THE UNIVERSITY OF MEMPHIS®

PHASE II MS4 PERMIT MANAGEMENT PLAN

Revised: September 2024

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PART 1. BACKGROUND & REGULATORY CONTEXT

REGULATORY REQUIREMENTS AND APPLICABLE STANDARDS

The Storm Water Phase II Final Rule requires the University of Memphis, the operator of a regulated small municipal separate storm sewer system (MS4), to obtain a National Pollutant Discharge Elimination System (NPDES) Permit (TNS000000) because your storm water discharges are considered "point sources" of pollution. MS4s are considered point sources because they discharge storm water into discrete conveyances, including roads with drainage systems and municipal streets. MS4s are publicly owned or operated and are designed or used for collecting or conveying storm water.

According to 40 CFR 122.26(b)(8), *"municipal separate storm sewer means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):*

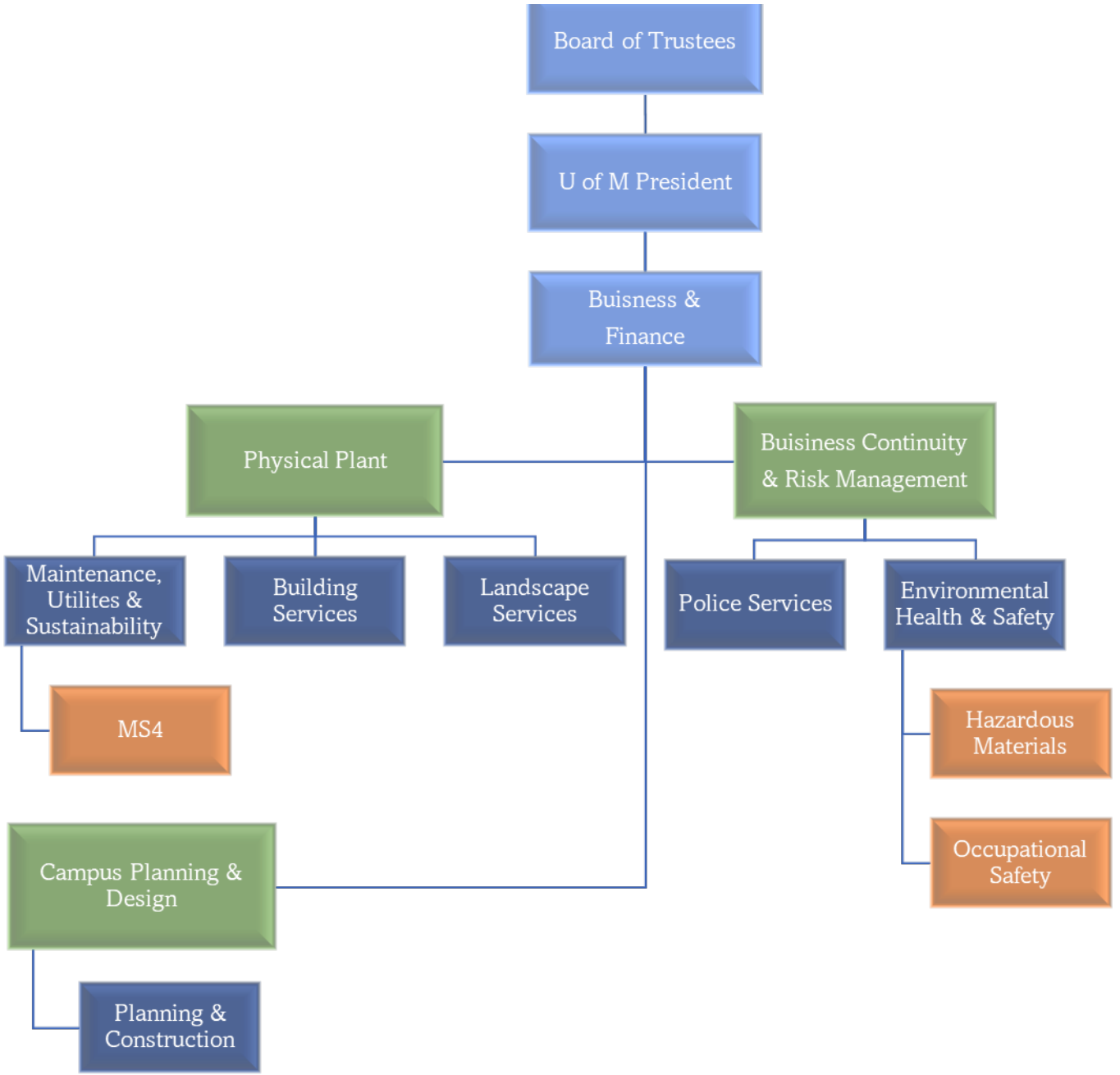
- *Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law)...including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act (CWA) that discharges into waters of the United States.*
- *Designed or used for collecting or conveying storm water;*
- *Which is not a combined sewer; and*
- *Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2."*

ORGANIZATIONAL STRUCTURE AND CONTACT INFORMATION

The University of Memphis is considered a non-traditional MS4, as it is not a municipality, but still has a large population density in an urban area to be designated for permit authorization by the Division of Water Resources. As a non-traditional MS4, some of the elements within the permit have some slight modifications or in some cases cannot be applied to our unique MS4 Program. All variations within each applicable section of this MS4 Plan have been noted and approved by the Division of Water Resources to satisfy all requirements of the permit.

The majority of MS4 responsibilities fall under the Physical Plant and Campus Planning and Design. The main MS4 point of contact is located under the Maintenance, Utilities and Sustainability Operations within Physical Plant. All record keeping, reporting, development, and implementation of the MS4 General Permit is the responsibility of the main MS4 point of contact. The AVP of Physical Plant holds signature authority for the MS4 General Permit. Responsibilities of the NPDES General Permit for Construction fall under Campus Planning & Design with the Chief of Campus Planning holding the signature authority. While construction activities are maintained by Campus Planning and Design staff, communication and required documentation is shared with the MS4 main point of contact for record keeping and reporting purposes. Polices Services share some MS4 responsibilities in relation to our emergency and incident reporting networks. Environmental Health and Safety also share some MS4 responsibilities in development and oversight of policies and procedures pertaining to handling and storing hazardous and nonhazardous materials, as well as employee training.

Figure 1: University of Memphis organizational structure in relation to MS4.



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LOCAL WATER RESOURCES

The U of M's MS4 permitted area eventually drains into two different streams, Cypress Creek and Black Bayou. All outfalls belonging to the U of M MS4 drain directly into the City of Memphis MS4 combining with their stormwater conveyance systems before draining into Cypress Creek and the Black Bayou. The majority of the Main Campus and all of the Park Ave Campus lead to the Black Bayou, which is a tributary to Nonconnah Creek and within the Nonconnah watershed (HUC 08010211). A smaller portion of the Northwest corner of the Main Campus lead to Cypress Creek, a tributary to Wolf River and within the Wolf River watershed (HUC 08010210).

Figure 2: U of M Main Campus to Cypress Creek.

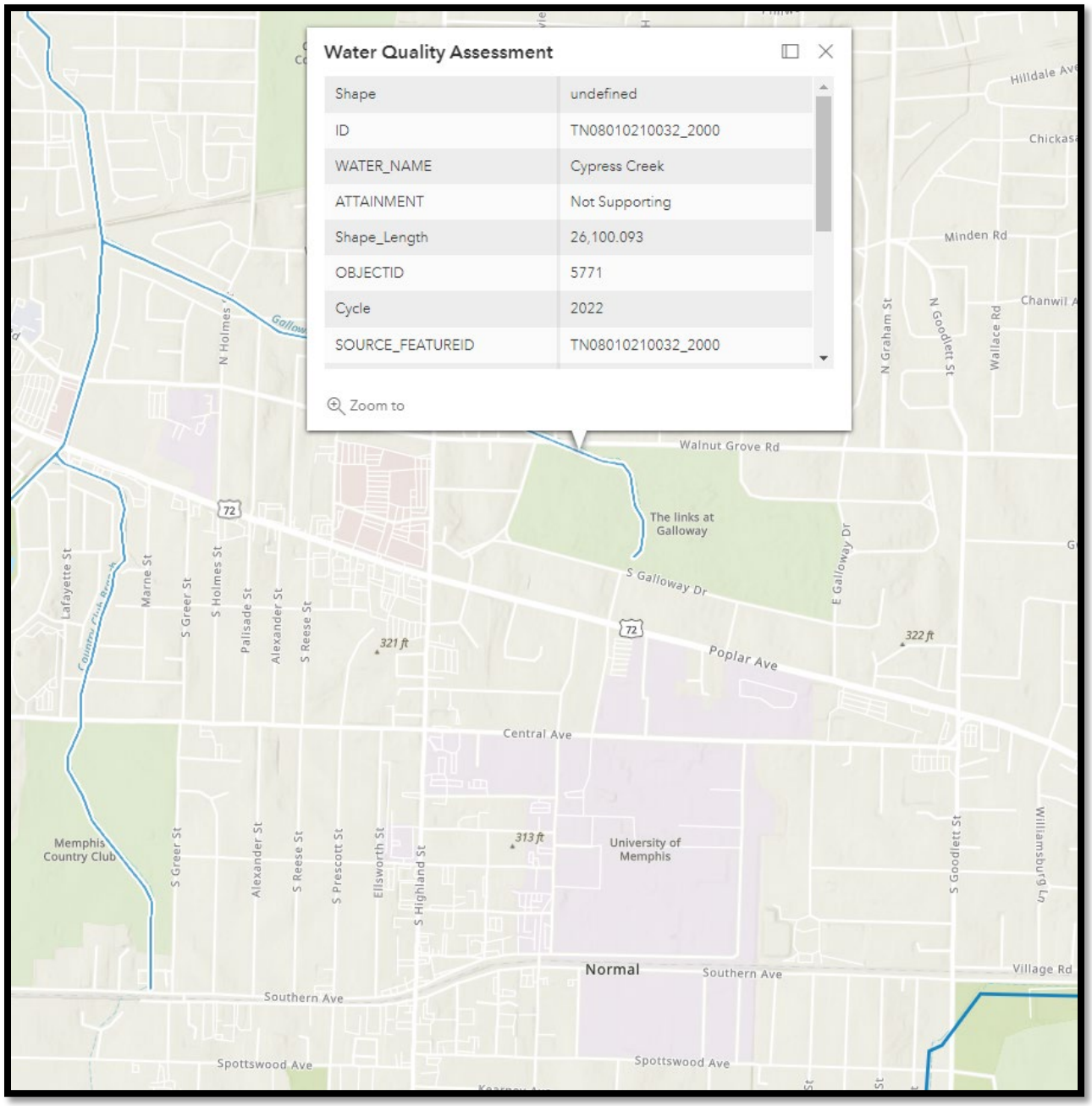


Figure 3: U of M Main campus to Black Bayou.

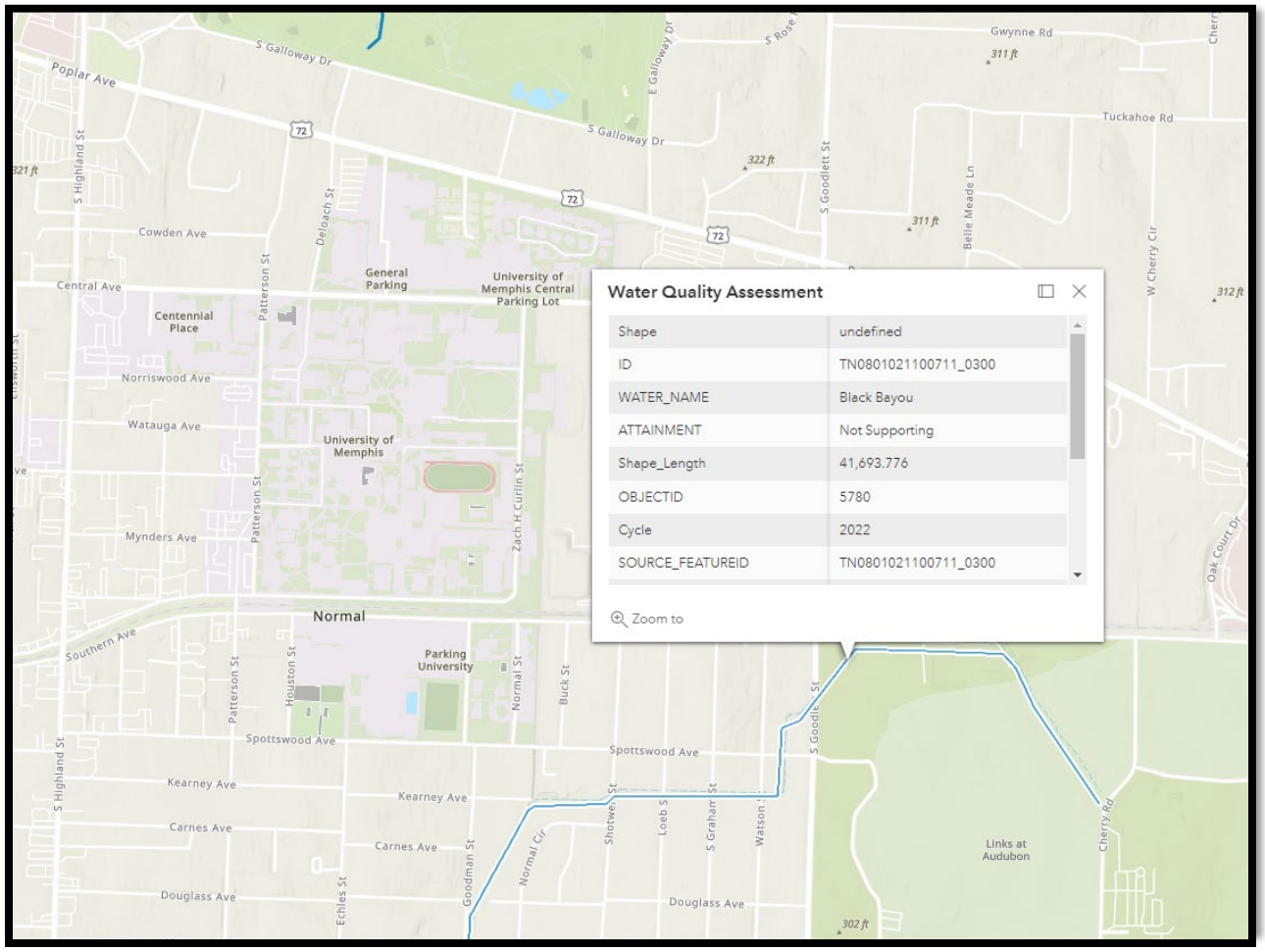


Figure 4: U of M Park Ave campus to Black Bayou.

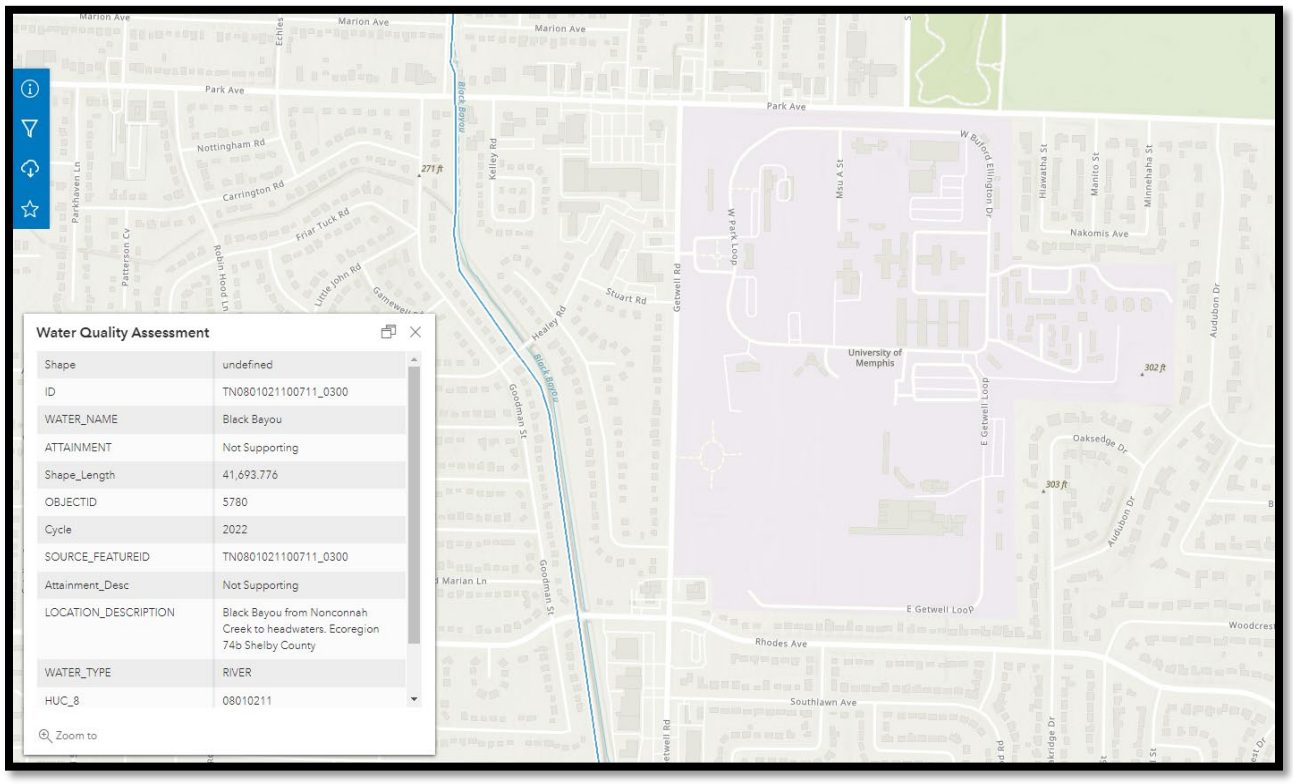
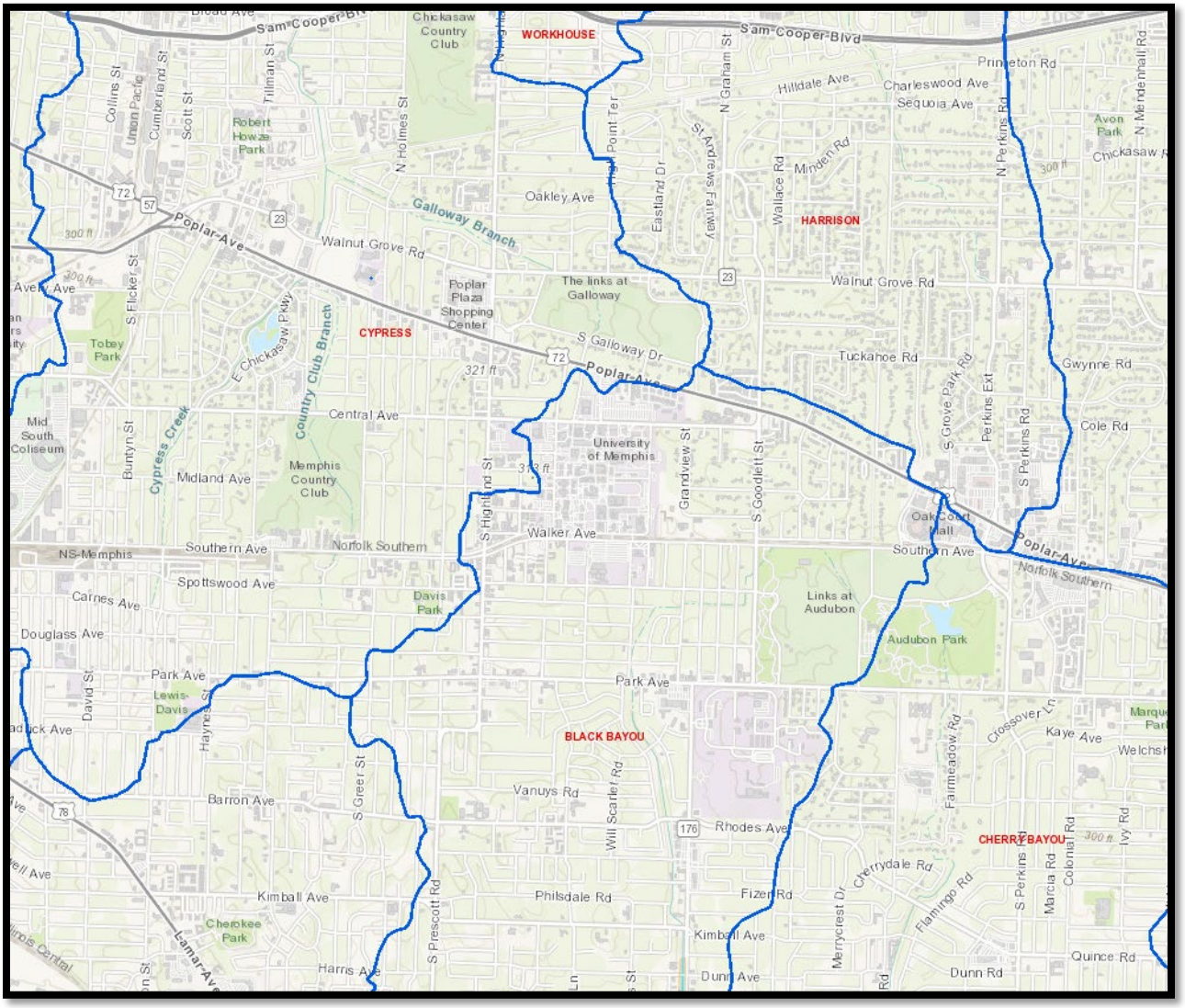


Figure 5: Cypress Creek and Black Bayou drainage basins.



According to Tennessee's Final EPA approved 2022 List of Impaired and Threatened Waters, as required by Section 303(d) of the Clean Water Act, both Cypress Creek and the Black Bayou are impaired. Impaired waters fail to meet one or more water quality standards. Below are charts of the impairments for both segments of Cypress Creek and the Black Bayou within the U of M MS4 drainage area.

Table 1: Tennessee 2022 303d list of Cypress Creek Impairments.

Waterbody ID	Waterbody Name	Primary County	Water Type	Water Size	Impairment Cause Name	TMDL Priority	Potential Impairment Source Name
TN08010210032_02000	Cypress Creek	Shelby County	River	5	Chlordane	Low	Contaminated sediments
					Dissolved Oxygen	Low	Municipal (urbanized high-density area)
					Escherichia Coli (E. Coli)	NA	Sanitary sewer overflows (collection system failures)
					Escherichia Coli (E. Coli)	NA	Municipal (urbanized high-density area)
					Nutrients	Low	Municipal (urbanized high-density area)
					Pesticides	Low	Contaminated sediments
					Physical substrate habitat alterations	Low	Channelization
					Polychlorinated biphenyls (PCBS)	Low	Contaminated sediments

Table 2: Tennessee 2022 303d list of Black Bayou Impairments.

Waterbody ID	Waterbody Name	Primary County	Water Type	Water Size	Impairment Cause Name	TMDL Priority	Potential Impairment Source Name
TN0801021100711_0300	Black Bayou	Shelby County	River	7.9	Dissolved oxygen	Low	Impacts from hydrostructure flow regulation/modification
					Escherichia Coli (E. Coli)	NA	Municipal (urbanized high-density area)
					Escherichia Coli (E. Coli)	NA	Sanitary sewer overflows (collection system failures)
					Phosphorus, total	Low	Municipal (urbanized high-density area)
					Physical substrate habitat alterations	Low	Channelization

STORM WATER MANAGEMENT PROGRAM

As a Phase II regulated small MS4, permittees are required to develop and implement a storm water management program that:

- Reduces the discharge of pollutants to the "maximum extent practicable" (MEP);
- Will not cause or contribute to the impact of stormwater runoff on receiving streams of the MS4 system that violate State water quality criteria.

The Program shall include engineering methods, system design, control techniques and/ or management practices appropriate for the control of pollutants of concern. The elements of the Program must be documented by the permittee in a Stormwater Management Plan (SWMP). The permit puts forth 6 minimum control measures (MCMs) that, when implemented together, are expected to reduce pollutants discharged into receiving waterbodies.

1) Public Education and Outreach on Stormwater Impacts;
2) Public Involvement/Participation;
3) Illicit Discharge Detection and Elimination (IDDE);
4) Construction Site Runoff Control;
5) Post-Construction/Permanent Stormwater Management in New Development and Redevelopment;
6) Pollution Prevention/Good Housekeeping.

The SWMP must include the following information for each of these six program elements described in Part 3 of this guidance and Section 4.2 of the Permit:

- ✓ A detailed written document(s) that details how the permittee intends to comply with the requirements set by the permit;
- ✓ A detailed narrative description of the BMPs, programs and processes that the permittee or other entity will implement for each of the stormwater control minimum measures;
- ✓ The measurable goals for each of the BMPs including, as appropriate, the months and years in which the permittee will undertake required actions, including interim milestones and the frequency of the action;
- ✓ Identify by name, job title or department those with the responsibility for implementing or coordinating the Program elements in the SWMP; and
- ✓ A detailed description of the monitoring and inspection programs required in Sections 4 and 5.

Implementation of the BMPs consistent with the SWMP and compliance with provisions of this permit, including reporting and monitoring requirements, constitutes compliance with the standard of reducing pollutants to the MEP. Unless otherwise specified in this permit, elements of the SWMP shall be implemented by the expiration of the permit.

The Program must be reviewed periodically in accordance with Subpart 4.4 and in conjunction with the requirements found in various sections throughout this permit. Changes to the Program required by this permit must be completed within 12 months of the effective date of the permit unless otherwise specified. Replacements or modifications to the SWMP must be documented in

the next annual report. Written approval from the TN Department of Environment Division of Water Resources is required prior to elimination of a SWMP activity or control measure. Refer to Section 4.4 for further details on program changes. Below are important dates to be aware of throughout the permit cycle.

PROGRAM DEADLINES AND ACTIVITIES

Storm Water Phase II Final Permit Reissuance	August 1, 2022
Storm Water Phase II Final Permit Effective Date	September 1, 2022
Notice of Coverage Effective Date	March 1, 2023
Notice of Coverage Expiration Date	August 31, 2027
Hearing for Appeals of Permanent Stormwater Management Requirements in Phase II MS4 Permit	November 2017
NOI & Permanent Stormwater Management Program Implementation Schedule Due	January 1, 2018
Submit Implementation Plan for Stormwater Management Program	November 30, 2022 (within 90 days from effective date of the permit)
Implementation of Permanent Stormwater Management Program	Within 24 months of the effective date of permit
Updates to legal authority required by the permit, fully implemented and adopted	Within 24 months of the effective date of permit
Analytical Monitoring (5-Year Cycle)	*UofM is exempt from this requirement*
Develop plan for implementing the Stormwater Management Program in any new areas added to the MS4	Within 90 days of transfer of ownership, operational authority, or responsibility of any new areas
Implement the Stormwater Management Program in any new areas added to the MS4	Within one year from the addition of the new areas
MS4 Map Updates	Within 6 months of modifications or additions
Present Annual Report to University for Review and Comment	September 4, 2023
2023 Annual Report Due	September 30, 2023
Hold Stormwater Management Committee Meetings	Quarterly

PART 2. MONITORING, RECORD KEEPING, & REPORTING

ANALYTICAL MONITORING (Section 5.1)

The permittee is required to perform analytical monitoring as a part of its Stormwater Management Program within the MS4 program area on streams designated by TDEC as having unavailable parameters. The UofM MS4 does not discharge to streams with unavailable parameters and is therefore not required to conduct analytical monitoring at this time.

RECORD KEEPING (Section 5.3)

Please refer to the Document Control Guidance for details on record keeping.

REPORTING (Section 5.4)

The permittee must submit an annual report to the Memphis Environmental Field Office (EFO) by September 30 of each calendar year that covers the previous reporting year (July 1 through June 30). The address of the Memphis EFO is as follows:

Memphis Environmental Field Office
8383 Wolf Lake Drive
Bartlett, TN 38133-4119
(901) 368-7939

The permittee may fulfill this requirement by submitting the report via the online portal called TDEC Forms. Prior to submitting the annual report to the division, the permittee must present the annual report to the public for suggestions and comment. This may be done through any public communication method the permittee chooses such as a public hearing or by publishing a draft annual report on the permittee's website. The permittee should respond to any comments received. The annual report form is found in Appendix B of the permit and on the Division's website.

PART 3. SIX MINIMUM CONTROL MEASURES

In each of the following sections, the six minimum control measures are described. Following the description of each measure is a table documenting BMPs that the UofM MS4 program are obligated by the Permit to maintain or implement over the next 5 years. These are the same BMPs set forth in the Notice of Intent (NOI). Also included in each section are other BMP ideas and metrics available for use when needed.

MCM 1: PUBLIC EDUCATION AND OUTREACH (Section 4.2.1)

Public education is a key component to any effective storm water management program. The program must focus on the steps that the U of M audience can take to minimize the discharge of pollutants of concern to receiving streams. For example, in certain areas known as hot spots, the permittee should focus education and an elimination strategy for that pollutant(s) of concern and address outreach to the communities where the hot spots are located. Permittees are encouraged to emphasize the water quality improvement aspect of education programs and document related or expected water quality improvements. Training conducted under this control measure is often also applicable under the pollution prevention and good housekeeping measure (4.2.6).

A Public Information and Education (PIE) plan must be developed and updated throughout the permit cycle. The purpose of the PIE plan is to stay on task and evaluate the effectiveness of each activity designed to meet the management measures. See Tables 3-5 to view the latest U of M PIE Plan. The PIE plan must include the following:

- Identify activities that satisfy each management measure;
- Identify the department and personnel responsible for performing each activity;
- Establish a set schedule or target date to accomplish each activity;
- Provide a way to evaluate the overall effectiveness of each activity and provide feedback on each annual report on the success and/or improvements following the completion of each activity.

4.2.1.1. Public

The public is listed as the first of the three major audiences by the permit. The U of M is considered a non-traditional MS4 and therefore equates the term “public” to our U of M student body and employees. Based on latest population estimate of 24,122, the U of M is required to conduct and/or sponsor a minimum of <u>one</u> activity per reporting year that addresses each of the management measures listed in General Permit requirement 4.2.1.1.

The following is a summary table listing each Public directed activity that the U of M has planned for the current permit cycle and was proposed in the NOI. Each activity shown in the summary table below is designed to meet the requirements of the PIE plan and must be evaluated annually on effectiveness. This evaluation will be submitted with the annual report each year and be available for public view on the campus MS4 website.

Table3: MCM1 Public Education and Outreach list of planned activities to address each management measure targeting the Public as stated in the General Permit 4.2.1.1.

MCM 1: PUBLIC EDUCATION AND OUTREACH							
TARGET AUDIENCE		**(1)**University Students **(2)** University Staff (including contracted staff) **(3)**Universty Faculty **(4)**On-Campus Residents **(5)**MS4 Related Staff					
MANAGEMENT MEASURES (4.2.1.1.)		**(a)** General awareness of the impacts on water quality **(b)** Awareness of the importance of maintenance activities for operators of permanent Best Management Practices (BMPs)/Stormwater Control Measures (SCMs) **(c)**Awareness of the proper storage, use, and disposal of pesticides, herbicides, fertilizers oil and other automotive-related fluids. **(d)**Awareness of identifying and reporting procedures for illicit connections/discharges, sanitary sewer seepage, spills, etc.					
Activity		**Measureable Goals**	**Target Audience**	**Relative Management Measures**	**Due Date/Schedule**	**Responsible Party**	**Method(s) of Evaluation**
1	Maintain and update U of M MS4 website	Place all MS4 material on website to be a valuable resource to the general public for education and reporting.	1-5	a-d	Prior to Annual Report due date/Annually	Physical Plant - MS4 Coordinator	# of webpage hits; #of reports/comments
2	Social Media Outreach	Post MS4 factoids or resourceful tools on the U of M Sustainability social media outlets.	1-5	a-d	2 posts/year	Physical Plant - MS4 Coordinator	# of likes, shares, comments and views
3	Host or Participate in an Educational Event on Campus	Have an exhibition table for the campus MS4 Program to distribute information and communicate with the general public. Events such as Tiger Blue Goes Green Day, Safety Palooza, Earth Day, Student Orientation, etc.	1-5	a-d	1 event/year	Physical Plant - MS4 Coordinator	# of brochures distributed, # of emails collected, # of survey submissions
4	Highlight Campus MS4 Program in Campus E-Newsletter	Submit factoids about MS4 Program and a link to our website for more information in the campus e-newletter called "Weekly."	2,3,5	a-d	1 submission/year	Physical Plant - MS4 Coordinator	# of newsletters distributed/ # of responses
5	Post Interactive Educational Material at Time Clocks/Gathering Areas	Post MS4 educational material at time clocks and other social gathering areas within Physical Plant that is interactive and incentivized(scanvenger hunt, trivia, etc.)	2,5	a-d	2 posts/year	Physical Plant - MS4 Coordinator	# of participants

4.2.1.2. Engineering and Development Community

The Engineering and Development Community is listed as the second of the three major audiences by the permit. The U of M considers this audience to be U of M staff that have direct interaction and responsibility related to the design and development of our campus infrastructure. This audience would include some individuals in the following departments: U of M Campus Planning and Design, Physical Plant, and Environmental Health and Safety. Based on the population size, the U of M is required to conduct and/or sponsor a minimum of two activities per a 5-year permit term that addresses each of the related management measures.

The U of M strives to participate in local and State organizations and professional development opportunities, so to stay informed and current in our progress. The U of M is currently a member of the Tennessee Stormwater Association (TNSA) and requires a significant portion of their Lead MS4 Staff to be Level 1 certified with the Tennessee Erosion Prevention and Sediment Control Program (TNEPSC). A current list of TNEPSC Level 1 and Level 2 U of M staff can be found at https://tnepsc.org/PrintCert.asp.

The following is a summary table listing each Engineering and Development Community - directed activity that the U of M has planned for the current permit cycle and was proposed in the NOI. Each activity shown in the summary table below is designed to meet the requirements of the PIE plan and must be evaluated annually on effectiveness. This evaluation will be submitted with the annual report each year and be available for public view on the campus MS4 website.

Table4: MCM1 Public Education and Outreach list of planned activities to address each management measure targeting the Engineering and Development Community as stated in the General Permit 4.2.1.2.

MCM 1: PUBLIC EDUCATION AND OUTREACH							
TARGET AUDIENCE		**(1)**U of M Campus Planning and Design Staff **(2)**Physical Plant Staff **(3)**Environmenal Health and Safety Staff					
MANAGEMENT MEASURES (4.2.1.2.)		**(a)**Awareness of the stormwater ordinances, regulations, and guidance materials related to long-term water quality impacts. **(b)** Awareness of stormwater ordinances, regulations, and guidance materials related to construction phase water quality impacts.					
Activity		**Measureable Goals**	**Target Audience**	**Relative Management Measures**	**Due Date/Schedule**	**Responsible Party**	**Method(s) of Evaluation**
1	Tennessee Eroision Prevention and Sediment Control (TNEPSC) Training and Certification	Require MS4 and construction related Lead positions to be TNEPSC Level 1 certified and require at least one position to be TNEPSC Level 2 certified.	1-2	b	Renew certification every 3 years	Physical Plant - MS4 Coordinator; Campus Planning and Design	# of certifications
2	MS4 Meetings	Host MS4 meetings to update Lead employees who have stormwater related duties. Meetings should include transparency in communication, permit updates, progress reports, professional development opportunities and educational material.	1-3	a,b	2 meetings/year	Physical Plant - MS4 Coordinator	# of attendees

4.2.1.3. Employees

Employees are listed as the third and final audience by the permit. While employees are included in the Public audience, this final Employee audience refers to a limited group of U of M employees, whose daily operational duties have a higher potential to impact or interact with U of M stormwater discharges. Management measures for this target audience will be dependent on job function and duty location. New employees or employees moving into an applicable job category must be trained within six months of their employment. All existing employees in applicable job categories must receive training and/or retraining within the 5-year permit term.

Table5: MCM1 Public Education and Outreach list of planned activities to address each management measure targeting the Employees as stated in the General Permit 4.2.1.3.

MCM 1: PUBLIC EDUCATION AND OUTREACH							
TARGET AUDIENCE		**(1)**U of M Campus Plan **(2)**Physical Plant Staff **(3)**Environmenal Health and Safety Staff **(4)**Dining Services Staff **(5)**Residence Life Staff **(6)**Police Services **(7)**All remaining U of M Employees					
MANAGEMENT MEASURES (4.2.1.3.)		**(a)**Awareness of water quality impacts from daily operations. **(b)** Pollution Prevention and Good Housekeeping (see subpart 4.2.6.) **(c)** The awareness of identifying and reporting procedures for illicit connections/discharges, sanitary sewer diversions or seepages, spills, etc. (see subpart 4.2.3e)					
	Activity	**Measureable Goals**	**Target Audience**	**Relative Management Measures**	**Due Date/Schedule**	**Responsible Party**	**Method(s) of Evaluation**
1	New Employee Orientation	All employees new to a position or new to the U of M, must attend an HR mandated orientation. Informative campus guides, brochures and other handouts are shared with new employees from various campus departments. Include MS4 Program information on the existing EH&S or Sustainability handout.	1-7	a-c	Within 1 month if newly hire or movement into a new position.	Human Resources/Physical Plant - MS4 Coordinator	# of attendees
2	Spill Prevention, Control and Countermeasure (SPCC)/Stormwater Pollution Prevention Training	Partner MS4 with SPCC employee training hosted by EH&S Department.	1-6	a-c	Existing employees -1 training/year. New hire/new position - within 6 months of hire date.	Environmental Health and Safety/ Physical Plant - MS4 Coordinator	# of attendees
3	Job Specific Training/Development	Work with individual crafts, trades, specific jobs within Departments to incorporate stormwater training as it relates to their daily duties.	1-6	a-c	1 training/year	Physical Plant - MS4 Coordinator	# of attendees

MCM 2: PUBLIC INVOLVEMENT/PARTICIPATION (Section 4.2.2)

The General Permit (section4.2.2) requires the permittee to develop and implement a public involvement/participation program. The goal of MCM 2 is to involve both (1) the public and (2) the commercial and industrial community in the development and implementation of the stormwater management plan. Permittees are responsible for promoting, publicizing, and facilitating opportunities for this participation to reduce pollutants in our stormwater discharges to the maximum extent practicable.

There are many advantages to involving public in the development of our MS4 Program. As the program evolves, public input is vital in understanding the bigger picture, what matters most to our audience, communication preferences, motivational ideals, where we stand in our collective understanding of water quality impacts, and so much more. Inclusivity in the MS4 decision making process provides a sense of ownership. This can come as a relief and a support when difficult changes need to be made or other challenges arise. It proves more successful to have inclusivity on the front end, than to try and engage such inclusion on the back end.

The U of M has multiple opportunities to involve our students in events such as river cleanups, campus litter cleanups, and other water education activities. We are fortunate to have the Center for Applied Earth Sciences and Engineering Research (CAESER) within our College of Engineering. CAESER's Water and Geographic Analysis divisions have developed partnerships and educational outreach within our campus community and the greater community. While the campus MS4 program has excelled in student event participation, education, research and outreach, there was less effort given to engaging the public in actively developing and implementing the program. This permit cycle, there will be more emphasis on pursuing ways for the campus public to be an active participate in program development and strategies on marketing those opportunities.

In the General Permit, MCM 2 designates the two major target audiences: (1) the general public (4.2.2.1), and (2) the commercial and industrial community (4.2.2.2). As a non-traditional MS4, the U of M will reference the permit definition "general public" as pertaining to all U of M faculty, staff and students. Furthermore, the U of M will reference the permit definition for "commercial and industrial community" as pertaining to U of M employees that have job responsibilities directly related to the campus MS4.

The following summary table (Table 6) exhibits a list of minimum requirements that permittees must meet, apart from the activities required to reach the two target audiences (see Table 7). An evaluation on the effectiveness and completion of each management measure is required each year in the annual report and can be viewed on the U of M MS4 website.

Table 6: MCM 2 Public Involvement/Participation list of minimum requirements as stated in the General Permit 4.2.2..

MCM 2: PUBLIC INVOLVEMENT/PARTICIPATION					
Management Measures		**Measureable Goals**	**Available Application(s)/Plans**	**Annual Report Requirement**	**Responsible Party**
a	Provide public access to Stormwater Management Program records, including a description of the program.	Write description of MS4 Program (e.g. plans) and have available on the Ms4's webpage.	The U of M MS4 webpage has the latest publication of the MS4 Program/Plans and meets this management measure. https://www.memphis.edu/ehs/stormwater/index.php	Provide web address for the Stormwater Management Plan.	Physical Plant - MS4 Coordinator
b	Develop and implement a formal public notice process including: (1)documenting and responding to public comments. (2) method to identify major modifications to the MS4 Program that require a formal public notice process. (subpart 4.4.1)	Prior to the second annual report due date (09/30/2024) complete the formal public notice process for the entire Stormwater Management Program, including responses to comments. In subsequent years, a formal public notice will only be required when major modifications are made to the program. (subpart 4.4.1)	There are currently no processes in place to meet this management measure. A process will be developed and implemented within Year 1 of the permit.	A copy of the public notice and response to comments must be submitted with the annual report only for the year in which such a process is required.	Physical Plant - MS4 Coordinator
c	Mechanisms, procedures, and processes for public access to information on projects and receiving and considering comments from the public on those projects. (subpart 4.2.4)	(1) Information for 100% of all construction site projects is accessible to public for comment. (2) 100% of all public comments on construction site projects are considered in accordance with the MS4 Program.	There is currently no mechanism in place for the public to view all information on construction site projects, nor to receive and response to public commentary on those projects apart from e-mailing or calling the Campus Planning and Design staff. A process will be applied within Year 1 of the permit to meet this management measure.	(1) Yes/No on the public accessibility of information on all construction sites. (2) # of comments received from the public on construction site projects (3) Yes/No on consideration given to all public comments on construction site projects.	Campus Planning and Design
d	Encourage and promote citizen reporting of illegal spillage, dumping, or otherwise disposal of materials into the MS4 storm sewer system. (subpart 4.2.3)	Develop and implement a public reporting system to facilitate and track public reports of spills, discharges, and dumping to its storm sewer system.	There are multiple ways to report an illicit discharge that are currently implemented on campus: (1)Report via the MS4 online submission form (2)Report via the U of M LiveSafe App (3)Call EH&S (901)6782256 or Police Services for non-emergency (901)678-3848 or for emergency dial 911 on any campus phone or (901)678-HELP(4357).	# of reports received from public	Physical Plant - MS4 Coordinator/EH&S/ Police Services

Table 7: MCM 2 Public Involvement/Participation list of activities planned by the U of M that meet management measures targeting audiences as stated in the General Permit 4.2.2.1 and 4.2.2.2.

MCM 2: PUBLIC INVOLVEMENT/PARTICIPATION							
TARGET AUDIENCE		**(1)**General Public **(2)** Commerical and Development Community					
MANAGEMENT MEASURES (4.2.2.1 and 4.2.2.2)		**(a)** Pollution prevention **(b)**Impacts on water quality or local stormwater management issues **(c)**Storage, use, and disposal of household hazardous waste, automotive-related fluids, pesticides, hericides, and fertilizers use. **(d)**Identifying and reporting procedures for illicit connections/discharges, sanitary sewer seepage, spills, etc.					
Activity		**Measureable Goals**	**Target Audience**	**Relative Management Measures**	**Due Date/Schedule**	**Responsible Party**	**Method(s) of Evaluation**
1	Litter/River Cleanups/Awarness Events	Host or participate in a litter cleanup on campus or within watershed. Partner with Memphis MS4, student groups, community non-profits and local businesses/organizations. Utilize events such as Earth Day, Tiger Blue Goes Green Day and Safety Palooza to inform the public on our MS4 Program, reporting tools and local water quality concerns.	1-2	a-d	1 event/year	Physical Plant - MS4 Coordinator	# of participants, amount of litter collected, # survey submissions/comments
2	Storm Structure ID Marking	Use the latest stormwater map to engage the public to apply "Only Rain Down the Drain" decals and individual ID tags. ID tags will improve reporting accuracy. Partner with CAESAR on project.	1-2	a-b,d	Year 1: Establish ID marking system on stormwater maps and create partnerships. Year 2-5: Work with partnerships and volunteers to apply decals and ID markers across campus with at least 1 event per year or until completion.	Campus Planning & Design/Physical Plant - MS4 Coordinator	# participants, # of drains tagged

Table 7: MCM 2 Public Involvement/Participation list of activities planned by the U of M that meet management measures targeting audiences as stated in the General Permit 4.2.2.1 and 4.2.2.2. Continued.

3	Recycle and Composting Program Expansion	Increase recycle and composting facilities/awareness around campus, especially near dorms and dining halls. Dumpster areas are always a hot spot for potential pollutants. Recycling and composting are great ways to reduce contaminants responsibly. Include the public in ways to expand these programs and inform others on the benefits to water quality.	1	a-d	1 event or survey/year	Physical Plant - MS4 Coordinator	# of brochures distributed, # of emails collected, # of survey submissions, # of volunteers, amount of waste diverted from landfill
4	Green Infastructure	Design and implement more low impact green infastructure that helps to protect water quality on campus. Establish academic partnerships on campus toward this development and create possible research opportunities.	1-2	a-d	1 installation/permit cycle	Campus Planning & Design/Physical Plant - MS4 Coordinator	# of participants, # of installations, # of public comments on designs, any research data on project
5	MS4 Wepage/Social Media/Newletters	Keep website updated with the latest information on MS4 program. Inform the public via U of M social media outlets and newsletter publications about proper disposal options, about our our online reporting form for illicit discharge, etc. Make publications interactive and incentivized to increase participation.	1-2	a-d	2 posts/year	Physical Plant - MS4 Coordinator	# of shares, likes, comments, webpage hits

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION – IDDE (Section 4.2.3)

Illicit discharges are any discharges into the MS4 that are not composed entirely of stormwater and are not otherwise authorized by the General Permit (subpart 1.3.3.2) as an allowable non-stormwater discharge. Allowable non-stormwater discharges may be addressed as an illicit discharge if identified by the permittee as a significant contributor of pollutants to the MS4. Illicit discharges enter the system either through direct connections (wastewater piping connected to storm drains, for example) or through indirect connections (infiltration from leaky wastewater systems, spills, dumping into the storm drain, etc.).

As a preventative measure, the U of M maintains an inventory of "Hot Spots." Hot Spots are locations or entities on campus that have a higher potential to produce non-stormwater discharges that are not allowable by the General Permit. These Hot Spots are inspected annually, and related personnel must attend the annual SPCC and Stormwater Pollution Prevention training provided by the UofM Employee, Health, and Safety Department.

We encourage the Public to participate in keeping pollution out of our natural waterways, by education on stormwater pollution and reporting any potential illicit discharges. The Public can report potential illicit discharges found on campus via our online Illicit Discharge Compliant Form.
If an emergency, contact U of M Police Service at 901-678-3848, and then submit the online Illicit Discharge Compliant Form at your earliest convenience.
Submissions via the online Illicit Discharge Compliant Form, go directly to the MS4 Coordinator and the Environmental, Health and Safety Department for the proper investigation and corrective measures, using the **Illicit Discharge Reporting Form (Appendix B.)** An inventory of all illicit discharge reports are maintained by the UofM MS4 Coordinator.

UofM regulations, response procedures, and enforcement measures related to illicit discharges into our storm sewer system can be found in our **UofM Stormwater Enforcement Response Plan or ERP (Appendix C.)**

Permittees are required to develop, implement, and enforce a program that can identify and eliminate any illicit discharges into the storm sewer system. The following summary table list management measures requirements as stated in the General Permit 4.2.3, and a list of activities/items that adhere to those requirements.

Table 8: MCM 3 Illicit Discharge Detection and Elimination (IDDE) list of activities/items implemented/planned by the U of M that meet management measures as stated in the General Permit 4.2.3. Continued.

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)				
Management Measures		**Measureable Goals**	**Available Application(s)/Plans**	**Annual Report Requirement**
a	Stormwater Map that contains all required data elements (subpart 4.2.3.1): outfalls, inputs, flow direction, and receiving streams	Keep map updated as new elements are identified.	The U of M stormwater map latest revision is March 2023. The map includes all required data and is publicily accessible on the MS4 webspage: https://www.memphis.edu/ehs/stormwater/index.php	Submit link or file attachment of map with each annual report.
b	Identify and investigate the categories of non-stormwater discharges or flows (subpart 4.2.3) only if the permittee identifies them as a significant contributor of pollutants to the MS4.	Maintain inventory of non-stormwater discharges or flows that the permittee identified as an illicit discharge and investigate them.	There are currently no non-stormwater discharges or flows that the U of M MS4 identifies as a significant contributor of pollutants.	(1) # of non-stormwater discharges identified as illicit discharges (2) # of non-stormwater discharges or flows investigated
c	Illicit discharge reporting and investigations	(1) document all potential illicit discharges reported and categorize them by the reporting source. (2)Investigate 100% of all potential illicit discharges within 7 days of the complaint. (3)100% of all enforcement actions must be taken within 7 calendar days of the confirmed illicit discharge investigation. (4) 100% of all corrective action plans must be reviewed per procedures.	There is currently no mechanism in place for the public to view all information on construction site projects, nor to receive and response to public commentary on those projects apart from e-mailing or calling the Campus Planning and Design staff. A process will be applied within Year 1 of the permit to meet this management measure.	(1) # of illicit discharges reported (2) # of confirmed illicit discharges (3) # of corrective action plans received

Table 8: MCM 3 Illicit Discharge Detection and Elimination (IDDE) list of activities/items implemented/planned by the U of M that meet management measures as stated in the General Permit 4.2.3. Continued.

d	Educate the public and employees on hazards impacting water quality due to illicit discharges and connections with the storm sewer systems, and improper disposal of waste.	Measureable goals for this management measure are also located in MCM 1: Public Education and Outreach.	See Table 3-5 for activities that meet this management measure.	See Table 3-5
e	Encourage and promote citizen reporting of illegal spillage, dumping, or otherwise disposal of materials into the MS4 storm sewer system by developing and implementing a public reporting system. As indicated in MCM 2 (4.2.2)	Measurable goals and reporting requirements, as well as U of M planned activities can be found on Table 6 of MCM 2.	See Table 6	See Table 6

MCM 4: CONSTRUCTION SITE RUNOFF CONTROL (Section 4.2.4)

Construction sites can be a significant source of sediment for MS4s, especially when installation and maintenance of erosion and sediment controls are not required or adequately enforced. Permittees shall develop, continue to develop, implement, and enforce a construction site stormwater runoff pollutant control program. See **Appendix C for the ERP Plan** containing ordinances and enforcement procedures, and **Appendix D for the UofM Construction Review and Inspection Process.**

Table 9: MCM 4 Construction Site Stormwater Runoff Control list of activities/items implemented/planned by the U of M that meet management measures as stated in the General Permit 4.2.4.

MCM 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
	Management Measures	**Measureable Goals**	**Available Application(s)/Plans**	**Annual Report Requirement**
a	Regulatory mechanism(s) are required to be consistent with the currently effective Tennessee Construction General Permit (CGP, TNR100000).	Make ordinance consistent with current CGP by 9/1/2024. Make ordinance consistent with next CGP by 9/30/2026.	AIA 201 General Conditions, THEC Designer Manual and Forms, U of M ERP, U of M Haz Mat Disposal Policy, U of M Dig Permit.	Identify if ordinances are consistent with CGP and effective and implemented within 18 months of the effective date of the subsequent CGP.
b	Construction site plans review and approval.	Establish policies and/or procedures for review and approval (or denial) of all plans and review 100% of all new development and redevelopment project accordingly. Keep records.	See U of M Construction and Review Process	# of new development and redevelopment projects reviewed

Table 9: MCM 4 Construction Site Stormwater Runoff Control list of activities/items implemented/planned by the U of M that meet management measures as stated in the General Permit 4.2.4. Continued.

c	Mechanisms or plans for public access to information on new development and redevelopment projects and receiving and considering comments from the	Requirements and plans for this management measure are implemented in MCM 2 and reported under subpart 4.2.2. See Table 6.	See Table 6	See Table 6
d	Procedures for permittee inspectors to evaluate and document construction site compliance.	Inspect a minimum of 10% of active non-priority construction sites in accordance with Stormwater Management Program.	As a university, there are minimal amount of construction related activites, especially over 1 acre, so the U of M MS4 considers all construction sites covered under the CGP as priority and inspectors currently evaluate and document all sites twice weekly (Form C62)and meet with the contractor and designer once a month for review (Form C44). See U of M's Construction and Review Process.	Twice weekly inspection forms and monthly review documentation.
e	Priority construction activities	(1)Conduct pre-construction meetings at 100% of priority construction activities. (2)Inspect 100% of all priority construction activities at least once per calendar month.	As a university, there are minimal amount of construction related activites, especially over 1 acre, so the U of M MS4 considers all construction sites covered under the CGP as priority and inspectors currently evaluate and document all sites twice weekly and meet with the contractor and designer once a month for review.	# of priority cosntruction activities

POST-CONSTRUCTION/PERMANENT STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT (Section 4.2.5)

The U of M MS4 Program shall include the following to manage post-construction stormwater at all new development and redevelopment projects that disturb one acre or more of land, or less than one acre if part of a larger common plan of development, and discharge into the permittee's MS4:

4.2.5.1. Permanent Stormwater Management Program

In 2024, the U of M MS4 Program developed and implemented a permanent stormwater management program to reduce pollutants in stormwater discharges through management practices, control techniques, and systems, design, and engineering practices implemented to the maximum extent practicable (MEP), as required by the permit.
This program and records pertaining to this program are housed in the U of M Physical Plant and maintained by the U of M MS4 Coordinator. As required by the permit, the permanent stormwater management program must include and abide by the following:

- Procedures for plan reviews, site inspections, enforcements, as stated in further detail in the Permit 4.2.5.6.
- Ordinances or other regulatory mechanisms to address permanent Stormwater management at new development and redevelopment projects.
- Approved procedures to ensure that each permanent stormwater control measure (SCMs) is properly operated and maintained. These SCMs should be inspected at least once every 5 years by a qualified professional. Permit 4.2.5.7.
- An inventory or tracking system listing all SCMs that can be made available to the public and the Division upon request. The inventory should include the following for each SCM: brief description, design characteristics, responsible party contact information, inspection schedule and records, maintenance details (including frequency and records), photograph of the installed SCM. Permit 4.2.5.8.

4.2.5.2. Permanent Stormwater Standards

- The permanent stormwater management program must require new development and redevelopment projects to be designed to reduce pollutants to the MEP, by designing and installing SCMs as established by Tennessee Rule 0400-40-10-.04 and complying with other requirements of Tennessee Rule 0400-40-10-.04.
- SCMs must be designed to provide full treatment capacity within 72 hours after a rain event for the life of the new development or redevelopment project.
- The water quality treatment design storm is a 1-year, 24-hour storm event. The water quality treatment volume (WQTV) is a portion of the runoff generated from impervious surfaces at a new development or redevelopment project by the design storm. SCMs must be designed, at a minimum, to achieve an overall treatment efficiency of 80% TSS removal from the WQTV. The quantity of the WQTV depends on the type of treatment provided. Treatment types and calculations can be found in the Permit 4.2.5.2.

4.2.5.3. Stormwater Mitigation and Public Stormwater Fund

A permittee may choose to develop an offsite mitigation program or payment into a public stormwater fund, or both, to offset water quality treatment goals that cannot be obtained. The U of M does not participate in stormwater mitigation programs or Public stormwater funds at this time.

4.2.5.4. Water Quality Riparian Buffers

Permittees must develop and implement a set of requirements to establish, protect, and maintain permanent water quality riparian buffers providing additional water quality treatment in riparian areas of new development and redevelopment projects that contain streams, including wetlands, ponds, and lakes.

The U of M does not have any streams or other natural waterways within or bordering the MS4 jurisdiction. Therefore, this requirement does not apply to the U of M MS4 Program.

The U of M refers to the Tennessee Permanent Stormwater Management and Design Guidance Manual, the State of Tennessee Design Manual, the State of Tennessee High Performance Building Requirements Manual, and the City of Memphis Stormwater Management Manual for guidance on the implementation of SCMs on campus. Per the Design Manual as part of the closeout process of a project, an inspection for Substantial Completion must be conducted and an operation and maintenance (O&M) plan for SCMs must be provided by the contractor to the Designer for review and then the Owner.

The UofM developed and implemented a Permanent SCM Manual for long-term operation and maintenance of SCMs on campus. The plan includes inspection templates for specific SCMs and an inventory of all SCMs.

Table 10: MCM Post Construction/Permanent Stormwater Management in New Development and Redevelopment list of activities/items implemented/planned by the U of M that meet management measures as stated in the General Permit 4.2.5.

MCM 5: Post-Construction/Permanent Stormwater Management in New Development and Redevelopment				
Management Measures		**Measureable Goals**	**Available Application(s)/Plans**	**Annual Report Requirements**
a	Stormwater Mitigation and Public Stormwater Fund as outlined in subpart 4.2.5.3 (note this management measure is only required if the permittee has developed such a fund)	(1) 100% of all mitigation projects must be completed (2) 100% of all mitigation projects in the Stormwater Mitigation and Public Stormwater Fund are completely funded	The U of M does not have stormwater mitigation or public stormwater funds at this time, so this requirement **does not apply.**	(1) brief status description (2) # of uncompleted projects at the end of the previous and current reporting period (3) # of projects completed during the reporting period (4) # of uncompleted projects at the end of reporting period that began more than 24 months prior to the end of the reporting period (5) $ in Public Stormwater Fund at end of reporting period (6) # of uncompletedprojects due to lack of funds
b	Develop and implement a set of requirements to establish, protect, and maintain permanent water quality riparian buffers	(1)100% of projects must have the buffer as required by subpart 4.2.5.4 (2) If applicable:100% of projects with permanent alternative buffer widths must be in accordance with the procedures and criteria approved by the Division	The U of M does not have natural waterways within our jurisdiction, nor close enough to our perimeter to require buffers. Therefore, this requirement **does not apply.**	(1) all of theprojects approved meet the buffer requirements of subpart 4.2.5.4 (2) # of project approved with alternative width Buffer Operations Facilities have a O&M Facility Plan (3) Date Alternative buffer width procedures and criteria most recentlyapproved by Division
c	Complete Code and Ordinance Review in accordance with subpart 4.2.5.5a (New Permittees Only)	EPA Water Quality Scorecard must be completed and submitted within one year of the effective date on the notice of coverage	The U of M is not a new permittee, so this **does not apply.**	A completed copy of the Scorecard shall be submitted with the subsequent annual report (Note: this is a one-time requirement)
d	Develop, implement, and enforce policies and procedures for the submittal and review of plans as required by 4.2.5.60	Establish policies and/or procedures for review and approval (or denial) of all plans and review all new development and redevelopment projects accordingly	The Tennessee Higher Education Designer Manual provides standards, criteria, and guides for the development and execution of capital projects pursued under State Building Commission Authority for the University of Memphis to follow. Chapter 3 (Design), section 3: 02. (2) for compliance with these design standards are documented Form C44.	(1) # of all new development and redevelopment projects reviewed and in accordance with the established policy and procedure

Table 10: MCM Post Construction/Permanent Stormwater Management in New Development and Redevelopment list of activities/items implemented/planned by the U of M that meet management measures as stated in the General Permit 4.2.5. Continued.

MCM 5: Post-Construction/Permanent Stormwater Management in New Development and Redevelopment				
Management Measures		**Measureable Goals**	**Available Application(s)/Plans**	**Annual Report Requirements**
e	Develop, implement, and enforce policies and procedures for SCM installation verification as required by subpart 4.2.5.60	Verify that 100% of SCMs are installed per design specifications in accordance with approved plan within 90 days of installation	A final inspection and our As-Built Certification Form F74 of constructed SCMs must be performed and approved before the Notice of Termination is filed. Inspection documentation is kept in the campus MS4 Coordinator's Office. See Appendix D for the UofM Construction Review and Inspection Process.	(1) # of sites verified (2) All SCMs are installed per design specifications in accordance with approved plan within 90 days of installation
f	Establish and maintain adequate legal authority assigning SCM maintenance responsibility and personnel access to the SCM and provide for enforcement action as required by subpart 4.2.5.70	(1) The permittee must have the legal authority to access SCMs and assigned maintenance responsibility for 100% of all SCMs (2) The permittee must enforce as directed in the appropriate legal authority, for 100% of all SCMs that have not been properly maintained	(1) The UofM receives owernship of the SCMs after the proper installation and clouseout procedures provided in the Designer's Manual are completed. (2) The U of M has adequate legal authority to apply enforcement actions towards contractors during construction of SCMs - THEC Designer's Manual and the project contract. (3) Once the SCM is approved and under U of M possession, disciplinary actions can be enacted via the Student and Employee Handbook.	(1) Proof of permittee adequate legal authority as required by 4.2.5.7 for all SCMs installed (2) # of SCMs that have not been properly operated or maintained (3) Enforcement actions taken in accordance with the appropriate legal authority or ERP
g	Implement and maintain a system to inventory and track the status of all public and private SCMs as required by subpart 4.2.5.8	(1) The system must be made available to the Division or members of the public upon request (2) 100% of all SCMs must be included in the inventory tracking system with complete information	(1) The MS4 Coordinator acquires all SCM records once installation is approved. (2) The MS4 Coordinator assigns a responsible department for the SCM and coordinates with that department to write an O&M plan. (3) The SCM is then added to the inventory and evaluated annually. (4) All SCMs are in compliance with the permit requirements and available for review upon request.	(1) # of requests for inventory (2) Proof of all SCMs in the inventory tracking system and have complete information (3) Beginning in the year 3 (2025) annual report submit the SCM inventory tracking system information as a geodatabase or as a file type that is generally accessible e.g. excel, csv, xml, or division supplied EDD, etc note: Files may be submitted in a manner approved by the division

POLLUTION PREVENTION/GOOD HOUSEKEEPING (Section 4.2.6)

The permittee must develop and implement an operation and maintenance (O & M) program with the goal of preventing or reducing pollutant runoff from municipal operations, also known as Best Management Practices (BMP.) The O & M program and plan must address the following facility operations, measures, and requirements at a minimum:

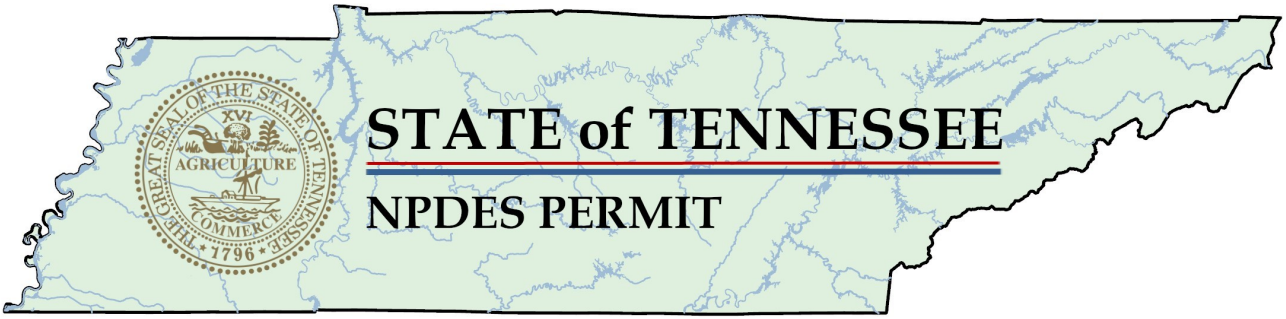
O & M PROGRAM AND FACILITY PLAN	
TARGET FACILITY OPERATIONS	**(1)** streets, roads **(2)** parking lots **(3)** maintenance and storage yards **(4)** fleet/maintenance shops w/outdoor storage areas **(5)** salt/sand storage locations **(6)** snow disposal areas **(7)** waste disposal, storage, and transfer stations
MANAGEMENT PRACTICES	**(a)** Minimize or prevent exposures of materials to precipitation; **(b)** Good housekeeping; **(c)** Preventative maintenance; **(d)** Spill prevention and response; **(e)** Erosion and sediment control; **(f)** Management of Runoff; **(g)** Control measure maintenance; **(h)** Facility site inspections (at least once a year)
PLAN REQUIREMENTS	**(a)** Inventory of management practices on site; **(b)** Procedures and documentation for implementation of management practices on site; **(c)** Maintenance procedures and frequencies for each SCM.

The O & M Plan for the University of Memphis, including blank inspection forms, can be found on the campus MS4 website. The MS4 Coordinator and responsible facility owners evaluate the campus O & M Plan once a year for modifications and effectiveness. Any modifications will be noted in the MS4 Annual Report.

Table 11: MCM 6 Pollution Prevention/Good Housekeeping list of activities/items implemented/planned by the U of M that meet management measures as stated in the General Permit 4.2.6.

MCM 6: POLLUTION PREVENTION/GOOD HOUSEKEEPING				
Management Measures		**Measureable Goals**	**Available Application(s)/Plans**	**Annual Report Requirement**
a	Employee training program for employees responsible for municipal operations at facilities.	Requirements for this management measures are implemented Public Education MCM and reported under subpart 4.2.1	As seen in MCM 1, UofM employees are multiple training measures that satisfy the permit requirements.	Requirements for this management measures are implemented Public Education MCM and reported under subpart 4.2.1
b	Develop and implement an O&M Facility Plan	All applicable Municipal operations must have an O&M Facility Plan.	An O&M Plan has been implemented and includes all UofM facility operations impacting stormwater.	(1) # Municipal Operations Facilities (2) # Yes/No Do all Municipal Operations Facilities have a O&M Facility Plan?
c	Facility Site Inspections	Conduct an annual facility site inspection in accordance with the Stormwater Management Program at all municipal operation facilities.	Facility site inspections are conducted annually. Refer to the O&M Plan for more details about procedures and inspections. Records of completed inspections are maintained by the U of M MS4 Coordinator.	# Municipal Operations Facilities NOT inspected in accordance with the Stormwater Management Program in the previous 12

APPENDIX A: NOTICE OF COVERAGE



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

Tracking No. TNS076104

Notice of Coverage (NOC) under the General NPDES Permit for
SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.) the following operator of a small municipal separate storm sewer system is authorized to discharge stormwater runoff into the waters of the State of Tennessee in accordance with the various eligibility criteria, administrative procedures, program requirements, reporting requirements, etc. set forth in the Tennessee MS4 NPDES general permit.

Permittee Name:	**University of Memphis**
is authorized to discharge:	stormwater runoff
from separate storm sewer system located in:	**Memphis, TN, Shelby County**
to to waters of the state:	**in accordance with the required program elements and other conditions set forth in the Tennessee small MS4 general permit.**
Issuance date:	**02/10/2023**
Effective date:	**03/01/2023**
Expiration date:	**08/31/2027**

General MS4 Permit information and overview can be found here.

APPENDIX B: ILLICIT DISCHARGE REPORTING FORM

ILLICIT DISCHARGE REPORTING FORM

THE UNIVERSITY OF MEMPHIS

Inspector Information

Name:	
Contact Phone Number:	Date and Time Discharge Discovered:

Discharge Information

Campus Location/Address:		
Nearest Intersection/Landmark:		
GPS location, if known:	Lat:	Long:

How Long since Last Rainfall: ☐ Raining Now ☐ 0-2 Days ☐ 3 or more Days	Nature of Discharge or Flow: ☐ Solid (Continuous) ☐ Intermittent (Occasional) ☐ Pulsing (Fluctuating) ☐ Transitory (Prior Spill)
If possible, identify the source of the discharge* ☐ Pipe Outfall ☐ Gutter ☐ Sanitary Wastewater ☐ Ditch ☐ Storm Sewer ☐ Other: _____ * Add descriptions of discharge/source to Field Photograph Log Sheet	Potential for Discharge to enter into: ☐ Stream/Water Body ☐ Wetland ☐ Storm Drain ☐ Other: _____
Was water flow observed? ☐ Yes ☐ No Direct Connection to pipe/inlet? ☐ Yes ☐ No	Was a photo taken? ☐ Yes ☐ No If yes, attach photos.

Describe Odor:

☐ None ☐ Musty ☐ Rotten Eggs (Sulphur) ☐ Rancid/Sour Milk
☐ Sewage Gas/Petroleum ☐ Sweet ☐ Cooking Oil ☐ Other: _____

Describe Clarity:

☐ Clear ☐ Cloudy ☐ Opaque ☐ Sheen ☐ Gray

Describe Color:

☐ Red ☐ Yellow ☐ Brown ☐ Green ☐ Gray ☐ White ☐ Other: _____

Solids/Floatables:

☐ Garbage ☐ Sewage ☐ Tissue ☐ Oil Sheen ☐ Suds ☐ Scum ☐ Iron Sheen ☐ Unknown

Additional Information to assist in the Investigation (Vegetation Impacts?): _____

Send completed form to:

Follow up Investigation:

Outfall Location: _____

FIELD ANALYSIS:

	Odor:	Solids/Floatables:	Flow:
	Clarity:	Sheen/Scum:	Source Confirmed? Y / N
	Color:	Condition of Vegetation:	Direct Connection? Y / N
	Comments: (Immediate Environmental Concern? Y / N)		

DATE: _____ Inspector Name _____ Additional notes to file: _____

INSTRUCTIONS TO COMPLETE ILLICIT DISCHARGE REPORTING FORM

WHAT IS AN ILLICIT DISCHARGE:

An illicit discharge is any discharge into the storm sewer system that is not composed entirely of stormwater. Examples:

- Dry weather discharges of wastewater into the storm sewer system from illegal dumping; spills and other non-stormwater pollution sources
- Discharges of pollutants, contaminants or illicit materials into storm drainage/sewer systems (oil, grease, solvents, metals, nutrients, toxics, viruses, bacteria)
- Improper antifreeze, oil disposal from vehicle maintenance, service stations
- Vehicle washing wastewaters
- Autobody/repair facility waste waters
- Plating shop waste water
- Manufacturers waste water
- Private service agencies waste water
- Wholesale/retail est. waste water
- Sanitary wastewater/connections
- Mobile rug cleaning waste dumping
- Laundry waste waters
- Disposal of auto/household toxics
- Vehicular/accidental spills
- Dairy barn waste waters
- On-lot disposal system- sewage effluent.

WHAT IS NOT AN ILLICIT DISCHARGE:

The following non-stormwater discharges are not illicit discharges:

- Discharges from firefighting activities
- Potable water sources including dechlorinated waterline and fire hydrant flushings
- Irrigation drainage
- Lawn watering
- Water from individual residential car washing
- Dechlorinated swimming pool discharges
- Water from crawl space pumps
- Uncontaminated water from foundation or footing drains
- Routine external building wash down which does not use detergents or other compounds
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless spilled material has been removed) and where detergents are not use
- Air conditioning condensate
- Springs
- Uncontaminated groundwater

(1.) Property Owner Information:

Determine property owners name, if available, and street address of the discharge source in the event that follow-up action or elimination is required. If unable to determine owner, write in “undetermined”.

(**2.) Description of Discharge** for source identification/verification.

a. Odor: Determine which odors apply.

b. Clarity: How clear is the discharge?

c. Color: Discharge color and colors in swale, pipe, ditch, etc.(Document if red/green deficient)

d. Solids/Floatables: Identify indicators of source.

Description of Solids/Floatables: • Iron vs. Oil Sheens:

Iron leaches from soils forming a breakable sheen on stagnant water surfaces when poked with a stick. Oil sheens will conform around and coat the surface of the stick.

APPENDIX C: ENFORCEMENT RESPONSE PLAN (ERP)

Stormwater Enforcement Response Plan

University of Memphis
Physical Plant / Campus Planning

August 2019

Contents

1 Introduction

As required by the MS4 permit, this Enforcement Response Plan (ERP) describes the University of Memphis's (UofM's) procedures and policies regarding enforcement of stormwater runoff, specifically in support of the following sections of the MS4 permit.

- Section 4.2.3 Illicit discharge detection and elimination
- Section 4.2.4 Construction site runoff control
- Section 4.2.5 Permanent Stormwater Management in New Development and Redevelopment

This ERP outlines roles and responsibilities relative to construction site stormwater management, as well as for illicit discharges.

The basis for UofM's stormwater program enforcement can be found in the following documents.

- The UofM Illicit Discharge Detection and Elimination Policy (see Appendix A)
- UofM Designer Manual (https://www.memphis.edu/cpd/capproj/designers_manual.php)
- UofM Designers' Manual Specifications, Section 01 57 23 (

Section 2.1 provides more detail on the Designer's Manual, Policies and Procedures, and Specifications documents. Appendix B contains a more detailed outline of the roles and responsibilities for new development oversight between the University Site Auditor, and the Designer, including document management.

2 UofM Structure

UofM Campus Planning and Design, the UofM legal office, and the UofM Procurement Offices provide contracting and project oversight for new construction at each of the UofM campuses. Projects valued at $ 100,000 or more are approved by the Office of the State Architect and by the State Building Commission. Projects less than $ 100,000 are administered by the university.

2.1 Projects contracted by UofM

Designs and specifications are set by UofM and THEC as outlined on the website here: https://www.memphis.edu/cpd/capproj/designers_manual.php

Design guidance, project specifications, administrative procedures, and typical contract documents can be found on this website. All contracts are between UofM and the Designer or General Contractor, and the University is involved in the plan's development and construction oversight throughout the project. The UofM Site Auditor is involved in the pre-construction meeting, the monthly progress meetings, and the closeout meetings and has the ability to provide input on project compliance throughout the project. Input includes the ability to direct the UofM Construction Representative to begin enforcement through contract documents if necessary.

The following is a summary of the UofM construction stormwater enforcement procedures and policies:

1. The UofM contract (the contract) is the legally enforceable mechanism to be used to gain compliance on a construction site. UofM typically contracts with the Designer and the Contractor separately. The Designer acts as the "owner's representative" and oversees the activities of the Contractor.
2. The contract sets the general criteria for compliance with the permit. The contract points to and includes the AIA Document A201 General Conditions of the contract. The contract also includes enforcement remedies:

a. Allows for a Stop Work Notice if work is not conducted in accordance with the contract.
b. Allows UofM to do work with another contractor if the initial contractor fails to perform in accordance with the contract.
c. Allows the Designer (who works as an agent for UofM) and/or UofM to withhold payment until work is corrected or completed.
d. Allows an assessment of liquidated damages.
e. Requires the contractor to perform inspections (which can be applied to stormwater compliance).

3. Within the Specifications, the following sections are very pertinent to stormwater and are referenced generally in the contract:
   a. 01 57 23 Temporary SW Pollution Control – details CGP requirements
   b. 01 41 15 Basic Regulatory Requirements – requires compliance with CGP
4. The Designer's Manual also is part of the Designer's contract and includes the following pertinent sections that are included in contract documents by reference:
   a. Chapter 3 Design – 3.02 C Outlines SWPPP requirements; 3.04 A allows for specialty stormwater consultants if needed; 3.12 outlines what the Designer does to prepare for the Construction phase and prepare the onsite SWPPP (contained within the site Project Manual).
   b. Chapter 6 Construction – requires the Designer to ensure that the Contractor complies with specifications, outlines inspection and EPSC requirements, and outlines progress meeting agendas.
5. A UofM Site Auditor is assigned to each construction project and is required to conduct monthly site audits on projects covered by the CGP using Form C62 (see Appendix C.) The Contractor completes twice weekly inspections required by the CGP. These twice weekly and monthly inspection forms are shared immediately among the Designer, the Contractor, the U of M Site Auditor, and the U of M MS4 Coordinator. In addition, the U of M Site Auditor attends monthly Progress meetings and highlights any stormwater issues that need to be addressed. The Contractor must resolve any deficiencies as soon as possible, but **no later than 7 days** from detection.

2.2 Other Services Contracted by UofM

Design and construction for smaller projects are typically contracted by the UofM without a designer. Site audits are conducted by the University Site Auditor, who works directly through the Contractor to gain compliance.

The UofM also routinely contracts out maintenance, custodial, and food services activities. Each of these contracts contains provisions to require the contracted services company to comply with all University policies, including the illicit discharge policy. Contract enforcement provisions are included in those contracts.

Any construction project within the U of M MS4 jurisdiction that does not require CGP coverage, but involves penetration of ground, requires a Dig Permit (see Appendix D) to be submitted by the Contractor at least three business days prior to breaking ground. The Dig Permit is a U of M contract that provides construction details and holds the Contractor responsible for adhering to our U of M IDDE Policy and Guidelines.

3 Enforcement Process

UofM's enforcement of construction stormwater violations and illicit discharges is authorized by contract and by the campus-wide illicit discharge prohibition policy. The enforcement process is outlined below.

3.1 Construction Enforcement Procedures

UofM is the owner of all construction on campus. UofM is the contract manager for projects that cost $100,000 or more. UofM obtains Construction General Permit (CGP) coverage (Notice of Coverage) for all sites that disturb one acre or more. As noted in the contract documents, the general contractor must inspect construction sites at least twice a week (and 72 hours apart) to comply with the CGP. The UofM also conducts a site audit at least once a month. Any deficiencies must be addressed by the contractor as soon as possible,

but not to exceed seven days. The procedures to obtain compliance on any construction site follow the process below. The following sections explain the procedures. These procedures escalate until compliance at the site is achieved.

1. Note corrective actions needed in the monthly site audit.
2. Bring corrective actions to monthly progress meetings.
3. Withhold invoice payments
4. Stop work notice
5. Complete work with another contractor
6. Sever contract

UofM is the contract manager of all construction projects that disturb <1 acre. Small construction projects are not required to have CGP coverage. The above enforcement procedures apply to sites that are <1 acre except that monthly site audits and progress meetings are not required for small construction sites.

3.1.1 Monthly site audit

UofM's Site Auditor conducts a site audit at least once per month of all sites covered by the CGP. The site audit verifies that the Contractor is performing the twice weekly inspections, that rainfall data is being monitored, and that the site's erosion and sediment controls are in place and functioning in accordance with the CGP requirements. The audit includes a site inspection as well as checking that paperwork is being completed correctly. Any needed corrective actions should be noted on the audit form (form C62) and discussed during the progress meetings. If corrective actions are completed as outlined in the audit form, no additional enforcement is necessary. The corrective actions taken should be noted on the audit form and resolved within seven days from detection.

3.1.2 Progress meeting

All sites managed by UofM have monthly progress meetings that are led by the Architect/Engineer and the UofM Construction Representative. The UofM Site Auditor attends these progress meetings. The agenda for each progress meeting can be found in Section 6.17 as Form A64 of the UofM Designers' Manual Administrative Procedures. Whether corrective actions have been noted on a site or no corrective actions are needed, the UofM Site Auditor will routinely complete and email the C62 Audit Form to the Contractor immediately. The UofM Site Auditor will also bring any concerns resulting from the audit to the progress meeting for discussion by all attending the meeting. Meeting minutes will be taken to document the discussion and resolution, and the meeting minutes kept as documentation of this enforcement step. When corrective actions have been completed, no additional action is necessary.

3.1.3 Withholding payments

When corrective actions are not being completed as required, the UofM Site Auditor will inform the UofM Construction Representative to withhold payment of part of an invoice or a full invoice until corrective actions have been completed. The reason(s) for withholding payment will be made clear to the Designer and Contractor. Once the corrective actions have been completed and verified by the UofM Site Auditor, the UofM Site Auditor will instruct the Construction Rep to pay the held invoice.

3.1.4 Stop work

When the previous steps aren't successful in getting a site in compliance, the UofM Site Auditor will work with the Designer to have a Stop Work Notice issued against the site until the corrective actions have been completed. The UofM Site Auditor must document that the previous steps have been exhausted or that the site conditions and potential damage warrant stopping all work on the project. The stop work can be lifted once the corrective actions have been documented by the UofM Site Auditor.

3.1.5 Severing the contract

For severe and ongoing, uncorrected violations, UofM can sever the contract with the Contractor for failure to perform.

3.2 Illicit Discharges

UofM has a campus wide policy prohibiting non-stormwater or illicit discharges (see Policy in Appendix A). Students violating this policy are subject to disciplinary action as outlined in the Student Handbook, found here: http://www.memphis.edu/studentlife/pdfs/student_handbook.pdf. Staff violating this policy are subject to disciplinary action as outlined in the UofM Faculty Handbook. Both sets of disciplinary actions rely on escalating discipline, with the goal of protecting the University's property and water quality.

APPENDIX A –
Illicit Discharge Detection and Elimination Policy

The University of Memphis	**Illicit Discharge and Detection Elimination Policy**	
POLICIES	Issued:	
	Responsible Executive Officer:	President
	Responsible Office:	Vice President for Business and Finance

Policy Statement

The University of Memphis is committed to protecting streams and rivers through compliance with requirements of the National Pollution Discharge Elimination System (NPDES). As a part of that commitment, University employees, students, visitors, and contractors are prohibited from discharging non-storm water into the storm sewer system or into streams.

Purpose

- To protect surface waters within the watershed areas owned and maintained by University of Memphis (UofM) by preventing illicit discharges and connections.
- To prevent the discharge of contaminants from UofM properties and operations into the stormwater drainage system and streams.
- To comply with the UofM's stormwater permit requirements as set forth by the Tennessee Department of Environment and Conservation

Policy

This policy prohibits University employees, students, visitors, contractors, departments, or units from causing or allowing discharges into the stormwater system which are not composed entirely of stormwater. Allowable discharges are as follows:

A. Discharges that are specifically permitted under a State or Federal Stormwater program
B. Uncontaminated discharges from the following sources are permitted:

- Water line flushing
- Landscape irrigation
- Diverted stream flows (permitted)
- Rising ground water
- Uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(20))
- Uncontaminated pumped groundwater
- Discharges from potable water sources
- Foundation drains, air conditioning condensation
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual, residential car washing
- Flows from riparian habitats and wetlands

- Dechlorinated swimming pool discharges
- Street wash waters
- Discharges resulting from firefighting activities

Best Management Practices

The University of Memphis is committed to reducing the number of potential pollutants that threaten our stormwater by identifying areas prone to potential pollutants called “Hot Spots.” Once identified, the UofM implements proactive strategies resulting in Best Management Practices (BMPs) that improve processes and ultimately reduce potential contaminants into our natural water conveyance system.

BMPs are sometimes implementing through educational and awareness strategies, such as conducting Illicit Discharge Awareness Training for Employees to hosting an educational event for our students, faculty, staff, and community. Other BMPs target improving operational procedures, such as requiring routine inspections of chemical storage areas to finding more eco-friendly alternatives for cleaning agents and fuel.

The UofM reevaluates and updates their BMP annually. More information about the UofM BMPs and target Hot Spots can be found on our MS4 website.
https://www.memphis.edu/ehs/stormwater/stormwater.php

List of Hot Spots and Potentials Pollutants – All listed below are sufficiently maintained through BMPs.

- All refuse collection points and loading docks – litter, leaking dumpsters, oil/grease spills
- Motor Pool – oil/grease spills, vehicle washing runoff
- Building Services – cleaning agent spills, litter, floor care sludge/runoff
- Landscaping – leaf removal, litter, leaking equipment, fertilizer, and salt storage/application
- Paint Shop/Art Building – paint and paint rinse
- Dining Services – litter, leaking dumpsters, oil/grease spills

Procedures

If you suspect an illicit discharge or observe improper disposal practices, notify the UofM Environmental Health and Safety Office at 901.678.4672 or 901.678.2044 during normal business hours. Facilities Management Work Control can also be notified during normal business hours at 901.678.2075. For afterhours notification, contact on duty personnel at the University of Memphis Police Services at 901.678.3848.

At your earliest, please submit any illicit discharge observation with our online Illicit Discharge Compliant Form.

FOR MORE INFORMATION:

For more information regarding Illicit Discharge Detection and Elimination, contact our campus MS4 Coordinator, Amelia Mayahi, at a.mayahi@memphis.edu or (901)678-5543. Information may also be found on the UofM Environmental Health and Safety website https://www.memphis.edu/ehs/stormwater/discharge.php.

REFERENCE: 40 CFR 112

Revision Dates

UMxxxx - Issued: MM DD, YYYY

Subject Areas:

Academic	Finance	General	Human Resources	Information Technology	Student Services/Affairs
		☑			

Appendix B
New Construction Project MS4 and CGP Compliance Components

NEW CONSTRUCTION PROJECT MS4 AND CGP COMPLIANCE COMPONENTS

Activity	Section of MS4 permit	Form, Spec, Contract section	Responsible for completing	Responsible for keeping/compiling documentation*	Repository
SWPPP development	Section 4.2.4: must require SWPPP with adequate BMPs		Designer	Designer	
SWPPP review	Section 4.2.4.f: Specific procedures for construction site plan (including erosion prevention and sediment controls) review and approval: The MS4 procedures must include an evaluation of plan completeness and overall BMP effectiveness.	C62	3rd party firm	University Site Auditor	University tracking file
NOI	Section 4.2.4: The MS4 must develop and maintain an inventory of all active public and private construction sites that result in a total land disturbance as defined in section 4.2.4. The inventory must contain relevant contact information for each project (e.g., tracking number, name, address, phone, etc.), the size of the project and area of disturbance, whether the project has submitted for permit coverage under the Tennessee Construction General Permit (TNR100000) and the date the MS4 approved the construction site plan. The MS4 must make this inventory available to TDEC upon request.		Designer	Designer, University Site Auditor	Project Data Binders University tracking file
NOC	See above		Designer	UofM CR, University Site Auditor, Designer	Project Data Binders University tracking file

Activity	Section of MS4 permit	Form, Spec, Contract section	Responsible for completing	Responsible for keeping/compiling documentation*	Repository
Pre-construction meeting	Section 4.2.4.f: The MS4 program must provide for the following: - Identification of priority construction activity; - Pre-construction meetings with construction-site operators for priority construction activity; and - Inspections by the MS4 of priority construction sites at least once per month.	C44, A62 01 31 19	Designer	Designer University Site Auditor (F686)	University tracking file
Monthly audit	Section 4.2.4: Procedures for site inspection and enforcement: The MS4 must have procedures in place for its inspectors to evaluate construction site compliance. The ERP must include specific enforcement steps to ensure construction sites are in compliance with the MS4's program. Section 4.2.4.f: The MS4 program must provide for the following: - Identification of priority construction activity; - Pre-construction meetings with construction-site operators for priority construction activity; and - Inspections by the MS4 of priority construction sites at least once per month.	C62	University Site Auditor	University Site Auditor	University tracking file Project Data Binders

Activity	Section of MS4 permit	Form, Spec, Contract section	Responsible for completing	Responsible for keeping/compiling documentation*	Repository
Designer field report	N/A	F632	Designer	Designer	
Progress meetings	Section 4.5 Enforcement Response Plan	01 31 19 C62 Designers' Manual Administrative Procedures	Designer (meeting summary) University Site Auditor (F686)	Designer University Site Auditor (C62)	University tracking file
As-built Stormwater certification	Section 4.2.5.4.a: a verification process to ensure that permanent stormwater BMPs have been installed per design specifications, that includes enforceable procedures for bringing noncompliant projects into compliance.	F74	Designer	Designer, CR, University Site Auditor	Project Data Binders, University tracking file
NOT		F695	Designer	University Site Auditor, Designer, CR	University tracking file Project Data Binders

*Yellow boxes highlight tracking components that must be available for TDEC review to show the process is being followed.

Appendix C

C62 STORMWATER SITE AUDIT CHECKLIST

This checklist is to be completed by the Owner for site audits of construction sites that disturb an acre or more. The Site Auditor's role is to ensure that the construction site is generally in compliance with the TN Construction General Permit (CGP) and any stream permits, such as an Aquatic Resources Alteration Permit (ARAP) or Corps of Engineers permit. The Site Auditor should complete the appropriate response for each item in the checklist and communicate the audit results to the Designer and Owner Project Manager. If the Site Audit indicates that item(s) are not in compliance with the CGP, additional enforcement steps should be considered. The Audit should be conducted at least monthly during active construction.

GENERAL PROJECT INFORMATION

Item Number	The following general project information may be completed by the Site Audit Representative prior to the Site Audit.	
1	Site Name:	
2	Plans Date:	
3	Project Size (acres):	Area of disturbance (acres):
4	NPDES Construction Stormwater Permit Tracking Number:	Site's Design Storm Event Rainfall Amount (inches):
5	List of Other Water Quality-Related Site Permits (if any):	
6	Does the Project Discharge to Impaired or Exceptional TN Waters? ☐ Yes ☐ No	
7	Are Quality Assurance Site Assessments Required for this Site? ☐ Yes ☐ No	

PERMIT AND SWPPP DOCUMENTATION

Item Number	Items to be checked by Owner's Site Audit Representative during a Construction Site Audit.	Yes	No
8	Are the site's permits currently effective (i.e., no expired permits)? (ARAP, CGP)	☐	☐
9	Is the NPDES permit posted near the main entrance of the construction site where it is accessible to the public?	☐	☐
10	Is the SWPPP located on site and current?	☐	☐
11	Does the site have written rainfall records? ☐ If using onsite gage, how many days since the last audit was the gaged rain data recorded? _____ ☐Reference site _____ (location) If using a reference site, how many days since the last audit was the reference site rain data recorded?	☐	☐
12	Do the site's rainfall records include any rain events where the recorded rainfall amount exceeded the ☐ 2yr, 24hr equivalent intensity ☐ 5yr, 24hr equivalent intensity	☐	☐
13	Are inspections performed twice a week at least 72 hours apart? Was the TDEC inspection form used?	☐	☐
14	Were the site's inspections performed by a qualified inspector? Level I certification number of inspector:_____	☐	☐
15	Do the inspection reports require maintenance to be completed?	☐	☐
16	Were maintenance items addressed within 7 days or before the next rain event?	☐	☐
17	If SWPPP modifications were needed, were the SWPPP modifications implemented within 14 days after the need was identified in an inspection?	☐	☐

C62 STORMWATER SITE AUDIT CHECKLIST

Item Number	Items to be checked by Owner's Site Audit Representative during a Construction Site Audit.	Yes	No
18	Do the inspection reports indicate that the site discharges caused an objectionable color contrast in a receiving stream? If "Yes", note the affected location(s) in comments section below.	☐	☐
19	Are quality assurance site assessments being conducted as required? (Or self-audits for a Campus with an MS4 Permit.)	☐	☐
20	Is documentation of the Quality Assurance Site Assessments contained with the SWPPP? (Or self-audits for a Campus with an MS4 Permit.)	☐	☐

SITE CHECK

For items checked "No," provide additional information in the next section.

Item Number	Spot check the following items:	Yes	No
21	Are measures in place to prevent sediment from leaving the site?	☐	☐
22	Are measures maintained and functioning?	☐	☐
23	Is a construction exit in place?	☐	☐
24	Are disturbed areas stabilized after being idle for 14 days? (Not applicable for active disturbances.)	☐	☐
25	Are stream buffers protected and undisturbed? For Waters with Unavailable Parameters or Exceptional TN waters, the average buffer width is 60'. For all other streams, the average stream buffer is 30'. Minimums are 30' and 15'.	☐	☐

Site Audit Representative Additional Comments and Notes

Site Audit Representative Certification: I certify that I completed this site audit checklist document and all attachments and that these items document the findings of the site audit based upon my observations.

Site Auditor Name (Print): _____

Site Auditor Signature: _____

Date: _____

Appendix D

The University of Memphis – Physical Plant Department	
DIG PERMIT	
Applicable to: All U of M Employees & Contractors	Date Effective: July 15, 2019 Rev. 1

Any penetration into the ground on The University of Memphis property requires a Dig Permit.

U of M Contact, Project Mgr: _____ Phone#: _____

Signature: _____ Date: _____

Work Description

Project: _____ Location: _____

Contractor or U of M Dept: _____

Expected Start Date: _____ Expected Completion Date: _____

Provide sketch and brief description showing depth, width, and length of excavation with dimensions from trees, walks, drives, and buildings. Identify all new lines, structures, and plants to be installed. Include bldg. names and streets. Notification must be given 3 working days in advance of digging. No digging shall take place without completed dig permit form. Any deviation from proposed route requires a new permit.

The University of Memphis prohibits discharges of any materials into the storm drain system other than stormwater. Any other discharge to the storm drain system other than stormwater, is a violation of UofM's Illicit Discharge & Detection Elimination Policy.

This permit does not exempt the holder from applicable state, federal and local laws, including the requirement to obtain an NPDES Stormwater Construction Permit for construction sites involving clearing, grading or excavation that result in an area of disturbance of one or more acres

Approvals (Sign and Date):

1. Utility – Physical Plant _____ 2. Communications – ITS _____

2. TN One Call (811)
   Required _____ TN One Call Permit # _____ Form kept on file in Physical Plant.
   Not Required _____

3. Comments _____

Contact Physical Plant Work Control Center at 678-2699 For Any Utility Damage

APPENDIX D: CONSTRUCTION REVIEW AND INSPECTION PROCESS

Construction Review and Inspection Process

1. Project is funded and approved by State Building Commission (SBC) and Designer is selected.
2. Determination if SWPPP is required.
3. SWPPP is prepared by Designer and included in construction documents.
4. SWPPP is reviewed by University of Memphis (UofM) credentialed plan reviewer (Level 2) using the C44 Stormwater Plan Review Checklist. **See Attachment A.**
5. NOI application is made to TDEC.
6. NOC is issued by TDEC.
7. Contractor puts SWPPP items in place on site.
8. Inspections begin and conducted as follow:
   - UofM Project Manager (Level 1) inspects site monthly using C62 Stormwater Site Audit Checklist. **See Attachment B**.
   - Designer inspects twice monthly using the C62 Stormwater Site Audit Checklist.
   - Contractor performs twice weekly inspections using the TDEC Construction Stormwater Inspection Certification form. **See Attachment C.**
9. Contractor receives inspections and makes necessary corrections.
10. Owner, Architect and contractors hold meetings twice a month, where follow up of the SWPPP is managed using the A64 Construction Progress Meeting Agenda. **See Attachment D.**
11. Designer or Consultant submits THEC F74 Stormwater As-Built Certification to U of M Site Inspector to review. If approved, process moves on to NOT. If denied, corrections will be made and reviewed for progress to NOT by U of M Site Inspector. **See Attachment E.**
12. Project closeout and closeout procedures– NOT

For the more information about the Designer's Manual and capital projects, visit UofM Campus Planning and Design.

Attachment A - C44 Stormwater Plan Review Checklist

C44 STORMWATER PLAN REVIEW CHECKLIST

The Project Manager or other Owner designee will serve as the Plan Reviewer. This checklist is to be completed by the Plan Reviewer on behalf of the Owner. The Plan Reviewer's role is to review the submitted plans to check for completeness and to complete this Checklist for documentation. The Plan Reviewer should check the plan submittal for each item in the checklist. The Plan Reviewer should then mark the appropriate response in the checklist (Included, Not Included & Required, or Not Applicable).

The architectural and/or engineering design professional is responsible for completeness and sufficiency of the plan's design aspects. The Tennessee NPDES Construction General Permit (CGP) states that the following persons may complete the Stormwater Pollution Prevention Plan (SWPPP): professional engineer, registered landscape architect, certified professional in erosion and sediment control, or TDEC Level II certified staff.

Items in this checklist identify the base requirements that are to be provided by the design professional.

GENERAL PLAN INFORMATION

Item No.	The following information must be provided to the Plan Reviewer for checking plan completeness. The Plan Reviewer will complete the checklist based on the submitted plans.		
1	Project Name:		
2	Plans Date:		
3	Date Received:		
4	Project Location:		
5	Institution's MS4 Permit Status		
	Campus Has MS4 Permit ☐	Campus Is Co-Permittee with Another MS4 ☐	Campus Not Required to have MS4 Permit ☐
6	If Campus Has MS4 Permit, Is Campus MS4 Permit Contact Listed in SWPPP?		
	Yes ☐	No ☐	
7	For Campuses with MS4 Permits, Campus MS4 Permit Contact Listed in SWPPP: For Campuses without an MS4 Permit, applicable Permit Entity and Contact:		
8	Project Size (acres):		
9	Disturbed Area (acres):		
10	Plan Reviewer Name:		
11	Plan Review Date:		

C44 STORMWATER PLAN REVIEW CHECKLIST

GENERAL PLAN INFORMATION

Item No.	Review Item	Included	Not Included & Required	Not Applicable
12	Topographic map of the project site including sufficient topography and structures to ascertain adjacent off-site drainage patterns.	☐	☐	☐
13	Existing contours and conditions (i.e., existing topography and showing the outline of existing structures and pavement indicating any pavement or structures to be removed.	☐	☐	☐
14	Proposed contours and conditions (i.e. proposed topography tying into existing topography and showing the outline of proposed structures and pavement)	☐	☐	☐
15	Breakdown of existing and proposed impervious surfaces in table format. Note if the breakdown is final or subject to changes.	☐	☐	☐
16	Locations of existing drainage ways such as ditches, pipes, streams, intermittent streams, wetlands, and wet weather conveyances, showing water quality buffers if applicable, within and adjacent to the property	☐	☐	☐
17	Locations of utility, roadway, and drainage easements within the property	☐	☐	☐
18	Designated floodways and floodplains, showing elevations	☐	☐	☐
19	Approximate limits of proposed land disturbing activity (i.e. a boundary line encompassing the location(s) of the proposed land disturbance activity)	☐	☐	☐
20	Proposed drainage network	☐	☐	☐
21	Name(s) of receiving waters for stormwater discharges from site	☐	☐	☐

C44 STORMWATER PLAN REVIEW CHECKLIST

SWPPP REVIEW CHECKLIST

Item No.	Review Item	Included	Not Included & Required	Not Applicable
22	Statement in the SWPPP that addresses whether the receiving waters for stormwater discharges from the site are designated as Waters with Unavailable Parameters with a Total Maximum Daily Load (TMDL), exceptional TN water, or none of these.	☐	☐	☐
23	List of stormwater outfalls along with the drainage area to each outfall	☐	☐	☐
24	If an outfall has a drainage area over 10 acres (over 5 acres for outfalls draining to Waters with Unavailable Parameters or exceptional TN waters), the SWPPP must include engineering design of sediment basins or equivalent measures.	☐	☐	☐
25	Written language describing the general timing for implementation of the control measures during construction activities	☐	☐	☐
26	The SWPPP should include a statement from the designer that states whether the site has steep slopes. Steep slopes are defined as natural or created slope of 35% grade or greater. A plan to address stabilization of the slope or portion of the slope that is 35% or greater is required.	☐	☐	☐
27	An estimate of the site runoff coefficient after construction activities are completed	☐	☐	☐
28	Design addressing how the post-construction runoff will be handled to prevent erosion at the permanent outfall and at receiving stream	☐	☐	☐
29	The estimated percentage of impervious areas before and after construction	☒	☐	☐
30	Soils information (referenced or summarized), including how the soil type affects the needed control measures and how the soil may affect the expected quality of site runoff	☐	☐	☐
31	Language regarding picking up litter, construction debris, and construction chemicals exposed to stormwater prior to anticipated storm events or before being carried off the site by wind or otherwise prevented from becoming a stormwater discharge pollutant.	☐	☐	☐
32	A description of any anticipated alteration of surface waters (if any);	☐	☐	☐
33	Includes the Aquatic Resource Alteration Permit (ARAP) number OR the tracking number of the ARAP or Section 401 Certification issued for the alteration (if any)	☐	☐	☐
34	The approximate size and location of surface waters or affected wetland acreage at the site (if any)	☐	☐	☐
35	A description of the protections employed to limit the disturbance (i.e., caution fence, clearly marked stream side buffer zones, etc.)	☐	☐	☐
36	SWPPP includes a copy of most recent Tennessee Permit No. TNR100000 (“General NPDES Permit For Discharges of Stormwater Associated With Construction Activities”)	☐	☐	☐
37	If stormwater quality treatment practices are included on the plans, include design and construction details.	☐	☐	☐
38	How many site assessments (maximum) will be required for this site? A site assessment must be conducted by a professional engineer, registered landscape architect, certified professional in erosion and sediment control, or a TDEC Level II certified staff.	_____		

C44 STORMWATER PLAN REVIEW CHECKLIST

EROSION PREVENTION AND SEDIMENT CONTROL (EPSC)

PLANS REVIEW CHECKLIST

Item No.	Review Item	Included	Not Included & Required	Not Applicable
39	Plans stamped and certified by the professional engineer or registered landscape architect.	☐	☐	☐
40	The erosion and sediment control plan has the appropriate minimum number of EPSC plan sheets. For site disturbances less than 5 acres, at least two stages must be identified and at least two separate EPSC plan sheets must be developed. The two stages for the EPSC plans show conditions and ESPC measures for (1) initial grading conditions and (2) final grading conditions. For site disturbances over 5 acres, at least three stages must be identified and at least three separate EPSC plan sheets must be developed. The three stages for the EPSC plans show conditions and EPSC measures for (1) initial grading conditions, (2) interim land disturbance activities and (3) final grading conditions.	☐	☐	☐
41	Proposed erosion prevention & sediment control measures including calculations (TDEC Sediment and Erosion Control Handbook should be used as a reference for design).	☐	☐	☐
42	Proposed construction sequence	☐	☐	☐
43	Seeding specifications, including temporary and permanent seed, soil amendments, mulch, seeding schedule and/or sod specifications and planting schedule.	☐	☐	☐
44	Construction Exits at all points where construction traffic leaves the site	☐	☐	☐
45	Pollution prevention measures, such as concrete washout areas and debris/trash management practices.	☐	☐	☐
46	Note requiring temporary stabilization of disturbed soils in compliance with Section 3.5.3.2 of the Tennessee General NPDES Permit for Discharges of Storm Water Associated with Construction Activities	☐	☐	☐
47	Water quality buffers along streams, 60’ minimum for Waters with Unavailable Parameters and Exceptional TN Waters streams, 30’ minimum for all others with exceptions based on averages and minimums as provided in the NPDES permit.	☐	☐	☐
48	Approximate slopes after major grading activities	☐	☐	☐
49	Total area of soil disturbance	☐	☐	☐
50	An outline of areas not to be disturbed	☐	☐	☐
51	The location of major structural and nonstructural controls identified in the SWPPP	☐	☐	☐
52	The location of areas where stabilization practices are expected to occur	☐	☐	☐
53	Identification of outfall points on the site plan	☐	☐	☐
54	The locations of erosion prevention and sediment control measures shown on the plan	☐	☐	☐

C44 STORMWATER PLAN REVIEW CHECKLIST

STORMWATER MANAGEMENT PLAN REVIEW CHECKLIST

Italicized items are recommended but not required unless specifically requested by the Owner.

Item No.	Review Item	Included	Not Included & Required	Not Applicable
55	Locations of proposed drainage network and supporting hydrologic/hydraulic calculations. *The design of minor stormwater management systems, defined as ditches, drains, pipes, etc., which collect the initial stormwater runoff shall be based on the 10-year storm frequency. The design of the major stormwater management system, defined as large storm sewers, major culverts, bridges, etc., which collect flow from the minor system shall be based on the 100-year storm frequency.*	☐	☐	☐
56	*Proposed permanent stormwater quantity and quality management BMP(s)*	☐	☐	☐
57	*Where BMPs are employed that rely on infiltration as a primary mechanism, a geotechnical study will be required to verify infiltration rates.*	☐	☐	☐
58	*Pre- and post-developed hydrologic and hydraulic stormwater runoff calculations must be provided which compare pre-development runoff rates to post-development runoff rates for the 2- through 100-year storm events. (Confirm the minimum year storm event.)*	☐	☐	☐
59	*Where an increase in the post-developed runoff rate is realized, a detailed downstream analysis may be required, along with the mitigation of any increase. Mitigation of increased flows can consist of onsite detention, longer onsite flow lengths, and/or infiltration. Meet applicable requirements of the High Performance Building Requirements (HPBr).*	☒	☐	☐
60	*If any permanent stormwater quality or quantity management practices are installed, include a Stormwater Operation & Maintenance Plan for all permanent stormwater management facilities to ensure their continued performance. These plans must identify the parts or components of the stormwater management facility that need to be maintained, the frequency of the needed maintenance activity, and the equipment and skills or training necessary to complete the maintenance. If the permanent stormwater practice is not a standard practice, the Designer must provide a practice-specific operation and maintenance plan.*	☐	☐	☐
61	*Compliance with applicable MS4 requirements (e.g. Runoff Reduction Policy).*	☐	☐	☐

C44 STORMWATER PLAN REVIEW CHECKLIST

Reviewer Comments and Notes

The Plans Reviewer should contact the Design Professional to resolve any outstanding items that were missing in the Plan Submittal. Each contact should be documented on the Checklist.

Follow-up Contact(s) with the Design Professional

For campuses that hold a Stormwater Phase 2 MS4 Permit, the Plans Reviewer should contact the listed Campus MS4 Contact and document this contact on the Checklist. This notification allows the Campus MS4 Contact to understand the extent of the construction project.

Follow-up Contact with the Campus MS4 Permit Contact

Attachment B - C62 Stormwater Site Audit Checklist

C62 STORMWATER SITE AUDIT CHECKLIST

This checklist is to be completed by the Owner for site audits of construction sites that disturb an acre or more. The Site Auditor's role is to ensure that the construction site is generally in compliance with the TN Construction General Permit (CGP) and any stream permits, such as an Aquatic Resources Alteration Permit (ARAP) or Corps of Engineers permit. The Site Auditor should complete the appropriate response for each item in the checklist and communicate the audit results to the Designer and Owner Project Manager. If the Site Audit indicates that item(s) are not in compliance with the CGP, additional enforcement steps should be considered. The Audit should be conducted at least monthly during active construction.

GENERAL PROJECT INFORMATION

Item Number	The following general project information may be completed by the Site Audit Representative prior to the Site Audit.	
1	Site Name:	
2	Plans Date:	
3	Project Size (acres):	Area of disturbance (acres):
4	NPDES Construction Stormwater Permit Tracking Number:	Site's Design Storm Event Rainfall Amount (inches):
5	List of Other Water Quality-Related Site Permits (if any):	
6	Does the Project Discharge to Impaired or Exceptional TN Waters? ☐ Yes ☐ No	
7	Are Quality Assurance Site Assessments Required for this Site? ☐ Yes ☐ No	

PERMIT AND SWPPP DOCUMENTATION

Item Number	Items to be checked by Owner's Site Audit Representative during a Construction Site Audit.	Yes	No
8	Are the site's permits currently effective (i.e., no expired permits)? (ARAP, CGP)	☐	☐
9	Is the NPDES permit posted near the main entrance of the construction site where it is accessible to the public?	☐	☐
10	Is the SWPPP located on site and current?	☐	☐
11	Does the site have written rainfall records? ☐ If using onsite gage, how many days since the last audit was the gaged rain data recorded? _____ ☐Reference site _____ (location) If using a reference site, how many days since the last audit was the reference site rain data recorded? _____	☐	☐
12	Do the site's rainfall records include any rain events where the recorded rainfall amount exceeded the ☐ 2yr, 24hr equivalent intensity ☐ 5yr, 24hr equivalent intensity	☐	☐
13	Are inspections performed twice a week at least 72 hours apart? Was the TDEC inspection form used?	☐	☐
14	Were the site's inspections performed by a qualified inspector? Level I certification number of inspector:_____	☐	☐
15	Do the inspection reports require maintenance to be completed?	☐	☐
16	Were maintenance items addressed within 7 days or before the next rain event?	☐	☐
17	If SWPPP modifications were needed, were the SWPPP modifications implemented within 14 days after the need was identified in an inspection?	☐	☐

C62 STORMWATER SITE AUDIT CHECKLIST

Item Number	Items to be checked by Owner's Site Audit Representative during a Construction Site Audit.	Yes	No
18	Do the inspection reports indicate that the site discharges caused an objectionable color contrast in a receiving stream? If "Yes", note the affected location(s) in comments section below.	☐	☐
19	Are quality assurance site assessments being conducted as required? (Or self-audits for a Campus with an MS4 Permit.)	☐	☐
20	Is documentation of the Quality Assurance Site Assessments contained with the SWPPP? (Or self-audits for a Campus with an MS4 Permit.)	☐	☐

SITE CHECK

For items checked "No," provide additional information in the next section.

Item Number	Spot check the following items:	Yes	No
21	Are measures in place to prevent sediment from leaving the site?	☐	☐
22	Are measures maintained and functioning?	☐	☐
23	Is a construction exit in place?	☐	☐
24	Are disturbed areas stabilized after being idle for 14 days? (Not applicable for active disturbances.)	☐	☐
25	Are stream buffers protected and undisturbed? For Waters with Unavailable Parameters or Exceptional TN waters, the average buffer width is 60'. For all other streams, the average stream buffer is 30'. Minimums are 30' and 15'.	☐	☐

Site Audit Representative Additional Comments and Notes

Site Audit Representative Certification: I certify that I completed this site audit checklist document and all attachments and that these items document the findings of the site audit based upon my observations.

Site Auditor Name (Print): _____

Site Auditor Signature: _____

Date: _____

Attachment C - TDEC Construction Stormwater Inspection Certification

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)

Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

Construction Stormwater Inspection Certification (Twice-Weekly Inspections)

Site or Project Name:		**NPDES Tracking Number: TNR**
Primary Permittee Name:		Date of Inspection:
Current approximate disturbed acreage:	Has rainfall been checked/documented daily? ☐ Yes ☐ No	Name of Inspector:
Current weather conditions:		Inspector's Training Certification Number:

Please check the box if the following items are on-site:

☐ Notice of Coverage (NOC) ☐ Stormwater Pollution Prevention Plan (SWPPP) ☐ Twice-weekly inspection documentation

☐ Site contact information ☐ Rain Gage ☐ Off-site Reference Rain Gage Location: _____

Best Management Practices (BMPs):

Are the Erosion Prevention and Sediment Controls (EPSCs) functioning correctly: If "No," describe below in Comment Section			
1.	Are all applicable EPSCs installed and maintained per the SWPPP?	☐ Yes	☐ No
2.	Are EPSCs functioning correctly at all disturbed areas/material storage areas per section 4.1.5?	☐ Yes	☐ No
3.	Are EPSCs functioning correctly at outfall/discharge points such that there is no objectionable color contrast in the receiving stream, and no other water quality impacts per section 5.3.2?	☐ Yes	☐ No
4.	Are EPSCs functioning correctly at ingress/egress points such that there is no evidence of track out?	☐ Yes	☐ No
5.	If applicable, have discharges from dewatering activities been managed by appropriate controls per section 4.1.4? If "No," describe below the measures to be implemented to address deficiencies.	☐ Yes	☐ No
6.	If construction activity at any location has temporarily/permanently ceased, was the area stabilized within 14 days per section 3.5.3.2? If "No," describe below each location and measures taken to stabilize the area(s)	☐ Yes	☐ No
7.	Have pollution prevention measures been installed, implemented, and maintained to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters per section 4.1.5? If "No," describe below the measures to be implemented to address deficiencies.	☐ Yes	☐ No
8.	If a concrete washout facility is located on site, is it clearly identified on the project and maintained? If "No," describe below the measures to be implemented to address deficiencies. ☐ N/A	☐ Yes	☐ No
9.	Have all previous deficiencies been addressed? If "No," describe remaining deficiencies in Comment section. ☐ Check if deficiencies/corrective measures have been reported on a previous form.	☐ Yes	☐ No

Comment Section. If the answer is "No" for any of the above, please describe the problem and corrective actions to be taken. Otherwise, describe any pertinent observations:

Certification and Signature (must be signed by the certified inspector and the permittee per Sections 3.5.8.2 (g) and 7.7.2 of the CGP)

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Inspector Name and Title:	Signature:	Date:
Primary Permittee Name and Title:	Signature:	Date:

Construction Stormwater Inspection Certification Form (Twice-Weekly Inspections)

Purpose of this form/ Instructions

An inspection, as described in section 3.5.8.2. of the General Permit for Stormwater Discharges from Construction Activities ("Permit"), shall be performed at least twice every calendar week and documented on this form. Inspections shall be performed at least 72 hours apart. Where sites or portion(s) of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions (e.g., site covered with snow or ice), such inspection only has to be conducted once per month until thawing results in runoff or construction activity resumes.

As described in section 3.5.8.1 of the Permit, inspectors performing the required twice weekly inspections must have an active certification by completing the "Fundamentals of Erosion Prevention and Sediment Control Level I" course (http://www.tnepsc.org/). Twice weekly inspections can also be performed by: a licensed professional engineer or landscape architect; a Certified Professional in Erosion and Sediment Control (CPESC) or a person who has successfully completed the "Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites" course. A copy of the certification or training record for inspector certification should be kept on site.

Qualified personnel, (provided by the permittee or cooperatively by multiple permittees) shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site, and each outfall.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the site's drainage system. Erosion prevention and sediment control measures shall be observed to ensure that they are operating correctly.

Outfall points (where discharges leave the site and/or enter waters of the state) shall be inspected to determine whether erosion prevention and sediment control measures are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event if possible, but in no case more than 7 days after the need is identified.

Based on the results of the inspection, the site description identified in the SWPPP in accordance with section 3.5.1 of the Permit and pollution prevention measures identified in the SWPPP in accordance with section 3.5.2 of the Permit, shall be revised as appropriate, but in no case later than 7 days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP, but in no case later than 14 days following the inspection.

All inspections shall be documented on this Construction Stormwater Inspection Certification form. Alternative inspection forms may be used as long as the form contents and the inspection certification language are, at a minimum, equivalent to the division's form and the permittee has obtained a written approval from the division to use the alternative form. Inspection documentation will be maintained on site and made available to the division upon request. Inspection reports must be submitted to the division within 10 days of the request.

Trained certified inspectors shall complete inspection documentation to the best of their ability. Falsifying inspection records or other documentation or failure to complete inspection documentation shall result in a violation of this permit and any other applicable acts or rules.

Attachment D - A64 Construction Progress Meeting Agenda

A64 CONSTRUCTION PROGRESS MEETING AGENDA

Provided below are the agenda items typically required by the Owner for Construction Progress Meetings. Guidance provided in agenda items does not revise the requirements of the Agreement.

Instructions:
1. Create an agenda for the meeting by using this form or copying the contents into another format.
2. Secure a record of attendance.

AGENDA

1. **Review progress** since previous meeting
   a. **Construction and field observations**
   b. **Weather delays**
   c. **Allowances**, including unit price base quantities, and need for interim increase or readiness for final reconciling decrease.
   d. **Environmental permits compliance**, including stormwater when applicable.
2. **Anticipated progress** until the next meeting
   a. **Updated progress schedule** review
   b. **Problems**, conflicts, impediments
   c. **Corrections** to restore the schedule
   d. **Construction Schedule** review of revisions
   e. **Commissioning** and due dates
   f. **Closeout issues** if SC is due soon
3. **Submittal review**
   a. **Pending from Contractor**
   b. **Pending with Designer**
4. **Review Project Logs**
   a. **Commissioning** observation
   b. **Action Items**
   c. **RFI** – Requests for information
   d. **Minor Changes**
   e. **RFP** – Requests for proposals
5. **HPBr** and status of closeout verification
6. **Confirm next meeting** appointment
7. **Record Documents** check to validate they are current and review status of the following:
   a. **O&M manuals**
   b. **Owner training**
8. **Sign unexecuted Change Orders**
9. **Review and certify** the current Application for Payment

END

Attachment E - F74 Stormwater As-Built Certification

F74 STORM WATER AS-BUILT CERTIFICATION

< Designer's or Consultant's Letterhead >

< Date >

< Name of institutional facility coordinator >
< Address >
< City, State, Zip >

RE: Stormwater System As-Built Certification
< SBC project number >
< Institution receiving Work >
< Building >, < Work >

By placing my professional stamp and signature on this paper, I certify that:

1a) this storm water management facility and its associated structures are constructed according to the approved design on file with Owner.

1b) all the drainage areas designed to drain to specific components of the storm water system in fact do.

1c) underground storm water system components, if any, were installed per the manufacturer's recommendations and the approved plans.

2) all storm water twice-weekly inspection reports, site assessment reports, and MS4 site audit documents are included in the Project Data Binders.

3) the Storm Water Operation & Maintenance Plan (SWOMP) is updated for any changes that occurred after the initial SWPPP, and is included in the Operating & Maintenance Data Binder.

Sincerely,

< Signature >

< Name >, < Title of signatory >

< Seal >