

**Millersville Board of Commissioners
Regular Meeting Agenda**

**Tuesday, October 20, 2020 at 5:30 P.M.
at the Millersville Community Center, 1181 Louisville Highway**

1. Call to Order.
2. Invocation and Pledge to the Flag.
3. Approve the minutes from the August 18, 2020 Regular Commission Meeting.
4. Approve the minutes from the September 15, 2020 Regular Commission Meeting.
5. Approve the September 2020 Financial Report.
6. **PUBLIC HEARING:**
 - A. **Ordinance 20-749**, an ordinance to amend the Millersville Code of Ordinances, Chapter 82 – Utilities, Article II – Sewers, Division 7, Rates and Charges, Section 82-206.
 1. Open Public Hearing for comments.
 2. Close Public Hearing.
 - B. **City's 2019-20 Annual MS4 Report.** (Phase II Small Municipal Separate Storm Sewer System).
 1. Open Public Hearing for comments.
 2. Close Public Hearing.
7. **Second Reading on Ordinance 20-749**, an ordinance to amend the Millersville Code of Ordinances, Chapter 82 – Utilities, Article II – Sewers, Division 7, Rates and Charges, Section 82-206. (Passed 1st Reading 9/15/20)
8. **First Reading on Ordinance 20-750**, City's Municipal Floodplain Zoning Ordinance (Update to FEMA Floodplain Maps).
9. Award the bid for Street Paving and authorize the City Manager to execute the contract.
10. Award the bid for Cleaning Services for the Community Center and authorize the City Manager to execute the contract.
11. Award the bid for three Police Vehicles.
12. Citizen comments. (Limited to 3 minutes per speaker).
13. City Attorney comments.
14. City Manager comments.
15. Commissioner comments.
16. Adjournment.

**Millersville Board of Commissioners
Regular Meeting Minutes**

**Tuesday, August 18, 2020 at 5:30 P.M.
Millersville Community Center, 1181 Louisville Highway**

The Millersville Board of Commissioners held their regular monthly meeting at the Millersville Community Center on Tuesday, August 18, 2020 with the following board members present: Tim Lassiter, Mayor; Keith Bell, Vice Mayor. Commissioners: Milton Dorris, David Gregory and Larry Petty. Also, present: City Manager/Recorder Holly Murphy, Assistant City Manager Dan Toole and Amy Hutchison, Recorder Pro Tem.

1. Call to Order.

Mayor Lassiter called the meeting to order at 5:30 P.M.

2. Invocation and Pledge to the Flag.

Pastor Charles Anderson gave the invocation followed by the Pledge to the Flag of the United States led by Mayor Tim Lassiter.

3. **Public Hearing on Ordinance 20-748**, an ordinance to deannex property at 2049 Liebengood Road, specifically identified as Robertson County Map 133, Parcel 25.00, so it can be annexed into the City of Ridgetop.

1. Open Public Hearing.

Mayor Lassiter opened the Public Hearing on Ordinance 20-748. There were no comments.

2. Close Public Hearing.

Mayor Lassiter closed the Public Hearing on Ordinance 20-748.

4. **Second Reading of Ordinance 20-748**, an ordinance to deannex property at 2049 Liebengood Road, specifically identified as Robertson County Map 133, Parcel 25.00, so it can be annexed into the City of Ridgetop.

Vice Mayor Bell moved to approve Ordinance 20-748, on second reading, seconded by Commissioner Gregory. (Vote 5 yea – 0 nay.). Motion carried. Ordinance 20-748 passed second and final reading.

5. Discussion and approval of the proposals for the CCTV system of security cameras and recording/playback equipment and the Access Control System of electronic doors for the new City Hall.

Vice Mayor Bell moved that we approve the proposals of CCTV system of security cameras and recording/playback equipment and the Access Control System of electronic doors for the new City Hall, seconded by Commissioner Gregory.

Roger Lancina (IT personnel) explained to the Commission the difference in the bids for each RFP. Following a discussion to choose the best company for each different RFP, Vice Mayor Bell amended the motion.

Vice Mayor Bell moved to amend the motion to specify that on the 2nd RFP for the CCTV system, Clearline be awarded the bid and further amend the motion on the 3rd RFP

for the security of the twelve doors that ADT be awarded the bid based on their proposal, seconded by Commissioner Gregory. With no further discussion, Mayor Lassiter called for a vote. (Vote 5 yea – 0 nay.) Motion carried.

6. Discussion on traffic lanes for the Bethel Farms development on S. Williams Road.

Brian Whitaker (OHM) gave explanation of an agreement from the previous administration which specified ten foot lanes. Per TDOT the lanes are required to be no less than twelve feet wide. Mr. Whitaker explained that the City could obtain more right-of-way to allow for turn lanes at the development or the City could do away with a dedicated left and right lane. The Commission discussed the options presented to them and with no further discussion, Mayor Lassiter called for a motion.

Vice Mayor Bell moved to approve two lanes in and out of Bethel Farms Development on S. Williams Road onto Bethel Road and that we approve two fourteen-foot lanes in compliance with the minimum requirements that TDOT has of a twelve-foot minimum, seconded by Commissioner Gregory. (Vote 5 yea – 0 nay.). Motion carried.

7. Discuss and approval of the City Manager Agreement.

Commissioner Gregory asked if Mr. Collie was going to accept our insurance to which Ms. Murphy stated that he has not said yet. Ms. Murphy also advised the Commission that he may not be able to start until September 28th. Commissioner Dorris voiced concern regarding Mr. Collie starting with twenty days of vacation. Ms. Murphy advised that he will only be able to use ten of those days in the first year. With no further discussion, Mayor Lassiter called for a vote.

Vice Mayor Bell moved to accept and approve the contract that is being proposed for Mr. Collie as City Manager, seconded by Commissioner Gregory. (Vote 4 yea – 1 abstention, with Commissioner Dorris abstaining.). Motion carried.

8. Citizen comments. (Limited to 3 minutes per speaker).

Melissa Clark, 1174 Louisville Hwy., Millersville Public Library – advised that the Library has made some improvements and changes because of virtual school and a lack of internet service in the area. There are now 14 hotspots available for checkout, special areas and computers dedicated to students and many added computer services. She informed of upcoming events at the Library including the Harvest Festival, Zoom Yoga and a Storybook Trail during the month of September. Mayor Lassiter asked how many students are using the computers on a regular basis, to which she answered that are six at this time using them regularly.

9. City Manager comments.

A. Dan Toole, Asst. City Manager – stated that he recently attended the Robertson County Economic Development Board meeting. The focus of the meeting was on the water and wastewater needs for each community and looking toward the next five years. He advised that the City of Millersville's needs were in the Bethel Road & I-65 area. WHUD was in attendance at this meeting also. WHUD stated that they were aware of those needs. They stated that seven years ago a new tank, water lines and pumping station was in the \$7 million-dollar range and that it would be looking at the City and development to fund this project. Mr. Toole also informed the Commission that the red light located at Bethel Road and Hwy 31W was now operational. Finally, he stated that he attended the Middle TN City Managers meeting recently held in Goodlettsville and that there was a good turn out and lots of development coming to the County.

B. Holly Murphy, City Manager – thanked Roger Lancina for putting together the

information regarding the RFP's and that she could not get through this process without him. She also advised that the search for an IT company has been put on the back burner for now but that a search was still on for a new phone company and that Mr. Lancina was also helping with that. She informed the Commission that a music video was recently shot at the turnaround located at 850 C Smith Sreet by country music artist, Kane Brown. She explained to the Commission that the State is offering Covid-19 relief to the cities. She stated that we qualify for \$100,000 but that it has to be used towards Covid-19 relief. That could include the purchase of another truck for Public Works if there are not already enough trucks to allow for social distancing, IT department needs, etc. The Department of Labor also has a program that will pay up to 80 hours of paid sick time due to Covid -19. This will be used for our recently sick employees. Finally, she advised the Commission that she had received an email from the State of Tennessee to adopt the sewer rate study. She will have this on the agenda for the next work session and will also ask Mr. Buddy Petty to be in attendance for any questions that the Commission may have.

16. Commissioner comments.

Commissioner Gregory asked Ms. Murphy if the City had received the monies from the Governor's office that was designated to the cities. Ms. Murphy stated that the City had received the money and it was included in the budget and there are no requirements on spending. He then asked Mr. Whitaker if he had any information on the sidewalk project to which Mr. Whitaker stated that the NEPA study was being compiled and that the plans are approximately 30% complete. He then asked about the gulch at 31W & Cartwright to which Mr. Whitaker stated that he had sent the information to TDOT. Mr. Gregory then asked about the asphalt bids. Ms. Murphy stated that we had received the bids but there are questions for Jerry regarding dollar amounts per road and that he only presented the price per tonnage. Finally, he asked about the Reynolds property development to which Mr. Toole stated that the developer brought plans to Andrew and he thinks there will need to be a traffic study.

Commissioner Petty asked if there will be curbs on S. Williams Road at the Bethel Farms Development turning in and out of Bethel Road to which Mr. Whitaker stated that he would check.

Commissioner Dorris expressed his appreciation for the red light at Bethel Road and Hwy 31W. He stated that it is a vast improvement for the area. He also stated that he liked the idea of having the fourteen-foot lanes at S. Williams Road.

Mayor Lassiter asked that everyone keep Deborah Ashburn and Earnest & Sheila Jones in their thoughts and prayers.

17. Adjournment.

**Vice Mayor Bell moved to adjourn, seconded by Commissioner Dorris.
(Vote 5 yea- 0 nay.). Motion carried.**

Meeting adjourned at 6:50 P.M.

Respectfully submitted,

Amy Hutchison
Recorder Pro Tem

**Millersville Board of Commissioners
Regular Meeting Minutes**

**Tuesday, September 15, 2020 at 5:30 P.M.
Millersville Community Center, 1181 Louisville Highway**

The Millersville Board of Commissioners held their regular monthly meeting at the Millersville Community Center on Tuesday, September 15, 2020 with the following board members present: Tim Lassiter, Mayor. Commissioners: Milton Dorris, David Gregory and Larry Petty. Also, present: City Manager/Recorder Holly Murphy, Assistant City Manager Dan Toole and Amy Hutchison, Recorder Pro Tem; Absent: Keith Bell, Vice Mayor.

1. Call to Order.

Mayor Lassiter called the meeting to order at 5:32 P.M.

2. Invocation and Pledge to the Flag.

Pastor Charles Anderson gave the invocation followed by the Pledge to the Flag of the United States led by Mayor Tim Lassiter.

3. Approve the minutes from the July 21, 2020 Regular Commission Meeting.

Commissioner Petty made a motion to approve the minutes from the July 21, 2020 Regular Commission Meeting, seconded by Commissioner Gregory. (Vote 4 yea – 0 nay.). Motion carried.

4. Approve the minutes from the September 8, 2020 Special Commission Meeting.

Commissioner Gregory made a motion to approve the minutes from the September 8, 2020 Special Commission Meeting, seconded by Commissioner Dorris. (Vote 4 yea – 0 nay.). Motion carried.

5. Approve the July 2020 Financial Report.

Commissioner Petty made a motion to approve the July 2020 Financial Report, seconded by Commissioner Gregory. (Vote 4 yea – 0 nay.). Motion carried.

6. Approve the August 2020 Financial Report.

Commissioner Gregory made a motion to approve the August 2020 Financial Report, seconded by Commissioner Petty. (Vote 4 yea – 0 nay.). Motion carried.

7. Approve **Resolution 20-R-25**, to accept the 2020 Sewer Rate Study and implement the resulting recommendations within 60 days as ordered by the Tennessee Water and Wastewater Financing Board.

Mayor Lassiter asked for a motion to remove Item #7 from the agenda.

Commissioner Gregory made a motion to remove Resolution 20-R-25, to accept the 2020 Sewer Rate Study and implement the resulting recommendations within 60 days as ordered by the Tennessee Water and Wastewater Financing Board, seconded by Commissioner Petty. (Vote 3 yea – 1 nay, with Commissioner Dorris voting no.). Motion carried.

8. **First Reading of Ordinance 20-749**, an ordinance to amend the Millersville Code of Ordinances, Chapter 82 – Utilities, Article II – Sewers, Division 7, Rates and Charges, Section 82-206.

Mayor Lassiter explained that this ordinance has to do with the sewer. He further explained that the City had received a letter from the State that we have been in the negative for two years in a row, therefore they ordered the City to get a sewer rate study and the recommendation was to raise the sewer rates on a certain schedule. The State requires that this be completed in a timely manner. If not, the State will step in and do it for the City.

With no further discussion, Mayor Lassiter called for a motion.

Commissioner Petty made a motion to approve Ordinance 20-749 on first reading, seconded by Commissioner Gregory. (Vote 3 yea – 1 nay, with Commissioner Dorris voting no.). Motion carried. Ordinance 20-749 passed first reading.

9. Citizen comments. (Limited to 3 minutes per speaker).

Melissa Clark, 1174 Louisville Hwy., Millersville Public Library – gave an update on upcoming events happening at the Library including the Fall Harvest Festival on September 9th and the Storybook Walking Trail during the month of September. She also gave an update on the number of library visits, circulations and curbside services. Mayor Lassiter asked about the Documentary on the Library to which Mrs. Clark stated that it is on the Library's Facebook and YouTube pages.

Robert Stone, 1229 Louisville Hwy. – asked if the City had a plan for the scheduled upcoming protest to which Mayor Lassiter that the police department will protect the city. He advised that there will be a large police presence and the fire department will be on standby.

Amber McFarland, 1015 Cartwright Circle S. – advised that she was the administrator of the Millersville 411 Facebook page and that she had been monitoring the chatter of the upcoming protest.

10. City Manager comments.

A. Dan Toole, Asst. City Manager – stated that the City is taking every step to keep the citizens and protestors safe during the protest. He also advised that he and Jerry had met with Roger's Group regarding the paving bids and he will be making his recommendation.

B. Holly Murphy, City Manager – informed the Commission about personnel changes in the police department. She stated that Detective Don Long had retired and his last day was September 9th, Hillary Fox who was in the Police Academy did not meet the qualifications, therefore she was no longer in the Academy or employed by the City and Bobby Black was terminated the previous Friday. She advised the Commissioners to come to her with any questions they may have regarding his termination letter. Finally, she let the Commission know that she is the one who recommended to the Mayor to remove Resolution 20-R-25 from the agenda. The State had informed her that since there was an ordinance a resolution was not needed.

11. Commissioner comments.

Commissioner Gregory asked Brian Whitaker of OHM if there was any news on the Sidewalk Project. Mr. Whitaker stated that the layout will be presented at the next work session. Commissioner Gregory also asked if Mr. Whitaker had information on the North Cartwright

culvert to which Mr. Whitaker said that he had not but he will check with TDOT. Finally, Commissioner Gregory asked about the Reynold's property. Mr. Whitaker advised that no plans had been turned in for his review.

Mayor Lassiter asked Mr. Whitaker to address the driveway leading back to the police department at City Hall. He stated that it is basically a ditch and the fire trucks cannot get through.

12. Adjournment.

Commissioner Dorris made a motion to adjourn, seconded by Commissioner Petty. (Vote 4 yea– 0 nay.). Motion carried.

Meeting adjourned at 5:55 P.M.

Respectfully submitted,

Amy Hutchison
Recorder Pro Tem

**CITY OF MILLERSVILLE, TENNESSEE
ORDINANCE 20-749**

**AN ORDINANCE SETTING THE RATES AND CHARGES FOR USERS
OF THE CITY'S SANITARY SEWER SYSTEM AS AUTHORIZED BY
THE MILLERSVILLE CODE OF ORDINANCES, CHAPTER 82 -
UTILITIES, ARTICLE II – SEWERS, DIVISION 7, RATES AND
CHARGES, SECTION 82-206.**

WHEREAS, the Governing Body of the City of Millersville reviews its sewer rates, charges, and fees annually during the budgeting process and may adjust said rates and charges accordingly; and

WHEREAS, certain sewer rates and charges shall be adopted by ordinance and other sewer associated charges and fees may be adopted by resolution, neither of which need to be codified in the Code of Ordinances; and

WHEREAS, Ordinance 18-714 was adopted by the Board of Commissioners establishing the current sewer rates and charges with automatic annual increases.

NOW THEREFORE, BE IT ORDAINED by the Board of Commissioners of the City of Millersville as follows:

SECTION 1. This ordinance will replace in entirety the current sewer rates as set by Ordinance 18-714.

SECTION 2. The new sewer rates and charges of the City of Millersville shall be set as follows:

The rates and charges for users of the city's sanitary system shall be:

Residential users:	0 – 1,200 gallons	\$18.30 minimum charge
	All gallons over 1,200	\$ 8.39 per 1,000 gallons
Commercial users:	0 – 1,000 gallons	\$18.87 minimum charge
	All gallons over 1,000	\$ 8.96 per 1,000 gallons
Hotels/Motels & Campgrounds	All gallons	\$12.64 per 1,000 gallons

All users of the city's sanitary system and connections thereto not located on lands within the corporate limits of the city of Millersville shall be billed at 150% of the standard rates, charges and fees.

All households, structures and facilities connected to the city's sewer system and on wells will be charged a monthly rate of \$37.40

SECTION 3. The above rates shall go into effect November 1, 2020.

SECTION 4. Effective July 1, 2021, there shall be an automatic increase of 8% to the above rates and charges.

SECTION 5. Effective **July 1, 2022**, there shall be an automatic increase of 5% to the rates established in Section 3.

SECTION 6. Effective **July 1, 2023**, there shall be an automatic increase of 5% to the rates established in Section 4.

THIS ORDINANCE SHALL BECOME EFFECTIVE IMMEDIATELY UPON PASSAGE, THE PUBLIC WELFARE REQUIRING IT.

Passed First Reading: _____

Public Hearing: _____

Passed Second Reading: _____

BOARD OF COMMISSIONERS

By: _____
Timothy F. Lassiter, Mayor

Attest:

By: _____
Holly L. Murphy, City Recorder

Approved as to Form and legality:

By: _____
Bruce Oldham, City Attorney

ORDINANCE NO. 20-750

MUNICIPAL FLOODPLAIN ZONING ORDINANCE

AN ORDINANCE ADOPTED FOR THE PURPOSE OF AMENDING THE CITY OF MILLERSVILLE, TENNESSEE MUNICIPAL ZONING ORDINANCE REGULATING DEVELOPMENT WITHIN THE CORPORATE LIMITS OF MILLERSVILLE, TENNESSEE, TO MINIMIZE DANGER TO LIFE AND PROPERTY DUE TO FLOODING, AND TO MAINTAIN ELIGIBILITY FOR PARTICIPATION IN THE NATIONAL FLOOD INSURANCE PROGRAM.

ARTICLE I. STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND OBJECTIVES

Section A. Statutory Authorization

The Legislature of the State of Tennessee has in Sections 13-7-201 through 13-7-210, Tennessee Code Annotated delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City of Millersville, Tennessee, Mayor and the Millersville Board of Commissioners, do ordain as follows:

Section B. Findings of Fact

1. The City of Millersville, Tennessee, Mayor and its Board of Commissioners wishes to maintain eligibility in the National Flood Insurance Program (NFIP) and in order to do so must meet the NFIP regulations found in Title 44 of the Code of Federal Regulations (CFR), Ch. 1, Section 60.3.
2. Areas of the City of Millersville, Tennessee are subject to periodic inundation which could result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
3. Flood losses are caused by the cumulative effect of obstructions in floodplains, causing increases in flood heights and velocities; by uses in flood hazard areas which are vulnerable to floods; or construction which is inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

Section C. Statement of Purpose

It is the purpose of this Ordinance to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas. This Ordinance is designed to:

1. Restrict or prohibit uses which are vulnerable to flooding or erosion hazards, or which result in damaging increases in erosion, flood heights, or velocities;

2. Require that uses vulnerable to floods, including community facilities, be protected against flood damage at the time of initial construction;
3. Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;
4. Control filling, grading, dredging and other development which may increase flood damage or erosion;
5. Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

Section D. Objectives

The objectives of this Ordinance are:

1. To protect human life, health, safety and property;
2. To minimize expenditure of public funds for costly flood control projects;
3. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
4. To minimize prolonged business interruptions;
5. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodprone areas;
6. To help maintain a stable tax base by providing for the sound use and development of floodprone areas to minimize blight in flood areas;
7. To ensure that potential homebuyers are notified that property is in a floodprone area;
8. To maintain eligibility for participation in the NFIP.

ARTICLE II. DEFINITIONS

Unless specifically defined below, words or phrases used in this Ordinance shall be interpreted as to give them the meaning they have in common usage and to give this Ordinance its most reasonable application given its stated purpose and objectives.

"Accessory Structure" means a subordinate structure to the principal structure on the same lot and, for the purpose of this Ordinance, shall conform to the following:

1. Accessory structures shall only be used for parking of vehicles and storage.
2. Accessory structures shall be designed to have low flood damage potential.
3. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters.

4. Accessory structures shall be firmly anchored to prevent flotation, collapse, and lateral movement, which otherwise may result in damage to other structures.
5. Utilities and service facilities such as electrical and heating equipment shall be elevated or otherwise protected from intrusion of floodwaters.

"Addition (to an existing building)" means any walled and roofed expansion to the perimeter or height of a building.

"Appeal" means a request for a review of the local enforcement officer's interpretation of any provision of this Ordinance or a request for a variance.

"Area of Shallow Flooding" means a designated AO or AH Zone on a community's Flood Insurance Rate Map (FIRM) with one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate; and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

"Area of Special Flood-related Erosion Hazard" is the land within a community which is most likely to be subject to severe flood-related erosion losses. The area may be designated as Zone E on the Flood Hazard Boundary Map (FHBM). After the detailed evaluation of the special flood-related erosion hazard area in preparation for publication of the FIRM, Zone E may be further refined.

"Area of Special Flood Hazard" see **"Special Flood Hazard Area"**.

"Base Flood" means the flood having a one percent chance of being equaled or exceeded in any given year. This term is also referred to as the 100-year flood or the one (1)-percent annual chance flood.

"Basement" means any portion of a building having its floor subgrade (below ground level) on all sides.

"Building" see **"Structure"**.

"Development" means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or storage of equipment or materials.

"Elevated Building" means a non-basement building built to have the lowest floor of the lowest enclosed area elevated above the ground level by means of solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwater, pilings, columns, piers, or shear walls adequately anchored so as not to impair the structural integrity of the building during a base flood event.

"Emergency Flood Insurance Program" or **"Emergency Program"** means the program as implemented on an emergency basis in accordance with Section 1336 of the Act. It is intended as a program to provide a first layer amount of insurance on all insurable structures before the effective date of the initial FIRM.

"Erosion" means the process of the gradual wearing away of land masses. This peril is not "per se" covered under the Program.

"Exception" means a waiver from the provisions of this Ordinance which relieves the applicant from the requirements of a rule, regulation, order or other determination made or issued pursuant to this Ordinance.

"Existing Construction" means any structure for which the "start of construction" commenced before the effective date of the initial floodplain management code or ordinance adopted by the community as a basis for that community's participation in the NFIP.

"Existing Manufactured Home Park or Subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, final site grading or the pouring of concrete pads) is completed before the effective date of the first floodplain management code or ordinance adopted by the community as a basis for that community's participation in the NFIP.

"Existing Structures" see **"Existing Construction"**.

"Expansion to an Existing Manufactured Home Park or Subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

"Flood" or "Flooding"

(a) A general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters.
2. The unusual and rapid accumulation or runoff of surface waters from any source.
3. Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (a)(2) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

(b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (a)(1) of this definition.

"Flood Elevation Determination" means a determination by the Federal Emergency Management Agency (FEMA) of the water surface elevations of the base flood, that is, the flood level that has a one percent or greater chance of occurrence in any given year.

"Flood Elevation Study" means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) or flood-related erosion hazards.

"Flood Hazard Boundary Map (FHBM)" means an official map of a community, issued by FEMA, where the boundaries of areas of special flood hazard have been designated as Zone A.

"Flood Insurance Rate Map (FIRM)" means an official map of a community, issued by FEMA, delineating the areas of special flood hazard or the risk premium zones applicable to the community.

"Flood Insurance Study" is the official report provided by FEMA, evaluating flood hazards and containing flood profiles and water surface elevation of the base flood.

"Floodplain" or "Floodprone Area" means any land area susceptible to being inundated by water from any source (see definition of "flooding").

"Floodplain Management" means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

"Flood Protection System" means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the area within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

"Floodproofing" means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities and structures and their contents.

"Flood-related Erosion" means the collapse or subsidence of land along the shore of a lake or other body of water as a result of undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a flash flood, or by some similarly unusual and unforeseeable event which results in flooding.

"Flood-related Erosion Area" or "Flood-related Erosion Prone Area" means a land area adjoining the shore of a lake or other body of water, which due to the composition of the shoreline or bank and high water levels or wind-driven currents, is likely to suffer flood-related erosion damage.

"Flood-related Erosion Area Management" means the operation of an overall program of corrective and preventive measures for reducing flood-related erosion damage, including but not limited to emergency preparedness plans, flood-related erosion control works and floodplain management regulations.

"Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

"Freeboard" means a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, blockage of bridge or culvert openings, and the hydrological effect of urbanization of the watershed.

"Functionally Dependent Use" means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship

building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

"Highest Adjacent Grade" means the highest natural elevation of the ground surface, prior to construction, adjacent to the proposed walls of a structure.

"Historic Structure" means any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Individually listed on the Tennessee inventory of historic places and determined as eligible by states with historic preservation programs which have been approved by the Secretary of the Interior; or
4. Individually listed on the City of Millersville, Tennessee inventory of historic places and determined as eligible by communities with historic preservation programs that have been certified either:
 - a. By the approved Tennessee program as determined by the Secretary of the Interior or
 - b. Directly by the Secretary of the Interior.

"Levee" means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding.

"Levee System" means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

"Lowest Floor" means the lowest floor of the lowest enclosed area, including a basement. An unfinished or flood resistant enclosure used solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this Ordinance.

"Manufactured Home" means a structure, transportable in one or more sections, which is built on a permanent chassis and designed for use with or without a permanent foundation when attached to the required utilities. The term "Manufactured Home" does not include a "Recreational Vehicle".

"Manufactured Home Park or Subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

"Map" means the Flood Hazard Boundary Map (FHBM) or the Flood Insurance Rate Map (FIRM) for a community issued by FEMA.

"Mean Sea Level" means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For the purposes of this Ordinance, the term is synonymous with the National Geodetic Vertical Datum (NGVD) of 1929, the North American Vertical Datum (NAVD) of 1988, or other datum, to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

"National Geodetic Vertical Datum (NGVD)" means, as corrected in 1929, a vertical control used as a reference for establishing varying elevations within the floodplain.

"New Construction" means any structure for which the "start of construction" commenced on or after the effective date of the initial floodplain management Ordinance and includes any subsequent improvements to such structure.

"New Manufactured Home Park or Subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of this ordinance or the effective date of the initial floodplain management ordinance and includes any subsequent improvements to such structure.

"North American Vertical Datum (NAVD)" means, as corrected in 1988, a vertical control used as a reference for establishing varying elevations within the floodplain.

"100-year Flood" see **"Base Flood"**.

"Person" includes any individual or group of individuals, corporation, partnership, association, or any other entity, including State and local governments and agencies.

"Reasonably Safe from Flooding" means base flood waters will not inundate the land or damage structures to be removed from the Special Flood Hazard Area and that any subsurface waters related to the base flood will not damage existing or proposed structures.

"Recreational Vehicle" means a vehicle which is:

1. Built on a single chassis;
2. 400 square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light duty truck;
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

"Regulatory Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

"Regulatory Flood Protection Elevation" means the "Base Flood Elevation" plus the "Freeboard". In "Special Flood Hazard Areas" where Base Flood Elevations (BFEs) have been determined, this elevation shall be the BFE plus 1 foot. In "Special Flood Hazard Areas" where

no BFE has been established, this elevation shall be at least three (3) feet above the highest adjacent grade.

"Riverine" means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

"Special Flood Hazard Area" is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. The area may be designated as Zone A on the FHBM. After detailed ratemaking has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AO, AH, A1-30, AE or A99.

"Special Hazard Area" means an area having special flood, mudslide (i.e., mudflow) and/or flood-related erosion hazards, and shown on an FHBM or FIRM as Zone A, AO, A1-30, AE, A99, or AH.

"Start of Construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; and includes the placement of a manufactured home on a foundation. Permanent construction does not include initial land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds, not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

"State Coordinating Agency" the Tennessee Emergency Management Agency, State NFIP Office, as designated by the Governor of the State of Tennessee at the request of FEMA to assist in the implementation of the NFIP for the State.

"Structure" for purposes of this Ordinance, means a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

"Substantial Damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

"Substantial Improvement" means any reconstruction, rehabilitation, addition, alteration or other improvement of a structure in which the cost equals or exceeds fifty percent (50%) of the market value of the structure before the "start of construction" of the initial improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The market value of the structure should be (1) the appraised value of the structure prior to the start of the initial improvement, or (2) in the case of substantial damage, the value of the structure prior to the damage occurring.

The term does not, however, include either: (1) Any project for improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications which have been pre-identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions and not solely triggered by an improvement or repair

project or; (2) Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure".

"Substantially Improved Existing Manufactured Home Parks or Subdivisions" is where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds fifty percent (50%) of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

"Variance" is a grant of relief from the requirements of this Ordinance.

"Violation" means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certification, or other evidence of compliance required in this Ordinance is presumed to be in violation until such time as that documentation is provided.

"Water Surface Elevation" means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, the North American Vertical Datum (NAVD) of 1988, or other datum, where specified, of floods of various magnitudes and frequencies in the floodplains of riverine areas.

ARTICLE III. GENERAL PROVISIONS

Section A. Application

This Ordinance shall apply to all areas within the incorporated area of the City of Millersville, Tennessee.

Section B. Basis for Establishing the Areas of Special Flood Hazard

The Areas of Special Flood Hazard identified on the City of Millersville, Tennessee, as identified by FEMA, and in and in the Robertson County, Tennessee and Incorporated Areas Flood Insurance Study (FIS) dated February 26, 2021, and the Flood Insurance Rate Map (FIRM), Community Panel Numbers 47147C0395C and 47147C0415C and 47147C0420C, dated April 16, 2008, and the Sumner County, Tennessee and Incorporated Areas Flood Insurance Study (FIS) dated February 26, 2021, and the Flood Insurance Rate Map (FIRM), Community Panel Numbers and 47165C0261G, 47165C0262G dated April 17, 2012 and 47165C0245H, 47165C0263H, 47165C0264H, 47165C0270H, 47165C0376H, 47165C0377H, dated February 26, 2021, along with all supporting technical data, are adopted by reference and declared to be a part of this Ordinance.

Section C. Requirement for Development Permit

A development permit shall be required in conformity with this Ordinance prior to the commencement of any development activities.

Section D. Compliance

No land, structure or use shall hereafter be located, extended, converted or structurally altered without full compliance with the terms of this Ordinance and other applicable regulations.

Section E. Abrogation and Greater Restrictions

This Ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants or deed restrictions. However, where this Ordinance conflicts or overlaps with another regulatory instrument, whichever imposes the more stringent restrictions shall prevail.

Section F. Interpretation

In the interpretation and application of this Ordinance, all provisions shall be: (1) considered as minimum requirements; (2) liberally construed in favor of the governing body and; (3) deemed neither to limit nor repeal any other powers granted under Tennessee statutes.

Section G. Warning and Disclaimer of Liability

The degree of flood protection required by this Ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This Ordinance does not imply that land outside the Areas of Special Flood Hazard or uses permitted within such areas will be free from flooding or flood damages. This Ordinance shall not create liability on the part of the City of MILLERSVILLE, Tennessee or by any officer or employee thereof for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made hereunder.

Section H. Penalties for Violation

Violation of the provisions of this Ordinance or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance shall constitute a misdemeanor punishable as other misdemeanors as provided by law. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon adjudication therefore, be fined as prescribed by Tennessee statutes, and in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the City of Millersville, Tennessee from taking such other lawful actions to prevent or remedy any violation.

ARTICLE IV. ADMINISTRATION

Section A. Designation of Ordinance Administrator

The City Manager or designee is hereby appointed as the Administrator to implement the provisions of this Ordinance.

Section B. Permit Procedures

Application for a development permit shall be made to the Administrator on forms furnished by the community prior to any development activities. The development permit may include, but is not limited to the following: plans in duplicate drawn to scale and showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, earthen fill placement, storage of materials or equipment, and drainage facilities. Specifically, the following information is required:

1. Application stage

- a. Elevation in relation to mean sea level of the proposed lowest floor, including basement, of all buildings where Base Flood Elevations are available, or to certain height above the highest adjacent grade when applicable under this Ordinance.
- b. Elevation in relation to mean sea level to which any non-residential building will be floodproofed where Base Flood Elevations are available, or to certain height above the highest adjacent grade when applicable under this Ordinance.
- c. A FEMA Floodproofing Certificate from a Tennessee registered professional engineer or architect that the proposed non-residential floodproofed building will meet the floodproofing criteria in Article V, Sections A and B.
- d. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
- e. A final Finished Construction Elevation Certificate (FEMA Form 086-0-33) is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities.
- f. In order to determine if improvements or damage meet the Substantial Improvement or Substantial Damage criteria, the applicant shall provide to the Floodplain Administrator a detailed cost to repair all damages and/or cost of improvements which includes the complete costs associated with all types of work necessary to completely repair or improve a building. These include the costs of all materials, labor, and other items necessary to perform the proposed work. These must be in the form of:
 - An itemized costs of materials, and labor, or estimates of materials and labor that are prepared by licensed contractors or professional construction cost estimators
 - Building valuation tables published by building code organizations and cost-estimating manuals and tools available from professional building cost-estimating services.
 - A qualified estimate of costs that is prepared by the local official using professional judgement and knowledge of local and regional construction costs.
 - A detailed cost estimate provided and prepared by the building owner. This must include as much supporting documentation as possible (such as pricing information from lumber companies, plumbing and electrical suppliers, etc). In addition, the estimate must include the value of labor, including the value of the owner's labor.

2. Construction Stage

Within AE Zones, where Base Flood Elevation data is available, any lowest floor certification made relative to mean sea level shall be prepared by or under the direct supervision of, a Tennessee registered land surveyor and certified by same. The Administrator shall record the elevation of the lowest floor on the development permit. When floodproofing is utilized for a non-residential building, said certification shall be prepared by, or under the direct supervision of, a Tennessee registered professional engineer or architect and certified by same.

Within approximate A Zones, where Base Flood Elevation data is not available, the elevation of the lowest floor shall be determined as the measurement of the lowest floor of the building relative to the highest adjacent grade. The Administrator shall record the elevation of the lowest floor on the development permit. When floodproofing is utilized for a non-residential building, said certification shall be prepared by, or under the direct supervision of, a Tennessee registered professional engineer or architect and certified by same.

For all new construction and substantial improvements, the permit holder shall provide to the Administrator an as-built certification of the lowest floor elevation or floodproofing level upon the completion of the lowest floor or floodproofing.

Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The Administrator shall review the above-referenced certification data. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further work being allowed to proceed. Failure to submit the certification or failure to make said corrections required hereby, shall be cause to issue a stop-work order for the project.

3. Finished Construction Stage

For all new construction and substantial improvements, the permit holder shall provide to the Administrator a final Finished Construction Elevation Certificate (FEMA Form 086-0-33). A final Finished Construction Elevation Certificate is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities. The Administrator will keep the certificate on file in perpetuity.

Section C. Duties and Responsibilities of the Administrator

Duties of the Administrator shall include, but not be limited to, the following:

1. Review all development permits to assure that the permit requirements of this Ordinance have been satisfied, and that proposed building sites will be reasonably safe from flooding.

2. Review proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.
3. Notify adjacent communities and the Tennessee Emergency Management Agency, State NFIP Office, prior to any alteration or relocation of a watercourse and submit evidence of such notification to FEMA.
4. For any altered or relocated watercourse, submit engineering data/analysis within six (6) months to FEMA to ensure accuracy of community FIRM's through the Letter of Map Revision process.
5. Assure that the flood carrying capacity within an altered or relocated portion of any watercourse is maintained.
6. Record the elevation, in relation to mean sea level or the highest adjacent grade, where applicable, of the lowest floor (including basement) of all new and substantially improved buildings, in accordance with Article IV, Section B.
7. Record the actual elevation, in relation to mean sea level or the highest adjacent grade, where applicable to which the new and substantially improved buildings have been floodproofed, in accordance with Article IV, Section B.
8. When floodproofing is utilized for a nonresidential structure, obtain certification of design criteria from a Tennessee registered professional engineer or architect, in accordance with Article IV, Section B.
9. Where interpretation is needed as to the exact location of boundaries of the Areas of Special Flood Hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation. Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this Ordinance.
10. When Base Flood Elevation data and floodway data have not been provided by FEMA, obtain, review, and reasonably utilize any Base Flood Elevation and floodway data available from a Federal, State, or other sources, including data developed as a result of these regulations, as criteria for requiring that new construction, substantial improvements, or other development in Zone A on the City of Millersville, Tennessee FIRM meet the requirements of this Ordinance.
11. Maintain all records pertaining to the provisions of this Ordinance in the office of the Administrator and shall be open for public inspection. Permits issued under the provisions of this Ordinance shall be maintained in a separate file or marked for expedited retrieval within combined files.
12. A final Finished Construction Elevation Certificate (FEMA Form 086-0-33) is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities. The Floodplain Administrator shall review the certificate data submitted. Deficiencies

detected by such review shall be corrected by the permit holder immediately and prior to Certificate of Compliance/Occupancy issuance. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or failure to make required corrections shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy. The Finished Construction Elevation Certificate certifier shall provide at least 2 photographs showing the front and rear of the building taken within 90 days from the date of certification. The photographs must be taken with views confirming the building description and diagram number provided in Section A. To the extent possible, these photographs should show the entire building including foundation. If the building has split-level or multi-level areas, provide at least 2 additional photographs showing side views of the building. In addition, when applicable, provide a photograph of the foundation showing a representative example of the flood openings or vents. All photographs must be in color and measure at least 3" × 3". Digital photographs are acceptable.

ARTICLE V. PROVISIONS FOR FLOOD HAZARD REDUCTION

Section A. General Standards

In all areas of special flood hazard, the following provisions are required:

1. New construction and substantial improvements shall be anchored to prevent flotation, collapse and lateral movement of the structure;
2. Manufactured homes shall be installed using methods and practices that minimize flood damage. They must be elevated and anchored to prevent flotation, collapse and lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State of Tennessee and local anchoring requirements for resisting wind forces.
3. New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
4. New construction and substantial improvements shall be constructed by methods and practices that minimize flood damage;
5. All electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
6. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
7. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;

8. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;
9. Any alteration, repair, reconstruction or improvements to a building that is in compliance with the provisions of this Ordinance, shall meet the requirements of "new construction" as contained in this Ordinance;
10. Any alteration, repair, reconstruction or improvements to a building that is not in compliance with the provision of this Ordinance, shall be undertaken only if said non-conformity is not further extended or replaced;
11. All new construction and substantial improvement proposals shall provide copies of all necessary Federal and State permits, including Section 404 of the Federal Water Pollution Control Act amendments of 1972, 33 U.S.C. 1334;
12. All subdivision proposals and other proposed new development proposals shall meet the standards of Article V, Section B;
13. When proposed new construction and substantial improvements are partially located in an area of special flood hazard, the entire structure shall meet the standards for new construction;
14. When proposed new construction and substantial improvements are located in multiple flood hazard risk zones or in a flood hazard risk zone with multiple Base Flood Elevations, the entire structure shall meet the standards for the most hazardous flood hazard risk zone and the highest Base Flood Elevation.

Section B. Specific Standards

In all Areas of Special Flood Hazard, the following provisions, in addition to those set forth in Article V, Section A, are required:

1. Residential Structures

In AE Zones where Base Flood Elevation data is available, new construction and substantial improvement of any residential building (or manufactured home) shall have the lowest floor, including basement, elevated to no lower than one (1) foot above the Base Flood Elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate equalization of flood hydrostatic forces on both sides of exterior walls shall be provided in accordance with the standards of this section: "Enclosures".

Within approximate A Zones where Base Flood Elevations have not been established and where alternative data is not available, the administrator shall require the lowest floor of a building to be elevated to a level of at least three (3) feet above the highest adjacent grade (as defined in Article II). Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate equalization of flood hydrostatic forces on both sides of exterior walls shall be provided in accordance with the standards of this section: "Enclosures"

2. Non-Residential Structures

In AE Zones, where Base Flood Elevation data is available, new construction and substantial improvement of any commercial, industrial, or non-residential building, shall have the lowest floor, including basement, elevated or floodproofed to no lower than one (1) foot above the level of the Base Flood Elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate equalization of flood hydrostatic forces on both sides of exterior walls shall be provided in accordance with the standards of this section: "Enclosures"

In approximate A Zones, where Base Flood Elevations have not been established and where alternative data is not available, new construction and substantial improvement of any commercial, industrial, or non-residential building, shall have the lowest floor, including basement, elevated or floodproofed to no lower than three (3) feet above the highest adjacent grade (as defined in Article II). Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate equalization of flood hydrostatic forces on both sides of exterior walls shall be provided in accordance with the standards of this section: "Enclosures"

Non-Residential buildings located in all A Zones may be floodproofed, in lieu of being elevated, provided that all areas of the building below the required elevation are watertight, with walls substantially impermeable to the passage of water, and are built with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. A Tennessee registered professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions above, and shall provide such certification to the Administrator as set forth in Article IV, Section B.

3. Enclosures

All new construction and substantial improvements that include fully enclosed areas formed by foundation and other exterior walls below the lowest floor that are subject to flooding, shall be designed to preclude finished living space and designed to allow for the entry and exit of flood waters to automatically equalize hydrostatic flood forces on exterior walls.

- a. Designs for complying with this requirement must either be certified by a Tennessee professional engineer or architect or meet or exceed the following minimum criteria.
 - 1) Provide a minimum of two openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding;
 - 2) The bottom of all openings shall be no higher than one (1) foot above the finished grade;
 - 3) Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.
- b. The enclosed area shall be the minimum necessary to allow for parking of vehicles, storage or building access.

- c. The interior portion of such enclosed area shall not be finished or partitioned into separate rooms in such a way as to impede the movement of floodwaters and all such partitions shall comply with the provisions of Article V, Section B.

4. Standards for Manufactured Homes and Recreational Vehicles

- a. All manufactured homes placed, or substantially improved, on: (1) individual lots or parcels, (2) in expansions to existing manufactured home parks or subdivisions, or (3) in new or substantially improved manufactured home parks or subdivisions, must meet all the requirements of new construction.
- b. All manufactured homes placed or substantially improved in an existing manufactured home park or subdivision must be elevated so that either:
 - 1) In AE Zones, with Base Flood Elevations, the lowest floor of the manufactured home is elevated on a permanent foundation to no lower than one (1) foot above the level of the Base Flood Elevation or
 - 2) In approximate A Zones, without Base Flood Elevations, the manufactured home chassis is elevated and supported by reinforced piers (or other foundation elements of at least equivalent strength) that are at least three (3) feet in height above the highest adjacent grade (as defined in Article II).
- c. Any manufactured home, which has incurred "substantial damage" as the result of a flood, must meet the standards of Article V, Sections A and B.
- d. All manufactured homes must be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.
- e. All recreational vehicles placed in an identified Special Flood Hazard Area must either:
 - 1) Be on the site for fewer than 180 consecutive days;
 - 2) Be fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is licensed, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached structures or additions), or;
 - 3) The recreational vehicle must meet all the requirements for new construction.

5. Standards for Subdivisions and Other Proposed New Development Proposals

Subdivisions and other proposed new developments, including manufactured home parks, shall be reviewed to determine whether such proposals will be reasonably safe from flooding.

- a. All subdivision and other proposed new development proposals shall be consistent with the need to minimize flood damage.
- b. All subdivision and other proposed new development proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.
- c. All subdivision and other proposed new development proposals shall have adequate drainage provided to reduce exposure to flood hazards.
- d. In all approximate A Zones require that all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals Base Flood Elevation data (See Article V, Section E).

Section C. Standards for Special Flood Hazard Areas with Established Base Flood Elevations and With Floodways Designated

Located within the Special Flood Hazard Areas established in Article III, Section B, are areas designated as floodways. A floodway may be an extremely hazardous area due to the velocity of floodwaters, debris or erosion potential. In addition, the area must remain free of encroachment in order to allow for the discharge of the base flood without increased flood heights and velocities. Therefore, the following provisions shall apply:

1. Encroachments are prohibited, including fill, new construction, substantial improvements or other development within the adopted regulatory floodway. Development may be permitted however, provided it is demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the encroachment shall not result in any increase in flood levels or floodway widths during a base flood discharge. A registered professional engineer must provide supporting technical data and certification thereof;
2. A community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the applicant first applies for a conditional letter of map revision (CLOMR) and floodway revision, fulfills the requirements for such revisions as established under the provisions of § 65.12, and receives the approval of FEMA;
3. ONLY if Article V, Section C, provisions (1) through (2) are satisfied, then any new construction or substantial improvement shall comply with all other applicable flood hazard reduction provisions of Article V, Sections A and B.

Section D. Standards for Areas of Special Flood Hazard Zones AE with Established Base Flood Elevations but Without Floodways Designated

Located within the Special Flood Hazard Areas established in Article III, Section B, where streams exist with base flood data provided but where no floodways have been designated (Zones AE), the following provisions apply:

1. Require until a regulatory floodway is designated, that no new construction, substantial , or other development, including fill shall be permitted within Zone AE on the community's FIRM, unless it is demonstrated through hydrologic and hydraulic analyses performed that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.
2. A community may permit encroachments within within Zones AE on the community's FIRM, that would result in an increase in the water surface elevation of the base flood, provided that the applicant first applies for a conditional letter of map revision (CLOMR) and floodway revision, fulfills the requirements for such revisions as established under the provisions of § 65.12, and receives the approval of FEMA;
3. ONLY if Article V, Section D, provisions (1) through (2) are satisfied, then any new construction or substantial improvement shall comply with all other applicable flood hazard reduction provisions of Article V, Sections A and B.

Section E. Standards for Streams without Established Base Flood Elevations and Floodways (A Zones)

Located within the Special Flood Hazard Areas established in Article III, Section B, where streams exist, but no base flood data has been provided and where a Floodway has not been delineated, the following provisions shall apply:

1. The Administrator shall obtain, review, and reasonably utilize any Base Flood Elevation and floodway data available from any Federal, State, or other sources, including data developed as a result of these regulations (see 2 below), as criteria for requiring that new construction, substantial improvements, or other development in approximate A Zones meet the requirements of Article V, Sections A and B.
2. Require that all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals Base Flood Elevation data.
3. Within approximate A Zones, where Base Flood Elevations have not been established and where such data is not available from other sources, require the lowest floor of a building to be elevated or floodproofed to a level of at least three (3) feet above the highest adjacent grade (as defined in Article II). All applicable data including elevations or floodproofing certifications shall be recorded as set forth in Article IV, Section B. Openings sufficient to facilitate automatic equalization of hydrostatic flood forces on exterior walls shall be provided in accordance with the standards of Article V, Section B.
4. Within approximate A Zones, where Base Flood Elevations have not been established and where such data is not available from other sources, no encroachments, including structures or fill material, shall be located within an area equal to the width of the stream or twenty feet (20), whichever is greater, measured from the top of the stream bank, unless certification by a Tennessee

registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the City of Millersville, Tennessee. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles.

5. New construction and substantial improvements of buildings, where permitted, shall comply with all applicable flood hazard reduction provisions of Article V, Sections A and B. Within approximate A Zones, require that those subsections of Article V Section B dealing with the alteration or relocation of a watercourse, assuring watercourse carrying capacities are maintained and manufactured homes provisions are complied with as required.

Section F. Standards For Areas of Shallow Flooding (Zone AO)

Located within the Special Flood Hazard Areas established in Article III, Section B, are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. In addition to Article V, Sections A and B, all new construction and substantial improvements shall meet the following requirements:

1. The lowest floor (including basement) shall be elevated at least as high as the depth number specified on the Flood Insurance Rate Map (FIRM), in feet, plus a freeboard of one (1) foot above the highest adjacent grade; or at least three (3) feet above the highest adjacent grade, if no depth number is specified.
2. Non-residential structures may, in lieu of elevation, be floodproofed to the same level as required in Article V, Section F(1) so that the structure, together with attendant utility and sanitary facilities, below that level shall be watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Certification is required in accordance with Article 4, Section B(1) (c) and Article V, Section B(2).
3. Adequate drainage paths shall be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

Section G. Standards For Areas of Shallow Flooding (Zone AH)

Located within the Special Flood Hazard Areas established in Article III, Section B, are areas designated as shallow flooding areas. These areas are subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are one (1) to three (3) feet. Base Flood Elevations are derived from detailed hydraulic analyses are shown in this zone. In addition to meeting the requirements of Article V, Sections A and B, all new construction and substantial improvements shall meet the following requirements:

1. Adequate drainage paths shall be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

Section H. Standards For Areas Protected by Flood Protection System (A-99 Zones)

Located within the Areas of Special Flood Hazard established in Article III, Section B, are areas of the 100-year floodplain protected by a flood protection system but where Base Flood Elevations have not been determined. Within these areas (A-99 Zones) all provisions of Article IV and Article V shall apply.

Section I. Standards for Unmapped Streams

Located within the City of Millersville, Tennessee, are unmapped streams where areas of special flood hazard are neither indicated nor identified. Adjacent to such streams, the following provisions shall apply:

1. No encroachments including fill material or other development including structures shall be located within an area of at least equal to twice the width of the stream, measured from the top of each stream bank, unless certification by a Tennessee registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the locality.
2. When a new flood hazard risk zone, and Base Flood Elevation and floodway data is available, new construction and substantial improvements shall meet the standards established in accordance with Articles IV and V.

ARTICLE VI. VARIANCE PROCEDURES

Section A. Municipal Board of Zoning Appeals

1. Authority

The City of Millersville, Tennessee Municipal Board of Zoning Appeals shall hear and decide appeals and requests for variances from the requirements of this Ordinance.

2. Procedure

Meetings of the Municipal Board of Zoning Appeals shall be held at such times, as the Board shall determine. All meetings of the Municipal Board of Zoning Appeals shall be open to the public. The Municipal Board of Zoning Appeals shall adopt rules of procedure and shall keep records of applications and actions thereof, which shall be a public record. Compensation of the members of the Municipal Board of Zoning Appeals shall be set by the Board of Commissioners.

3. Appeals: How Taken

An appeal to the Municipal Board of Zoning Appeals may be taken by any person, firm or corporation aggrieved or by any governmental officer, department, or bureau affected by any decision of the Administrator based in whole or in part upon the provisions of this Ordinance. Such appeal shall be taken by filing with the Municipal Board of Zoning Appeals a notice of appeal, specifying the grounds thereof. In all cases where an appeal is made by a property owner or other interested party, a fee of three hundred dollars for the cost of publishing a notice of such hearings shall be paid by the appellant. The Administrator shall transmit to the Municipal Board of Zoning Appeals all papers constituting the record upon which the appeal action was taken. The Municipal Board of Zoning Appeals shall fix a reasonable time for the hearing of the appeal, give public notice thereof, as well as due notice to parties in interest and decide the same within a reasonable time which shall not be more than sixty days from the date of the hearing. At the hearing, any person or party may appear and be heard in person or by agent or by attorney.

4. Powers

The Municipal Board of Zoning Appeals shall have the following powers:

a. Administrative Review

To hear and decide appeals where it is alleged by the applicant that there is error in any order, requirement, permit, decision, determination, or refusal made by the Administrator or other administrative official in carrying out or enforcement of any provisions of this Ordinance.

b. Variance Procedures

In the case of a request for a variance the following shall apply:

- 1) The City of Millersville, Tennessee Municipal Board of Zoning Appeals shall hear and decide appeals and requests for variances from the requirements of this Ordinance.
- 2) Variances may be issued for the repair or rehabilitation of historic structures as defined, herein, upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary deviation from the requirements of this Ordinance to preserve the historic character and design of the structure.
- 3) In passing upon such applications, the Municipal Board of Zoning Appeals shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this Ordinance, and:
 - a) The danger that materials may be swept onto other property to the injury of others;
 - b) The danger to life and property due to flooding or erosion;

- c) The susceptibility of the proposed facility and its contents to flood damage;
 - d) The importance of the services provided by the proposed facility to the community;
 - e) The necessity of the facility to a waterfront location, in the case of a functionally dependent use;
 - f) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - g) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
 - h) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - i) The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;
 - j) The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, water systems, and streets and bridges.
- 4) Upon consideration of the factors listed above, and the purposes of this Ordinance, the Municipal Board of Zoning Appeals may attach such conditions to the granting of variances, as it deems necessary to effectuate the purposes of this Ordinance.
 - 5) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

Section B. Conditions for Variances

- 1. Variances shall be issued upon a determination that the variance is the minimum relief necessary, considering the flood hazard and the factors listed in Article VI, Section A.
- 2. Variances shall only be issued upon: a showing of good and sufficient cause, a determination that failure to grant the variance would result in exceptional hardship; or a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or Ordinances.
- 3. Any applicant to whom a variance is granted shall be given written notice that the issuance of a variance to construct a structure below the Base Flood Elevation will result in increased premium rates for flood insurance (as high as \$25 for

\$100) coverage, and that such construction below the Base Flood Elevation increases risks to life and property.

4. The Administrator shall maintain the records of all appeal actions and report any variances to FEMA upon request.

ARTICLE VII. LEGAL STATUS PROVISIONS

Section A. Conflict with Other Ordinances

In case of conflict between this Ordinance or any part thereof, and the whole or part of any existing or future Ordinance of the City of Millersville, Tennessee, the most restrictive shall in all cases apply.

Section B. Severability

If any section, clause, provision, or portion of this Ordinance shall be held to be invalid or unconstitutional by any court of competent jurisdiction, such holding shall not affect any other section, clause, provision, or portion of this Ordinance which is not of itself invalid or unconstitutional.

Section C. Effective Date

This Ordinance shall become **effective January 1, 2021** in accordance with the Charter of the City of Millersville, Tennessee, and the public welfare demanding it.

Approved and adopted by the City of Millersville, Tennessee Board of Commissioners.

Date

Mayor of Millersville, Tennessee

Attest: _____
City Recorder

Passed First Reading _____

Public Hearing _____

Passed Second and Final Reading _____

Date of Publication of Caption and Summary



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
1-888-891-8332 (TDEC)

Phase II Small Municipal Separate Storm Sewer System (MS4) Annual Report

1. MS4 Information

Name of MS4: City of Millersville		MS4 Permit Number: TNS 077887	
Contact Person: John Vogel		Email Address: stormwater@cityofmillersville.com	
Telephone: (615) 859-0880		MS4 Program Web Address: https://www.cityofmillersville.com/departments/index.php?structureid=23	
Mailing Address: 1246 Louisville Hwy			
City: Millersville	State: TN	ZIP code: 37072	

What is the current population of your MS4? 6,781 (2018 estimate)

What is the reporting period for this annual report? July 1 2019 to June 30 2020

2. Discharges to Waterbodies with Unavailable Parameters or Exceptional Tennessee Waters (Section 3.1)

- A. Does your MS4 discharge into waters with unavailable parameters (previously referred to as impaired) for pathogens, nutrients, siltation or other parameters related to stormwater runoff from urbanized areas as listed on TN's most current 303(d) list and/or according to the on-line state GIS mapping tool (tdeconline.tn.gov/dwr/)? If yes, attach a list. ☒ Yes ☐ No
- B. Are there established and approved TMDLs (<http://www.tn.gov/environment/article/wrws-tennessees-total-maximum-daily-load-tmdl-program>) with waste load allocations for MS4 discharges in your jurisdiction? If yes, attach a list. ☐ Yes ☒ No
- C. Does your MS4 discharge to any Exceptional Tennessee Waters (ETWs - http://environment-online.tn.gov:8080/pls/enf_reports/f?p=9034:34304:4880790061142)? If yes, attach a list. ☐ Yes ☒ No

D. Are you implementing specific Best Management Practices (BMPs) to control pollutant discharges to waterbodies with unavailable parameters or ETWs? If yes, describe the specific practices: 19-104. Land disturbance permit.

(1) General. The land disturbance permit is to be obtained by the owner(s) or owner(s) designee(s) for development or redevelopment of over an acre, or less than an acre if required by the administrator. The land disturbance permit is designed to track all applicable land disturbance activities and ensure they are monitored for compliant erosion prevention and sediment controls, the absence of illicit discharges leaving the site, and compliance with the city's TDEC NPDES MS4 general permit along with any applicable TDEC construction general permits, TDEC Aquatic Resources Alteration Permits (ARAP), and any other relevant permits. Tracking of these activities allows inspection, and in cases of non-compliance, enforcement actions to be taken.

(2) Exemptions. The following land disturbance activities are exempt from the requirements of obtaining a land disturbance permit:

(a) Surface mining as is defined in Tennessee Code Annotated, § 59-8-202.

(b) Such minor land disturbing activities as home gardens and individual home landscaping, home repairs, home additional or modifications, home maintenance work, and other related activities that result in no soil erosion leaving the site. (Erosion Prevention and Sediment Control (ESPC) practices may be enforced through individual building permits.)

☒ Yes

☐ No

(c) Agriculture practices involving the establishment, cultivation or harvesting of products in the field or orchard, preparing and planting of pastureland, farm ponds, dairy operations, livestock and poultry management practices, and the construction of farm buildings.

(d) Any project carried out under the technical supervision of NCRS, TDOT, TDEC, or USACE that is covered under applicable state or federal construction permits.

(e) Installation, maintenance, and repair of any underground public utility lines when such activity occurs on an existing road, street or sidewalk which is hard surfaced and such street, curb, gutter, or sidewalk construction has been approved.

(f) Any emergency activity that is immediately necessary for the protection of life, property, or natural resources. These activities may be undertaken without a land disturbance permit; however, the person conducting these excluded activities shall remain responsible for conducting these activities within accordance with provisions of this ordinance and other applicable regulations including responsibility for controlling sediment, illicit discharges, and runoff.

3. Public Education/Outreach and Involvement/Participation (Sections 4.2.1 and 4.2.2)

A. Have you developed a Public Information and Education plan (PIE)?

☒ Yes

☐ No

Phase II Small Municipal Separate Storm Sewer System (MS4) Annual Report

- B. Is your public education program targeting specific pollutants and sources, such as Hot Spots? If yes, describe the specific pollutants and/or sources targeted by your public education program: The current PIE plan lists the following groups as specific targets: citizens for general housekeeping activities, Owners of permanent BMPs, Developers and their design consultants, the construction community, professionals such as landscapers & lawn care businesses, professionals working with petroleum based products, municipal employees, and hot spots. The City updated our PIE plan this reporting period and identified specific outreach and education events and implemented a schedule for the upcoming year. ☒ Yes ☐ No
- C. Do you have a webpage dedicated to your stormwater program? If yes, provide a link/URL: <https://www.cityofmillersville.com/departments/index.php?structureid=231> ☒ Yes ☐ No
- D. Summarize how you advertise and publicize your public education, outreach, involvement and participation opportunities: Website, Facebook, City Hall, the Library and the Community Center. Brochures are available for pick up as well.
- E. Summarize the public education, outreach, involvement and participation activities you completed during this reporting period: Attendance at Middle Tennessee Stormwater Group Meetings, participated in a Community Stream clean up in association with Goodlettsville. Created a Stream Watch Program which encouraged community participation in committee meetings, clean up activities, and various events. Our consultant engineer has also regularly communicated with developer's engineers to inform them about the City's requirements for stormwater management on construction projects. Manned a booth at the Halloween Carnival to educate children & their parents on October 26.
- F. Summarize any specific successful outcome(s) (e.g., citizen involvement, pollutant reduction, water quality improvement, etc.) fully or partially attributable to your public education and participation program during this reporting period: During the October 19, 2019 stream cleanup, volunteers and City employees cleaned 2.99 tons of trash from Slater's Creek. Millersville staff attended multiple MTSG meetings throughout this permit cycle.
4. Illicit Discharge Detection and Elimination (Section 4.2.3)
- A. Have you developed and do you continue to update a storm sewer system map that shows the location of system outfalls where the municipal storm sewer system discharges into waters of the state or conveyances owned or operated by another MS4? ☒ Yes ☐ No
- B. If yes, does the map include inputs into the storm sewer collection system, such as the inlets, catch basins, drop structures or other defined contributing points to the sewershed of that outfall, and general direction of stormwater flow? ☐ Yes ☒ No
- C. How many outfalls have you identified in your storm sewer system? 42
- D. Do you have an ordinance, or other regulatory mechanism, that prohibits non-stormwater discharges into your storm sewer system? ☒ Yes ☐ No

- E. Have you implemented a plan to detect, identify and eliminate non-stormwater discharges, including illegal disposal, throughout the storm sewer system? If yes, provide a summary: 19-109. Illicit discharges.

(1) Scope. This section shall apply to all water generated on developed or undeveloped land entering the city's separate storm sewer system.

(2) Prohibition of illicit discharges. No person shall introduce or cause to be introduced into the municipal separate storm sewer system any discharge that is not composed entirely of stormwater or any discharge that flows from stormwater facility that is not inspected in accordance with § 16-506 shall be an illicit discharge. Non-stormwater discharges shall include, but shall not be limited to, sanitary wastewater, commercial car wash wastewater, lawn mowing debris, lawn care chemicals, grease, soap, cleaning chemicals, radiator flushing disposal, spills from vehicle accidents, carpet cleaning wastewater, effluent from septic tanks, improper oil disposal, laundry wastewater/gray water, improper disposal of auto and household toxics. The commencement, conduct or continuance of any non-stormwater discharge to the municipal separate storm sewer system is prohibited except as described as follows:

(a) Uncontaminated discharges from the following sources:

(i) Water line flushing or other potable water sources;

(ii) Landscape irrigation or lawn watering with potable water;

(iii) Diverted stream flows;

(iv) Rising ground water;

(v) Groundwater infiltration to storm drains;

(vi) Pumped groundwater;

(vii) Foundation or footing drains;

(viii) Crawl space pumps;

(ix) Air conditioning condensation;

(x) Springs;

(xi) Non-commercial washing of vehicles;

(xii) Natural riparian habitat or wetland flows;

(xiii) Swimming pools (if dechlorinated - typically less than one (1) PPM chlorine);

(xiv) Firefighting activities;

(xv) Any other uncontaminated water source.

(b) Discharges specified in writing by the city as being necessary to protect public health and safety.

(c) Dye testing is an allowable discharge if the city has so specified in writing. not in compliance.

(d) Discharges authorized by the Construction General Permit (CGP), which comply with section 3.5.9 of the same:

(i) Dewatering of work areas of collected stormwater and ground water (filtering or chemical treatment may be necessary prior to discharge);

(ii) Waters used to wash vehicles (of dust and soil, not process materials

☒ Yes

☐ No

such as oils, asphalt or concrete) where detergents are not used and detention and/or filtering is provided before the water leaves site;

(iii) Water used to control dust in accordance with CGP section 3.5.5;

(iv) Potable water sources including waterline flushings from which chlorine has been removed to the maximum extent practicable;

(v) Routine external building washdown that does not use detergents or other chemicals;

(vi) Uncontaminated groundwater or spring water; and

(vii) Foundation or footing drains where flows are not contaminated with pollutants (process materials such as solvents, heavy metals, etc.).

(3) Prohibition of illicit connections. The construction, use, maintenance or continued existence of illicit connections to the municipal separate storm sewer system is prohibited. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(4) Reduction of stormwater pollutants by the use of best management practices. Any person responsible for a property or premises, which is, or may be, the source of an illicit discharge, may be required to implement, at the person's expense, the BMPs necessary to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, shall be deemed in compliance with the provisions of this section. Discharges from existing BMPs that have not been maintained and/or inspected in accordance with this ordinance shall be regarded as illicit.

(5) Notification of spills. Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting in, or may result in, illicit discharges or pollutants discharging into, the municipal separate storm sewer system, the person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials the person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, the person shall notify the city in person or by telephone, fax, or email, no later than the next business day. Notifications in person or by telephone shall be confirmed by written notice addressed and mailed to the city within three (3) business days of the telephone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three (3) years.

(6) No illegal dumping allowed. No person shall dump or otherwise deposit outside an authorized landfill, convenience center or other authorized garbage or trash collection

Phase II Small Municipal Separate Storm Sewer System (MS4) Annual Report

point, any trash or garbage of any kind or description on any private or public property, occupied or unoccupied, inside the city.

(7) Hot spots. The administrator is authorized to regulate hot spots. Upon written notification by the administrator, the property owner or designated facility manager of a hot spot area shall, at their expense, implement necessary controls and/or best management practices to prevent discharge of contaminated stormwater to the municipal separate storm sewer system. The administrator may require the facility to maintain inspection logs or other records to document compliance with this paragraph.

- F. How many illicit discharge related complaints were received this reporting period? 1
- G. How many illicit discharge investigations were performed this reporting period? 1
- H. Of those investigations performed, how many resulted in valid illicit discharges that were addressed and/or eliminated? 0

5. Construction Site Stormwater Runoff Pollutant Control (Section 4.2.4)

- A. Do you have an ordinance or other regulatory mechanism requiring:
- | | | |
|---|---|-----------------------------|
| Construction site operators to implement appropriate erosion prevention and sediment control BMPs consistent with those described in the TDEC EPSC Handbook? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Construction site operators to control wastes such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Design storm and special conditions for unavailable parameters waters or Exceptional Tennessee Waters consistent with those of the current Tennessee Construction General Permit (TNR100000)? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
- B. Do you have specific procedures for construction site plan (including erosion prevention and sediment BMPs) review and approval? ☒ Yes ☐ No
- C. Do you have sanctions to enforce compliance? ☒ Yes ☐ No
- D. Do you hold pre-construction meetings with operators of priority construction activities and inspect priority construction sites at least monthly? ☒ Yes ☐ No
- E. How many construction sites disturbing at least one acre or greater were active in your jurisdiction this reporting period? 6
- F. How many active priority and non-priority construction sites were inspected this reporting period? 6
- G. How many construction related complaints were received this reporting period? 3

6. Permanent Stormwater Management at New Development and Redevelopment Projects (Section 4.2.5)

- A. Do you have a regulatory mechanism (e.g. ordinance) requiring permanent stormwater pollutant removal for development and redevelopment projects? If no, have you submitted an Implementation Plan to the Division? ☒ Yes ☒ No
- B. Do you have an ordinance or other regulatory mechanism requiring:
- | | | |
|---|---|-----------------------------|
| Site plan review and approval of new and re-development projects? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| A process to ensure stormwater control measures (SCMs) are properly installed and maintained? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |

Permanent water quality riparian buffers? If yes, specify requirements:

19-106. Buffer zones. The goal of the water quality buffer is to preserve undisturbed vegetation that is native to the streamside habitat in the area of the project. Vegetated, preferably native, water quality buffers protect water bodies by providing structural integrity and canopy cover, as well as stormwater infiltration, filtration and evapotranspiration. Buffer width depends on the size of a drainage area. Streams or other waters with drainage areas less than one (1) square mile will require buffer widths of thirty feet (30') minimum. Streams or other waters with drainage areas greater than one (1) square mile will require buffer widths of sixty feet (60') minimum. The sixty feet (60') criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than thirty feet (30') at any measured location. The MS4 must develop and apply criteria for determining the circumstances under which these averages will be available. A determination that standards cannot be met may not be based solely on the difficulty or cost associated with implementation. Every attempt should be made for development and redevelopment activities not to take place within the buffer zone. If water quality buffer widths as defined above cannot be fully accomplished on-site, the MS4 must develop and apply criteria for determining the circumstances under which alternative buffer widths will be available. A determination that water quality buffer widths cannot be met on site may not be based solely on the difficulty or cost of implementing measures, but must include multiple criteria, such as: type of project, existing land use and physical conditions that preclude use of these practices.

Buffer zone requirements:

☒ Yes

☐ No

(1) "Construction" applies to all streams adjacent to construction sites, with an exception for streams designated as impaired or Exceptional Tennessee waters, as designated by the Tennessee Department of Environment and Conservation. A thirty foot (30') foot natural riparian buffer zone adjacent to all streams at the construction site shall be preserved, to the maximum extent practicable, during construction activities at the site. The water quality buffer zone is required to protect waters of the state located within or immediately adjacent to the boundaries of the project, as identified using methodology from standard operating procedures for hydrologic determinations (see rules to implement a certification program for qualified hydrologic professionals, Tennessee Rules chapter 0400-40-17). Buffer zones are not primary sediment control measures and should not be relied on as such. Rehabilitation and enhancement of a natural buffer zone is allowed, if necessary, for improvement of its effectiveness of protection of the waters of the state. The buffer zone requirement only applies to new construction sites. The riparian buffer zone should be preserved between the top of stream bank and the disturbed construction area. The thirty (30) feet criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than fifteen feet (15') at any measured location.

Buffer zone requirements for discharges into impaired or high quality waters: A sixty foot (60') natural riparian buffer zone adjacent to the receiving stream designated as impaired or high quality waters shall be preserved, to the maximum extent practicable, during construction activities at the site. The water quality buffer zone is required to protect waters of the state (e.g., perennial and intermittent streams, rivers,

lakes, wetlands) located within or immediately adjacent to the boundaries of the project, as identified on a 7.5-minute USGS quadrangle map, or as determined by the director. Buffer zones are not sediment control measures and should not be relied upon as primary sediment control measures. Rehabilitation and enhancement of a natural buffer zone is allowed, if necessary, for improvement of its effectiveness of protection of the waters of the state. The buffer zone requirement only applies to new construction sites. The riparian buffer zone should be established between the top of stream bank and the disturbed construction area. The sixty feet (60') criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than twenty-five (25') at any measured location.

(2) "Permanent" new development and significant redevelopment sites are required to preserve water quality buffers along waters within the MS4. Buffers shall be clearly marked on site development plans, grading permit applications, and/or concept plans. Buffer width depends on the size of a drainage area. Streams or other waters with drainage areas less than one (1) square mile will require buffer widths of thirty feet (30') minimum. Streams or other waters with drainage areas greater than 1 square mile will require buffer widths of sixty feet (60') minimum. The sixty feet (60') criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than thirty feet (30') at any measured location. (Ord. #04-651, Jan. 2005, as replaced by Ord. #15-830, Feb. 2015)

- C. What is the threshold for development and redevelopment project plans plan review (e.g., all projects, projects disturbing greater than one acre, etc.)? 19-105. Stormwater system design: construction and permanent stormwater management performance standards.

(1) Applicability. This section shall be applicable to all land development, including, but not limited to, site plan applications, subdivision applications, land disturbance applications and grading applications. The requirements in this section shall apply to any new development or redevelopment site that meets one or more of the following criteria:(a) One (1) acre or more;

(i) New development that involves land disturbance activities of one (1) acre or more;

(ii) Redevelopment that involves other land disturbance activity of one (1) acre or more;

(b) Developments and redevelopments less than one acre of total land disturbance may also be required to obtain authorization under this ordinance if:

(i) The administrator has determined that the stormwater discharge from a site is causing, contributing to, or is likely to contribute to a violation of a state water quality standard;

(ii) The administrator has determined that the stormwater discharge is, or is likely to be a significant contributor of pollutants to waters of the state;

or

(iii) Any new development or redevelopment, regardless of size, that is defined by the administrator to be a hotspot land use.

(c) Other options:

(i) Change in elevation of property.

(ii) Any land disturbance that requires coverage under a TDEC construction general permit.

(iii) Any disturbance that requires coverage under a TDEC ARAP.

(2) General requirements. Stormwater at applicable developments and redevelopments shall be managed in accordance with the requirements contained within this section.

(a) Any discharge of stormwater or other fluid to an improved sinkhole or other injection well, as defined, must be authorized by permit or rule as a Class V underground injection well under the provisions of Tennessee Department of Environment and Conservation (TDEC) Rules, chapter 1200-4-6.

(b) Stormwater design or BMP manuals.

(i) Adoption. The city adopts as its MS4 stormwater design and Best Management Practices (BMP) manuals for stormwater management, construction and permanent, the following publications, which are incorporated by reference in this ordinance as if fully set out herein:

(A) TDEC Erosion Prevention and Sediment Control Handbook; most current edition.

(B) Tennessee Permanent Stormwater Management and Design Guidance Manual; most current edition. (C) Metro Nashville Stormwater Management Manual Volume 5, Low Impact

Phase II Small Municipal Separate Storm Sewer System (MS4) Annual Report

Development

(D) And/or a collection of city approved BMPs.

(ii) The publications listed above include a list of acceptable BMPs including the specific design performance criteria and operation and maintenance requirements. These include city approved BMPs for permanent stormwater management including green infrastructure BMPs.

(iii) Stormwater facilities that are designed, constructed and maintained in accordance with these publications will be presumed to meet the minimum water quality performance standards.

(c) Submittal of a copy of the NOC, SWPPP and NOT to the local MS4

(i) Permittees who discharge stormwater through an NPDES-permitted Municipal Separate Storm Sewer System (MS4) who are not exempted in section 1.4.5 (permit coverage through qualifying local program) of TDEC's Construction General Permit (CGP) must provide proof of coverage under the Construction General Permit (CGP); submit a copy of the Stormwater Pollution Prevention Plan (SWPPP); and at project completion, a copy of the signed Notice of Termination (NOT) to the administrator. Permitting status of all permittees covered (or previously covered) under this general permit as well as the most current list of all MS4 permits is available at the TDEC's data viewer web site.

(ii) Copies of additional applicable local, state or federal permits (i.e.: ARAP, etc.) must also be provided upon request.

(iii) If requested by the city, these permits must be provided before the issuance of any land disturbance permit or the equivalent.

D. How many development and redevelopment project plans were reviewed for this reporting period? 1

E. How many development and redevelopment project plans were approved? 1

F. How many permanent stormwater related complaints were received this reporting period? 2

G. How many enforcement actions were taken to address improper installation or maintenance? 0

H. Do you have a system to inventory and track the status of all public and private SCMs installed on development and redevelopment projects? ☒ Yes ☐ No

I. Does your program include an off-site stormwater mitigation or payment into public stormwater fund? If yes, specify. _____ ☐ Yes ☒ No

7. Stormwater Management for Municipal Operations (Section 4.2.6)

A. As applicable, have stormwater related operation and maintenance plans that include information related to maintenance activities, schedules and the proper disposal of waste from structural and non-structural stormwater controls been developed and implemented at the following municipal operations:

Streets, roads, highways? ☒ Yes ☐ No

Municipal parking lots? ☒ Yes ☐ No

Maintenance and storage yards? ☒ Yes ☐ No

Phase II Small Municipal Separate Storm Sewer System (MS4) Annual Report

- Fleet or maintenance shops with outdoor storage areas? ☒ Yes ☐ No
- Salt and storage locations? ☒ Yes ☐ No
- Snow disposal areas? ☒ Yes ☐ No
- Waste disposal, storage, and transfer stations? ☒ Yes ☐ No
- B. Do you have a training program for employees responsible for municipal operations at facilities within the jurisdiction that handle, generate and/or store materials which constitute a potential pollutant of concern for MS4s? ☐ Yes ☒ No
- If yes, are new applicable employees trained within six months, and existing applicable employees trained and/or retrained within the permit term? ☐ Yes ☐ No

8. Reviewing and Updating Stormwater Management Programs (Section 4.4)

- A. Describe any revisions to your program implemented during this reporting period including but not limited to:
- Modifications or replacement of an ineffective activity/control measure. We created a Stream Watch Program.
- Changes to the program as required by the division to satisfy permit requirements. We updated the Stormwater Ordinance.
- Information (e.g. additional acreage, outfalls, BMPs) on newly annexed areas and any resulting updates to your program.
- B. In preparation for this annual report, have you performed an overall assessment of your stormwater management program effectiveness? If yes, summarize the assessment results, and any modifications and improvements scheduled to be implemented in the next reporting period. ☒ Yes ☐ No

Phase II Small Municipal Separate Storm Sewer System (MS4) Annual Report

9. Enforcement Response Plan (Section 4.5)

- A. Have you implemented an enforcement response plan that includes progressive enforcement actions to address non-compliance, and allows the maximum penalties specified in TCA 68-221-1106? If no, explain. _____ ☒ Yes ☐ No
- B. As applicable, identify which of the following types of enforcement actions (or their equivalent) were used during this reporting period; indicate the number of actions, the minimum measure (e.g., construction, illicit discharge, permanent stormwater management), and note those for which you do not have authority:

Action	Construction	Permanent Stormwater	Illicit Discharge	In Your ERP?	
Verbal warnings	#10	#0	#0	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Written notices	#5	#0	#1	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Citations with administrative penalties	#2	#0	#0	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Stop work orders	#3	#0	#0	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Withholding of plan approvals or other authorizations	#1	#0	#0	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Additional Measures	#0	#0	#0	Describe: N/A	

- C. Do you track instances of non-compliance and related enforcement documentation? ☒ Yes ☐ No
- D. What were the most common types of non-compliance instances documented during this reporting period?
Improper installation of stormwater detention pond, failure to maintain construction site BMPs

10. Monitoring, Recordkeeping and reporting (Section 5)

- A. Summarize any analytical monitoring activities (e.g., planning, collection, evaluation of results) performed during this reporting period. No analytical monitoring performed July 1, 2019 - June 30, 2020
- B. Summarize any non-analytical monitoring activities (e.g., planning, collection, evaluation of results) performed during this reporting period. See A.
- C. If applicable, are monitoring records for activities performed during this reporting period submitted with this report. ☐ Yes ☒ No

11. Certification

Phase II Small Municipal Separate Storm Sewer System (MS4) Annual Report

This report must be signed by a ranking elected official or by a duly authorized representative of that person. See signatory requirements in sub-part 6.7.2 of the permit.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Tim Lassiter, Mayor
Printed Name and Title


Signature

9-30-20
Date

Annual reports must be submitted by September 30 of each calendar year (Section 5.4) to the appropriate Environmental Field Office (EFO), identified in the table below:

EFO	Street Address	City	Zip Code	Telephone
Chattanooga	1301 Riverfront Pkwy, Suite 206	Chattanooga	37402	(423) 634-5745
Columbia	1421 Hampshire Pike	Columbia	38401	(931) 380-3371
Cookeville	1221 South Willow Ave.	Cookeville	38506	(931) 520-6688
Jackson	1625 Hollywood Drive	Jackson	38305	(731) 512-1300
Johnson City	2305 Silverdale Road	Johnson City	37601	(423) 854-5400
Knoxville	3711 Middlebrook Pike	Knoxville	37921	(865) 594-6035
Memphis	8383 Wolf Lake Drive	Bartlett	38133	(901) 371-3000
Nashville	711 R S Gass Boulevard	Nashville	37216	(615) 687-7000

2. Discharges to Waterbodies with Unavailable Parameters or Exceptional Tennessee Waters (Section 3.1)

B. The Proposed Final 2018 303(d) List of Impaired and Threatened Waters in Tennessee for the Cheatham Reservoir Watershed lists the following bodies of water in the City of Millersville:

- i. TN05130202220_2000 Manskers Creek
- ii. TN05130202220_0350 Slaters Creek

3. Public Education/Outreach and Involvement/Participation (Sections 4.2.1 and 4.2.2)

- D. Please see the educational materials in the attached appendix.
- F. Please see a copy of the sign-in sheets in the attached appendix.

4. Illicit Discharge Detection and Elimination (Section 4.2.3)

- This section left intentionally blank

5. Construction Site Stormwater Runoff Pollutant Control (Section 4.2.4)

- A. Section 19-105 from the Millersville stormwater ordinance outlining requirements for construction sites is attached.
- B. The City of Millersville contracted the services of an engineering firm to provide engineering and stormwater review of all site plans submitted to the City for approval. Engineering review includes review and comment on proposed EPSC plans, SWPPP documents and other stormwater related necessities as needed by each project. All site plans are required to submit erosion prevention and sediment plans that adhere to the Best Management Practices outlined in the TDEC Sediment and Erosion Control Manual and TDEC Manual for Post Construction as enforced by the City's stormwater ordinance. Land disturbance permits are required for all new and re-development projects that propose to disturb more than one (1) acre; less than one (1) acre if part of a larger common plan of development; less than one (1) acre if in the discretion of the Stormwater Manager such activity poses a unique threat to water, or public health or safety or; the creation and use of borrow pits, fill areas and/or stockpiles. Please see section 19-104 in the attached stormwater ordinance outlining these requirements.
- C. Section 19-107 paragraph (5) in the attached excerpt from the Millersville Stormwater ordinance outlines sanctions for non-compliant construction sites.

6. Permanent Stormwater Management at New Development and Redevelopment Projects (Section 4.2.5)

- This section left intentionally blank

7. Stormwater Management for Municipal Operations (Section 4.2.6)

- This section left intentionally blank

8. Reviewing and Updating Stormwater Management Programs (Section 4.4)

- A. The pamphlet for the new Stream Watch Program is attached in the appendix.

9. Enforcement Response Plan (Section 4.5)

- A. Sections 19-110 and 19-111 from the Millersville Stormwater Ordinance is attached. These sections outline the City's enforcement actions and penalty assessment.

10. Monitoring, Recordkeeping and Reporting (Section 5)

- This section left intentionally blank



Municipal Separate Storm Sewer System (MS4) Annual Report
Reporting Period: July 1, 2019- June 30, 2020

City of Millersville – TNS077887

APPENDIX



**DISCHARGES TO WATERBODIES WITH UNAVAILABLE PARAMETERS OR
EXCEPTIONAL TENNESSEE WATERS (SECTION 3.1)**

(Question 2)

Supporting Materials

ID305B	WATER_NAME	LOCATION	WATER_TYPE	WATER_SIZE	CAUSE_NAME
TN05130202001_3000	Cheatham Reservoir	DAVIDSON CO	FRESHWATER RESERVOIR	994	Escherichia coli
TN05130202001_3000	Cheatham Reservoir	DAVIDSON CO	FRESHWATER RESERVOIR	994	Escherichia coli
TN05130202001T_0200	Unnamed Trib to Cheatham Reservoir	CHEATHAM CO	RIVER	2.04	Other anthropogenic substrate alterations
TN05130202001T_0200	Unnamed Trib to Cheatham Reservoir	CHEATHAM CO	RIVER	2.04	Sedimentation/Siltation
TN05130202001T_0600	Unnamed Trib to Cheatham Reservoir	SUMNER CO	RIVER	1.13	Alteration in stream-side or littoral vegetative covers
TN05130202001T_0600	Unnamed Trib to Cheatham Reservoir	SUMNER CO	RIVER	1.13	Alteration in stream-side or littoral vegetative covers
TN05130202001T_0600	Unnamed Trib to Cheatham Reservoir	SUMNER CO	RIVER	1.13	Chlorine
TN05130202001T_0600	Unnamed Trib to Cheatham Reservoir	SUMNER CO	RIVER	1.13	Chlorine
TN05130202001T_0600	Unnamed Trib to Cheatham Reservoir	SUMNER CO	RIVER	1.13	Sludge
TN05130202001T_0600	Unnamed Trib to Cheatham Reservoir	SUMNER CO	RIVER	1.13	Sludge
TN05130202001T_0600	Unnamed Trib to Cheatham Reservoir	SUMNER CO	RIVER	1.13	Sludge
TN05130202001T_0600	Unnamed Trib to Cheatham Reservoir	SUMNER CO	RIVER	1.13	Sludge
TN05130202001T_0700	Unnamed Trib to Cheatham Reservoir	DAVIDSON CO	RIVER	1	Total Dissolved Solids
TN05130202001T_0700	Unnamed Trib to Cheatham Reservoir	DAVIDSON CO	RIVER	1	Total Dissolved Solids
TN05130202001T_0700	Unnamed Trib to Cheatham Reservoir	DAVIDSON CO	RIVER	1	Iron
TN05130202001T_0700	Unnamed Trib to Cheatham Reservoir	DAVIDSON CO	RIVER	1	Iron
TN05130202001T_0800	Davidson Branch	DAVIDSON CO	RIVER	2.83	Escherichia coli
TN05130202001T_0800	Davidson Branch	DAVIDSON CO	RIVER	2.83	Escherichia coli
TN05130202001T_0800	Davidson Branch	DAVIDSON CO	RIVER	2.83	Escherichia coli
TN05130202001T_0800	Davidson Branch	DAVIDSON CO	RIVER	2.83	Escherichia coli
TN05130202001T_0900	Overall Creek	DAVIDSON CO	RIVER	7.83	Sedimentation/Siltation
TN05130202001T_0900	Overall Creek	DAVIDSON CO	RIVER	7.83	Sedimentation/Siltation
TN05130202001T_0900	Overall Creek	DAVIDSON CO	RIVER	7.83	Low flow alterations
TN05130202001T_0900	Overall Creek	DAVIDSON CO	RIVER	7.83	Low flow alterations
TN05130202007_0100	Sims Branch	DAVIDSON CO	RIVER	1.5	Phosphorus (Total)
TN05130202007_0100	Sims Branch	DAVIDSON CO	RIVER	1.5	Other anthropogenic substrate alterations
TN05130202007_0100	Sims Branch	DAVIDSON CO	RIVER	1.5	Oxygen, Dissolved
TN05130202007_0100	Sims Branch	DAVIDSON CO	RIVER	1.5	Escherichia coli
TN05130202007_0150	Sims Branch	DAVIDSON CO	RIVER	1.4	Other anthropogenic substrate alterations
TN05130202007_0150	Sims Branch	DAVIDSON CO	RIVER	1.4	Other anthropogenic substrate alterations
TN05130202007_0150	Sims Branch	DAVIDSON CO	RIVER	1.4	Oxygen, Dissolved
TN05130202007_0150	Sims Branch	DAVIDSON CO	RIVER	1.4	Oxygen, Dissolved
TN05130202007_0150	Sims Branch	DAVIDSON CO	RIVER	1.4	Propylene Glycol
TN05130202007_0150	Sims Branch	DAVIDSON CO	RIVER	1.2	Other anthropogenic substrate alterations
TN05130202007_0300	Finley Branch	DAVIDSON CO	RIVER	1.2	Phosphorus (Total)
TN05130202007_0300	Finley Branch	DAVIDSON CO	RIVER	1.2	Escherichia coli
TN05130202007_0600	Collins Creek	DAVIDSON CO	RIVER	6.7	Alteration in stream-side or littoral vegetative covers
TN05130202007_0600	Collins Creek	DAVIDSON CO	RIVER	6.7	Sedimentation/Siltation
TN05130202007_0800	Indian Creek	DAVIDSON CO	RIVER	5.7	Phosphorus (Total)
TN05130202007_0800	Indian Creek	DAVIDSON CO	RIVER	5.7	Escherichia coli
TN05130202007_0900	Owl Creek	DAVIDSON CO	RIVER	15.96	Sedimentation/Siltation
TN05130202007_0900	Owl Creek	WILLIAMSON CO	RIVER	15.96	Sedimentation/Siltation
TN05130202007_0900	Owl Creek	DAVIDSON CO	RIVER	15.96	Phosphorus (Total)

TN05130202007_1100	Holt Creek	DAVIDSON CO	RIVER	6.2	Phosphorus (Total)
TN05130202007_1100	Holt Creek	WILLIAMSON CO	RIVER	6.2	Escherichia coli
TN05130202007_1100	Holt Creek	DAVIDSON CO	RIVER	6.2	Escherichia coli
TN05130202007_1200	Whittemore Branch	DAVIDSON CO	RIVER	2.9	Other anthropogenic substrate alterations
TN05130202007_1200	Whittemore Branch	DAVIDSON CO	RIVER	2.9	Escherichia coli
TN05130202007_1300	Sorghum Branch	DAVIDSON CO	RIVER	3.1	Other anthropogenic substrate alterations
TN05130202007_1300	Sorghum Branch	DAVIDSON CO	RIVER	3.1	Sedimentation/Siltation
TN05130202007_1300	Sorghum Branch	DAVIDSON CO	RIVER	3.1	Escherichia coli
TN05130202007_1400	Sevenmile Creek	DAVIDSON CO	RIVER	2.4	Other anthropogenic substrate alterations
TN05130202007_1400	Sevenmile Creek	DAVIDSON CO	RIVER	2.4	Oxygen, Dissolved
TN05130202007_1400	Sevenmile Creek	DAVIDSON CO	RIVER	2.4	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202007_1400	Sevenmile Creek	DAVIDSON CO	RIVER	2.4	Phosphorus (Total)
TN05130202007_1400	Sevenmile Creek	DAVIDSON CO	RIVER	2.4	Escherichia coli
TN05130202007_1410	Shasta Branch	DAVIDSON CO	RIVER	1.84	Escherichia coli
TN05130202007_1410	Shasta Branch	DAVIDSON CO	RIVER	1.84	Escherichia coli
TN05130202007_1450	Sevenmile Creek	DAVIDSON CO	RIVER	4.99	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202007_1450	Sevenmile Creek	DAVIDSON CO	RIVER	4.99	Phosphorus (Total)
TN05130202007_1450	Sevenmile Creek	DAVIDSON CO	RIVER	4.99	Escherichia coli
TN05130202007_1490	Cathy Jo Branch	DAVIDSON CO	RIVER	1.1	Sedimentation/Siltation
TN05130202007_1490	Cathy Jo Branch	DAVIDSON CO	RIVER	1.1	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202007_1490	Cathy Jo Branch	DAVIDSON CO	RIVER	1.1	Other anthropogenic substrate alterations
TN05130202007_1490	Cathy Jo Branch	DAVIDSON CO	RIVER	1.1	Phosphorus (Total)
TN05130202007_1490	Cathy Jo Branch	DAVIDSON CO	RIVER	1.1	Escherichia coli
TN05130202007_1490	Cathy Jo Branch	DAVIDSON CO	RIVER	1.3	Escherichia coli
TN05130202007_1500	Pavillion Branch	DAVIDSON CO	RIVER	4	Phosphorus (Total)
TN05130202007_2000	Mill Creek	DAVIDSON CO	RIVER	4	Phosphorus (Total)
TN05130202007_2000	Mill Creek	DAVIDSON CO	RIVER	4	Sedimentation/Siltation
TN05130202007_2000	Mill Creek	DAVIDSON CO	RIVER	4	Oxygen, Dissolved
TN05130202007_2000	Mill Creek	DAVIDSON CO	RIVER	4	Oxygen, Dissolved
TN05130202007_2000	Mill Creek	DAVIDSON CO	RIVER	5.9	Oxygen, Dissolved
TN05130202007_3000	Mill Creek	DAVIDSON CO	RIVER	5.9	Sedimentation/Siltation
TN05130202007_3000	Mill Creek	DAVIDSON CO	RIVER	5.9	Phosphorus (Total)
TN05130202007_5000	Mill Creek	DAVIDSON CO	RIVER	8.1	Oxygen, Dissolved
TN05130202007_5000	Mill Creek	WILLIAMSON CO	RIVER	8.1	Oxygen, Dissolved
TN05130202007_5000	Mill Creek	DAVIDSON CO	RIVER	8.1	Sedimentation/Siltation
TN05130202007_5000	Mill Creek	WILLIAMSON CO	RIVER	8.1	Sedimentation/Siltation
TN05130202007_5000	Mill Creek	DAVIDSON CO	RIVER	8.1	Phosphorus (Total)
TN05130202007_5000	Mill Creek	WILLIAMSON CO	RIVER	8.1	Phosphorus (Total)
TN05130202007_5000	Mill Creek	DAVIDSON CO	RIVER	8.1	Escherichia coli
TN05130202007_5000	Mill Creek	WILLIAMSON CO	RIVER	8.1	Escherichia coli
TN05130202010_0200	Drake Branch	DAVIDSON CO	RIVER	2.7	Sedimentation/Siltation
TN05130202010_0200	Drake Branch	DAVIDSON CO	RIVER	2.7	Escherichia coli
TN05130202010_0900	Ewing Creek	DAVIDSON CO	RIVER	17.6	Other anthropogenic substrate alterations
TN05130202010_0900	Ewing Creek	DAVIDSON CO	RIVER	17.6	Sedimentation/Siltation

TN05130202023_0100	East Fork Browns Creek	DAVIDSON CO	RIVER	2.2	Phosphorus (Total)
TN05130202023_0100	East Fork Browns Creek	DAVIDSON CO	RIVER	2.2	Escherichia coli
TN05130202023_0200	Middle Fork Browns Creek	DAVIDSON CO	RIVER	3.5	Other anthropogenic substrate alterations
TN05130202023_0200	Middle Fork Browns Creek	DAVIDSON CO	RIVER	3.5	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202023_0200	Middle Fork Browns Creek	DAVIDSON CO	RIVER	3.5	Phosphorus (Total)
TN05130202023_0200	Middle Fork Browns Creek	DAVIDSON CO	RIVER	3.5	Escherichia coli
TN05130202023_0200	Middle Fork Browns Creek	DAVIDSON CO	RIVER	3.5	Escherichia coli
TN05130202023_0300	West Fork Browns Creek	DAVIDSON CO	RIVER	3.6	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202023_0300	West Fork Browns Creek	DAVIDSON CO	RIVER	3.6	Phosphorus (Total)
TN05130202023_0300	West Fork Browns Creek	DAVIDSON CO	RIVER	3.6	Escherichia coli
TN05130202023_1000	Browns Creek	DAVIDSON CO	RIVER	0.2	Oil and Grease
TN05130202023_1000	Browns Creek	DAVIDSON CO	RIVER	0.2	Other anthropogenic substrate alterations
TN05130202023_1000	Browns Creek	DAVIDSON CO	RIVER	0.2	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202023_1000	Browns Creek	DAVIDSON CO	RIVER	0.2	Phosphorus (Total)
TN05130202023_1000	Browns Creek	DAVIDSON CO	RIVER	0.2	Phosphorus (Total)
TN05130202023_1000	Browns Creek	DAVIDSON CO	RIVER	0.2	Escherichia coli
TN05130202023_1000	Browns Creek	DAVIDSON CO	RIVER	0.2	Escherichia coli
TN05130202023_2000	Browns Creek	DAVIDSON CO	RIVER	4.1	Oil and Grease
TN05130202023_2000	Browns Creek	DAVIDSON CO	RIVER	4.1	Phosphorus (Total)
TN05130202023_2000	Browns Creek	DAVIDSON CO	RIVER	4.1	Phosphorus (Total)
TN05130202023_2000	Browns Creek	DAVIDSON CO	RIVER	4.1	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202023_2000	Browns Creek	DAVIDSON CO	RIVER	4.1	Other anthropogenic substrate alterations
TN05130202023_2000	Browns Creek	DAVIDSON CO	RIVER	4.1	Escherichia coli
TN05130202027_1000	Dry Creek	DAVIDSON CO	RIVER	0.5	Escherichia coli
TN05130202027_2000	Dry Creek	DAVIDSON CO	RIVER	5.9	Other anthropogenic substrate alterations
TN05130202202_1000	Pages Branch	DAVIDSON CO	RIVER	5.11	Escherichia coli
TN05130202209_1000	Cooper Creek	DAVIDSON CO	RIVER	3.9	Other anthropogenic substrate alterations
TN05130202209_1000	Cooper Creek	DAVIDSON CO	RIVER	3.9	Escherichia coli
TN05130202211_1000	Loves Branch	DAVIDSON CO	RIVER	1.71	Other anthropogenic substrate alterations
TN05130202212_0100	Neeleys Branch	DAVIDSON CO	RIVER	1.7	Escherichia coli
TN05130202212_1000	Gibson Creek	DAVIDSON CO	RIVER	3.7	Other anthropogenic substrate alterations
TN05130202212_1000	Gibson Creek	DAVIDSON CO	RIVER	3.7	Low flow alterations
TN05130202220_0100	Lumsley Fork	DAVIDSON CO	RIVER	4.7	Escherichia coli
TN05130202220_0200	Walkers Creek	DAVIDSON CO	RIVER	6.49	Escherichia coli
TN05130202220_0210	Unnamed Trib to Walkers Creek	DAVIDSON CO	RIVER	1.47	Low flow alterations
TN05130202220_0300	Slaters Creek	SUMNER CO	RIVER	0.99	Sedimentation/Siltation
TN05130202220_0300	Slaters Creek	SUMNER CO	RIVER	0.99	Sedimentation/Siltation
TN05130202220_0300	Slaters Creek	SUMNER CO	RIVER	0.99	Escherichia coli
TN05130202220_0350	Slaters Creek	SUMNER CO	RIVER	10.24	Escherichia coli
TN05130202220_0400	Madison Creek	SUMNER CO	RIVER	14.4	Sedimentation/Siltation
TN05130202220_0500	Center Point Branch	SUMNER CO	RIVER	3.8	Organic Enrichment (Sewage) Biological Indicators
TN05130202220_1000	Manskers Creek	SUMNER CO	RIVER	7.9	Sedimentation/Siltation
TN05130202220_1000	Manskers Creek	DAVIDSON CO	RIVER	7.9	Sedimentation/Siltation
TN05130202220_1000	Manskers Creek	SUMNER CO	RIVER	7.9	Escherichia coli

TN05130202314_0400	Sugartree Creek	DAVIDSON CO	RIVER	4.3	Other anthropogenic substrate alterations
TN05130202314_0400	Sugartree Creek	DAVIDSON CO	RIVER	4.3	Phosphorus (Total)
TN05130202314_0400	Sugartree Creek	DAVIDSON CO	RIVER	4.3	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202314_0400	Sugartree Creek	DAVIDSON CO	RIVER	4.3	Oxygen, Dissolved
TN05130202314_0400	Sugartree Creek	DAVIDSON CO	RIVER	4.3	Escherichia coli
TN05130202314_0700	Vaughns Gap Branch	DAVIDSON CO	RIVER	0.6	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202314_0700	Vaughns Gap Branch	DAVIDSON CO	RIVER	0.6	Phosphorus (Total)
TN05130202314_0700	Vaughns Gap Branch	DAVIDSON CO	RIVER	0.6	Other anthropogenic substrate alterations
TN05130202314_0700	Vaughns Gap Branch	DAVIDSON CO	RIVER	0.6	Escherichia coli
TN05130202314_0750	Vaughns Gap Branch	DAVIDSON CO	RIVER	1.9	Other anthropogenic substrate alterations
TN05130202314_0750	Vaughns Gap Branch	DAVIDSON CO	RIVER	1.9	Escherichia coli
TN05130202314_0800	Jocelyn Hollow Branch	DAVIDSON CO	RIVER	2	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202314_0800	Jocelyn Hollow Branch	DAVIDSON CO	RIVER	2	Phosphorus (Total)
TN05130202314_0800	Jocelyn Hollow Branch	DAVIDSON CO	RIVER	2	Escherichia coli
TN05130202314_1000	Richland Creek	DAVIDSON CO	RIVER	1.9	Phosphorus (Total)
TN05130202314_1000	Richland Creek	DAVIDSON CO	RIVER	1.9	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202314_1000	Richland Creek	DAVIDSON CO	RIVER	1.9	Sedimentation/Siltation
TN05130202314_1000	Richland Creek	DAVIDSON CO	RIVER	1.9	Other anthropogenic substrate alterations
TN05130202314_1000	Richland Creek	DAVIDSON CO	RIVER	1.9	Escherichia coli
TN05130202314_2000	Richland Creek	DAVIDSON CO	RIVER	6.7	Other anthropogenic substrate alterations
TN05130202314_2000	Richland Creek	DAVIDSON CO	RIVER	6.7	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202314_2000	Richland Creek	DAVIDSON CO	RIVER	6.7	Phosphorus (Total)
TN05130202314_2000	Richland Creek	DAVIDSON CO	RIVER	6.7	Escherichia coli
TN05130202314_3000	Richland Creek	DAVIDSON CO	RIVER	4	Other anthropogenic substrate alterations
TN05130202314_3000	Richland Creek	DAVIDSON CO	RIVER	4	Nitrate/Nitrite (Nitrite + Nitrate as N)
TN05130202314_3000	Richland Creek	DAVIDSON CO	RIVER	4	Phosphorus (Total)
TN05130202314_3000	Richland Creek	DAVIDSON CO	RIVER	4	Escherichia coli



PUBLIC EDUCATION/OUTREACH AND INVOLVEMENT/PARTICIPATION
(SECTION 4.2.1 AND 4.2.2)

(Question 3)

Supporting Materials

Question B and D



Spring Clean Up Day

May 02, 2020 8 a.m. until 2 p.m.

Location:

Enter C-Smith @ Wades Lawncare - 1215 Louisville Hwy

Proof of residency required in order to use our Clean Up Day Dumpsters

Items that will not be accepted are:

**Construction Material*

**Paint*

**Mattresses*

**Hazardous Materials*











**Oil of any kind*

Residents that need to dispose of mattresses can do so by placing them by the road and scheduling a bulk item pick up with City Hall.





10 Water Tips

-  Use fertilizers sparingly and sweep driveways, sidewalks and roadways.
-  Never dump anything down storm drains.
-  Plant grass or plants on the bare spots in your yard.
-  Compost your yard waste.
-  Avoid pesticides.
-  Direct downspouts away from paved surfaces.
-  Take your car to the car wash instead of washing it in the driveway.
-  Check car for leaks, and recycle motor oil.
-  Pick up after your pet.
-  Have your septic tank pumped and system inspected regularly.

How Can I make a difference ?

There are many small steps that can be taken at home to help reduce pollution.

1. Check automobiles for leaks—

Each year millions of gallons of used motor oil are disposed of improperly by being spilled or poured onto the ground or directly down storm drains. Did you know that one pint of oil can cause an oil slick that will cover the area the size of a football field? Low concentrations of other vehicle fluids can also cause substantial damage to waterways by simply leaking onto the roadway or your driveway.

2. Take your vehicles to car washes—

If you are washing your vehicle on your driveway or street, all of the wash water runs down a curb and into the nearest storm drain which leads right into a river or stream. Soap and detergents can impair waterways with ingredients such as phosphorus and other harsh cleaning chemicals. The remaining rinse water usually contains pollutants such as oils and grease, suspended solids, heavy metals, and other toxic substances. This problem can be especially harmful if a vehicle is washed on the pavement.

Collected dust particles from dirt, brake wear, engine leaks and other sources that collect on your car or truck's surface will wash into nearby waterways.

If you must wash off your vehicle, consider doing it on a part of your yard where the grass and/or soil can serve as a natural filter to absorb pollutants. The area that you select to clean your vehicle on is important. Find a grass, gravel, or porous area that will absorb the wash water rather than carrying it to a storm drain.

Remember the next time you decide NOT to wash a vehicle at a commercial facility: Use environmentally safe products. Water with soap will not be treated if dumped down a storm drain. Use low-volume or pressure to reduce over spraying and wasting water. Consider using rain barrels to collect rainwater that could be reused to wash vehicles. Wash a vehicle **ONLY** when needed.

3. Maintain a healthy lawn without polluting—

Maintaining a healthy yard is important to most residents. Excess fertilizer and pesticides can wash off lawns when it rains. Here are some tips to follow when maintaining your lawn that prevent water pollution while

Managing your garden:

Fertilizer Application

- Avoid fertilizing in drought conditions and when heavy rain is predicted.
- Use slow-release forms of nitrogen.
- If fertilizer is spilled on paved surfaces, sweep it up and apply it to the lawn.
- Irrigate the lawn to minimize runoff.

Pesticide Application

- Read the pesticide label **BEFORE** you handle or apply.
- Avoid applying pesticides when rain is predicted.

Grass and Yard Clippings

- Don't blow grass clippings and leaves in the street or down a storm drain! These extra nutrients can reduce oxygen levels in water and potentially cause fish kills.
- Recycle clippings.
- Use a mulching mower to reduce grass clippings.
- Compost plant clippings, leaves, grass clippings and other plant material or bag them for curbside pick-up.

Prevent Erosion

- Schedule grading projects for dry weather.
- Cover bare areas with plants or mulch.
- Leave vegetation along stream banks undisturbed.
- Cover all storm drains before hydro-seeding an area.

Equipment Maintenance and Clean Up

- Don't wash equipment where wastewater can drain to an impervious surface or storm drain.
- Dispose of old oil, gasoline and yard chemicals properly.
- Don't litter. Cover your load.
- Don't use cleaning chemicals where wastewater can drain to impervious surfaces or a storm drain.

What You Can Do To Report Polluters

Call 911 **only** if there is a LIFE SAFETY EMERGENCY SPILL. The fire department can report to the scene and contain a spill.

Call the Millersville Police Department at (615) 859-2758 to report illegal dumping. Be sure to get any vehicle information such as make, model, year and license plate number.

Call the Public Works at (615) 859-0880 to report clogged catch basins. Call Codes Office for illicit discharges into the street or storm drain at (615) 859-0880. Rain water is the **ONLY** substance that should go down any storm drain.

While there are no hard rules, the size of the roof area and the infiltration rate of the soil are keys to deciding how big to make a rain garden. The larger the roof area and the slower that water infiltrates into the soil the more area of rain garden needed.

2. Once the rain garden is laid out, it is time to start digging.

The deepest ponding depth in the rain garden should be about 6 inches.

Begin the digging by removing soil in the rain garden so that the deepest part is about 8-10 inches deep. The bottom of the rain garden should be as level as possible.

The extra soil removed from the rain garden should be used on the downhill side of the rain garden to create a berm, an earthen barrier, that will keep the water in the rain garden. The top of the berm should not be higher than the uphill edge of the rain garden.

3. A shallow swale or corrugated drain pipe should be set up to carry the water from the roof downspout to the rain garden.

Corrugated pipe can be buried or above ground.

The land should slope down to the rain garden area to ensure that water does not stand anywhere around the foundation of the house.

4. Mix organic matter into the soil within the rain garden by spreading 2 to 4 inches of compost over the area and mixing the organic matter in with the existing soil. If the soil is acidic (has a low pH), lime should also be added to neutralize the pH of the soil.

For soils with high clay content, it may be beneficial to remove about 1-2 feet of the soil and replace it with a more porous "rain garden soil".

5. Establish a grass or groundcover border along the upper edge of the rain garden to slow down the runoff water as it enters the rain garden, and do the same over the berm to stabilize it as a border of the rain garden.

6. Within the rain garden, plant drought tolerant, wet tolerant, hardy plants such as many of the native plants found in low areas. Ornamental grasses, shrubs and self-seeding perennials are good choices.



WHAT CAN I DO?



POLLUTION PREVENTION

Stormwater
Management

Phone: 615-859-6950
Fax: 615-851-1825

Rain Gardens Make a Difference in Water Quality

Why Plant a Rain Garden

Every time it rains, fertilizers, pesticides, debris and other pollutants wash across lawns and driveways and down streets into the nearest storm drain. From there they go directly into a river, lake or stream. Most pollution comes from storm water runoff. Planting a rain garden reduces pollution while giving you a garden that is easy to maintain and needs little or no watering.

About Rain Gardens

Planting a rain garden on your property is one way to conserve water, reduce your monthly water bill and help protect our waterways at the same time. All that is needed is some basic information, a little imagination and the space on your property to build a rain garden.

How Rain Gardens Work

A rain garden receives storm water runoff water from roofs or other hard surfaces such as driveways. The rain garden holds the water on the landscape so that it can soak into the ground instead of flowing into a street and down a storm drain. The plants, mulch and soil in a rain garden combine natural physical, biological and chemical processes to remove pollutants from runoff.

An effective rain garden depends on water infiltrating the soil of the garden. Water should stand in a rain garden no longer than 24 hours after the rain stops. Mosquitoes cannot complete their breeding cycle in this length of time, so the rain garden should not increase mosquito populations at all.



Multiple Benefits from Rain Gardens

How to Create a Rain Garden

Constructing a

rain garden is easy, but it requires lots of shovel work when built by hand. Use the assistance of others to prepare and plant your rain garden. Teamwork reduces the amount of time it takes to construct a rain garden. It can be created alone, but if neighbors and friends are asked to join then they can learn the "hands on" value of a rain garden. Here are the main steps to creating a rain garden in your yard.

1. Use rope to layout the boundary of the rain garden.

A rain garden should be curvy in shape and is best situated with the longest length perpendicular to the slope of the land.

7. Once plants are in place, the rain garden area should have a good covering of mulch put over it. Lighter mulches such as pine bark and straw will float and may be washed away to the edges in the rain garden, so better mulch choices for a rain garden are more dense materials such as pine straw, wood chips or shredded wood.

8. Remove weeds on a regular basis as the landscape plants grow, and replenish mulch as needed. As the plants in the rain garden mature, there will be less need for mulch and weeding.

Rain gardens should be relatively low maintenance

TRASH / DEBRIS / ILLEGAL DUMPING



Site in the City of Millersville

If the correct plants are chosen.

Common forms of litter (or trash) include aluminum cans, plastic bags and bottles, paper products, household hazardous wastes, motor oil, used food containers, cigarette butts, unwanted food, diapers and more. Litter can collect on top of drains, causing potential flooding by not allowing water to enter fast enough during a storm. Smaller debris or non-visible pollutants can wash into storm drains that drain to rivers, lakes and streams. When litter is washed into creeks and streams, it can impact aquatic life. This pollution can have harmful effects on drinking water supplies, recreational use, and wildlife. Make sure that your trash is properly disposed of and never litter. If you spot trash and debris in your neighborhood, pick it up and dispose of it properly! Never rinse it down the storm drain by hosing an area. Never use a broom or a leaf blower to push debris down a drain.

Maintain your driveway to prevent dirt, gravel and other forms of pollution to reach the public way. Storm water running across the road will end up in a storm drain or drainage ditch and eventually to one of our impaired streams.

To help R.I.D. Millersville of illegal dumping and other forms of pollution, REPORT what you see to the police department at 615-859-2758. Remember to get the license number of vehicles dumping illegally.

Together we can stop it!

Failure to Meet or Maintain Design or Maintenance Standards



If a responsible party fails or refuses to meet the design or maintenance standards, the Stormwater Manager, after reasonable notice, may choose to begin levying fines of not less than \$50.00, or more than \$5,000.00, assessed each day the violation continues or may choose to correct a violation of the design standards or maintenance needs by ordering corrective action to be performed by the city or others until all necessary work to place the facility in proper working condition is completed.



STORMWATER

- SLOW IT DOWN
- SPREAD IT OUT
- SOAK IT IN



City of Millersville

CLEAN WATER
IS
EVERYONE'S BUSINESS!

City of Millersville
Stormwater Dept.

INFORMATIONAL
BROCHURE

PERMANENT BMP'S



Contact Information:

Phone: 615-859-0880

Fax: 615-851-1825

1246 Louisville Highway
Millersville, TN 37072

What are Permanent BMP's?



BMP's are designed to remove pollutants from urban runoff and control water quantity before it reaches our streams.

Examples of permanent BMP's are:

1. **Buffer Zone**—A strip of undisturbed, original vegetation, enhanced or restored existing vegetation, or the re-establishment of vegetation surrounding an area of disturbance or bordering streams, ponds, wetlands, or lakes.

2. **Diversion**—a channel of compacted soil constructed above, across, or below a slope, with a supporting earthen ridge on the lower side. A diversion consists of two components: the ridge and the channel.
3. **Cablon**—Large, multi-celled, welded wire or rectangular revetments, retaining walls, abutments, check dams, etc.
4. **Riprap**—Erosion-resistant ground cover of large, loose angular stone with a geotextile or granular underlining.
5. **Storm Drain Outlet Protection**—paved and/or riprapped channel treatment, placed below storm drain outlets.
6. **Rain Garden**—a planted depression that allows rainwater runoff from impervious urban areas like roofs, driveways, walkways, parking lots, etc.
7. **Stormwater filtration systems**—consist mainly of a pre-treatment, or sedimentation area, and the filter area. Runoff first enters the sedimentation area where the runoff velocity is reduced allowing larger pollutant particles to

drop out. When the stormwater leaves the sedimentation area, it is spread evenly over the filter bed, where it flows downward through the filter media. As the stormwater flows through the filter, the filtration media trap and absorb pollutants present in the stormwater.

8. **Dry Extended Detention Basins**—Underground detention facilities are structural BMPs designed to provide temporary storage of stormwater runoff for quantity control purposes. The systems are typically installed beneath parking lots, streets, and parks
9. **Wet Detention ponds**—consists of a permanent pool, temporary pool, and a forebay. The permanent pool prevents particles that have settled to the pond bottom from re-suspending when runoff flows into the pond. The temporary pool is storage above the permanent pool which is utilized to control runoff during a storm event. A separate smaller pond, called a forebay, is placed upstream of the main pond to trap suspended solids in the runoff before it enters the main pond.

As Built Plans

All applicants are required to submit actual as built plans for any structures located on-site after final construction is completed along with any changes to the Operations and Maintenance Plan submitted with the application. Significant changes must be approved by the Stormwater Manager. The plan must show the final design specifications for all stormwater management facilities and must be sealed by a registered professional engineer licensed to practice in Tennessee.

Recorded Plan

The location of the Stormwater facilities and best management practices, the recorded location of the Covenants document, and inspection and maintenance guidance that outlines the property owners responsibility shall be shown on a plot that is recorded in the Office of the County Register of Deeds.

Landscaping Operations and Maintenance Plan

Must be submitted with the final design describing the vegetative stabilization and management techniques to be used at a site after construction is

completed. This plan will explain not only how the site will be stabilized after construction, but who will be responsible for the maintenance of vegetation at the site and what practices will be employed to ensure that adequate vegetative cover is preserved.



Inspections

Routine inspections are the responsibility of the property owner, or the owner/s of the Stormwater management facilities.

Records

Parties responsible for the operation and maintenance of a stormwater management facility shall make records of the installation of the stormwater facility, and of all maintenance and repairs to the facility, and shall retain the records for at least ten years. These records shall be made available to the Stormwater Manager during inspection of the facility and at other reasonable times upon request.



Appeal Process

There is an appeal process if you feel that you have been unfairly accused.

ABOUT THIS BROCHURE

This brochure is one of a series of brochures dedicated to raising awareness of pollution prevention to protect water quality. The following landscaping practices will help minimize water pollution while providing your customers a healthy and attractive lawn and landscape.

PROFESSIONAL LANDSCAPING ASSOCIATION

Georgia Green Industry Association (GGIA) (www.ggia.org)
 Georgia Turfgrass Association (GTA) (www.turfgrass.org)
 Metro Atlanta Landscape & Turf Association (MALTA) (www.malta-inc.org)
 Professional Lawn Care Association of America (www.plcaa.org)
 Southern Nursery Association (SNA) (www.sna.org)

USEFUL LINKS

2002 GA Pest Control Manual (www.ent.uga.edu/pest2002/)
 Grasscycling (<http://georgia.earth911.org/usa/master.aspx?lib&a=organics/mow/grasscycling.asp>)
 UGA Cooperative Extension Service publications (www.ces.uga.edu/pubs/pubsobj.html)
 UGA's Environmentally Friendly Landscaping Practices (www.ces.uga.edu/Agriculture/horticulture/H-00-060.htm)
 UGA's Xeriscaping Guide (www.ces.uga.edu/pubcd/B1073.htm)

SPECIAL THANKS TO

Rose Mary Seymour, Ph.D., P.E. of the University of Georgia, College of Agricultural and Environmental Science, Biological and Agricultural Engineering, Griffin Campus

Solutions to Water Pollution for the COMMERCIAL LANDSCAPING & LAWN CARE INDUSTRY

ABOUT THIS BROCHURE

Do you know that some of your landscaping and/or lawn care practices may not be as "green" as you think? Lawn and landscape areas have the potential to be sources of water pollution from fertilizers, pesticides and organic materials.

For more information about water pollution visit:
www.cleanwatercampaign.com

DESIGNING THE LANDSCAPE

- Design a landscape that reduces runoff and encourages natural infiltration of rain.
 - Minimize impervious areas.
 - Do not allow bare soil areas in the landscape.
 - Incorporate existing native vegetation into the landscape design when possible and select plants best adapted to the local climate, soils and growing conditions.
 - Choose turf grass that is heat and drought tolerant.
- Protect streams and waterways and reduce erosion by leaving an undisturbed vegetative buffer along stream banks.
- Do not plant hard-to-mow areas such as steep slopes in turf grass. Use ground covers, trees, shrubs or other perennials to reduce plant maintenance.
- Schedule grading and excavation projects during dry weather.
- Mulch or seed areas that lie idle after land disturbing activities.
- Prior to hydro seeding, cover all storm drains to ensure the material does not get washed into streams, rivers and lakes.



Applying Fertilizer

- Apply only the amount of fertilizer that the turf or plant requires.
- Provide soil-sampling services to your customers to assure proper fertilizer and lime applications. Local Cooperative Extension Service offices can provide information on soil sampling procedures and where to get soil analysis services in your area.
- Do not apply fertilizer if heavy rain is predicted.
- Avoid fertilizing during periods of limited rainfall. Fertilizers are chemical salts and can dehydrate drought-stressed plant roots.
- Use slow-release forms of nitrogen such as urea formaldehyde.



- Calibrate fertilizer spreaders and application equipment to ensure proper rates are applied.
- Around waterways, use a deflector shield with spreaders. Avoid throwing granules in water and leave a three-foot buffer of unfertilized turf.
- Minimize the amount of fertilizer applied to non-target areas by closing the spreader when passing over paved surfaces.
- If fertilizer is spilled or lands on paved surfaces, sweep it up and apply it to the lawn.
- A light irrigation immediately after fertilizer application will move the nutrients into the soil so they won't wash off in the next storm.

Applying Pesticides

- Read the pesticide label BEFORE you purchase, handle or apply it. The label provides safe usage and storage information. It is dangerous and illegal to not use as directed.
- Obtain a Georgia Pesticide Applicators License. For more information go to www.agr.state.ga.us/.



Integrated Pest Management

- Integrated Pest Management (IPM), a practice used by leading professional landscape companies, integrates a regular monitoring program with correct diagnosis of pest problems. It promotes the use of cultural, biological and mechanical means of controlling pests. And, it advocates intervention with pesticides only when necessary to avoid serious damage.
- The key to a successful IPM program is frequent inspection and accurate diagnosis of pests.
- Consult your local county Cooperative Extension Service office for assistance in identifying pests or selecting the best management option.
- Cultural control methods include proper planting methods, plant selection and maintenance practices such as using pest-resistant plant varieties.
- Mechanical control consists of practices like trapping or destroying pests by hand, pruning infested plant parts and mulching to



- Biological control methods are already in place in nature in the form of predator-prey relationships. Certain flowering plants and wildlife enhancements can attract insect-eating predators that can naturally control pest problems.



Maintaining the Turf

- Properly maintained turf grass improves soil structure, stabilizes topsoil and reduces erosion and runoff.
- Avoid mowing more than 1/3 of the grass length. This may warrant more frequent mowing or changing the mower height in certain seasons. Use a mulching mower when possible.
- Don't blow, sweep or dump grass clippings or leaves into the street, down storm drains or drainage ditches.
- Compost plant clippings, leaves, excess grass clippings and other plant material, or bag them for curbside pickup.
- Recycle grass clippings. Clippings can provide up to 30 percent of the total fertilizer needs.
- Mulching leaves into the turf with a mulching mower can also be beneficial.
- Reuse compost in your landscape maintenance. The use of compost improves soil texture and structure, moisture retention and adds valuable nutrients.



Customer Education

- Tell your client the benefits of grass clipping recycling. Lawn clippings left on the ground can provide nutrients and lower the amount of fertilizer required.
- After each service visit, leave a ticket telling the customer what pests were detected, any other problems and recommendations for management. Explain in detail the corrective actions taken to ensure approval of the management practices used.
- Maintain membership(s) in a professional landscaping organization(s) to stay current on maintenance methods and the newest plant varieties available. Become a certified

Storm Water Pollution Prevention Why this is Important...

Most cities have two drainage systems—the sanitary sewer system and storm drain system. The storm drain system is designed to prevent flooding by carrying excess rainwater away from streets, homes, and businesses. Because storm water from a storm drain system is not usually treated, it serves the unintended function of carrying urban pollution into our streams and rivers.

This pamphlet tells you how to prevent pollution from entering our streams and rivers from polluted storm water.

Storm water runoff mixed with urban pollutants creates storm water pollution. The pollutants include: oil and other automobile fluids, paint, construction debris, yard and pet wastes, pesticides, and litter.

Polluted storm water flows through the storm drain system that takes water and debris straight from the streets and parking lots to our streams and rivers. Each day polluted storm water enters our streams untreated, leaving toxic chemicals in our waterways and tons of trash along their banks. Polluted storm water contaminates our streams and rivers, harms aquatic life and increases the risk of flooding. Overall, storm water pollution costs us millions of dollars per year.

For more information or assistance, call, e-mail or write:

Tennessee

Small Business Environmental Assistance Program
8th Floor, L&C Annex, 401 Church Street
Nashville, TN 37243-1551

1-800-734-3619

BGSBEAP@tn.us

<http://tn.gov/environment/ea/sbeap/>

Safe Substitutes for Pest Control

Garden Aphids and Mites- Mix one (1) tablespoon of liquid soap and one (1) cup of vegetable oil. Add one (1) teaspoon of the mixture to a cup of water and spray. Note: oil may harm vegetable plants in the cabbage family.

Caterpillars- When caterpillars are eating, apply products containing Bacillus Thuringiensis to leaves.

Ants- Place boric acid dust or hydramethylnon baits in problem areas, cracks, and insect walkways. Be sure it is inaccessible to children and pets (boric acid is a mild poison).

Roaches- Apply boric acid dust to cracks and entry points.

If You must Use Pesticides

- Read labels! Use only as directed. Often to control the problem, many gardeners use way too much pesticide.
- Use a pesticide that is specifically designed to control your pest. The insect should be listed on the label. Approximately 90% of the insects on your lawn and garden are not harmful.

Pesticides Disposal

- Dispose of unused and out-dated pesticides properly. Household toxins, such as pesticides, can pollute our streams and rivers and contaminate groundwater if disposed of in storm drains or gutters.
- Rinse empty pesticide containers and use rinse water as you would the product. Dispose of empty rinsed containers in the trash.
- To obtain information for proper disposal of unused or out-dated pesticides call the Household Hazardous Waste Program at 615-532-9265 or contact the Household Hazardous Waste web site at

<http://www.tn.gov/environment/swm/hhw/>

Landscaping, Gardening and Pest Control Impacts

Landscaping, gardening, and pest control activities can be major contributors to storm water pollution. Sediment, yard wastes, over watering, pet wastes, and garden chemicals mixed with storm water pollutes our streams and rivers.

Also, when it rains fertilizers, pesticides, and herbicides are washed off of lawns and landscaped areas and enter our waterways. These chemicals not only kill garden pests, they also harm useful insects, poison fish, and contaminate ground and surface waters.

Leaves, grass clippings, and tree trimmings that are swept or blown into the streets and gutters also cause storm water pollution. These wastes clog catch basins, causing flooding of roads and streets. Leaves and grass clippings that are washed into the river start to decompose and absorb dissolved oxygen from water. If oxygen levels in the water become too low, aquatic animals die.

Best Management Practices

There are federal and state storm water regulations that require some Businesses to establish Best Management Practices (BMPs). Recent permitting requirements for local water facilities may result in greater scrutiny and enforcement of their environmental operations. The following Best Management Practices will help ensure cleaner streams and rivers across the State of Tennessee.

General Landscaping Tips

- To protect stockpiles and materials from wind and rain- Store them under tarps or secured plastic sheeting.
- To avoid extra grading work and muddy runoff- Schedule grading and excavation projects for dry weather.
- To reduce water pollution- Use temporary check dams or ditches to divert runoff away from storm drains.
- To increase erosion control- Plant fast-growing annual and perennial grasses, as these will shield and bind the soil.

Garden and Lawn Maintenance Tips

- Do not over water lawns. Conserve water by using irrigation practices such as drip irrigation, soaked hoses, or micro-spray systems.
- For cities that have curbside pickup, leave clipping and pruning wastes besides the street for pickup. Or, compost clippings at home and use compost around plants.
- Do not blow or rake leaves into streets, gutters or storm drains.
- Use organic or non-toxic fertilizers.
- Do not over fertilize and do not fertilize near ditches, streams, or other bodies of water.
- Store pesticides, fertilizers, and other chemicals in a covered area to prevent runoff.

Home and Garden Pesticide Alternatives

Only using a chemical to control pests is usually a temporary fix. A more common sense approach is needed for a long-term solution. It is called **Integrated Pest Management (IPM)**. Plan your "IPM" strategy in the following order:

A) Physical Controls

- Caulking holes
- Barriers
- Hand picking
- Traps

B) Biological Controls

- Predatory insects
- Bacterial insecticides

C) Chemical Controls – Last Resort Use:

- Less toxic products
- Insecticidal soaps
- Horticultural oils
- Dehydrating dusts
- Boric acid powder
- Pyrethrin based Insecticides

This pamphlet was produced by the Small Business Environmental Assistance Program of the Tennessee Department of Environment & Conservation.



Tennessee
Small Business Environmental Assistance Program (SBEAP)
8th Floor, L&C Annex
401 Church Street
Nashville, TN 37243-1551
1-800-734-3619
(615) 532-8012
♦ ♦ ♦ ♦ ♦

A special thanks to the City of Chattanooga, Storm Water Management for their assistance in providing the original Stormwater Best Management Practice brochures.

To Reach Your Local
Field Office
Call 1-888-891-8332 or
1-888-891-TDEC



The Tennessee Department of Environment and Conservation is committed to principles of equal opportunity, equal access and affirmative action. Contact the EEO/AA Coordinator or the ADA Coordinator at 1-866-253-5827 for further information. Hearing impaired callers may use the Tennessee Relay Service (1-800-848-0298).

Tennessee Department of Environment and Conservation, Authorization No. 327142, 1,500 copies. This public document was promulgated at a cost of \$0.10 per copy. March 2005. Printed on recycled and recyclable paper.

Storm Water Best Management Practices (BMPs)



Landscaping Gardening Pest Control

TENNESSEE DEPARTMENT OF ENVIRONMENT &
CONSERVATION
SMALL BUSINESS ENVIRONMENTAL ASSISTANCE
PROGRAM

1-800-734-3619

BGSBEAP@tn.gov

Offit

WHAT YOU SHOULD KNOW ABOUT PESTICIDES

Storing pesticides safely

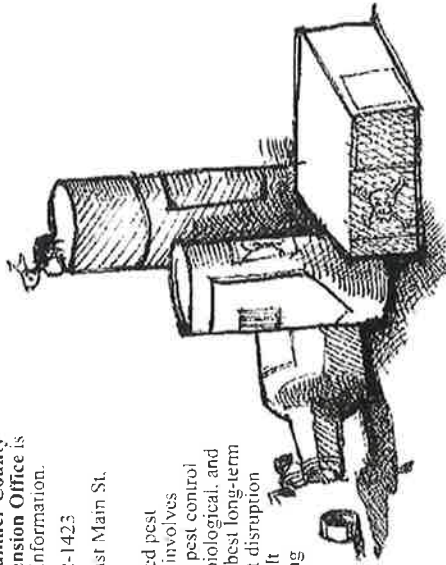
Improper pesticide storage and disposal can be dangerous to the health of you, your family and pets, and can harm the environment. To be safe, follow these recommendations:

- Don't stockpile. Buy only enough pesticide to carry you through the use season. Consider ready-to-use products rather than concentrated solutions. Although they are more expensive per use, these products may be more practical if all you need is a limited amount of pesticide. Pesticides lose effectiveness over time. And you reduce storage problems.
- Look into solutions to your pest problems that call for less – or no – pesticide use. **Summer County Agriculture Extension Office** is a good source of information.

Phone: (615) 452-1423

Location: 155 East Main St,
Gallatin, TN 37066

Ask about "integrated pest management." IPM involves combining different pest control tactics – chemical, biological, and cultural – to get the best long-term results with the least disruption to the environment. It focuses on preventing pest problems in the first place so you don't need to use pesticides.

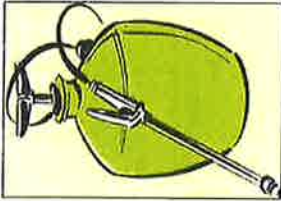


City of Millersville
1246 Louisville
Highway
Millersville, TN
37072

Stormwater
Management
Department

Contact Person:
Karen Smith
(615) 859-0880
karen.smith@cityofmillersville.com

Visit us online at:
www.cityofmillersville.com



- **Transparent tape applied over labels helps keep containers legible.** If you can't tell how old a container is or identify its contents, follow the advice on safe disposal in this handout.
- **Store pesticides out of reach of children and pets.** The best place is in a locked cabinet in a well-ventilated utility area or garden shed. Never store pesticides in cabinets near food, animal feed or medical supplies. Cap and put away pesticides immediately after each use.
- **"Child-resistant" packaging does not mean "child-proof."** You still must store pesticides properly, out of children's reach. Be sure to close containers tightly.
- **Store flammable liquids outside your living area and away from ignition sources** such as a furnace, vehicle, outdoor grill or gas-powered tools. Do not store containers where flooding is possible or in places where they might spill or leak into wells, drains, ground water, or surface water.

Safe disposal

- The best way to dispose of a small amount of excess pesticide is to use it. Apply according to directions on the product label. If you cannot use it, ask your neighbors if they can.
- Do not throw unused pesticides in the trash. If you can't finish using a pesticide, Summer County has a household hazardous waste



- **Never** pour any leftover pesticides product down the sink, into the toilet, down a sewer or direct drain or on the ground. Millersville's municipal collection program. Call (615) 452-1114 for more information.

- storm sewer systems are not equipped to remove pesticide residues before entering waterways; these can harm fish, plants, and other living things.
 - When empty, you should rinse the container carefully three times, draining the rinse water each time back into the sprayer or the container used to mix the pesticide. Then use the rinse water as a pesticide, following the label directions. Replace the cap securely. (Do not puncture or burn a pressurized container like an aerosol – it could explode.) Once you have followed these steps, dispose of the container according to label instructions or according to state and local laws, whichever is stricter.
- Never reuse a pesticide container.**

- Never reuse a pesticide container.

DID YOU KNOW?

In 2001, there were an estimated 6.5 million dogs in the United States. That's 6.3 billion pounds of poop per year!!

It would take a scoop 300 feet wide and 800 feet deep to dispose of all of that poop!

* Source: U.S. Pet Ownership and Demographics Source Book by the American Veterinary Medical Association



Σωμ. νεπερ Μανχεμ εντ
Χαγοφ Μιλ ραλζε
1246 Λουισιαν: Ηγγιωαφ
Μιλ ραλζε, TN 37072

Τηλ: 615-859-0880



Clean Water Campaign
40 Courtland Street, NE
Atlanta, Georgia 30303
WWW.CLEANWATERCAMPAIGN.COM

Pick It Up...



It's Your Doodie!

THE PROBLEM

Pet waste can contaminate our rivers, lakes and streams. Pet waste contains harmful bacteria such as E. Coli and fecal coliform. Waters that contain a high amount of bacteria such as E. Coli are unfit for human contact. A single gram of pet waste contains an average of 23 million fecal coliform bacteria, some of which can cause disease in humans.



- ◆ Pet waste decays, using up dissolved oxygen and releasing compounds that are harmful to fish and other animals that rely on water.
- ◆ Pet waste contains nutrients that can cause excessive algae growth in a river or lake, upsetting the natural balance.

I WANT TO BE A RESPONSIBLE PET OWNER, BUT DOES THIS MEAN I HAVE TO PICK UP AFTER MY PET?



The bad news is...

Yes, you do have to "scoop the poop" but it's a small price to pay to protect our water quality.

The good news is...

Whether in your yard or walking your dog, you can easily do the right thing. Purchase a "pooper scooper" or simply use a plastic bag. Many parks and apartment complexes provide special posts with "pet mitts" or bags to help you clean up after your dog. When finished, just place the waste in a garbage can. Everyone will be happier when you pick up after your pet!



WHY SHOULD I PICK IT UP?

Pet waste left on sidewalks, streets, yards or other open areas can be washed away and carried by rainwater into storm drains to nearby rivers, lakes and streams and cause many problems.



For more information visit
www.cleanwatercampaign.com or call:

Καλες Συνητησις (615) 859-0880
City of Atlanta
404-330-6040
DeKalb County
404-294-2878

Fulton County
404-730-8097
Gobb County
770-499-4136

Clayton County
770-961-8399
Gwinnett County
678-376-6929



ARE YOU A DO-IT-YOURSELFER?

YOU CAN PUT THE BRAKES ON WATER POLLUTION

Did You Know?

Each year millions of gallons of used motor oil are disposed of improperly: dripped, spilled or poured directly onto the ground or down storm drains.

It only takes four quarts, or about one oil change, of used motor oil to foul one million gallons of drinking water.

Many brake pads contain metals that wear away a little by little. The metal breaks down into dust each time you apply the brakes. Brake pads can contain as much as 20 percent copper, which is toxic to aquatic life at the base of the food chain. They also contain lead and zinc. (Source: US EPA)

BE A SOLUTION TO WATER POLLUTION.

www.cleanwatercampaign.com

Στοιχείο: 1246 Απορροφητική Ηλεκτρονική
Μόλυβδος, TN 37072
(615) 859-0880
www.cleanwatercampaign.com



Clean Water Campaign

40 Courtland Street, NE
Atlanta, Georgia 30303



PUT THE BRAKES ON WATER POLLUTION

TIPS FOR MAINTAINING OR REPAIRING YOUR VEHICLE AT HOME



BY PREVENTING FLUIDS FROM REACHING THE STREET OR STORM DRAIN, YOU CAN PREVENT STORMWATER POLLUTION AND HELP PROTECT OUR RIVERS, LAKES AND STREAMS.



BE AWARE OF WHERE YOU WORK

- Any drips or spills on the ground can be carried away by rainwater to a storm drain and into a nearby river, lake or stream.
- Choose to work on a flat concrete surface where you can easily clean up accidental spills. Remember the phrase "keep it clean, drains to stream" when you work on paved surfaces.
- Never work on a vehicle in the street or near a storm drain.



FOLLOW THESE TIPS WHEN CHANGING YOUR OIL OR OTHER VEHICLE FLUIDS

- Use funnels or pumps when handling liquid products or wastes to avoid spills.
- Capture vehicle fluids in separate drip pans or containers. Properly recycle used oil, antifreeze and other

- Use plastic tarps and drip pans if a car is leaking. Pour the oil collected on tarp back into a drip pan.
- Drain and recycle used oil filters. Poke holes in the filter and let it drain into your oil pan for several hours before you recycle.
- As an alternative, you can use kitty litter, sawdust or oil absorbent to clean spills. Apply it to the spill, sweep it up and dispose of the waste in the trash.
- If spills occur, use an absorbent pad to clean the spill. Squeeze the pad to wring out excess liquids. Place the used pad in a plastic bag and then dispose in the trash.
- Collect your used motor oil, antifreeze and oil filters in separate containers for transport to a nearby recycling station. Tires and batteries are some other items that can be recycled.



PUT THE BRAKES ON POLLUTION WHEN REPLACING BRAKE PARTS

- Many brake pads contain copper, which wears off as the pads wear and contributes to stormwater pollution.
- Don't hose down brake pads, rotors or drums.
- Use shop cloths to wipe as much brake dust as possible from the rotors and drums before using brake cleaner fluid. The shop cloths can be laundered and reused.
- Recycle cleaner fluid by using a drip pan. Reuse collected cleaner to clean rotors and drums.



WASH YOUR CAR AT A NEARBY CAR WASH

- Wash water from washing your car at home can contain detergents, metals, oil, sediment and other debris that can pollute nearby rivers, lakes and streams.
- For spot cleaning, wipe the vehicle with a damp cloth instead of washing it.
- Take your vehicle to a commercial car wash that recycles water. This will prevent detergents and other contaminants from being washed down a storm drain or drainage ditch.



DID YOU KNOW THE FOLLOWING CAN BE RECYCLED?

- Transmission fluid
- Used tires
- Brake fluid
- Used oil filters
- Car batteries
- Antifreeze
- Used motor oil

For the nearest location near you, call



FOR MORE INFORMATION PLEASE VISIT
www.CleanWaterways.org

Stormwater Best Management Practices

FAT

Restaurants and Food Service Facilities

Good Practices for Food Establishments

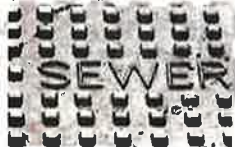
Restaurant activities can harm the environment if they are not careful with disposal and cleanup procedures. With proper training and education, restaurant personnel can prevent debris from entering storm drains, thus helping to improve the water quality in neighboring waterways.

This brochure will explain steps your food establishment can take to help protect water quality by keeping debris out of the storm drain and by preventing fats, oil, and grease from blocking the sanitary sewer lines.



Storm Drains and Sanitary Sewers

Storm drains are found in parking lots and in streets. Storm drains are engineered to gather and transport stormwater to our local waterways. Storm drain systems do not remove any pollutants from stormwater before it is discharged into streams and bayous. Only unpolluted water may be discharged to a storm drain!



Sanitary Sewers collect wastewater from indoor (toilets, sinks, dishwashing machines, and floor drains) and transports it to a sewage treatment plant for removal of pollutants.



"Only unpolluted water may be discharged to a storm drain!"



Fats, Oil, and Grease (FOG)

Regular maintenance and service of your sewer lines and grease trap intercepter will help prevent sewer overflows to the storm drain system.

- Do not pour FOG into floor drains, sinks, or into parking lot inlets.
- Maintain grease traps!
- Recycle grease and oil.
- Use drying agents (kitty litter or towels to clean up spills).



Proper Cleaning

- Always empty washwater and mop buckets into the mop sink.
- Clean floor mats and garbage cans in a mop sink.
- Regularly inspect for and clean trash from the outside of the restaurant.



Garbage Dumpsters

- Always use garbage bags or trash cans.
- Do not rinse out dumpster! Request that your waste hauler exchange the dirty dumpster for a clean one.
- Keep dumpster lids closed and secure.
- Ensure dumpster drain plug is securely in place.
- Keep the area around the dumpster clean.
- Avoid placing of liquids and FOG in the dumpster.
- Do not overfill the dumpster.



TENNESSEE STATE PERMITS

Who Needs One?

Anyone engaged in the business of removing and disposing of domestic septage from septic tanks, holding tanks, portable toilets or other similar sewage treatment or disposal facilities must obtain a septic tank pumping contractor license from the Tennessee Division of Groundwater Protection.

What Information Must I Provide?

Applicants must submit "Division of Groundwater Protection Application for Septic Tank Pumping Contractor Permit" form (Form CN-0765). The application includes the following information: the business name and address, owner name and address, owner's physical description, method of removing septage, method of transporting septage, the number of trucks and state of registration, vehicle license numbers, pump trucks' capacities, number of gallons pumped per year, types of waste to be hauled, and county where owner intends to conduct most business. The applicant must have written permission of the proper official when contents are to be disposed of at a public wastewater treatment plant or written permission of the landowner and disposal site operator when land application site is used, including a copy of the domestic septage site permits.

How Will My Application Be Processed?

Completed application forms and application fee should be sent to the Division of Groundwater Protection at the local county office, a regional Environmental Assistance Center, or the Nashville central office. A detailed review of the application is conducted, and the applicant is sent a notification letter when the review is complete. A permit is granted or denied within 45 days of the date of application. Permits expire on December 31 each year and must be renewed. Permits are not transferable and become invalid upon change of ownership.

What Fees Are Required?

Permit fee: \$200

What Are My Rights and Responsibilities

After the Permit is Approved?

The applicant has the right to proceed with activities outlined in the approved permit. They must notify the Department of any changes to application information. The applicant is responsible for following all applicable state statutes and regulations. All pump truck vehicles must display the name and address of the firm and operator and must have an identifying sticker provided by the Department. Applicants are responsible for maintaining monthly logs. Applicants have the right to appeal a permit that has been denied, suspended or revoked.

What Are the Division's Rights and Re-

sponsibilities After the Permit is Approved?

The Division has the right to inspect pumpers' monthly logs. The Division has the right to revoke, suspend, or deny the issuance of a permit to any applicant who violates the state statutes or departmental regulations. Any person who violates or fails to comply with the state statutes, rules, or regulations may be subject to civil penalties.

Whom Do I Contact For Applications, Assistance and Other Information?

Applicants may obtain applications and information from the Tennessee Division of Groundwater Protection.

CITY OF MILLERSVILLE

REQUIREMENTS FOR SEPTIC CLEANING OPERATIONS



INFORMATIONAL BROCHURE

615-859-0880

CITY OF MILLERSVILLE

Primary Business Address
1246 Louisville Highway
Millersville, TN 37072

Phone: 615-859-0880
Fax: 615-851-1825
Email: karen.smith@cityofmillersville.com

MILLERSVILLE CODE OF ORDINANCES §82-155



Every person who operates equipment for the purpose of removing digested sludge from septic tanks, cesspools, and

other sewage disposal installations on private or public property must register with the building inspector and furnish such records of work done within the corporate limits as may be deemed necessary by the health officer.

WHO NEEDS TO REGISTER?

- Every person who operates equipment for the purpose of removing digested sludge within the city limits of Millersville.

HOW DO I REGISTER?

- Registration forms are available at City Hall or you may print the PDF version online at: www.cityofmillersville.com
- Complete the form prior to the start of work and return it to the following address:

1246 Louisville Highway
Millersville, TN 37072

WHAT INFORMATION IS REQUESTED ON THE FORM?

- Project address
- Company performing work
- Tennessee State License number

- Contact name and number
- Explanation of work to be completed
- Why work has been requested

WHAT DO I DO WHEN WORK IS COMPLETE?

- You must furnish the city with records of the work completed.

WHAT ARE THE FEES?

- There are no city fees associated with this process.

WHAT CITY DEPARTMENT OVERSEES THIS PROCESS?

- The Codes Department for the City of Millersville

CITY OF MILLERSVILLE

Primary Business Address
1246 Louisville Highway
Millersville, TN 37072

Phone: 615-859-0880
Fax: 615-851-1825
Email: karen.smith@cityofmillersville.com





AUTOMOTIVE REPAIR AND MAINTENANCE Minimum Standards and BMP's

City of Millersville
Codes Administration

Stormwater Management



It is our water, take this seriously.

Quick Facts From EPA Best Management Practices (BMP's)

- * Protect floor drains from discharges
- * Keep dumpster area clean and free of hazardous wastes
- * Never wash spilled material down storm drain or sanitary sewer drain
- * Use dry cleanup methods
- * Do not store drained vehicle fluids in open containers
- * Dispose of wastewater from closed-loop flushing systems as hazardous waste
- * Never wash parts outdoors
- * Do not dispose of spent parts-cleaning solution down the sanitary sewer, even if it is water-based
- * Keep waste disposal records as required by hazardous waste regulations for inspection
- * Change all fluids indoors
- * Use drip pans and transfer to appropriate containers as soon as possible
- * Have absorbent pads and booms on hand for spill response
- * Drain oil filters and other parts containing fluids before recycling them
- * Use closed-loop flushing systems to flush engines, radiators and transmissions to prevent discharges to the sanitary sewer



- * Avoid using spray-on solvent brake cleaner
- * Consider purchasing an aqueous brake washer
- * Use water-based cleaning products
- * Clean parts in a location equipped with drip pans, drain boards and drying racks



- * Avoid chlorinated solvents due to air quality and employee health concerns

To learn more about water pollution in industry, visit: www.epa.gov/sbtpages/water

Question E and F



Project Location: Slafors Creek
Date: 10/19 Time: _____

Waiver & Release from Liability

I understand that I am volunteering for activities through the Cumberland River Compact ("Compact"), the City of Millersville ("Millersville"), and the City of Goodlettsville ("Goodlettsville"). I understand that as a volunteer, I may be involved in physical activities that have a potential risk of injury. I assume this risk. I agree that I will perform activities that I am comfortable doing and follow all instructions.

I hereby release and discharge the Compact, Millersville, Goodlettsville, and all of their affiliates, officers, directors, employees, agents and volunteers from any claim, demand or cause of action that may be asserted by or on behalf of me as a result of my volunteering for activities through the Cumberland River Compact, the City of Millersville, and the City of Goodlettsville. I agree to be responsible for my behavior and to indemnify the Compact, Millersville, Goodlettsville, and all of their affiliates, officers, directors, employees, agents and volunteers from any damages or liabilities arising out of my activities as a volunteer through the Cumberland River Compact, the City of Millersville, and the City of Goodlettsville.

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By signing this form, I confirm that no compensation was received for the performance of activities under this proposal. I grant the Compact, Goodlettsville, Millersville, and their partners the irrevocable right to use photographs and video or audio recordings of me made while volunteering, in any medium, without pay.

	Print First and Last Name (Please Print)	Signature (Participant or Parent/Guardian if under 18)	Team Name/ Group	Age (if under 18)	E-Mail*
1	Liam Borgan		Belmont	9	mariah.borgan@gmail.com
2					
3					
4					
5					
6					
7					
8					
9					
10					

*Emails will be added to our Streamlines mailing list



Project Location: Slater's Creek (Millersville)
Date: 6-19 Time: _____

Waiver & Release from Liability

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	Print First and Last Name (Please Print)	Signature (Participant or Parent/Guardian if under 18)	Team Name/ Group	Age (if under 18)	E-Mail*
1	Keith Bell	<i>Keith Bell</i>	M'ville		ekoithbell@gmail.com
2	Olivia Whatley	<i>Olivia Whatley</i>			O.whately@pop.bell.net.edu
3	Joe Vitagliano	<i>Joe Vitagliano</i>			Joe.vitagliano@pop.bell.net.edu
4	Tami Laxins	<i>Tami Laxins</i>			TLKNS@HOTMAIL.COM
5	Allison Martin	<i>Allison Martin</i>			martin22allison@yahoo.com
6	Shannon Enrich	<i>Shannon Enrich</i>			shannon.enrich@hickory.com
7	Clifford Chin	<i>Clifford Chin</i>			clifford.chin@vanderbilt.edu
8	Scott Story	<i>Scott Story</i>	OHM Advisors		SCOTT_STORY@OHM-ALUMS.ORG
9	Jocelyne Lara	<i>Jocelyne Lara</i>			jocelynelara@live.com
10	Quwan Davis	<i>Quwan Davis</i>	Postmates		quwan.davis@postmates.com

*Emails will be added to our Streamlines mailing list



Project Location: Slatter's Creek (Millersville)
Date: 12/19 Time: _____

Waiver & Release from Liability

I understand that I am volunteering for activities through the Cumberland River Compact ("Compact"), the City of Millersville ("Millersville"), and the City of Goodlettsville ("Goodlettsville"). I understand that as a volunteer, I may be involved in physical activities that have a potential risk of injury. I assume this risk. I agree that I will perform activities that I am comfortable doing and follow all instructions.

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	Print First and Last Name (Please Print)	Signature (Participant or Parent/Guardian if under 18)	Team Name/ Group	Age (if under 18)	E-Mail*
1	Damika Callahan	<i>Damika Callahan</i>	—	—	damikacallahan@gmail.com
2	Christopher Rivers	<i>Christopher Rivers</i>	—	—	cr1@hotmail.com
3	R. Baxee	<i>R. Baxee</i>	OVER 18	OVER 18	RMBW3@COMCAST.NET
4	W. Garrett	<i>W. Garrett</i>	Somerville	"	Wgarrett@goodlettsville.gov
5	Gina Hartsau	<i>Gina Hartsau</i>	Summer County	over 18	ghartsau@summercountytg.gov
6	Paige Brazzell	<i>Paige Brazzell</i>	Summer County	over 18	pbrazzell@summercountytg.gov
7	Jos Phillips	<i>Jos Phillips</i>	City of Millersville	32	JPhillips@summercountytg.gov
8	Donna R Smith	<i>Donna R Smith</i>	Millersville	over 50	Donna.Smith@cityofmillersville.org
9	Sneha Lingam	<i>Sneha</i>	Vanderbilt		sneha.lingam@vanderbilt.edu
10	Catherine Livanov	<i>Catherine Livanov</i>	Vanderbilt		onzivanov@gmail.com

*Emails will be added to our Streamlines mailing list



Project Location: Shaffer's Creek
Date: 10/19 Time: _____

Waiver & Release from Liability

I understand that I am volunteering for activities through the Cumberland River Compact ("Compact"), the City of Millersville ("Millersville"), and the City of Goodlettsville ("Goodlettsville"). I understand that as a volunteer, I may be involved in physical activities that have a potential risk of injury. I assume this risk. I agree that I will perform activities that I am comfortable doing and follow all instructions.

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	Print First and Last Name (Please Print)	Signature (Participant or Parent/Guardian if under 18)	Team Name/ Group	Age (if under 18)	E-Mail*
1	Holly Harper		Chapman		
2	Alissa Schloman		Chapman		
3	Austin Triana				
4	Darceus Chandler		CHM		
5	Brian H. Whitaker		CHM		
6	Janet T. Jones				
7	Megan Tighe		Chapman		
8	Megan Hall				
9	Will Furuvana		Chapman		
10	Sean Cox				

*Emails will be added to our Streamlines mailing list



Project Location: Slater's Creek (Millersville)
Date: 6/19 Time: _____

Waiver & Release from Liability

I understand that I am volunteering for activities through the Cumberland River Compact ("Compact"), the City of Millersville ("Millersville"), and the City of Goodlettsville ("Goodlettsville"). I understand that as a volunteer, I may be involved in physical activities that have a potential risk of injury. I assume this risk. I agree that I will perform activities that I am comfortable doing and follow all instructions.

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	Print First and Last Name (Please Print)	Signature (Participant or Parent/Guardian if under 18)	Team Name/ Group	Age (if under 18)	E-Mail*
1	Yaima Alonso-Jeckell		Vanderbilt	—	yaima.alonso@gmail.com
2	Aaron Seckell		Vanderbilt		as109e.j@gmail.com
3					
4					
5					
6					
7					
8					
9					
10					

*Emails will be added to our Streamlines mailing list



Project Location: Skater's Creek
Date: 10/18 Time: _____

Waiver & Release from Liability

I understand that I am volunteering for activities through the Cumberland River Compact ("Compact"), the City of Millersville ("Millersville"), and the City of Goodlettsville ("Goodlettsville"). I understand that as a volunteer, I may be involved in physical activities that have a potential risk of injury. I assume this risk. I agree that I will perform activities that I am comfortable doing and follow all instructions.

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	Print First and Last Name (Please Print)	Signature (Participant or Parent/Guardian if under 18)	Team Name/ Group	Age (if under 18)	E-Mail*
1	Alanna Moring				
2	Danney Clements		Postvoter		
3	Elizabeth Tate		Chapman		
4	Layton Tate		Chapman 5		
5	Lea Russell		Estimates		
6	Long Vu		SE		
7	Laurie Gavilo-Lane		Gavilo	45	
8	Drew Lane		"		
9	Connor Lane		"		
10	CHARLOTTE STAFFORD		—		aske88@gmail.com

*Emails will be added to our Streamlines mailing list



CONSTRUCTION SITE STORMWATER RUNOFF POLLUTANT CONTROL
(SECTION 4.2.4)

(Question 5)

Supporting Materials

Question A

filed (original returned to public works, or assigned division) prior to issuance of the land disturbance permit.

- (5) Permit requirements. The following are conditions of land disturbance permit coverage. Any violation of these conditions will make the permit holder(s) subject to all enforcement actions and penalties outlined in this ordinance.
- (a) Submittal and approval by city staff and board(s) of the erosion prevention and sediment control plans.
- (b) Compliance with the site's TDEC construction general permit, TDEC ARAP, TDEC underground injection well permit, FEMA flood plain development permit, and other federal or state permits where applicable. (c) Compliance with approved erosion prevention and sediment control plan and EPSC performance standards.
- (d) Implementation and maintenance of appropriate erosion prevention and sediment control best management practices.
- (e) Construction site operators must control wastes such as discarded building materials, concrete truck washouts, chemicals, litter, and sanitary waste at the construction site to avoid adverse impacts to water quality.
- (6) Land disturbance surety. Prior to the issuance of a permit for any land disturbance activity, the applicant shall be required to provide a surety to the City of Goodlettsville to guarantee completion of all land and grade stabilization measures and improvements as shown by the approved grading plan. For areas when potentially hazardous soil or drainage conditions exist due to types of soils, steep grades, flood plain development, streams, or drainage ditches, the applicant may be required, to provide a surety to guarantee completion of all land and grade stabilization measures and improvements as shown by the approved plan.
- (7) Permit duration. Each land disturbance permit shall expire and become null and void when one of the following has occurred:
- (a) Six (6) months of no activity on the site has occurred.
- (b) Final stabilization of the site per the approved plans has occurred.
- (c) Issuance of a TDEC Notice of Termination (NOT). A copy must be provided to the city in order to close out the land disturbance permit.
- (d) Three (3) years from issuance of permit or if new federal or state regulations exist changing the scope of coverage where a new land disturbance permit is required.
- (e) In cases of expiration of the land disturbance permit, a permit may be re-issued with no additional fee if the plan and scope of the project submitted on the original land disturbance permit does not significantly change. When significant change applies, new permit fees must be paid. (Ord. #04-651, Jan. 2005, as replaced by Ord. #15-830, Feb. 2015)

19-105. Stormwater system design: construction and permanent stormwater management performance standards. (1) Applicability. This section shall be applicable to all land development, including, but not limited to, site plan applications, subdivision applications, land disturbance applications and grading applications. The requirements in this section shall apply to any new development or redevelopment site that meets one or more of the following criteria:

- (a) One (1) acre or more;
 - (i) New development that involves land disturbance activities of one (1) acre or more;
 - (ii) Redevelopment that involves other land disturbance activity of one (1) acre or more;
 - (b) Developments and redevelopments less than one acre of total land disturbance may also be required to obtain authorization under this ordinance if:
 - (i) The administrator has determined that the stormwater discharge from a site is causing, contributing to, or is likely to contribute to a violation of a state water quality standard;
 - (ii) The administrator has determined that the stormwater discharge is, or is likely to be a significant contributor of pollutants to waters of the state; or
 - (iii) Any new development or redevelopment, regardless of size, that is defined by the administrator to be a hotspot land use.
 - (c) Other options:
 - (i) Change in elevation of property.
 - (ii) Any land disturbance that requires coverage under a TDEC construction general permit.
 - (iii) Any disturbance that requires coverage under a TDEC ARAP.
- (2) General requirements. Stormwater at applicable developments and redevelopments shall be managed in accordance with the requirements contained within this section.
 - (a) Any discharge of stormwater or other fluid to an improved sinkhole or other injection well, as defined, must be authorized by permit or rule as a Class V underground injection well under the provisions of Tennessee Department of Environment and Conservation (TDEC) Rules, chapter 1200-4-6.
 - (b) Stormwater design or BMP manuals.
 - (i) Adoption. The city adopts as its MS4 stormwater design and Best Management Practices (BMP) manuals for stormwater management, construction and permanent, the following publications, which are incorporated by reference in this ordinance as if fully set out herein:
 - (A) TDEC Erosion Prevention and Sediment Control Handbook; most current edition.
 - (B) Tennessee Permanent Stormwater Management and Design Guidance Manual; most current edition. (C) Metro Nashville Stormwater Management Manual Volume 5, Low Impact Development
 - (D) And/or a collection of city approved BMPs.
 - (ii) The publications listed above include a list of acceptable BMPs including the specific design performance criteria and operation and maintenance requirements. These include city approved BMPs for permanent stormwater management including green infrastructure BMPs.
 - (iii) Stormwater facilities that are designed, constructed and maintained in accordance with these publications will be presumed to meet the minimum water quality performance standards.
 - (c) Submittal of a copy of the NOC, SWPPP and NOT to the local MS4

- (i) Permittees who discharge stormwater through an NPDES-permitted Municipal Separate Storm Sewer System (MS4) who are not exempted in section 1.4.5 (permit coverage through qualifying local program) of TDEC's Construction General Permit (CGP) must provide proof of coverage under the Construction General Permit (CGP); submit a copy of the Stormwater Pollution Prevention Plan (SWPPP); and at project completion, a copy of the signed Notice of Termination (NOT) to the administrator. Permitting status of all permittees covered (or previously covered) under this general permit as well as the most current list of all MS4 permits is available at the TDEC's data viewer web site.
 - (ii) Copies of additional applicable local, state or federal permits (i.e.: ARAP, etc.) must also be provided upon request.
 - (iii) If requested by the city, these permits must be provided before the issuance of any land disturbance permit or the equivalent.
- (3) **Stormwater pollution prevention plans for construction stormwater management.** (a) Requirement to prepare a SWPPP: The applicant must prepare a stormwater pollution prevention plan (SWPPP) for all construction activities that complies with subsection (6) below. The purpose of this plan is to identify owner/operator activities that could cause pollutants in the stormwater, and to describe measures or practices to control these pollutants during project construction.
- (b) Stormwater pollution prevention plan general requirements: The erosion prevention and sediment control plan component of the SWPPP shall adhere to the following requirements.
 - (i) The potential for soil erosion and sedimentation problems resulting from land disturbing activity shall be accurately described
 - (ii) The measures that are to be taken to control soil erosion and sedimentation problems shall be explained and illustrated
 - (iii) The length and complexity of the plan must be commensurate with the size of the project, severity of the site condition, and potential for off-site damage
 - (iv) If necessary, the measures to control soil erosion and sedimentation problems that are described in the plan shall be phased so that changes to the site that alter drainage patterns or characteristics during construction will be addressed by an appropriate phase of the plan.
 - (v) The plan shall be sealed by a registered professional engineer or landscape architect licensed in the State of Tennessee.
 - (vi) The plan shall conform to the requirements found in the general NPDES permit for stormwater discharges from construction activities (TNR100000), and shall include at least the following:
 - (A) Project description - Briefly describe the intended project and proposed land disturbing activity including number of units and structures to be constructed and infrastructure required.
 - (B) A topographic map with contour intervals of five feet (5') or less showing present conditions and proposed contours resulting from land disturbing activity.
 - (C) All existing drainage ways, including intermittent and wet-weather. Include any designated floodways or flood plains.

- (D) A general description of existing land cover. Individual trees and shrubs do not need to be identified.
- (E) Stands of existing trees as they are to be preserved upon project completion, specifying their general location on the property. Differentiation shall be made between existing trees to be preserved, trees to be removed and proposed planted trees. Tree protection measures must be identified, and the diameter of the area involved must also be identified on the plan and shown to scale. Information shall be supplied concerning the proposed destruction of exceptional and historic trees in setbacks and buffer strips, where they exist. Complete landscape plans may be submitted separately. The plan must include the sequence of implementation for tree protection measures.
- (F) Approximate limits of proposed clearing, grading and filling.
- (G) Approximate flows of existing stormwater leaving any portion of the site.
- (H) A general description of existing soil types and characteristics and any anticipated soil erosion and sedimentation problems resulting from existing characteristics.
- (I) Location, size and layout of proposed stormwater and sedimentation control improvements.
- (J) Existing and proposed drainage network.
- (K) Proposed drain tile or waterway sizes.
- (L) Approximate flows leaving site after construction and incorporating water run-off mitigation measures. The evaluation must include projected effects on property adjoining the site and on existing drainage facilities and systems. The plan must address the adequacy of outfalls from the development: when water is concentrated, what is the capacity of waterways, if any, accepting stormwater off-site; and what measures, including infiltration, sheeting into buffers, etc., are going to be used to prevent the scouring of waterways and drainage areas off-site, etc.
- (M) The projected sequence of work represented by the grading, drainage and sedimentation and erosion control plans as related to other major items of construction, beginning with the initiation of excavation and including the construction of any sediment basins or retention/detention facilities or any other structural BMPs.
- (N) Specific remediation measures to prevent erosion and sedimentation run-off. Plans shall include detailed drawings of all control measures used; stabilization measures including vegetation and nonvegetation measures, both temporary and permanent, will be detailed. Detailed construction notes and a maintenance schedule shall be included for all control measures in the plan.
- (O) Specific details for: the construction of stabilized construction entrance/exits, concrete washouts, and sediment basins for

controlling erosion; road access points; eliminating or keeping soil, sediment, and debris on streets and public ways at a level acceptable to the city. Soil, sediment, and debris brought onto streets and public ways must be removed by the end of the work day to the satisfaction of the city. Failure to remove the sediment, soil or debris shall be deemed a violation of this ordinance.

- (P) Proposed structures: location and identification of any proposed additional buildings, structures or development on the site.
- (Q) A description of on-site measures to be taken to recharge surface water into the ground water system through runoff reduction practices.
- (R) Specific details for construction waste management. Construction site operators shall control waste such as discarded building materials, concrete truck washout, petroleum products and petroleum related products, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality. When the material is erodible, such as soil, the site must be treated as a construction site.

(4) Design performance standards and requirements for permanent stormwater management. The following performance standards shall be addressed for permanent stormwater management at all applicable development and redevelopment sites effective as of fifteen (15) days following the adoption date of this ordinance:

- (a) Runoff reduction performance standard. The first inch of rainfall on the development or redevelopment shall be one hundred percent (100%) managed with no discharge to surface waters or the public storm sewer system. This standard shall be met using measures, alone or in combination, designed, built and maintained to infiltrate, evapotranspire or harvest and use the rainfall, in accordance with the site design layout practices and stormwater control measures provided in the Tennessee Permanent Stormwater Management and Design Guidance Manual or reference Metro Nashville's Low Impact Development Design Guidelines, most current edition.
 - (i) The pre-development infiltrative capacity of soils at the development or redevelopment must be taken into account in selection of infiltration-based stormwater control measures.
 - (ii) The Tennessee Runoff Reduction Assessment Tool (TN-RRAT) or Metro Nashville's Stormwater Management Manual Volume 5, Low Impact Development design guidelines shall be used by the site designer to determine compliance with the runoff reduction requirement.
 - (iii) Incentive standard: The following types of development or redevelopment shall receive a ten percent (10%) reduction in the volume of rainfall to be managed for any of the following types of development. Such incentives are additive such that a maximum reduction of fifty percent (50%) of the runoff reduction performance standard is possible for a project that meets all five (5) development types:
 - (A) Redevelopment;
 - (B) Brownfield redevelopment;

- (C) High density developments having greater than seven (7) units per acre;
 - (D) Vertical density developments having a Floor to Area Ratio (FAR) of two (2) or greater than eighteen (18) units per acre; and
 - (E) Mixed use and transit oriented development that is located within one half (1/2) mile of a mass transit station.
- (b) Runoff reduction performance standard compliance. Developments and redevelopments that achieve one hundred percent (100%) of the runoff reduction performance standard (or incentive standard if applicable) using only site design layout practices and/or stormwater control measures that are designed, built and maintained to infiltrate, evapotranspire or harvest and use the rainfall shall be exempt from compliance with the eighty percent (80%) TSS removal performance standard.
- (c) Runoff reduction limitations. Limitations to the application of runoff reduction requirements may prevent a development or redevelopment from meeting one hundred percent (100%) of the runoff reduction requirement. Such limitations may include, but are not limited to:
 - (i) Natural physical conditions exist at the development or redevelopment that preclude or highly limit the use of infiltration practices. Such conditions include, but are not limited to, the following circumstances:
 - (A) The presence of sinkholes or other karst features;
 - (B) A high prevalence of shallow bedrock;
 - (C) A high prevalence of poorly-drained soils (i.e., hydrologic soil group D), such that soil amendments to promote infiltration must be extensive;
 - (D) A high prevalence of contractive/expansive soils and their proximity to on-site or off-site structures; (E) Slopes greater than the maximums identified for the appropriate application of stormwater control measures;
 - (ii) The development lacks the available area to create the necessary hydraulic capacity to fully achieve the runoff reduction requirement through infiltration or evapotranspiration; and,
 - (iii) The proposed use for the development is inconsistent with the capture and re-use of stormwater;
 - (iv) Soil or topographic conditions at the development dictate that stormwater control measures which rely on infiltration to reduce stormwater volumes would be located in close proximity to on-site or off-site subsurface foundations, basements or crawlspaces where wet conditions or flooding is known or suspected to occur;
 - (v) Conditions exist at the development that create a potential for introducing pollutants into the groundwater, unless pre-treatment is provided;
 - (vi) Pre-existing soil contamination is present in areas that are or could be subject to contact with infiltrated stormwater;
 - (vii) The placement of on-site or off-site utilities precludes the use of stormwater control measures that infiltration, evapotranspire or harvest and use rainfall;

- (viii) The site has a historic or archeological significance that cannot be disturbed as determined by the state historic preservation office.
- (d) Eighty percent (80%) TSS removal performance standard: Developments and redevelopments that cannot meet one hundred percent (100%) of the runoff reduction performance standard using the site design layout practices and stormwater control measures provided in the Tennessee Permanent Stormwater Management and Design Guidance Manual must treat the remainder of the stipulated amount of runoff prior to discharge from the development or redevelopment with a technology documented to remove eighty percent (80%) Total Suspended Solids (TSS), unless an alternative provided under this ordinance is approved. The treatment technology must be designed, installed and maintained to continue to meet this performance standard.
- (e) It can be demonstrated that multiple criteria (not based solely on the difficulty or cost of implementing measures) rule out an adequate combination of infiltration, evapotranspiration, and reuse such as lack of available area to create the necessary infiltrative capacity; a site use that is inconsistent with capture and reuse of stormwater; physical conditions that preclude use of these practices.
- (f) Stormwater discharges to critical areas with sensitive resources (i.e., cold water fisheries, shellfish beds, swimming beaches, recharge areas, water supply reservoirs, etc.) may be subject to additional performance criteria, or may need to utilize or restrict certain stormwater management practices.
- (g) Stormwater discharges from hotspots may require the application of additional structural BMPs and pollution prevention practices beyond runoff reduction and eighty percent (80%) TSS removal practices.
- (h) Prior to or during the site design process, applicants for land disturbance permits shall consult with the administrator to determine if they are subject to additional stormwater design requirements.
 - (i) The calculations for determining peak flows shall be used for sizing all stormwater facilities.
- (5) Minimum peak discharge control requirements. The administrator may establish standards to regulate the quantity of stormwater discharged, therefore:
 - (a) Stormwater designs shall meet the storm frequency storage requirements; and,
 - (b) If hydrologic or topographic conditions warrant greater control than that provided by the minimum control requirements, the administrator may impose any and all additional requirements deemed necessary to control the volume, timing, and rate of runoff.
- (6) Permanent stormwater management plan requirements.
 - (a) Requirement to prepare a permanent stormwater management plan: The permanent stormwater management plan shall be prepared and submitted to the administrator for all applicable developments and redevelopments.
 - (b) The permanent stormwater management plan shall include sufficient information to allow the administrator to evaluate the environmental characteristics of the project site, the potential impacts of all proposed development of the site, both present and future, on the water resources, the appropriateness of the measures proposed for managing stormwater generated at the project site, and design compliance with the performance standards and requirements for permanent stormwater management identified in this ordinance.

- (c) The permanent stormwater management plan shall be sealed by a registered professional engineer or landscape architect licensed in the State of Tennessee.
- (d) The plan shall include, at a minimum, the elements listed below:
 - (i) Topographic base map: Topographic base map of the site which extends a minimum of one hundred feet (100') beyond the limits of the proposed development and indicates:
 - (A) Existing surface water drainage including streams, ponds, culverts, ditches, sink holes, wetlands; and the type, size, elevation, etc., of nearest upstream and downstream drainage structures;
 - (B) Current land use including all existing structures, locations of utilities, roads, and easements;
 - (C) All other existing significant natural and artificial features;
 - (D) Proposed land use with tabulation of the percentage of surface area to be adapted to various uses; drainage patterns; locations of utilities, roads and easements; the limits of clearing and grading.
 - (ii) A completed site assessment and inventory checklist (found in the Tennessee Permanent Stormwater Management and Design Guidance Manual).
 - (iii) Proposed structural and non-structural BMPs and stormwater control measures;
 - (iv) A written description of the site plan and justification of proposed changes in natural conditions may also be required;
 - (v) Calculations: hydrologic and hydraulic design calculations for the predevelopment and post-development conditions for the design storms specified in the approved stormwater design and BMP manuals. These calculations must show that the proposed stormwater management measures are capable of controlling runoff from the site in compliance with this chapter and the guidelines of the approved stormwater design and BMP manuals. Such calculations shall include:
 - (A) A description of the design storm frequency, duration, and intensity where applicable;
 - (B) Time of concentration;
 - (C) Soil curve numbers or runoff coefficients including assumed soil moisture conditions;
 - (D) Peak runoff rates and total runoff volumes for each watershed area;
 - (E) Infiltration rates, where applicable;
 - (F) Culvert, stormwater sewer, ditch and/or other stormwater conveyance capacities;
 - (G) Flow velocities;
 - (H) Data on the increase in rate and volume of runoff for the design storms referenced in the approved stormwater design and BMP manuals; and
 - (I) Documentation of sources for all computation methods and field test results.

- (J) Results from the Tennessee Runoff Reduction Assessment Tool (TNRRAT) or Metro Nashville's Stormwater Management Manual Volume 5, Low Impact Development Design.
- (vi) Soils information. If a stormwater management control measure depends on the hydrologic properties of soils (e.g., infiltration basins), then a soils report shall be submitted. The soils report shall be based on on-site boring logs or soil pit profiles and soil survey reports. The number and location of required soil borings or soil pits shall be determined based on what is needed to determine the suitability and distribution of soil types present at the location of the control measure.
- (vii) Eighty percent (80%) TSS removal information. If eighty percent (80%) TSS removal BMPs are included in the plan, then it must also include:
 - (A) A narrative description of all runoff reduction limitations that exist at the development or redevelopment;
 - (B) A map drawn to scale showing the location and boundaries of such limitations;
 - (C) Calculations showing the volume of runoff managed by runoff reduction stormwater control practices and the volume of runoff managed by eighty percent (80%) TSS removal BMPs; and,
 - (D) Calculations showing compliance with the eighty percent (80%) TSS removal performance standard.
- (vii) Maintenance and repair plan required. The design and planning of all permanent stormwater management facilities shall include detailed maintenance and repair procedures to ensure their continued performance. These plans will identify the parts or components of a stormwater management facility that need to be maintained and the equipment and skills or training necessary. Provisions for the periodic review and evaluation of the effectiveness of the maintenance program and the need for revisions or additional maintenance procedures shall be included in the plan.

19-106. Buffer zones. The goal of the water quality buffer is to preserve undisturbed vegetation that is native to the streamside habitat in the area of the project. Vegetated, preferably native, water quality buffers protect water bodies by providing structural integrity and canopy cover, as well as stormwater infiltration, filtration and evapotranspiration. Buffer width depends on the size of a drainage area. Streams or other waters with drainage areas less than one (1) square mile will require buffer widths of thirty feet (30') minimum. Streams or other waters with drainage areas greater than one (1) square mile will require buffer widths of sixty feet (60') minimum. The sixty feet (60') criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than thirty feet (30') at any measured location. The MS4 must develop and apply criteria for determining the circumstances under which these averages will be available. A determination that standards cannot be met may not be based solely on the difficulty or cost associated with implementation. Every attempt should be made for development and redevelopment activities not to take place within the buffer zone. If water quality buffer widths as defined above cannot be fully accomplished on-site, the MS4 must develop and apply criteria for determining the circumstances under which alternative buffer widths will be available. A determination that water quality buffer widths cannot be met on site may not be based solely on the difficulty or

Question B

- first inch of rainfall must be one hundred percent (100%) managed with no discharge to surface waters.
- (b) It can be demonstrated that the proposed development will not discharge, during or after construction; stormwater runoff that contains contaminants or will otherwise not affect, impair or degrade adjacent or downstream properties, conveyances, or streams.
 - (c) Alternative minimum requirements for on-site management of stormwater discharges have been established in a stormwater management plan that has been approved by the city.
- (2) Downstream damage, etc. prohibited. In order to receive consideration, the applicant must demonstrate to the satisfaction of the administrator that the proposed alternative will not lead to any of the following conditions downstream:
- (a) Deterioration of existing culverts, bridges, dams, structures or land;
 - (b) Degradation of biological functions or habitat;
 - (c) Accelerated streambank or streambed erosion or siltation;
 - (d) Increased threat of flood damage to public health, life or property.
- (3) Alternative request procedure. For consideration of an alternative stormwater management measure, a formal request shall be submitted to the administrator. The formal request shall be submitted with a stormwater management plan outlining why the primary stormwater management measure cannot be addressed and how the alternative measures will address the provisions outlined in this Ordinance. The plan shall demonstrate how the proposed development is not likely to impair attainment of the objectives of this chapter. The administrator shall notify the appellant customer of the date of the alternative request in writing; such written notice shall be given at the address provided following review of the request. The decision made by the administrator will be final and conclusive with no further administrative review.
- (4) Land disturbance permit not to be issued where alternatives requested. No land disturbance permit shall be issued where an alternative has been requested until the alternative is approved, unless allowed by the administrator. If no alternative is approved, the plans must be resubmitted with a stormwater management plan that meets the primary requirement for on-site stormwater management. If no alternative is approved, the owner has thirty (30) days to resubmit the land disturbance permit without facing additional fees. If the land disturbance permit is submitted more than thirty (30) days following the alternative request decision by the administrator, applicable fees will be charged.

19-104. Land disturbance permit. (1) General. The land disturbance permit is to be obtained by the owner(s) or owner(s) designee(s) for development or redevelopment of over an acre, or less than an acre if required by the administrator. The land disturbance permit is designed to track all applicable land disturbance activities and ensure they are monitored for compliant erosion prevention and sediment controls, the absence of illicit discharges leaving the site, and compliance with the city's TDEC NPDES MS4 general permit along with any applicable TDEC construction general permits, TDEC Aquatic Resources Alteration Permits (ARAP), and any other relevant permits. Tracking of these activities allows inspection, and in cases of non-compliance, enforcement actions to be taken.

- (2) Exemptions. The following land disturbance activities are exempt from the requirements of obtaining a land disturbance permit:
- (a) Surface mining as is defined in Tennessee Code Annotated, § 59-8-202.
 - (b) Such minor land disturbing activities as home gardens and individual home landscaping, home repairs, home additional or modifications, home maintenance work, and other related activities that result in no soil erosion leaving the site. (Erosion Prevention and Sediment Control (ESPC) practices may be enforced through individual building permits.)
 - (c) Agriculture practices involving the establishment, cultivation or harvesting of products in the field or orchard, preparing and planting of pastureland, farm ponds, dairy operations, livestock and poultry management practices, and the construction of farm buildings.
 - (d) Any project carried out under the technical supervision of NCRS, TDOT, TDEC, or USACE that is covered under applicable state or federal construction permits.
 - (e) Installation, maintenance, and repair of any underground public utility lines when such activity occurs on an existing road, street or sidewalk which is hard surfaced and such street, curb, gutter, or sidewalk construction has been approved.
 - (f) Any emergency activity that is immediately necessary for the protection of life, property, or natural resources. These activities may be undertaken without a land disturbance permit; however, the person conducting these excluded activities shall remain responsible for conducting these activities within accordance with provisions of this ordinance and other applicable regulations including responsibility for controlling sediment, illicit discharges, and runoff.
- (3) Supplemental permit. In cases where a secondary owner/operator will be working within an area already covered by an existing land disturbance permit that was issued under the name of a primary owner/operator, a supplemental land disturbance permit shall be obtained prior to commencement of the secondary owner/operators work. The application fee may be waived for any supplemental permit. Where applicable, prior to issuance of the supplemental land disturbance permit, the secondary owner/operator must show that coverage under the site's NPDES construction general permit has been obtained. Once covered by a land disturbance permit, all primary and secondary owner/operators will be considered by the city as co-permittees. If co-permittee's involvement in the construction activities affects the same project site, they will be held jointly and severally responsible for complying with the terms of the permits issued for that site.
- (4) Application. Application for the land disturbance permit shall be made to the administrator by the property owner(s) and co-permittee (if applicable). Applications are available from the public works department, or assigned division. No land disturbing activities shall take place prior to approval of the land disturbance permit application. Application fees must be paid and the recorded inspection and maintenance agreement

filed (original returned to public works, or assigned division) prior to issuance of the land disturbance permit.

- (5) Permit requirements. The following are conditions of land disturbance permit coverage. Any violation of these conditions will make the permit holder(s) subject to all enforcement actions and penalties outlined in this ordinance.
- (a) Submittal and approval by city staff and board(s) of the erosion prevention and sediment control plans.
 - (b) Compliance with the site's TDEC construction general permit, TDEC ARAP, TDEC underground injection well permit, FEMA flood plain development permit, and other federal or state permits where applicable. (c) Compliance with approved erosion prevention and sediment control plan and EPSC performance standards.
 - (d) Implementation and maintenance of appropriate erosion prevention and sediment control best management practices.
 - (e) Construction site operators must control wastes such as discarded building materials, concrete truck washouts, chemicals, litter, and sanitary waste at the construction site to avoid adverse impacts to water quality.
- (6) Land disturbance surety. Prior to the issuance of a permit for any land disturbance activity, the applicant shall be required to provide a surety to the City of Goodlettsville to guarantee completion of all land and grade stabilization measures and improvements as shown by the approved grading plan. For areas when potentially hazardous soil or drainage conditions exist due to types of soils, steep grades, flood plain development, streams, or drainage ditches, the applicant may be required, to provide a surety to guarantee completion of all land and grade stabilization measures and improvements as shown by the approved plan.
- (7) Permit duration. Each land disturbance permit shall expire and become null and void when one of the following has occurred:
- (a) Six (6) months of no activity on the site has occurred.
 - (b) Final stabilization of the site per the approved plans has occurred.
 - (c) Issuance of a TDEC Notice of Termination (NOT). A copy must be provided to the city in order to close out the land disturbance permit.
 - (d) Three (3) years from issuance of permit or if new federal or state regulations exist changing the scope of coverage where a new land disturbance permit is required.
 - (e) In cases of expiration of the land disturbance permit, a permit may be re-issued with no additional fee if the plan and scope of the project submitted on the original land disturbance permit does not significantly change. When significant change applies, new permit fees must be paid. (Ord. #04-651, Jan. 2005, as replaced by Ord. #15-830, Feb. 2015)

19-105. Stormwater system design: construction and permanent stormwater management

performance standards. (1) Applicability. This section shall be applicable to all land development, including, but not limited to, site plan applications, subdivision applications, land disturbance applications and grading applications. The requirements in this section shall apply to any new development or redevelopment site that meets one or more of the following criteria:

Question C

- years until the minimum seventy-five percent (75%) survival for one (1) year is achieved.
- (iv) In addition to the above requirements, a landscaping plan must be submitted with the final design describing the vegetative stabilization and management techniques to be used at a site after construction is completed. This plan will explain not only how the site will be stabilized after construction, but who will be responsible for the maintenance of vegetation at the site and what practices will be employed to ensure that adequate vegetative cover is preserved.
- (3) Inspection of stormwater management facilities. Periodic inspections of facilities shall be performed, documented, and reported in accordance with this chapter, as detailed in §16-506.
- (4) Records of installation and maintenance activities. Parties responsible for the operation and maintenance of a stormwater management facility shall make records of the installation of the stormwater facility, and of all maintenance and repairs to the facility, and shall retain the records for at least three (3) years. These records shall be made available to the city during inspection of the facility and at other reasonable times upon request.
- (5) Failure to meet or maintain design or maintenance standards. If a responsible party fails or refuses to meet the design or maintenance standards required for stormwater facilities under this chapter, the city, after reasonable notice, may correct a violation of the design standards or maintenance needs by performing all necessary work to place the facility in proper working condition. In the event that the stormwater management facility becomes a danger to public safety or public health, the city shall notify in writing the party responsible for maintenance of the stormwater management facility. Upon receipt of that notice, the responsible person shall have thirty (30) days to effect maintenance and repair of the facility in an approved manner. In the event that corrective action is not undertaken within that time, the city may take necessary corrective action. The cost of any action by the city under this section shall be charged to the responsible party and/or a lien placed on the property by the city.

19-108. Existing locations and ongoing developments.

- (1) On-site stormwater management facilities maintenance agreement.
 - (a) Where the stormwater facility is located on property that is subject to a development agreement, and the development agreement provides for a permanent stormwater maintenance agreement that runs with the land, the owners of property must execute an inspection and maintenance agreement that shall operate as a deed restriction binding on the current property owners and all subsequent property owners and their lessees and assigns, including but not limited to, homeowner associations or other groups or entities.
 - (b) The maintenance agreement shall:
 - (i) Assign responsibility for the maintenance and repair of the stormwater facility to the owners of the property upon which the facility is located and be recorded as such on the plat for the property by appropriate notation.
 - (ii) Provide for a periodic inspection by the property owners in accordance with the requirements of subsection (v) below for the purpose of documenting maintenance and repair needs and to ensure compliance



Reviewing and Updating Stormwater Management Programs

(Section 4.4)

Question 8

Supporting Materials

STREAM WATCH PROGRAM

you are interested in joining the committee to monitor the streams in the City of Millersville, please complete the application and return it to:

Stream Watch
City of Millersville
1246 Louisville Highway
Millersville, TN 37072

The committee meets once a quarter and shares information—we attend Stream Cleanup Events and lobby for commissioners for appropriate laws to control our natural resource. Once a year we participate in World Water Monitoring Day and test the water for temperature, pH, dissolved oxygen and turbidity. The tests are simple and all test tubes and tablets are provided. All of this takes place right here in the City of Millersville.

If you choose to be a part, I will send a name tag that you will be expected to wear when monitoring your section of stream. I will identify you as a member of Stream Watch. JOIN TODAY!



Facts for this brochure were obtained from the Environmental Protection Agency.

City of Millersville

1246 Louisville Highway
Millersville, TN 37072

Phone: 615-859-0880
Fax: 615-851-1825

City of Millersville

STREAM WATCH PROGRAM

Streams in our city



Telephone: 615-859-0880

A Challenge to
GET YOUR
BOOTS MUDDY!

Let the rain come down... rain events are the perfect time to observe runoff

in action. You will be able to see how much water travels across impervious surfaces and how much soil is being dislodged and deposited elsewhere.

Here's the challenge—during the next rain event, don your boots and go outside, yes, in the rain. Remember when you were a kid and you loved playing and sloshing in the wet stuff? Pretend that you are young again and have some fun.

Walk around your yard and notice how much of your yard is impervious surfaces, driveway, sidewalk, rooftop, etc. Follow the flow of the water across the surfaces of the yard to where it exits your lot and onto your neighbor's.

Now is the really important part, follow the flow from your neighborhood and see where it ends up. It may dump into a drainage ditch, onto the roadway and eventually into a stream.

Observe the following:

- The color of the water when it enters the stream or other water conveyance
- The color of the water when it leaves your lot
- Are ruts being cut out of any surfaces due to water flow?
- Where is the water flowing from to reach your lot

Now, decide what changes you can make to prevent sediment from leaving your site. Remember the goal is to have clear water, only, leaving your property.



He that plants trees loves others beside himself.

Dr. Thomas Fuller (1654 - 1734), Gnomologist, 1732

Cool Running Streams—Clean Water and You



Cool, Running Water—Clean Clear Water—Where are you in this image?

se your eyes and imagine a cool running stream. at images come to mind? Do you see trees, green banks and clear water? Do you want to wade or sit along bank and dangle your feet into the clear clean water?

What if I told you that our stream, Slaters Creek, is polluted due to E. coli and siltation? Without your help beautiful stream may never recover.

It may be controlled, in part, with larger buffer areas keep fecal matter from washing into the stream from domestic and wild animals. (Please pick up after your pet the life of Slaters Creek may depend on it.)

Siltation is yet another problem, when it rains, unpaved soil is dislodged and carried to the stream. This excess silt reduces the water's, squelches the oxygen destroys important animal habitats.



Flooding During Rain Events

Due to an increase in impervious surfaces, more water runs directly into Slaters Creek. While it used to carry only a small portion of the rain water, now it is expected to carry much more of it. This natural channel is easily overwhelmed in large rain events and is more likely to overflow its banks and flood the surrounding area. Once again siltation plays an important role. As the silt is deposited in the stream, the stream bed is raised and the water level, in turn, is also raised. One solution is to make sure there are no bare areas along the bank that will erode into the stream. Keep the bank vegetated.

Less Flow During Dry Spells

Where do you think water that infiltrates into the ground goes? Well, in a natural setting about 1/2 of the precipitation soaks into the ground and moves slowly underground and empties into stream channels.

When surfaces, whether manmade impervious or denuded soil, prevent the natural infiltration of water, there is less groundwater to move into the channel, thus less flow during dry seasons.



Slaters Creek - dry creek bed

Wider Channels with More Sediment in Them

Imagine rushing water moving down a channel after a rain-storm. Everything in its path that is not tied down or too heavy to move gets carried away. This includes all the loose sand, sediment, and dirt on the banks of the stream. Over time, pulses of rushing water erode the banks away and the channel gets wider and wider. Wider channels also allow large volumes of water to heat up from the sun, raising temperatures higher than what aquatic life can tolerate. Slaters Creek is suffering from this malady.

Our creek needs vegetation on its banks, reduction in siltation, canopies of trees to keep the water cool, wide buffer areas of undisturbed land and most importantly, YOU.



Slaters Creek - at Creekside Drive

Join Stream Watch and become an advocate for clean water in Millersville. Clean water is everyone's concern.

Stream Watch Volunteer Application

Application Date: _____

APPLICANT'S NAME	MAILING ADDRESS	PHONE NUMBER

STREET ADDRESS (if different): _____

Check all that apply.

I would be able and willing to:

- ☐ act as chairman of the committee
- ☐ recruit new members
- ☐ speak and/or make presentation to civic groups/citizens/school-aged children
- ☐ physically inspect portions of streams on a regular basis
- ☐ take pictures of areas of concern along the creek
- ☐ participate in stream cleanups
- ☐ help organize stream cleanups
- ☐ schedule training and seminars for citizens, citizen groups, city boards and city employees
- ☐ participate in environmental outreach opportunities (e.g. Safety Week)
- ☐ help test water once a year between September 18 and October 18
- ☐ attend local public education and outreach water quality seminars and events
- ☐ solicit and obtain corporate sponsorship to provide food/water at our various events
- ☐ other _____



ENFORCEMENT RESPONSE PLAN

(SECTION 4.5)

(Question 9)

Supporting Materials

Question A

- (7) Hot spots. The administrator is authorized to regulate hot spots. Upon written notification by the administrator, the property owner or designated facility manager of a hot spot area shall, at their expense, implement necessary controls and/or best management practices to prevent discharge of contaminated stormwater to the municipal separate storm sewer system. The administrator may require the facility to maintain inspection logs or other records to document compliance with this paragraph.

19-110. Enforcement. (1) Enforcement authority. The administrator shall have the authority to issue notices of violation and citations, and to impose the civil penalties provided in this section.

Measures authorized include:

- (a) Verbal warnings. At a minimum, verbal warnings must specify the nature of the violation and required corrective action.
 - (b) Written notices. Written notices must stipulate the nature of the violation and the required corrective action, with deadlines for taking such action.
 - (c) Citations with administrative penalties. The MS4 has the authority to assess monetary penalties, which may include civil and administrative penalties.
 - (d) Stop work orders. Stop work orders that require construction activities to be halted, except for those activities directed at cleaning up, abating discharge, and installing appropriate control measures.
 - (e) Withholding of plan approvals or other authorizations. Where a facility is in noncompliance, the MS4's own approval process affecting the facility's ability to discharge to the MS4 can be used to abate the violation.
 - (f) Additional measures. The MS4 may also use other escalated measures provided under local legal authorities. The MS4 may perform work necessary to improve erosion control measures and collect the funds from the responsible party in an appropriate manner, such as collecting against the project's bond or directly billing the responsible party to pay for work and materials.
- (2) Notification of violation.
- (a) Verbal warning. Verbal warning may be given at the discretion of the inspector when it appears the condition can be corrected by the violator within a reasonable time, which time shall be approved by the inspector.
 - (b) Written notice. Whenever the administrator finds that any permittee or any other person discharging stormwater has violated or is violating this ordinance or a permit or order issued hereunder, the administrator may serve upon such person written notice of the violation. Within ten (10) days of this notice, an explanation of the violation and a plan for the satisfactory correction and prevention thereof, to include specific required actions, shall be submitted to the administrator. Submission of this plan in no way relieves the discharger of liability for any violations occurring before or after receipt of the notice of violation.
 - (c) Consent orders. The administrator is empowered to enter into consent orders, assurances of voluntary compliance, or other similar documents establishing an agreement with the person responsible for the noncompliance. Such orders will include specific action to be taken by the person to correct the noncompliance within a time period also specified by the order. Consent orders shall have the same force and effect as administrative orders issued pursuant to paragraphs (d) and (e) below.

- (d) Show cause hearing. The administrator may order any person who violates this chapter or permit or order issued hereunder, to show cause why a proposed enforcement action should not be taken. Notice shall be served on the person specifying the time and place for the meeting, the proposed enforcement action and the reasons for such action, and a request that the violator show cause why this proposed enforcement action should not be taken. The notice of the meeting shall be served personally or by registered or certified mail (return receipt requested) at least ten (10) days prior to the hearing. Page | 27
- (e) Compliance order. When the administrator finds that any person has violated or continues to violate this chapter or a permit or order issued thereunder, he may issue an order to the violator directing that, following a specific time period, adequate structures or devices be installed and/or procedures implemented and properly operated. Orders may also contain such other requirements as might be reasonably necessary and appropriate to address the noncompliance, including the construction of appropriate structures, installation of devices, self-monitoring, and management practices.
- (f) Cease and desist and stop work orders. When the administrator finds that any person has violated or continues to violate this chapter or any permit or order issued hereunder, the administrator may issue a stop work order or an order to cease and desist all such violations and direct those persons in noncompliance to:
- (i) Comply forthwith; or
 - (ii) Take such appropriate remedial or preventive action as may be needed to properly address a continuing or threatened violation; including halting operations except for terminating the discharge and installing appropriate control measures.
- (g) Suspension, revocation or modification of permit. The administrator may suspend, revoke or modify the permit authorizing the land development project or any other project of the applicant or other responsible person within the city. A suspended, revoked or modified permit may be reinstated after the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein, provided such permit may be reinstated upon such conditions as the administrator may deem necessary to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations.
- (h) Conflicting standards. Whenever there is a conflict between any standard contained in this chapter and in the BMP manual(s) adopted by the city under this ordinance, the strictest standard shall prevail.

19-111. Penalties.

- (1) Violations. Any person who shall commit any act declared unlawful under this chapter, who violates any provision of this chapter, who violates the provisions of any permit issued pursuant to this chapter, or who fails or refuses to comply with any lawful communication or notice to abate or take corrective action by the administrator, shall be guilty of a civil offense.
- (2) Penalties. Under the authority provided in Tennessee Code Annotated, § 68-221-1106, the city declares that any person violating the provisions of this chapter may be assessed a civil penalty by the administrator of not less than fifty dollars (\$50.00) and not more than five thousand dollars (\$5,000.00) per day for each day of violation. Each day of violation shall constitute a separate violation.

- (3) Measuring civil penalties. In assessing a civil penalty, the administrator may consider:
- (a) The harm done to the public health or the environment;
 - (b) Whether the civil penalty imposed will be a substantial economic deterrent to the illegal activity;
 - (c) The economic benefit gained by the violator;
 - (d) The amount of effort put forth by the violator to remedy this violation;
 - (e) Any unusual or extraordinary enforcement costs incurred by the city;
 - (f) The amount of penalty established by ordinance or resolution for specific categories of violations; and
 - (g) Any equities of the situation which outweigh the benefit of imposing any penalty or damage assessment.
- (4) Recovery of damages and costs. In addition to the civil penalty in subsection (2) above, the city may recover:
- (a) All damages proximately caused by the violator to the city, which may include any reasonable expenses incurred in investigating violations of, and enforcing compliance with, this chapter, or any other actual damages caused by the violation.
 - (b) The costs of the city's maintenance of stormwater facilities when the user of such facilities fails to maintain them as required by this chapter.
- (5) Referral to TDEC. Where the city has used progressive enforcement to achieve compliance with this ordinance, and in the judgment of the city has not been successful, the city may refer the violation to TDEC. For the purposes of this provision, "progressive enforcement" shall mean two (2) follow-up inspections and/or two (2) warning notifications. In addition, enforcement referrals to TDEC must include, at a minimum, the following information:
- (a) Construction project or industrial facility location;
 - (b) Name of owner or operator;
 - (c) Estimated construction project or size or type of industrial activity (including SIC code, if known);
 - (d) Records of communications with the owner or operator regarding the violation, including at least two follow-up inspections, two (2) warning letters or notices of violation, and any response from the owner or operator.
- (6) Other remedies. The city may bring legal action to enjoin the continuing violation of this chapter, and the existence of any other remedy, at law or equity, shall be no defense to any such actions.
- (7) Remedies cumulative. The remedies set forth in this section shall be cumulative, not exclusive, and it shall not be a defense to any action, civil or criminal, that one (1) or more of the remedies set forth herein has been sought or granted. (Ord. #04-651, Jan. 2005, as amended by Ord. #10-738, April 2010, and replaced by Ord. #15-830, Feb. 2015)

19-112. Appeals. Pursuant to Tennessee Code Annotated, § 68-221-1106(d), any person aggrieved by the imposition of a civil penalty or damage assessment as provided by this chapter may appeal said penalty or damage assessment to the city's governing body.

- (1) Appeals to be in writing. The appeal shall be in writing and filed with the municipal recorder or clerk within fifteen (15) days after the civil penalty and/or damage assessment is served in any manner authorized by law.

Project: Millersville Street Paving 2020

				Milling	1.5 Surface Budget No Level If Needed		Total Tons	Budget W/Leveling				
					165	Leveling	W/Leveling			Customers	Score	
Locations	Length	Width	SYS		LBS	LBS						
Cartwright North	2504	26.5	7372.9		608.3	\$ 41,361.91	92.2	700	\$	47,628.86	25	8-9
McMurtry Road	5016	22	12261.3		1011.6	\$ 68,786.08	153.3	1165	\$	79,208.21	41	6-8
Ruby Lane	590	13.5	885		73	\$ 4,964.85	11.1	84	\$	5,717.10	6	10
Shell Road	3521	20.2	7902.7		652	\$ 44,334.08	98.8	751	\$	51,051.37	32	6-8
Ridgecrest Drive	2975	25	8263.9		681	\$ 46,360.42	103.3	785	\$	53,384.72	12	8
Glenwood Drive	1620	26	4680	\$ 14,040.00	386.1	\$ 40,294.80	58.5	445	\$	44,272.80	23	7-8
Springhollow	1960	26	6527	\$ 19,281.00	538.5	\$ 55,897.47	81.6	620	\$	61,445.42	18	7-8
Cartwright South	1052	21	2454		538.5	16,161.00	81.6	620	\$	16,161.00	11	8-9
Pole Hill Road	1828.8	20	4066.2		335.2	\$ 26,055.33	58	387	\$	26,316.00	37	4.0-7.0 65% = 4 35%=7
	21,066.80		54,413.00		4,824.20	\$ 344,215.94	738.4	5557	\$	385,185.48		
\$68 per ton from Rogers Group						\$344,215.94		\$		385,185.48		\$400,000 Budget
Stripping Estimate	21,066.80 X 4 X.15		12,640.08		\$	12,640.08		\$		12,640.08		
					\$	356,856.02		\$		397,825.56		
\$73.36 per ton from Deweese Company						\$ 383,229.96		\$		407,661.52		
Stripping Estimate	21,066.80 X 4 X.15		12,040.08		\$	13,640.08		\$		12,640.08		
					\$	396,870.04		\$		420,301.60		

Striping Estimate - Kerr Construction

Locations	Length			
Cartwright North	2504	X4	X.15	\$ 1,502.40
McMurtry Road	5016	X4	X.15	\$ 3,009.60
Ruby Lane	590	X4	X.15	\$ 354.00
Shell Road	3521	X4	X.15	\$ 2,112.60
Ridgecrest Drive	2975	X4	X.15	\$ 1,785.00
Glenwood Drive	1620	X4	X.15	\$ 972.00
Springhollow	1960	X4	X.15	\$ 1,175.00
Cartwright South	1052	X4	X.15	\$ 1,096.80
Pole Hill Road	1828.8	X4	X.15	\$ 631.20
	21,066.80			\$ 12,640.08