permit cycle.
2. Maintain an updated map with the items listed above. Items not included in the current map must be added within the first 2 years of the permit cycle.

4.3.P Newly regulated permittees: Shall develop an IDDE Program. Newly regulated permittees shall describe the IDDE program in their SWMP. The MS4 Operator shall have the program fully implemented within five (5) years of permit issuance.

1. If the MS4 Operator needs to develop the regulatory mechanism, the ordinance or regulatory mechanism must be adopted within the first 3 years of permit coverage.
2. Develop or update a map in accordance with Section 4.3.A of this Permit. The MS4 Operator must develop or update a map with the items listed above. All outfalls shall be dry weather field screened within the first five (5) years of permit issuance.

4.3.Q The MS4 Operator must develop and implement or maintain a training program for all municipal field staff, who, as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system.

This shall include staff who may handle materials which may become an illicit discharge. This shall include discharges through spills, improper disposal, mismanagement, improper vehicle or equipment washing or rinsing. This training may be conducted with resources online and may be focused for what topics are relevant to their position.

1. Each staff shall take this training at minimum within one year of a new employee being hired.
2. The applicable staff may include the following; (unless the MS4 Operator does not have the listed department under their jurisdiction). Additional staff or departments shall be included if appropriate;

- Fleet maintenance staff;
- Staff at facilities with fuel, chemicals, washing of vehicles or equipment;
- Road maintenance staff;
- Road salt/de-icing staff; and
- Parks, swimming pool, or golf course staff who encounter spills, equipment or vehicle washing, fueling, chemicals, etc.

3. The training dates, topics and the attendance shall be recorded.

4. Reviews of the training effectiveness shall be considered after municipal site inspections or after an incident occurs. If a certain department or facility did not perform the way they were trained, or if an issue arises that was not handled properly, the MS4 Operator should consider if the training is enough or is ineffective. The MS4 Operator shall consider ways to survey or test staff to see if the training is effective.

4.3.R Using adaptive management the MS4 Operator shall review their IDDE Program, at minimum, annually and update implementation procedures as necessary. This data shall be used to continuously evaluate the effectiveness of each BMP and the implementation of each BMP.

Any additional BMPs shall be acknowledged in the Stormwater Management Program report.

4.4 MCM 4. Construction Site Stormwater Runoff Control

The MS4 Operator shall develop, implement and enforce a program to reduce pollutants in any stormwater runoff to their MS4 from construction activities that result in land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre shall be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.

4.4.A The MS4 Operator shall have a law, ordinance and/or other regulatory mechanism to require construction site runoff control BMPs at construction/land disturbance sites greater than or equal to one (1) acre or less than one acre if the construction activity is part of a larger common plan or development or sale that would disturb one acre or more. The mechanism shall include sanctions which are designed to ensure compliance, to the extent allowable under State, or local law.

4.4.B The MS4 Operator shall review pre-construction plans. These reviews at a minimum shall:

1. Incorporate the consideration of potential water quality impacts through procedures for site plan review. The site plan review procedures shall evaluate threats to water quality shall by considering, at minimum, the following factors:
 - a) Soil erosion potential;
 - b) Site slope;
 - c) Project size and type;
 - d) Sensitivity of receiving waterbodies;
 - e) Discharge flow type (pipe or sheet flow);
 - f) Location of discharge point in relation to receiving water;
 - g) Proximity of the site to receiving waterbodies; and
 - h) Other factors relevant to the MS4 service area.
2. Use a checklist, or other listed criteria, to ensure consistency and completeness.
3. Include requirements for construction site operators to select, install, implement, and maintain appropriate stormwater control measures.
 - a) This includes; temporary BMPs throughout the life of the land disturbance, and permanent BMPs which remain on site as required by local codes and ordinances.
4. Consider ways to minimize disturbed areas through actions such as, phased construction requirements, temporary seeding or sodding, or erosion mats to exposed areas.
5. Include requirements for construction site operators to control construction-site waste that may cause adverse impacts to water quality.

This shall include at a minimum:

 - a) Discarded building materials;
 - b) Concrete truck, and mortar mix washout;
 - c) Chemicals (such as fertilizer, paint, oils, herbicides, pesticides);
 - d) Litter; and
 - e) Sanitary waste.

4.4.C The MS4 Operator shall establish authority for site inspections and enforcement of control measures. To the extent allowable by state, federal, and local law, all MS4 Operators shall implement procedures for inspecting construction/land disturbance projects.

The construction site runoff control program shall implement at a minimum:

1. Identify priority sites for inspection based on nature of the construction activity, topography, disturbed area, and the characteristics of soils and sensitivity of, or proximity to, receiving water;

2. Construction site inspections shall include assessment of compliance with the MS4 Operator's construction site stormwater runoff control ordinance or regulatory mechanism, and other applicable ordinances;
3. The inspections shall evaluate any structure that functions to prevent pollution of stormwater or to remove pollutants from stormwater and use enforcement policies to require BMPs are implemented and effective;
4. Final inspection, upon completion of the land disturbance and prior to final approval of construction project. Ensure all disturbed areas have been stabilized, that all temporary erosion and sediment control measures are removed.
5. The inspections conducted by the MS4 Operator shall be documented with a checklist. The checklist must include structural BMPs and check on the self-inspection which are conducted by the construction site operator. These MS4 Operator checklists may be electronic.

4.4.D The construction site runoff control program shall include an established, escalating enforcement policy that clearly describes the action to be taken for violations.

The program shall have written procedures to ensure compliance with the MS4 Operator's construction site runoff control regulatory mechanism. This shall include the sanctions and enforcement mechanisms the permittee will use to ensure compliance and procedures for when certain penalties, injunctions or other measures will be used.

1. The MS4 Operator must have the authority to initiate a range of enforcement actions to address the variability and severity of noncompliance.
2. Enforcement responses to violations must consider the following criteria at minimum:
 - a) Degree and duration of the violation;
 - b) Effect the violation has on the receiving water;
3. Enforcement actions shall be timely in order to ensure the actions are effective. These procedures and actions must be written and available for MS4 staff for consistency and training purposes.
4. The MS4 Operator must have a minimum of two (2) enforcement actions they are able to use.
Possible enforcement actions include, but are not limited to:
 - a) Stop Work orders;
 - b) Verbal education or educational materials given to the construction site operator;
 - c) Written warnings or notice of violation;
 - d) Bonding or escrow requirements;
 - e) Fines/ penalties; and
 - f) Denials for previous non-compliance or current non-compliance at other sites.

4.4.E The MS4 Operator shall require the construction site operator to conduct inspections at minimum:

1. Every fourteen (14) days, when construction is active.
2. Within 72 hours of any storm event, and within 48 hours after any storm event equal to or greater than a 2-year, 24-hour storm has ceased.

Checklists used for these inspections conducted by construction site operators shall either be submitted to the MS4 Operator, or the MS4 Operator shall verify that these inspections are being conducted by the construction site operator checklists during MS4 Operator inspections.

4.4.F The MS4 Operator shall maintain an inventory of active public and private land disturbance sites, as defined in Section 4.4 of this permit. This may be supplemented with records such as a plan review checklist and email correspondence. The inventory must contain:

1. Relevant contact information for each project (e.g., tracking number, name, address, phone, etc.);
2. Size of the project/ area of disturbance;
3. If the site is a priority site/ how high of priority;

4.4.G The MS4 Operator shall track their oversight inspections. This may be done by retaining copies of records such as inspection checklists and email correspondence. The MS4 Operator must make these inventories available to the Department upon request.

The tracking must contain at a minimum:

1. Inspection dates and time;
2. Inspector name;
3. Inspection findings; and,
4. Follow up actions and dates, including corrective actions and enforcement actions.

4.4.H Existing permittees: Review the Stormwater Management Program including ordinances, permitting procedures, review procedures, inspection procedures and enforcement procedures to ensure compliance with these requirements. Any changes necessary to be in compliance with this permit shall be completed within the first year of this permit issuance. The inventory of active sites must be updated as new projects are reviewed and projects are completed. If the MS4 Operator needs to develop this inventory, it shall be completed within one (1) year of this permit issuance.

- 4.4.I Newly regulated permittees:** If the MS4 Operator needs to develop this construction site runoff program, the SWMP shall describe the construction site stormwater plan and scheduled implementation. Development of this program shall be completed within the first three (3) years of the permit issuance. If the MS4 Operator's ordinance or regulatory mechanism is already developed, the permittee shall include a copy of the relevant sections with the SWMP. For new permittees, the inventory must be completed with one (1) year of permit issuance and then updated as new projects are permitted.
- 4.4.J** The Stormwater Management Program must include procedures for the MS4 Operator to receive and consider information submitted by the public about land disturbance sites. This may be in combination with 4.2.D of this permit.
- 4.4.K** The MS4 Operator shall provide, or support access to, construction site runoff control training for MS4 inspectors and plan reviewers at minimum once during this permit cycle. This education shall be tracked or documented.
- 4.4.L** The MS4 Operator must provide written procedures outlining the local inspection and enforcement procedures to their inspectors to ensure consistency among the inspections.
- 4.4.M** Using adaptive management, all MS4 Operators shall review, at minimum annually, their Construction Site Stormwater Runoff Control Program and evaluate the ordinances, review procedures, inspection procedures, enforcement procedures, receipt of public information procedures, and effectiveness of training procedures to ensure compliance with these requirements and determine if changes are needed. This annual review may include but is not limited to:
1. Evaluating the most common violations, how the violations are handled, how many are escalated;
 2. If the education program can assist in reducing violations;
 3. Determining if the site plans match the sites when violations arise or if additional items need to be evaluated at plan review;
 4. Assessing public complaints being addressed in a timely manner; and
 5. Evaluating if the inspections thorough and consistent across different sites.

Any additional BMPs shall be acknowledged in the SWMP.

4.5 MCM 5. Post-Construction Stormwater Management in New Development and Redevelopment

The MS4 Operator shall continue or develop, implement, and enforce a program to address the quality of long-term stormwater runoff from new development and redevelopment projects that disturb equal to and greater than one acre, including projects less than one acre that are part of a larger common plan of development or sale that would disturb one acre or more and that discharge into the regulated MS4.

The MS4's program shall ensure that controls are in place that have been designed and implemented to prevent or minimize water quality impacts

- 4.5.A** The MS4 Operator shall maintain and utilize an ordinance(s) or other regulatory mechanism(s) to address post-construction runoff from new development and redevelopment projects to the extent allowable under state or local law for sites equal to or greater than one acre including projects less than one acre that are part of a larger common plan of development or sale. The goal of this approach is to arrive at designs that protect sensitive areas, minimize the creation of stormwater pollution, utilize BMPs that effectively remove stormwater pollution, and attempt to maintain predevelopment runoff conditions.

The MS4's program shall ensure that controls are in place that have been designed and implemented to prevent or minimize water quality impacts from stormwater, after construction.

1. If adopting a set of standards from another MS4 or other established standards, the MS4's ordinance may incorporate by reference, therefore the MS4 does not need to incorporate the entire guidance into their codes.
2. This program may be accomplished through one or multiple ordinances or regulatory mechanisms.

- 4.5.B** The MS4 Operator shall continue or develop a strategy to minimize water quality impacts. This shall include a combination of structural and/or non-structural controls (BMPs) appropriate for the permittee's community.

1. Structural controls include but are not limited to; extended detention basins, grass swales, bio-retention, permeable surfaces, sand filter basins, stormwater planters, proprietary BMPs.

The ordinance or regulatory mechanism for structural post-construction controls, or water quality facilities, shall include:

- a) Adoption or development of numeric or technical performance and/or design standards to control post-construction stormwater discharges.

These post-construction stormwater standards are for designing, installing, implementing, and maintaining stormwater control measures which may include, but are not limited to BMPs that; infiltrate, evapo-transpire, harvest, detain, retain, and/or reuse stormwater.

The MS4 Operator must adopt or maintain local stormwater discharge design standards that consider parameters such as; site discharge volume, rate, duration, and frequency for new development and redevelopment sites with the intent to minimize the impact of stormwater runoff on water quality.

2. Non-structural controls include but are not limited to; stream buffers, no mow zones, preservation of open spaces, tree preservation, impervious cover reduction, land use planning, and low impact development.

The ordinance(s) or regulatory mechanism(s) for non-structural post-construction controls, shall include:

- a) Adoption or development of preventative actions that involve management and source controls such as, but not limited to:
 - Policies and ordinances that provide requirements and standards to direct development to identified areas;
 - Protection of sensitive areas such as wetlands and riparian areas;
 - Maintain and/or increase open space (which may include a dedicated funding source for open space acquisition);
 - Maintain requirements for buffer zones along water bodies;
 - Require minimizing impervious surfaces;
 - Require minimizing disturbance of soils and vegetation;
 - Policies or ordinances that encourage infill development in higher density urban areas, and areas with existing infrastructure;
 - Programs which incentivize the use of green infrastructure;
 - Requirements for minimization of directly connected impervious areas; and
 - Tree preservation ordinances.

- 4.5.C Pre-construction plan review shall be conducted by the MS4 Operator to assess site characteristics at the beginning of the construction site design phase to ensure adequate planning for stormwater program compliance.

The structural or non-structural controls chosen shall: protect sensitive areas, minimize the creation of stormwater pollution, and effectively reduce stormwater pollution. This can be achieved by reasonably mimicking pre-construction runoff conditions on all affected new development projects, or the permittee may achieve this goal through a method more appropriate for its community.

1. The plan review process shall use a checklist. This may be part of the same plan review in MCM 4.
2. The plan review process shall evaluate non-structural BMP selection first, such as comprehensive plans, zoning ordinances, buffer strips, and/or maximization/preservation of open space. Non-structural BMPs primarily prevent stormwater runoff from a site, which could influence the options for structural BMPs which help mitigate the stormwater related impacts after they have occurred.

- 4.5.D The MS4 Operator shall have ordinances or similar enforcement mechanisms to ensure adequate long-term operation and maintenance (O&M) of the selected BMPs, including, as appropriate, agreements between the MS4 Operator and other parties such as post-development landowners or regional authorities.

1. Long term O&M shall be addressed during the plan review and approval process.
2. Copies of O&M manuals shall be retained by the party responsible for the post-construction BMP, and with the MS4 Operator. This may be done electronically.

- 4.5.E The MS4 Operator shall inspect, or require inspection of, each water quality structural and non-structural water post-construction BMP according to the following at minimum:

1. A minimum of one (1) inspection shall be conducted during construction, and one (1) inspection before the site is finalized, to verify water quality facilities are built as designed and any applicable boundaries or practices for non-structural BMPs are being observed. This may be conducted in combination with MCM 4 inspections.
 - a) The MS4 inspector shall have access to the approved plans to ensure proper installation.
2. A minimum of once in the first three years after the installation by, the MS4 Operator.
3. Annually by the owner or operator of the post-construction BMP, or by the MS4 Operator. If completed by the BMP owner or operator, this inspection report shall be submitted to the MS4 Operator for evaluation and review.
4. The MS4 Operator shall inspect a minimum of 60% of all water quality post-construction BMPs within the five year permit cycle. This must include installations with ongoing or open enforcement issues.

- 4.5.F The MS4 Operator must maintain a plan designed to ensure compliance with the MS4's post-construction water quality regulatory mechanism. This plan shall include escalating enforcement mechanisms the MS4 Operator will use to ensure compliance.

The MS4 Operator must have the authority to initiate a range of enforcement actions to address the variability and severity of noncompliance.

1. Enforcement responses to violations must consider at minimum:
 - a) Degree and duration of the violation;

- b) Effect the violation has on the receiving water;
- c) Compliance history of the post-construction BMP owner or operator; and
- d) Cooperation of the owner or operator with compliance efforts.

4.5.G Enforcement actions shall be timely in order to ensure the actions are effective. The MS4 Operator shall begin enforcement actions within thirty (30) days of discovering a violation.

The MS4 Operator shall maintain a minimum of two possible sanctions. These include, but are not limited to:

- 1. Education regarding the BMP and verbal warnings;
- 2. Written warnings or notice of violation (this includes email notification);
- 3. Property lien; and
- 4. Fines.

4.5.H The MS4 Operator shall maintain an inventory tracking the water quality post-construction BMPs. This inventory must contain, at a minimum:

- 1. Relevant contact information for the responsible person(s) or entity (e.g., tracking number, name, address, phone, etc.);
- 2. The type of post-construction BMP;
- 3. Applicable operations and maintenance documents;
- 4. Date the MS4 Operator approved the construction site plan; and,
- 5. If the water quality facility is owned or operated by the MS4, the tracking shall also include any maintenance, such as sediment clean-out or replanting.

4.5.I The MS4 Operator shall also track the post-construction BMP inspections. This may be done by retaining copies of records such as inspection checklists and email correspondence. The MS4 Operator must make these inventories available to the Department upon request.

The MS4 Operator shall track at a minimum:

- 1. Inspection dates/ times;
- 2. Inspector name(s);
- 3. Inspection findings; and,
- 4. Follow up actions including all enforcement actions.

4.5.J Existing permittees: Evaluate the ordinances, permitting procedures, review procedures, inspection procedures and enforcement procedures to ensure compliance with these requirements and determine if changes are needed. Any changes necessary to be in compliance with this permit shall be completed within the first two (2) years of permit issuance. The inventory of water quality facilities must be updated as new facilities are added and projects are completed. If the MS4 Operator needs to develop this inventory, it shall be completed within two (2) years of this permit issuance.

4.5.K Newly regulated permittees: Shall develop the ordinance or regulatory mechanism. Development of this program shall be completed within the first five (5) years of the permit issuance. For new permittees, the inventories of public and private post-construction water quality BMPs must be completed within two (2) years of permit issuance and then updated as new projects are permitted and projects are completed.

4.5.L The MS4 Operator shall provide appropriate training for MS4 inspectors at minimum once every permit cycle. This may include Green Infrastructure training, or specific operation of proprietary post-construction BMPs. The MS4 shall provide overall training to explain the function of both structural and non-structural post-construction water quality BMPs.

4.5.M Using adaptive management, all MS4 Operators shall review, at minimum annually, their Post-Construction Site Stormwater Management in New Development and Redevelopment Program and evaluate effectiveness of the overall program and determine if changes are needed. This annual review may include but is not limited to:

- 1. Reviewing the number and types of developments;
- 2. How many BMPs were installed/inspected;
- 3. The amount of watershed area being treated;
- 4. The types of violations found and how frequently; and
- 5. How education could improve the effectiveness of the program.

Any additional programmatic BMPs shall be acknowledged in the Stormwater Management Program Report.

4.6. MCM 6. Pollution Prevention/Good Housekeeping for Municipal Operations

The permittee shall develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

- 4.6.A** The MS4 Operator shall maintain and utilize an employee training program for MS4 municipal operations staff. The training shall be given at minimum annually to all MS4 staff who work with material handling, at MS4 owned or operated vehicle/equipment maintenance areas, storage yards, and material storage facilities. This may be broken up into staff units, or by applicable topics.
- 4.6.B** The training shall be used to prevent and reduce stormwater pollution.
The training shall cover a minimum of the following topics/ activities (if applicable to the MS4):
1. Vehicle and equipment washing;
 2. Fluid disposal and spills;
 3. Fleet, equipment, and building maintenance;
 4. Park and open space maintenance procedures (including fertilizer, herbicide, pesticide application);
 5. New construction, road maintenance, and land disturbances;
 6. Stormwater system maintenance;
 7. MS4 operated salt and de-icing operations;
 8. Fueling;
 9. Solid waste disposal;
 10. Street sweeper operations; and
 11. Illicit Discharges.
- 4.6.C** The MS4 Operator shall:
1. Maintain material to use in the training program, such as those available from the EPA, the state, or other organizations.
 2. Maintain written procedures for the training program. Include a description of how this training will coordinate with all other minimum control measures (such as Illicit Discharge), monitoring and TMDL implementations where applicable.
 3. Maintain a written schedule to offer topic specific training when it is appropriate. Such as, swimming pool discharges in the summer, leaf disposal in the fall, proper salt clean-up and usage in the winter.
- 4.6.D** The MS4 Operator shall maintain a list of all municipal operations/ facilities that are impacted by this operation and maintenance program.
This shall include a minimum of the following if owned and operated by the MS4 and if applicable to the MS4:
1. Maintenance yards;
 2. Fleet or maintenance shops, including parks department;
 3. Storage yards;
 4. Parks, golf courses, swimming pools, and splash pads;
 5. Municipal parking lots;
 6. Salt/sand storage locations;
 7. Snow disposal areas; and
 8. Other locations expected to contribute floatables and/or pollutants.
- 4.6.E** The MS4 Operator shall maintain a list of industrial facilities the MS4 Operator owns or operates which are subject to NPDES permits for discharges of stormwater associated with industrial activity. The list shall include the permit number or a copy of the No Exposure Exemption Certification (if applicable) for each facility.
This includes; municipal projects with a land disturbance permit, wastewater facilities, airports, etc.
NPDES permitted facilities not owned or operated by the permittee are not required to be part of the list; however, the MS4 Operator should be familiar with all such facilities in their MS4 service area as they may signify a priority area for the IDDE program.
- 4.6.F** The MS4 Operator shall develop or maintain controls for reducing or eliminating the discharge of floatables and pollutants from municipal facilities listed in Section 4.6.D and 4.6.E.
These controls shall include at a minimum, where applicable:
1. A list of potential pollutant sources at each facility, such as materials used and stored on site;
 2. A minimum of annual inspections of all municipally owned or operated facilities for stormwater issues;
 - a) Records shall be kept for inspections and follow up. This may be a checklist, and may be electronic;
 3. Use of structural controls/BMPs to reduce or prevent pollutants from entering waters of the state or into another MS4 where needed.
 - a) A map with descriptions of these BMPs shall be maintained for each facility;
 4. All paints, solvents, petroleum products, and petroleum waste products (except fuels) under the control of the permittee shall be stored so these materials are not exposed to stormwater;
 5. Sufficient practices of spill prevention, control, and/or management shall be provided to prevent any spill of these pollutants from entering waters of the state;
 - a) This shall include spill kits when liquid product is stored at a facility; and

- b) Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
- 6. Tracking of rock salt/brine or other deicer usage;
- 7. Maintaining municipal salt storage area(s) after use of rock salt, at minimum:
 - a) Sweep and/or shovel spillage in loading area and storage area, and
 - b) Unload salt hoppers or keep under cover when salt is in the hopper.
- 4.6.G The MS4 Operator shall have procedures for proper disposal of waste removed from the MS4 structures and areas of jurisdiction.
This waste, shall include at minimum, if applicable to the permittee:
 - 1. Street sweeper spoils and washout;
 - 2. Accumulated sediment;
 - 3. Dredged materials;
 - 4. Floatables, trash and litter;
 - 5. Leaves, other organic matter; and
 - 6. Other debris.
- 4.6.H The MS4 Operator shall maintain and utilize the following procedures, at minimum, for the washing of all municipal vehicles and equipment (if applicable to the MS4):
 - 1. Use of any soap or detergent shall only be where there is connection to sanitary sewer or equivalent treatment; and
 - 2. Any wash or rinse water that contains pollutants such as salt, oils, grease, sediment, grass clippings, lawn chemicals, or pesticides shall not be discharged to waters of the state or the MS4 system without appropriate treatment.
 - 3. Any washing or rinsing activities shall be conducted in an appropriate area so the water is treated. This area(s) shall be marked on the map of the facility.
- 4.6.I The MS4 Operator shall maintain written explanation of the controls, procedures, inspection schedules, and explanation of tracking of these controls. Tracking may be done by retaining inspection reports or checklists.
Individual Stormwater Pollution Prevention Plans or one overarching Operations and Maintenance Manual for all applicable MS4 facilities may be used to comply with this requirement. If a unified document is used, each individual site shall be familiar with the document, and a copy shall be present on each site referenced in the document or available electronically. Annually, the MS4 Operator shall evaluate the results, controls, and inspection procedures to ensure compliance with these requirements and determine if changes are needed. This evaluation may also aid in finding priority areas or pollutants in relation to MCM 3, or adding more education in relation to MCM 1.
- 4.6.J The MS4 Operator shall maintain procedures to determine if there are impacts to water quality for new flood management projects, if applicable. Any flood management projects shall require the protection of water quality in the standards that are used to plan, design, build, and maintain stormwater infrastructure.
Flood management projects are those projects developed or designed to reduce flooding.
- 4.6.K **Existing permittees:** Shall evaluate the current Stormwater Management Program including training, inspection procedures, and other municipal operation procedures to ensure compliance with these requirements. Any changes necessary to be in compliance with this permit shall be completed within one (1) year of this permit issuance.
- 4.6.L **Newly regulated permittees:** Shall develop this program. The SWMP shall describe the pollution prevention/ good housekeeping plan and scheduled implementation. Development of this program shall be completed within the first five (5) years of the permit issuance.
- 4.6.M Using adaptive management, all MS4 Operators shall review their Municipal Operations Program, at minimum, annually and update implementation procedures as necessary within the permit requirement. Any additional BMPs shall be acknowledged in the Stormwater Management Program Report.

PART 5. MONITORING, RECORDKEEPING, AND REPORTING

5.1 Monitoring

- 5.1.A The MS4 Operator shall retain records of any monitoring information used to complete the application for this operating permit, implementation of any part of this operating permit, and implementation for any part of the permittee's Stormwater Management Program for a period of at least three (3) years from the date of the sample, measurement, or analysis. This period may be extended by official written request by the Department at any time. These records may be maintained electronically.

Monitoring data shall include, if applicable, the below information:

1. All calibrations and maintenance records of sample or analytical equipment;
2. All original strip chart recordings for continuous monitoring instrumentation;
3. The date, location, and time of sampling or measurement;
4. Name of the individual(s) who performed the sampling or measurements;
5. The date(s) analyses were performed;
6. Name of the individual(s) who performed the analyses;
7. The analytical techniques or methods used; and
8. The results of such analyses.

5.1.B Any monitoring conducted for the purpose of implementation of any part of this permit shall be conducted in accordance to test procedures approved under 40 CFR Part 136 unless another method is required under 40 CFR subchapters N or O.

5.2 Recordkeeping

All records required by this permit may be maintained electronically, as long as they are accessible upon request by the Department. If a non-electronic version is kept, the permittee shall retain the most recent versions of the records and shall be accessible to the Department upon request.

5.2.A The permittee shall retain records of all activities requiring recordkeeping by the Stormwater Management Program, a copy of the NPDES permit, a copy of all ordinances, policies, and formal procedures for all six (6) MCMs and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the report or application. This period may be extended by official request of the Department at any time.

5.2.B The permittee shall retain the most recent version of their SWMP at a reasonable location accessible to the Department, this may be done as a publicly available website.

5.2.C If requested in writing by the public, the permittee shall submit the items required under Part 5 of this permit, including a copy of the permit, SWMP, or application.

5.2.D The permittee shall submit the items contained in Part 5 of this permit to the Department upon request.

5.3 MS4 Stormwater Management Program Report

5.3.A A report to the Department on the status of the MS4's program is due annually on or before February 28th. This report shall cover the previous year from January 1st to December 31st. The report shall be submitted on the Department approved, MS4 Stormwater Management Program Report form. If approved by the Department, permittees may submit the MS4 Stormwater Management Program Report using an alternative report format. The MS4 Operator shall submit the MS4 Stormwater Management Program Report containing, at a minimum:

1. Information regarding progress toward achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable;
2. The status of the MS4's compliance with permit conditions;
3. Assessment(s) of the appropriateness of identified BMPs and corresponding measurable goals for each MCM;
4. A summary of results of information collected and analyzed during the reporting period, including monitoring data or quantifiable values per the MS4's measurable goals;
5. A summary of the TMDL Assumptions and Requirement Attainment Plan (ARAP), if applicable, containing the implementation status of BMPs and measurable goals specific to the TMDL ARAP or progress toward implementing the schedule for implementation of the TMDL ARAP. The summary shall also include any changes to BMPs and corresponding measurable goals;
6. If the permittee is utilizing integrated planning, the permittee shall provide a summary of the status of the integrated plan; and
7. A statement if the permittee is relying on another entity to satisfy some of the permittee's permit obligations. If applicable, the permittee shall supply the name of the entity, the name of the entity's primary contact person, and other relevant contact information.

5.3.B Electronic Discharge Monitoring Report (eDMR) Submission System. Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent monitoring data and any report required by the permit (unless specifically directed otherwise by the permit), shall be submitted via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data for the NPDES program. The eDMR system is currently the only Department-approved reporting method for this permit unless specified elsewhere in this permit, or a waiver is granted by the Department. The facility must register in the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before the first report is due.

PART 6. SPECIAL CONDITIONS FOR TOTAL MAXIMUM DAILY LOADS

6.1 MS4s Subject to Total Maximum Daily Loads (TMDL)

- 6.1.A** Any regulated MS4 identified in an EPA approved or established TMDL with an applicable Wasteload Allocation (WLA) shall implement steps toward the attainment of applicable WLAs in accordance with 40 CFR 122.44(k)(2) and (3).
- 6.1.B** The MS4 Operator shall develop a TMDL ARAP to address the TMDL's assumptions and requirements where applicable.
- 6.1.C** The TMDL ARAP shall be incorporated into the Stormwater Management Program and include, at a minimum:
1. A plan to identify potential sources of the pollutant(s);
 2. A plan to implement BMPs to address the sources within the MS4 service area; and
 3. A schedule, including beginning and ending milestones, which are expressed as month and year to implement planned BMPs.
- The schedule for the implementation of the TMDL ARAP shall be completed as soon as practicable, but is not limited to the five year term of this operating permit as attainment can take years or even multiple permit terms.
- 6.1.D** BMPs shall be developed or designed with a purpose of reducing the pollutant(s) of concern. The ARAP shall list each BMP and shall contain a description of the BMP, the purpose of the BMP, and the expected result of the BMP.
- 6.1.E** Measurable goals shall be established for each BMP or in conjunction with multiple BMPs.
1. Each measurable goal shall contain a statement clearly indicating how it will be established to determine the appropriateness of identified BMPs and progress toward the expected results of the BMP.
 2. Measurable goals shall be quantifiable; however, if it is not feasible to utilize a measurable goal that is quantifiable, then the permittee shall provide justification indicating why the measurable goal cannot be quantifiable.
 3. If applicable, measurable goals shall also utilize interim and completion milestone dates, and a periodic frequency of measurement to document progress. Interim and final milestone dates shall be established with a format of month and year, or as 1st, 2nd, 3rd, 4th, and 5th year of the operating permit cycle.
- 6.1.F** An iterative process shall be utilized by the permittee documenting how each BMP is evaluated and subject to replacement or modification. The permittee shall apply reasonable further progress by replacing or modifying ineffective BMPs with effective BMPs.
- 6.1.G** If the permittee is subject to an approved or established TMDL, the permittee shall draft and submit their TMDL ARAP to the Department as soon as practicable but no later than 30 months after the date the EPA approves or establishes the TMDL or the effective date of their operating permit, whichever is later.
- The initial TMDL ARAP is to be submitted to the Department's Water Protection Program, MS4 Team for review and approval at MS4@dnr.mo.gov or Water Protection Program, MS4 Team, P.O. Box 176, Jefferson City, MO 65102. The deadline for the TMDL ARAP may be extended through written request by the permittee and written approval by the Department.
- 6.1.H** The MS4 Operator shall submit annual TMDL ARAP status reports to the Department on February 28th of each year until the TMDL ARAP has been submitted.
- The annual status report shall provide a brief update on the status of completion of the TMDL ARAP to be submitted to the Department. The deadline for the TMDL ARAP status report may be extended through written request by the permittee and with written approval by the Department. The annual status report shall be submitted to the Department's Water Protection Program, MS4 Team at MS4@dnr.mo.gov or Water Protection Program, MS4 Team, P.O. Box 176, Jefferson City, MO 65102.
- 6.1.I** If the Department approves the TMDL ARAP, it will be presumed that the TMDL ARAP is affordable by the permittee. If the Department disapproves a submitted TMDL ARAP and requires any additional or different controls or expenses, the Department will conduct an affordability analysis in support of the disapproval unless waived by the permittee. In addition to the disapproval, the Department shall provide an itemized list of recommendations, discrepancies, and plan corrective action(s) to the permittee in written correspondence, which will also provide deadlines for any corrective action(s).
- 6.1.J** If the TMDL ARAP has been submitted to the Department but has not received approval, the MS4 Operator is not required to implement any actions listed in their TMDL ARAP and shall notify the Department of this in their MS4 Stormwater Management Program Report.
- 6.1.K** If the TMDL ARAP has received Department approval, the permittee shall implement their TMDL ARAP in accordance to schedules established in the TMDL ARAP.
- Implementation of all TMDL ARAP control measures shall be documented and retained by the permittee, and made available to the Department or the EPA upon request.

- 6.1.L If the MS4 Operator has an approved TMDL ARAP, the permittee shall provide a summary listing the BMPs and the status of the measurable goals in the MS4 Stormwater Management Program Report.
- 6.1.M If the MS4 Operator is subject to a TMDL, the MS4 Operator may demonstrate no additional controls are needed beyond the successful implementation of the six Minimum Control Measures (MCMs), which includes modifications to the BMPs or measurable goals, for the attainment with the TMDL's assumptions and requirements. The demonstration is subject to Department approval. The MS4 Operator shall contact the Water Protection Program's MS4 Team to begin the process.
- 6.1.N If the permittee has already developed an integrated plan, a separate ARAP is not be required provided the integrated plan meets the requirements outlined in section 6.1 of this permit. Review and rating of an integrated plan is subject to the same requirements of section 6.1 of this permit. The MS4 Operator shall contact the Water Protection Program's MS4 Team to begin the process.
- 6.1.O Permittees subject to existing TMDL Assumptions and Requirements shall submit their plan and status of implementation to the Department with the MS4 Stormwater Management Program Report required by this permit. Existing plans shall be subject to the same conditions listed in items 6.1.
- 6.1.P If the EPA approved or established TMDL indicates that the permittee does not cause or contribute to the impairment, the permittee is not required to develop and implement any action contained in Part 6 of this permit.

PART 7. STANDARD PERMIT CONDITIONS

- 7.1.A Duty to Comply. The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and the Federal Clean Water Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal.
- 7.1.B Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.
- 7.1.C Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance may also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems installed by a permittee only when necessary to achieve compliance with the conditions of the permit.
- 7.1.D Inspection and Entry. The permittee shall allow the Department or an authorized representative (including an authorized contractor acting as a representative of the Department), upon the presentation of credentials and other documents as may be required by law to:
1. Enter the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit.
 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, and have the authority to request records be provided electronically in absentia.
 3. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
 4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Act, any substance or parameters at any location.
- 7.1.E Monitoring Methods. See Part 5.1 of this operating permit.
- 7.1.F Need to Halt or Reduce Activity Not an Excuse. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

- 7.1.G Permit Actions. This permit may be modified, revoked, reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- 7.1.H Duty to Reapply.
1. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
 2. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
 3. A permittees with currently effective general permit shall submit an application for renewal at least 180 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.) Continuation of expiring permits are in accordance with 10 CSR 20-6.010(10)(C) and subsequent amendments.
- 7.1.I Administrative Continuation of the Permit. If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 10 CSR 20-6.010(10)(C) and remain in force and effect. Any permittee who was granted permit coverage prior to the expiration date, and who has applied for renewal at least 180 days prior to the expiration date, will automatically remain covered by the continued permit until the earlier of:
1. Reissuance or replacement of this permit, at which time the permittee shall comply with the application conditions of the new permit to maintain authorization to discharge;
 2. Notice of termination;
 3. Issuance of a site-specific permit or alternative general permit for MS4 discharges; or
 4. A permit decision by the Director not to reissue this general permit, at which time the permittee shall seek coverage under an alternative general permit or a site-specific permit.
- 7.1.J Permit Transfers. Subject to 10 CSR 20-6.010(11), an operating permit may be transferred upon submission to the Department. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the MCWL or the CWA. (See 40 CFR 122.61. In some cases, modification or revocation and reissuance is mandatory.)
- 7.1.K Procedures for Modification or Revocation. If at any time the Department determines that the quality of waters of the state may be better protected by reopening this permit, or revoking this permit and requiring the owner/operator of the permitted site to apply for a site-specific (individual) permit or alternative general permit, the Department may revoke a general permit and require any person to obtain such an operating permit as authorized by 10 CSR 20-6.010(13), 10 CSR 20-6.200(1)(B) or 10 CSR 20-6.200(6).
- 7.1.L If this permit is reopened, modified, or revoked pursuant to this section, the permittee retains all rights under Chapters 536 and 644 Revised Statutes of Missouri upon the Department's reissuance of the permit as well as all other forms of administrative, judicial, and equitable relief available under law.
- 7.1.M The Department may require the permittee to apply for and obtain a site-specific or alternative general permit if:
1. The permittee is not in compliance with the conditions of this general permit,
 2. The discharge no longer qualifies for this general permit due to changed site conditions and regulations,
 3. The permittee will be notified in writing of the need to apply for a site-specific permit or an alternative general permit. When a site-specific permit or alternative general permit is issued to the authorized permittee, the applicability of this general permit to the permittee will be terminated upon the effective date of the site-specific or alternative general permit, whichever the case may be.
- 7.1.N Site-Specific Permit or Alternative General Permit. The permittee may apply for a site-specific permit or alternative general permit in lieu of coverage under this general permit. In such cases, the permittee shall submit an application for the alternate

permit in accordance with the requirements of 10 CSR 20-6.200 with reasons supporting the request. The request may be granted by issuance of any site-specific permit or an alternative general permit.

- 7.1.O Property Rights. This permit does not convey any property rights of any sort, or any exclusive privilege.
- 7.1.P Duty to Provide Information. The permittee shall furnish to the Department, within a reasonable amount of time, any information which the Department may request to determine whether cause exists for modifying, revoking, and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.
- 7.1.Q Falsification Penalties. Any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six months, or by both. Second and successive convictions for violations under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two years, or both.
- 7.1.R Reopener Clause. Nothing in this permit shall prevent the Department from re-opening, modifying, or revoking this permit as authorized by law.
- 7.1.S Signatory Requirements.
1. All permit applications shall be signed and certified in accordance with 40 CFR 122.22 and 10 CSR 20-6.010(2)(B) by either a principal executive officer or by an individual having overall responsibility for environmental matters for the permittee.
 2. All reports required by this permit, and other information requested by the Department shall be signed by a person described in section 2.2.B of this permit, or by a duly authorized representative of that person. A person is a duly authorized representative if:
 - a) The authorization is made in writing by a person designated in Section 2 of this permit;
 - b) The authorization specifies an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of stormwater manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the permittee. A duly authorized representative may thus be either a named individual or any individual occupying a named position.
 - c) The written authorization is submitted to the Director; and
 - d) If an authorization under section 2.2.B is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new, written authorization satisfying the requirements of this paragraph must be submitted to the Director prior to, or together, with any reports, information, or applications signed by an authorized representative.