TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
JACKSON ENVIRONMENTAL FIELD OFFICE
1625 HOLLYWOOD DRIVE
JACKSON, TENNESSEE 38305-4316
PHONE (731) 512-1300 STATEWIDE 1-888-891-8332 FAX (731) 661-6283

February 19, 2016

Jerry McClinton, MS4 Program Manager
City of Brownsville
111 N. Washington Avenue
Brownsville, Tennessee 38012

REF: MS4 Audit
Permit No.: TNS075191
Haywood County

Dear Mr. McClinton,

On Tuesday, January 26 through Thursday, January 28, 2016, I worked through an Audit of your City's MS4 Program. I was assited by Lauren Patterson, Brownsville's GIS/ Stormwater Director of your Code Enforcement Staff and Tom Lawrence Brownsville's MS4 consultant, to establish the compliance status of Brownsville's MS4 program.

As you recall, the last meeting that I had with you related to your compliance status was almost two years ago on a Thursday, December 4, 2014. At that time, the Brownsville MS4 program had become stagnant and you were in a transition time between mayors.

What was encouraging to me and my Manager, Conner Franklin at that time was the commitments that you were able to make. As a point of reference, I thought it would be good to list your commitments so that his inspector can complement you and the City for following through. The list of commitments is as follows:

The following is a list of key information set-forth during the December 4, 2014 meeting:

1. ***The City of Brownsville has renewed its contract with their MS4 consultant, Tom Lawrence, PE for a twelve month period of time. The effective date of the contract renewal is November 25, 2014.***

2. ***The City of Brownsville has budgeted for and committed to hire a GIS/ Stormwater individual to enhance the MS4 capabilities by the end of the first quarter of 2015.***

3. ***As part of the contract with Tom Lawrence, once the new MS4 position is filled, Mr. Lawrence will train that individual for MS4 applications of the GIS program. That* individual *will also be trained in all aspects of the requirements of the MS4 permit and program.***

4. *The 2014 Annual Report will be received in the JEFO on or before Friday, January 30, 2015. The public notice was waived by the JEFO for this specific submittal.*

5. *A "MS4 Audit" has been tentatively scheduled for November, 2015.*

6. *You agree to notify me when your new employee has been hired. Once that person has begun training with Tom Lawrence, I will contact Mr. Lawrence to schedule a time to come by to meet the new employee and assess progress towards compliance.*

7. *Monthly "progress reports" will be submitted to the JEFO at least until the 2015 Audit. These progress reports can be as simple as an email to me, but the progress needs to be noted in a written format.*

As a representative of the State's Division of Water Resources, it is a pleasure to be able to confirm that the City of Brownsville met all of the December 4, 2014 commitments.

Now to the details of your audit based on the requirements of the 2010 to 2015 MS4 Phase II Permit:

Stormwater Management Plan

***Public Education and Outreach*:**

1. **On question (4) related to "hot spots", yard debris and litter was all that was listed.**

   After discussion, it was mutually agreed that the industrial area containing the Mid-South Farmer's Co-op, Apex-Teknor, and B.T Ready Mix should be added to Brownsville's "Hot Spot" list, along with Hooper Timber Company, LLC which has begun spraying their logs again. They had ceased the log spraying in 2010.

   The first three listed above are located adjacent to Little Nixon Creek and the timber company is located adjacent to Sugar Creek. Both of these creeks are on the State of Tennessee's Impaired/ Unavailable list that requires a high level of protection from any industrial or construction site run-off.

2. **Your Public Information and Education Plan (PIE) was found to be very good. It was encouraging to be told of the actions already being taken to fulfill the plan.**

   All activities are currently documented by a hard copy narrative that is kept in a file.

Public Involvement and Participation:

1. **The general public is kept informed of all MS4 activities by utilizing the local newspaper and the City's website. It was obvious that the information is made available to the public since there were people coming in City Hall to voice their opinion on a local proposed retail business during this audit.**

   It was very unique that the aldermen of the City of Brownsville have neighborhood meetings within their Wards and often times use these gatherings to educate the citizens of Brownsville on stormwater pollution. This overall team effort is to be commended.

2. **One needed enhancement noted and discussed in great detail was the City's website related to the general public's access to the stormwater information. Currently, to get to the stormwater information, someone has to search through the "Public Works" Department information to find out any information. It seemed too difficult to access by this inspector.**

   Recommendation: Add a "stand alone" link on the first page of the website that would direct someone quickly to all stormwater related information. The information of highest priority on this link should be the stormwater contact. There should also be a means to report an illicit discharge online, as well.

   It could also provide a means to accept public comment on proposed development projects and such and as a means to promote educational information.

Illicit Discharge Detection and Elimination (IDDE):

1. **To the City's credit, the City of Brownsville adopted the stormwater "Model Ordinance" developed by Sidney D. Hemsley, J.D. and John C. Chlarson P.E. in May of 2013. The City of Brownsville officially adopted the ordinance on July 9, 2013.**

2. **The City is current with the 2010 MS4, Phase II permit related to the mapping requirements. In fact, the mapping system development is well into the proposed mapping requirements of the pending 2016 MS4 Phase II permit.**

   Recommendation: Continue to develop your GIS mapping system that will eventually be an advanced tool for future drainage and MS4 issue evaluations. It will also give other departments such as Public Works, Fire Departments, and emergency responders another tool to assist them in protecting the water quality of the community of Brownsville.

3. **It was found that the SWMP in conjunction with the Emergency Response Plan (ERP) gives guidelines to conduct an IDDE program.**

Recommendation: Add an item "g." to the SWMP's "Section 4" dealing with IDDE's. The item would mention the solicitation of other agencies to help in looking for and reporting any illicit discharges seen on their routes such as the trash collection groups, water, electric, and gas meter readers, school bus drivers, etc.

The more eyes we have looking, the better for your MS4 Program.

It should be noted that "stormwater awareness training" has been conducted for City workers. If possible, it would be advantageous to expand the training to include Brownsville Energy Authority personnel along with County School System (mainly bus drivers and maintenance crews) employees. Unfortunately, this may be outside your jurisdiction and would require partnering with the different agencies.

4. **It was encouraging to note that even though the SWMP states that you are required to respond to a complaint within 7 days, your typical response time is 2 days or less.**

Construction Site Stormwater Runoff Control:

1. **Under this section a significant observation is that the "Plans Review" process has been established in great detail in Brownsville's Stormwater Ordinance (Section 14-504.(3). This inspector was pleased to fine in the ordinance that there is the requirement that project disturbing more than an acre requires the developer to provide a Notice of Coverage (NOC) from the Division of Water Resources (DWR) before Brownsville's City Planning Commision will begin consideration of the proposed project. This is a very important cross reference that is often overlooked by MS4 communities.**

   In general terms this inspector understands your plans review process as follows:

   - **Plans are submitted to Jerry McClinton, the Code & Enforcement Manager who does a preliminary review to make sure it is presentable to the "Planning Commission".**

   - **Once the plan package is in order to proceed, it is presented to the "Planning Commission" which meets on the fourth Thursday of each month and the meetings are open to the public.**

   - **The City of Brownsville has a "Planning Consultant" on retainer as needed.**

2. **Please be reminded that a Level II, TNESPC Certified plans reviewer will be required to be in the plans review process in the proposed 2016, Phase II MS4 General Permit once it becomes effective. This requirement can be accomplished internally or with external assistance from Level II Certified individuals.**

3. **If this inspector understood correctly, essentially all MS4 construction inspections are being conducted by you. The thought is that while you are there inspecting as the "code enforcement" inspector you conduct the required monthly MS4 stormwater compliance inspections as well.**

   During discussion, however, the City did not appear (at least one could not be produced during the audit) to have any standardized inspection form. A form is extremely important for documentation (especially if enforcement should ever be required) and consistency in inspections (especially when more than one inspector is conducting the inspections).

   Feel free to use TDEC's form. There is no need for you to develop one unless you think it is needed to to meet a specific Brownsville need.

4. **It was good to note that the City experiencd no construction violations during 2015.**

Permanent Stormwater Management in New Development and Redevelopment:

1. **The City of Brownsville deserves to be recognized, the City adopted the needed ordinance July 9, 2013.**

   Appropriately, the City has delayed implementation due to the uncertainty of the effective date of the pending 2016 MS4 Phase II Permit. The current implementation date set by TDEC is October 31, 2016.

2. **The City completed an EPA Scorecard in 2013 but never submitted it. Technically is should have been completed sometime after May 16, 2012, and submitted with their 2012 Annual Report.**

   Comment: This is a permit requirement. Based on my personal confidence in you, your current staff, and the consultant that I understand the City will keep on retainer, this inspector anticipates full compliance on this issue during the next permit cycle.

3. **It was established that the City of Brownsville will use the TDEC Post Construction Manual. Inspection forms will be developed for the permanent BMP inspections over the next permit cycle to deal with qualifying developments.**

Pollution Prevention/ Good Housekeeping for Municipal Operations:

1. **The list of municipal facilities that have a stormwater exposure include three fire stations, a Municipal Complex, and the Public Works Yard.**

   During discussion it was agreed to add the school bus facility, and the Parks' facility which maintain equipment.

2. **With the exception of the school bus maintenance employees and drivers, all employees have had annual stormwater training. Public Works has 19 employees, the Fire Department has 25 employees, and the Municipal Facility had 4 employees.**

3. **Each facility listed has an individual Stormwater Pollution Prevention Plan (SWPPP) and the inspection documentation to go along with the plans. Having SWPPP's for each City facility is commendable. There are but a few MS4's that can claim this. The public Work's SWPPP was inspected in greatest detail.**

   Comment(s):

   - **There was a drain inlet adjacent to the fuel pump. According to Tom Lawrence, you told him that that specific inlet was connected to the domestic sewer. That is good for stormwater but fuel residue into a domestic sewer system is not a good thing.**

     Either way, the stormwater entering this inlet needs to be handled appropriately. If an oil/ water separator is not included in this drainage system it is probably needed.

   - **The bags of salt used for street application during ice and snow were found to be under roof. The fact that you protect the bags of salt stormwater contact is considered the correct BMP.**

   - **Adjacent to the banks of Little Nixon Creek, piles of spent asphalt and sand were found. It is assumed that these products were leftovers and were deposited next to the top bank of Little Nixon Creek. There was no evidence of any materials from these piles of spoil on the Public Works' Facility entering Little Nixon Creek. I will, however, need to point out that Little Nixon Creek is an impaired (unavailable) stream and that requires a 60 foot buffer.**

     It is difficult to convince the general public that buffers are needed and why, and then violate our own statement and place spoil at the top of bank. Should we not set an example?

     A suggestion: Move the spoil piles to at least 60' from top of bank. Then install some brightly colored silt fence (or equivalent) around the bottoms of the piles or cover them, whichever is better for you. Let us demonstrate to the public as to how we expect it done.

4. **It is my understanding that you are involved with any proposed "flood management" projects which from an MS4 perspective is considered critical to preventing a negative impact on water quality within your MS4 jurisdiction. Please involve your staff in these projects.**

Reviewing and Up-dating Stormwater Management Program:

As stated at the beginning of this letter, the City of Brownsville has made tremendous MS4 progress since December, 2014. It was apparent during the audit that your program is now under constant internal evaluation and adaptation to whatever modifications are necessary for the improvement of your program.

You are encouraged to continue your self-evaluation program.

Discharges to Water Quality Impaired Waters:

1. **The City of Brownsville has three (3) impaired streams within its MS4 jurisdiction, Sugar Creek, Nixon Creek, and Little Nixon Creek. Based on the State's watershed determinations, the City of Brownsville is considered a source of the stream's impairment. Due to that designation, the City of Brownsville is required to complete E coli testing along with Semi-Quantitative Single Habitat (SQSH) evaluation.**

2. **I was informed that the E coli sampling has been completed (the results were provided) and you will have the SQSH evaluation completed by May 16, 2016 (see highlighted note below) to meet the requirements of the 2010 MS4 permit.**

   During this portion of our discussion I was asked to consider dropping Nixon Creek from your list of streams to be evaluated due to the fact that it has a small footprint inside of your MS4 area. The request has merit and I will continue to evaluate as you set-up your SQSH sampling program.

   I failed to remember and point out that the SQSH evaluations must only be completed between the months of June through September.

   Let me quickly say, I will work with you and your program on meeting this permit requirement.

3. **I was informed that your required Visual Stream Assessments (VSA) will be scheduled and completed as soon as the weather stabilizes which will probably push off sampling until sometime in the month of March, 2016.**

Additional Observation(s):

1. **During the discussion of "hot Spots" I was informed that Hooper Timber Company, LLC (HTC) was again using their sprinkler system to keep their logs moist. In my last industrial inspection of them, HTC has ceased their use of wetting-down their logs prior to processing. This could be a problem especially due to the fact that impaired Sugar Creek borders their property.**

To add to the concern about this facility's impact on local water quality is that we observed where by-product materials had been pushed into a tributary to Sugar Creek and a 500 gallon fuel tank had been placed within 100 feet of the top of bank.

In response to these findings, it was agreed that Ms. Patterson and I would set a time and conduct a joint inspection of this facility.

2. **While at the Public Works facility, it was observed that there was considerable flow Restrictions noted in Little Nixon Creek, mainly trees that had fallen into the channel. These restrictions should be carefully removed not to damage any of the existing vegetative canopies.**

3. **There was no obvious stormwater issue noted at the school bus terminal, maintenance facility and fueling islands. This facility should, however, be added to your "drive by" list.**

4. **Mid-South Farmer's Co-op was visited and found to have a retention basin that captures and holds all stormwater run-offs from the facility. No potential avenue of discharge was found. I will probably re-visit this facility to make sure the observations the day of the audit were indeed valid.**

SUMMARY:

1. **Let me first re-state how proud I am of the progress the City of Brownsville has made towards compliance. The results of this audit is very encouraging to this inspector and I believe will be an encouragement to other Phase II MS4's of equivalent size and share a similar permit compliance status that the City of Brownsville has worked through.**

2. **The only "non-compliance" issue is completing all of the required stream monitoring and the VSA's. This inspector has complete confidence that this will be completed within the timeframe specified during this audit.**

3. **Continue to develop your GIS stormwater mapping system and utilize it as much as possible to incorporate stormwater data, such as tracking complaints, illicit discharges, TDEC issued CGP's as well as those of the City of Brownsville hot spot candidates, etc.**

4. **Continue to monitor the development of the proposed 2016 MS4, Phase II permit and be prepared to accommodate the changes. As of the writing of this letter, the "Public Notice" date is Monday, February 22, 2016.**

5. **As a potential project towards improving the habitat of Sugar Creek, consider planting trees along the top bank in the stretch from South Washington westward towards the Brownsville Wastewater Treatment Plant. The addition of trees along Sugar Creek will develop into a needed canopy lowering the water temperature and**

increasing the quality of the aquatic habitat. This is becoming the one of the most recommended first steps to the improvement of water quality along a creek that is deficient in canopy.

Possibly this could be utilized as a community outreach and involvement activity for your program. Hopefully you got your copy of the "Tennessee Riparian Buffer Handbook". It has many suggested improvement plans.

Again, it was enjoyable working with Lauren Patterson and Tom Lawrence as they endured TDEC's MS4 Audit of the City of Brownsville's MS4 Program. Their time and cooperative spirit towards MS4 compliance was appreciated. I look forward to continuing to partnering with you, Lauren Patterson and Tom Lawrence in the future as we all work together for the good of Brownsville's MS4 Program.

If you have any questions concerning this letter or if I may assist in any other area of concern that you think I can assist you with, please feel free to contact by phone at 731-512-1362 or by email at James.W.Scott@tn.gov.

Sincerely,

James W. Scott

James W. Scott

Division of Water Resources
Jackson Environmental Field Office
1625 Hollywood Drive
Jackson, Tennessee 38305

Cc

The Honorable William D. Rawls
Mayor, City of Brownsville
111 North Washington
P.O. Box 449
Brownsville, Tennessee 38012

Lauren Patterson, GIS/Stormwater Director
111 North Washington Avenue
P.O. Box 449
Brownsville, Tennessee 38012

Tom Lawrence, PE
231 N. Avalon Street
Memphis, Tennessee 38112

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

Small Municipal Separate Storm Sewer System (MS4) Audit Worksheet* - Rev 1.2

MS4 Name: Brownsville, TN	Date: 01/26-28/2016
County: Haywood	Permit #: TNS075191
Responsible Official: Mayor William D. Rawls	NOC Date: May 16, 2011
On-Site Representative(s): Lauren Patterson and Jerry McClinton Phone Number(s): 731-772-1212 and 731-772-1212	
Name/Address/Title/Phone Number of MS4 Contact Person: Lauren Patterson Stormwater Manager 111 North Washington, PO Box 449 Brownsville, TN 38012 731-772-1212	

Y =Yes N= No (Circle one)

Stormwater Management Program (NPDES Permit Section 4.1.)

1. Y N Has a written Stormwater Management Plan (SWMP) been developed? (4.1.)

Minimum Control Measure #1: Public Education and Outreach (4.2.1)

2. Y N Has this program element been included in the SWMP? (4.2.1)

3. Y N Have they implemented a public education and outreach program? (4.2.1)

4. Y N Have they identified "hot spots" within their jurisdiction? (4.2.1)

If yes, list specific events/activities focused on "hot spot" areas and the pollutant(s) of concern.

Brownsville: Residential Areas as hot spots to focus on Yard Debris and Litter

JWS Comment(s): Should add industrial areas to the list of "Hot Spots" such as B.T. Ready Mix, the local Co-op, Hooper Hardwoods, automotive repair shops, etc.

[*Hot spot* means an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater. Examples might include operations producing concrete or asphalt, auto repair shops, auto supply shops, large commercial parking areas and restaurants. (permit definition)]

5. Y N Have they developed a written Public Information and Education Plan (PIE)? (Due 12 months from NOC effective date) (4.2.1.)

6. Y N Has a method to evaluate the plan's effectiveness been incorporated into the PIE? (4.2.1.)

JWS Comment(s): ***It was agreed that measurement of the effectiveness an educational program is difficult. Brownsville's approach then is to document all educational programs outlined in their PIE and attempt to find ways to assess the effectiveness over the duration of the permit.***

7. Y N Does the PIE detail specific goals and specific public information events/activities that will occur over the remainder of the permit cycle? (4.2.1.)

JWS Comment(s): ***The goals are somewhat general. Their generalities must be put in perspective of the small community that Brownville's MS4 represents. It will take time to develop the relationships mentioned in their "PIE". After all, Haywood County is very rural and farming is by far the main industry.***

Also, in reality, Brownsville's MS4 program didn't really begin in earnest until 2013, but tremendous strides have been made since then.

8. Does the PIE include targeted educational campaigns addressing the following issues (4.2.1.):

Y N General public awareness on the impacts on water quality from general housekeeping maintenance/activities?

Y N Home owner associations and other operators of permanent BMPs awareness of the importance of maintenance activities?

Y N Local engineering and development community awareness of the stormwater ordinances, regulations, and guidance materials related to long-term water quality impacts?

Y N General public and professional chemical applicators awareness on the proper storage, use, and disposal of pesticides, herbicides, and fertilizers?

Y N General public and professional chemical applicators awareness on the proper storage, use, and disposal of oil and other automotive-related fluids?

Y N General public and municipal employees on the awareness of identifying and reporting procedures for illicit connections/discharges, sanitary sewer seepage, spills, etc.?

Y N Local engineering, development, and construction community awareness of stormwater ordinances, regulations and guidance materials related to construction phase water quality impacts?

Y N Municipal employee/contractor awareness of water quality impacts from daily operations?

9. Y N Do they track and maintain records of these activities? (4.2.1.)

JWS Comment: **They currently use a manual system. The method consists of a writing a memo to the file documenting the event, meeting, etc. The memo is then filed.**

Minimum Control Measure #2: Public Involvement/Participation (4.2.2)

10. Y N Has this program element been included in the SWMP? (4.1.)

11. Y N Have they complied with public notice requirements? (4.2.2) [i.e., A public notice would normally be required when the local government proposes to enact a stormwater management ordinance, changes to ordinance, etc.]

If yes, what method(s) of advertising are they using? **Website and Newspaper**

12. Y N Have they identified and published the name of the stormwater contact?

Where is this information located? **Annual Report and Website**

13. Y N Have they created a website devoted to their stormwater program?

Internet (Identify website): Under Public Works at www.brownsvilletn.gov

JWS Comment: This inspector found it rather difficult to get to the stormwater information on the website.

14. How do they ensure public participation and involvement during the stormwater management program development process and/or during program changes? (i.e. stormwater advisory groups) – **Advertise public participation opportunities, held one event after hours (at 6 PM) and another one in conjunction with a Board meeting. Talk about stormwater on the Mayor's radio show. Looking into associating with a community group.**

15. How do they encourage citizen reporting of illegal spillage, dumping or illicit disposal of materials into the MS4 system? (i.e. hotlines, website link) (4.2.2.) – **Information about what is stormwater pollution is on website and hotline number available on the website. Calls to City Hall number will also quickly be forwarded to stormwater staff.**

16. How was the annual report presented (i.e., public meeting, posted on the internet, etc.) (5.4.) **Public Meeting at a Regular Board Meeting**

17. Y N Are stormwater related volunteer activities sponsored or endorsed by the MS4? **The City has encouraged residents to attend public meetings and to report stormwater problems and potential problems that are observed. No separate events have been held. The City is considering events to ensure that they can be safely conducted.**

JWS Comment: They have had no "special promotions of this nature to date. It is considered wise by this inspector that Brownsville is researching liability issues if they incorporate the general public in special stormwater projects.

What participatory/stewardship activities (i.e. waterbody cleanups, storm drain stenciling, etc.) did they implement? **Brownsville is looking into a partnership with a community group for community activities.**

What is their method of advertising the public involvement opportunities?
(Due within 30 days of NOC effective date) (4.2.2)
Mayor's radio program, newspaper, flyers, website

JWS Comment: It was also noted that the alderman of Brownsville have periodic meeting with their "Districts". These meetings are also used to communicate stormwater information.

18. Y N Have they tracked and maintained records of all public involvement/participation programs and activities? (4.2.2.) List how. List in computer file.

List the activities and number of the people that participated? (Including annual report meeting, cleanups, etc.)

(See Attached)

Minimum Control Measure #3: Illicit Discharge Detection and Elimination (IDDE) (4.2.3)

19. Y N Has this program element been included in the SWMP? (4.1.)

20. Y N Have they maintained, either through ordinances or other regulatory mechanisms, the ability to prohibit non-stormwater discharges into their storm sewer system? (4.2.3)

JWS Comment: The "Model Stormwater Ordinance" requiring LID and the first inch of run-off capture was adopted by the City of Brownsville July 9, 2013.

21. Y N Have they continued to develop and implement an illicit discharge detection and elimination program (IDDE) to detect and address non-stormwater discharges, including illegal dumping into their system? (4.2.3)

JWS Comment: Current personnel have been active in visiting any facility that has presented a potential problem and responded to complaints more rapidly than their IDDE requires. (2 days vs. 7)

22. Y N Have they continued to update, and develop a storm sewer system map showing the location of all outfalls and the identification/name of receiving waters? (4.2.3)

JWS Comment: Brownsville is current with the requirements of the 2010 MS4 Permit. Personnel are continuing to convert all storm sewer information to their developing GIS utility mapping system.

23. Y N Does the map also include inputs into the storm sewer collection system and indicate the general direction of stormwater flow? (4.2.3.)

Who can access the map and for what purpose?
City Staff as needed. Can be made available to public if needed.

24. Y N Have they developed written procedures for conducting the IDDE program? (4.2.3.)

JWS Comment: SWMP references the ERP for the specifics of this program

25. Y N Has a written Enforcement Response Plan (ERP) for illicit discharges been developed? (Due 18 months from NOC effective date) (4.2.3.)

26. Y N Has the Enforcement Response Plan (ERP) been implemented? (Due 18 months from NOC effective date) (4.2.3.)

27. Y N Is dry weather/field screening conducted?
VSA scheduled to be completed by end of Permit cycle

JWS Comment: Will be implemented immediately. After discussion, it has been done periodically but not with any specific organization.

28. Y **(N/A)** N Based on field screenings have they identified areas that have a reasonable potential of having illicit discharges? (4.2.3.)

29. What is the frequency of their field screenings? **Once per permit cycle, although City employees work throughout the City and will observe storm drains during their work. Note that City employees have been instructed to report problems observed during field work.**

30. Y N Are investigations of illicit discharges documented? (4.2.3.) JWS- Non-to-date

Does the documentation contain:

Y	N	locations	Y	N	sample results
Y	N	times	Y	N	discovered source
Y	N	parameters			

31. Y N Have they prohibited, by ordinance or other regulatory mechanism, contamination of stormwater from hot spots? (4.2.3)

Ordinance # 899/07/09/13/#5 (15) (a) "Hotspots"

32. Y N Is a mechanism currently available to the public to report illicit discharges (hotline, website, other)? (4.2.3.)

What is that mechanism? **Calling hotline number. Public could also come to City Hall to report observations.**

JWS: Need to make website available to report illicit discharges

33. What are the illicit complaint investigation procedures?

Take report and try to get a much information as possible, enter info onto tracking list, send out investigator to reported location, identify problem, identify source, contact TDEC if needed, contact responsible person, follow-up as needed.

34. Y N Does the ERP specify a timeframe for complaint investigations? (4.2.3.) JWS- 7 Days

35. Y N Have they responded to complaints within 7 days? (4.2.3.) JWS- Usually within 2 days

How many illicit discharges have been reported during this review period? 0

How many illicit discharges have been responded to during this review period? 0

How many illicit discharges have been eliminated during this review period? 0

How many illicit discharges have been documented during this review period? 0

- There was one illegal dumping complaint that was followed up (one day). The Complaint was found not to be a valid complaint.

36. Who is responsible for reporting/informing a hazardous waste or material spill and cleanup activities to TEMA and/or local spill response agencies?

Lauren Patterson and Jerry McClinton

37. Y N Is a set of written guidelines and procedures in place for responders to follow in case of a hazardous waste or material spill? (4.2.3.) Request a copy. – City stormwater staff are instructed to avoid hazardous or dangerous situations and professionals would be called to conduct testing and clean-up.

JWS- Section 2.4 of ERP

38. Is a training/education program in place to inform the following groups of the hazards associated with illegal discharges and improper disposal of waste (4.2.3):

Y N MS4 Employees (public employees)?
Spill Prevention & Response: Training Class
IDDE Procedures (response, investigation, elimination, prevention): Training Class
Y N Industry/Commercial (businesses)? JWS- Working on this approach
Hazards of illegal dumping & illicit discharges: Webpage
Y N General Public?
Hazards of illegal dumping & illicit discharges: Webpage
Used oil & household hazardous waste educational materials: Webpage
Recycling & disposal facilities: Webpage
IDDE reporting procedures: Webpage
Y N Other: N/A

39. What types of enforcement mechanisms are available? (Due 18 months from NOC effective date) (4.5.1.a, b., c., d., f.)

Y N Verbal warnings
Y N Written notices
Y N Citations w/ administrative penalties
Y N Stop work orders
Y N Withholding of plans or other authorizations
Y N Additional measures (list) N/A

40. Y N Have any enforcement actions been taken during this review period?

Describe: No situations where enforcement was needed.

41. Y N Is there an official enforcement escalation plan or procedure in place? Request a copy. (4.5.1.) In Ordinance (Sections 14-508 & 14-509)

Minimum Control Measure #4: Construction Site Stormwater Runoff Control (4.2.4)

42. Y N Has this program element been included in the SWMP? (4.1.)

43. Y N Have they continued to develop and implement a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance of

greater than or equal to one acre and/or less than one acre if that construction activity is part of a larger common plan of development? (Due 24 months from NOC effective date) (4.2.4)

44. Y N Have they updated ordinances or other regulatory mechanisms to include the current erosion prevention and sediment control (EPSC) measure requirements? What dates were these ordinances or regulatory mechanisms adopted? Date adopted: 07/09/13
(Due 18 months from NOC effective date) (4.2.4a)

Name and/or code section(s): Ordinance #899/07/09/13/#5 JWS- Model Ordinance

45. Y N Have they developed sanctions to ensure compliance with these ordinances and regulatory mechanisms? (4.2.4a)

Y N Do the sanctions include monetary penalties as specified in TCA 68-221-1106? (4.2.4a)

46. Y N Are their EPSC requirements consistent with those described in the TDEC EPSC Handbook? (4.2.4b)

47. Y N Have they updated requirements in their program corresponding to the Tennessee Construction General Permit? Including special conditions for impaired and exceptional waters? (Due 18 months from NOC effective date) (4.2.4c)

48. Y N Have they developed an inventory and tracking mechanism for all active public and private construction sites that result in a land disturbance of greater than or equal to one acre and/or less than one acre if that construction activity is part of a larger common plan of development? (4.2.4d) What is the mechanism? Ask to see it. – List on Computer

49. Y N Have they developed requirements for construction site operators to control wastes such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality? (4.2.4e)

Note: Adopted TDEC requirements

50. Y N Have they developed procedures for site plan review, which incorporate consideration of potential water quality impacts? (4.2.4f)

Are those procedures in writing? Request a copy. – Yes

JWS- Not as formal as intended by the permit. It appears that Jerry McClinton handles a set of plans from application to finished product.

51. Y N Are these procedures included in the SWMP?

Y N Does the procedures include an evaluation of plan completeness and over all BMP effectiveness? (4.2.4.f.) JWS- See note on "50"

52. How many plans were reviewed during this reporting period? 6 (2014 – 2015)

53. Y N Does the plan review process ensure that EPSC measures meet state technical standards? Plans are signed by the Professional Engineer developing the plan for submittal to the City who is responsible for technical standards.

54. Y N Have they developed procedures for receipt and consideration of information submitted by the public? List the procedures.(4.2.4g) – Information would be considered by plans reviewer. JWS- During the Planning Commission Meetings held the 4th Thursday of each month. These meetings are open to the public. There was active public feed-back during this Audit related to a proposed "Dollar General" store that would require rezoning from residential to commercial.

55. Y N Have they developed procedures for site inspection and enforcement of control measures? (4.2.4h)

56. Y N Are the enforcement steps included in their ERP? (4.2.4.h.)

57. Y N Have they required their inspectors to complete and maintain certification under the Tennessee Fundamentals of Erosion Prevention and Sediment Control, Level 1(or equivalent)? (4.2.4.i) List inspector names. – **Jerry McClinton and Lauren Patterson**

58. Y N Have they required their site plan reviewers to complete and maintain certification under the Tennessee Erosion Prevention and Sediment Control Design Course, Level 2? (4.2.4i) List plan reviewer names. **Jerry McClinton is plan reviewer. Lauren Patterson has also completed Level 2 class.**

59. Y N Do they identify priority construction activity (a.k.a., sites)? (4.2.4.j) How? –

Priority Sites are sites covered by TDEC CGP

60. Y N Do they hold pre-construction meetings with construction site operators for priority construction activities? (4.2.4.j.)

61. Y N Do they perform inspections of priority construction sites at least once per month? (4.2.4.j.) – Schedule set, but in process of getting consistent inspection schedule.

62. Y N Is a standardized inspection form used? (request a copy) JWS- They need one.

63. How many construction sites have active permits with the MS4? None

64. What is the number of active construction sites requiring monthly inspections? <10

65. What is the number of inspections performed and the frequency over the past 12 months?

Unknown, Sites are inspected as part of other visits for code enforcement and are not documented separately for water quality inspections. Brownsville is in process of setting up

water quality inspection tracking system. JWS- They will incorporate their developing GIS system in the plan.

66. Request to see the procedures for tracking inspections. Describe the procedures. Inspect sites at least once per month, document inspections and follow-up as needed.

67. How many violations were found in the previous year? **None**

68. What are the procedures if violations are found? Are the procedures documented in the ERP? (4.5.1.) **Historically problems noted were mentioned to the contractor on-site and the contractor was expected to fix problems. Since water quality issues were inspected as part of code enforcement, problems were usually fixed promptly.**

69. What is the procedure when citizen complaints are received? **Record complaint; inspect location and follow-up as needed.**

70. **Y** N Can construction site inspectors administer enforcement actions?

If no, who can? If yes, what types of enforcement actions? Full enforcement procedure as describe in the Ordinance.

71. **Y** N Are enforcement actions tracked? Ask to see their tracking mechanism. **No enforcement actions needed to be taken.** JWS- The tracking system is currently a manual system. With the low volume of development, this is plenty adequate.

72. Describe this tracking mechanism and person(s) responsible for follow up.

Tracking mechanism is ExCel spreadsheet. Responsible person is Stormwater Coordinator or other City staff.

73. How many of the following enforcement actions were used in the previous year?

Notices of Violations (NOV) 0

Administrative fines 0

Stop-work orders 0

Civil penalties 0

Criminal penalties 0

74. What is the most common compliance issue on construction projects (i.e. tracking on streets, litter or inadequate concrete washout BMPs)? - **BMPs in need of maintenance.**

Minimum Control Measure #5: Permanent Stormwater Management in New Development and Redevelopment (4.2.5)

75. Y N Has this program element been included in the SWMP? (4.1.)

76. Y N Have they developed and implemented a program to address post-construction runoff from new development and redevelopment projects which disturb an acre or more or are part of a larger common plan? (4.2.5.1) – Program and Ordinance have been developed. Implementation is being delayed in accordance with other Statewide MS4 Programs, per TDEC authorization, so that all programs can start post-construction implementation at the same time.

77. Y N Have they developed and implemented ordinances or other regulatory mechanisms to address post-construction runoff from new development and redevelopment projects? (4.2.5.1)

78. Y N Have they developed sanctions to ensure compliance with these ordinances and regulatory mechanisms? (4.2.5.1.)

Y N Do the sanctions include monetary penalties as specified in TCA 68-221-1106? (4.2.4a)

79. Y N Have they developed a set of requirements (performance standards) to establish, protect, and maintain water quality buffers in areas of new development and redevelopment? (4.2.5.1)
Y N In areas less than 1 mile^2 the buffer equals 30 feet
Y N In areas greater than 1 mile^2 the buffer equals 60 feet

Ask for a copy of set of requirements. – In Ordinance # 899/07/09/13/#5

80. Y N Do site design standards require that BMP's be designed, built and maintained to infiltrate, evapotranspire, harvest, or use, at a minimum, 100% of the first inch of every rainfall event preceded by 72 hours of no precipitation? (4.2.5.2.1)

81. Do they allow Off-site Mitigation or Public Stormwater Project Fund for sites that cannot meet 100% of the runoff or pollutant reduction requirement? Yes

82. Y N Do they offer an incentive program for redeveloped sites? (4.2.5.2.1)

83. Y N Have they filled out the EPA Water Quality Control Scorecard within the first year of coverage? (4.2.5.3.) Completed in 2013

84. Y N Did they submit a copy of the scorecard with the subsequent annual report? (4.2.5.3.)

Scorecard completed at later date per agreement with TDEC.

85. Y N Have any changes been made to local codes and ordinances? (4.2.5.3.)

What were the changes? Note that current Ordinance was adopted in 2013.

86. Y N Were the required updates to the ordinances performed within 4 years of coverage under this permit? (4.2.5.3.) List deadline date. Permit NOC dated May 16, 2011, thus deadline would be May 16, 2015. Ordinance updates completed on July 9, 2013.

87. Y N Have they included project review, approval and enforcement procedures in the ERP? (4.2.5.4.)

88. Do the procedures include the following:

Y N procedures for site plan review and approval that include inter-departmental consultations (4.2.5.4.a.) –

Y N how the site plan review ensures that performance standards are met and how long-term maintenance is addressed (4.2.5.4.b.)

Y N A verification process and enforceable procedures to ensure that permanent stormwater BMPs have been installed correctly (4.2.5.4.c.)

89. Who performs post construction BMP plan review? Jerry McClinton- Head of Code Enforcement

90. Y N Have they adopted a post construction design manual? Ask to see a copy.

Manual published by TDEC

91. Y N Have they required the operator at permitted sites to develop and implement a maintenance agreement accepting maintenance responsibility and allowing for inspections and also account for transfer of lease/deed responsibility? (4.2.5.5, 4.2.5.5.1)

92. Y N Have they developed and implemented regulatory mechanisms to ensure adequate long-term operation and maintenance of BMPs? (4.2.5.5)

93. Y N Do they ensure this maintenance agreement includes a provision requiring BMP owners to initiate corrective action within 30 days of receiving a non-compliance notification? (4.2.5.5)

94. Y N Does the maintenance agreement allow for them, or their designees, to perform necessary maintenance neglected by the owner/operator and bill/recoup all costs incurred by the MS4 for these corrections? (4.2.5.5)

95. Y N Have they developed a system to track BMP's at new development and redevelopment sites? (Due 180 days from NOC date) (4.2.5.6.)

96. In addition to standard information (project name, owner, location, start/end dates), do they require the following information for the BMP tracking system (4.2.5.6.a., b., c., d.):

Y N BMP description (type, number, specifications)

Y N Lat/Long coordinates JWS- **Section 14-506. (2). (b) Of Brownsville's Ordinance**

Y N Maintenance requirements

Y N Inspection information (date, findings, follow up activities, compliance status)

97. Y N Are they requiring owner/operators to perform routine inspections of all BMP's at least annually? (4.2.5.7.a.)

JWS- **Section 14-506. (1) Of Brownsville's Ordinance**

98. Y N Are they requiring owner/operators to perform comprehensive inspections of all stormwater management facilities at least every five years? (4.2.5.7.b.)

JWS- **Section 14-506. (2). (b) Of Brownsville's Ordinance**

99. Y N Are these inspections (1/5yrs) being performed by an engineer or landscape architect? (4.2.5.7.b.)

JWS- Are required by ordinance but it hasn't been 5 years since the ordinance was adopted and there are no such structures in Brownsville as of the time of this Audit.

100. Do the inspection reports include the following information (4.2.5.7.b.):

Y N Facility type JWS- "NA" as of the date of this audit-Required by Ordinance

Y N Inspection date

Y N BMP owner information

Y N Description of BMP condition

Y N Photos

Y N Maintenance items or violations needing correction

101. Y N Are they requiring a copy of these inspections to be submitted? (See note above)

Minimum Control Measure #6: Pollution Prevention/Good Housekeeping for Municipal Operations (4.2.6)

102. Y N Has this program element been included in the SWMP? (4.1.)

103. Y N Have they identified the municipal activities that are exposed to stormwater? List the activity and/or facility. (i.e., park, open space maintenance, fleet and building maintenance, construction/land disturbances, and stormwater system maintenance).

City-Wide Activities
Fire Station #2
Fire Station #3
Municipal Complex (Including Fire Station #1)
Public Works Yard

104. Y N Is there a designated stormwater person identified for each activity/facility?

105. Y N Have they developed and implemented an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations? (4.2.6.)

106. Y N Is there stormwater BMP technical guidance designated and made available for maintenance staff? Note that the BMPs involve general housekeeping. The only BMP for which technical guidance would be needed is erosion prevention and sediment control measures for which the TDEC EPSC manual is available for guidance.

107. What types of training have been received?

Employees involved in work that would affect stormwater have received class including general awareness training, SWPPP training and how to report pollution issues.

108. How many of the staff have received training? (List by facility)

Public Works (19), Fire (25), Municipal Facility (4)

109. Y N Do they use contractual staff to complete MS4 maintenance activities?

If yes, who?

110. Y N Is there a schedule established for inspection and cleaning of catch basins and the stormwater conveyance system? What is the schedule?

Annual cleaning

111. What is the frequency of inspection? (Proactive/Response to emergencies) –

As needed. Note that as part of training, all employees are instructed to report problems and potential problems they observe as they travel throughout the City to the Stormwater staff.

112. **Y** N Are procedures in place for properly disposing of waste removed from the separate storm sewers? (4.2.6.)

JWS- They take it directly to the land field. There are occasions where they drop it off at Public Works before it finally get to the landfill.

113. How is the MS4 spoil disposed of? Is it tracked and recorded? Ask to see documentation.

JWS- Disposed at landfill but may be stored at Public Works Yard pending disposal. There is currently no documentation as to how long does the spoil stay at public works before being hauled to the county land field.

114. How often does street sweeping occur? **None** JWS- Dailey, Monday through Friday

115. How are the street sweeping spoils disposed? JWS- Hauled to the Public Work's complex and dumped. Then hauled to land field for disposal.

116. Y **N** Is there a written Integrated Pest Management (IPM) program for municipal operations? If yes, who is assigned to coordinate the IPM program?

117. How does the SWMP address/inspect road salt storage?

The SWMP mentions that the City has SWPPP for its facilities. Within the SWPPP for the Public Works facility, salt storage is addressed in Section 3.7.

118. **Y** N Are storage locations identified for chemicals?

119. **Y** N Are there procedures for chemical (i.e., deicer, brine, etc.) applications?

General procedures discussed within SWPPP.

120. Y **(N/A)** N Do maintenance contracts include language on stormwater impact and appropriate BMPs?

121. **Y** N Are procedures in place to ensure that new flood management projects assess the impacts on water quality? [Have they coordinated with flood control managers for the purpose of identifying and addressing environmental impacts?] (4.2.6.)

Jerry McClinton, Brownsville's MS4 Manager is involved in the projects. Nothing in writing.

122. Y N Are procedures in place to examine existing projects for incorporating additional water quality protection devices or practices at municipal facilities? (4.2.6.)

SWPPP plans include inspections which would identify problems and develop solutions for problems, such as new BMPs.

123. Y N Have the following been considered when developing their program: "maintenance activities, maintenance schedules, long-term inspection procedures of structural and non-structural controls, controls for reducing or eliminating discharges from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops, salt/sand storage locations, and waste transfer stations" (4.2.6.)

These issues are incorporated into the SWPPPs.

Reviewing and Updating Stormwater Management Program (4.4)

124. Y N Are they performing an annual review of the Stormwater Management Program during preparation of the annual report? (4.4.1) List how this is done?

This is in the process of being implemented. During preparation of the Annual Report, past activities are reviewed to evaluate the effort expended vs. the results achieved vs. regulatory need for the activity. No significant issues have been noted that need to be modified, other than working with TDEC on submittal timeframes.

125. Y N Are changes to the Stormwater Management Program being reported to the division? (4.4.2) If yes, how are the changes reported?

No significant changes in the requirements have been proposed, other than changes in the timeframe for completion of tasks and submittal to TDEC. These issues have primarily been handled by phone, e-mail and in-person meetings.

126. Y N Have any new areas been added to the MS4 within the last 12 months?

127. Y N Do they have a plan for implementing the Stormwater Management Program in all newly added areas within 90 days of transfer of responsibility? (4.4.4.)

Yes, the plan will be implemented within 180 days of finalization of annexation per SWMP.

128. Y N Does the plan include schedules for implementation? (4.4.4.)

Within SWMP.

129. Y (N/A) N Are they implementing their Stormwater Management Program requirements in these areas? (4.4.4.)

130. Y (N/A) N Has information on all new annexed areas and resulting updates been included in the annual report? (4.4.4.)

Enforcement Response Plan (4.5)

131. Y N Have they developed an Enforcement Response Plan addressing their ability to respond to violations and describing progressive enforcement including verbal warnings, written notices, and citation with penalties, stop work orders, and withholding of plan approvals or other authorizations? (4.5.1.) (Due 18 months from NOC effective date)

JWS- Excellent ERP

132. Does their enforcement case documentation include the following (4.5.3.):

Y	N	Name of owner/operator	Y	N	Location
Y	N	Description of violation	Y	N	Compliance schedule
Y	N	Enforcement response used	Y	N	Documentation of enforcement response
Y	N	Referrals	Y	N	Date the violation was resolved

133. Y N Have they developed a plan to identify chronic violators? Describe. (4.5.4.)

JWS- Section 2.5 of their ERP (Enforcement Tracking)

Discharges to Water Quality Impaired Waters

134. Y N Have they included/implemented BMPs specifically targeted to achieve wasteload allocations prescribed by all applicable TMDLs? (3.1.1) TMDLs for streams which have a portion of their flow within the City of Brownsville have been established for e. coli and sediment, both of which are unlikely to have much contribution from the City of Brownsville MS4.

To address the issues, the city has pet waste pick-up information on its website and has made it illegal to improperly dispose of pet waste. The City also maintains EPSC inspection and enforcement for construction sites. City code enforcement personnel have the ability to provide enforcement for pet waste and EPSC violations.

135. Y N Does the SWMP include a schedule of installation and monitoring of such BMPs? (3.1.1.)

On-going (see above)

Analytical monitoring (5.1)

136. Y N Has this program element been included in the SWMP? (3.1.1.)

137. Y N For stream segments identified as being impaired for siltation and/or habitat alteration, where discharges from the MS4 have been identified as a source of impairment, is

biological stream sampling utilizing the Semi-Quantitative Single Habitat (SQSH) Method as identified in the division's Quality System Standard Operating Procedure for Macroinvertebrate Stream Survey being performed? (5.1.)

Y N Every 5 years? To be completed by May 16, 2016

138. Y N For stream segments identified as being impaired for pathogens, where discharges from the MS4 have been identified as a source of impairment, is bacteriological stream sampling utilizing methods identified in the division's Quality System Standard Operating Procedure for Chemical and Bacteriological Sampling of Surface Water being performed? (5.1.)

Y N Every 5 years?

139. Y (N/A) N Are they performing the TMDL prescribed analytical monitoring for all stream segments subject to a TMDL for parameters other than siltation, habitat alteration or pathogens where the MS4 has been identified as a source of impairment? (5.1.)

Non-analytical monitoring (5.2)

140. Y N Has this program element been included in the SWMP? (3.1.1.)

141. Y N Are they performing visual stream surveys and impairment inventories upstream and downstream of each MS4 outfall discharging into an impaired stream where the discharges from the MS4 have been identified as a source of impairment? (5.2.) Ask to see their records. Describe how this is documented.

Y N Every 5 years? To be completed by May 16, 2016

Recordkeeping (5.3)

142. Y N Are records being kept of all monitoring activities, copies of reports, and records of all data used to complete the NOI for at least 3 years? (5.3.)

Reporting (5.4)

143. Y (See Below) N Have they presented their annual reports at a public hearing for suggestions and comment prior to submitting to the division? (5.4.) List how they documented. Due to City personnel turnover, the City worked with TDEC staff to revise dates for public meetings and submission dates for Annual Reports. The meetings and reports were completed by the revised agreed upon due dates.
2011/12 and 2012/13 Public Hearing on 9/20/13
2013/14 No Public Hearing Required
2014/15 Public Hearing on 9/8/15

144. Y (See Below) N Have they submitted their annual reports to the EFO by September 30th of each year that covers the previous fiscal year? (5.4.)

Due to City personnel turnover, the City worked with TDEC staff to revise dates for public meetings and submission dates for Annual Reports. The meetings and reports were completed by the revised agreed upon due dates.
2011/12 signed 9/27/13 submitted 9/30/2013
2012/13 signed 9/27/13 submitted 9/30/2013
2013/14 signed 1/27/15 submitted approximately 1/30/2015 (Received by TDEC on 2/2/15)
2014/15 signed 9/7/15 submitted 9/30/15

Wrap-Up:

145. Does the SWMP include the follow information for each of the six minimum control measures:

Best management practices (BMPs), programs and processes (SOPs) that the MS4 will implement for this minimum control measure? (4.1.a.)
Y N Public Education and Outreach
Y N Public Involvement/Participation
Y N Illicit Discharge and Elimination
Y N Construction Site Stormwater Runoff Control
Y N Permanent Stormwater Management
Y N Pollution Prevention/Good Housekeeping for Municipal Operations

Measurable goals and milestones that the MS4 will implement (with dates/frequencies) for each BMP? (4.1.b.)
Y N Public Education and Outreach
Y N Public Involvement/Participation
Y N Illicit Discharge and Elimination
Y N Construction Site Stormwater Runoff Control
Y N Permanent Stormwater Management
Y N Pollution Prevention/Good Housekeeping for Municipal Operations
Y N The person(s) responsible for implementing/coordinating BMPs?
- Stormwater Manager

The person(s) responsible for implementing or coordinating the BMP? (4.1.c.)
- Stormwater Manager
Y N Public Education and Outreach
Y N Public Involvement/Participation
Y N Illicit Discharge and Elimination
Y N Construction Site Stormwater Runoff Control
Y N Permanent Stormwater Management
Y N Pollution Prevention/Good Housekeeping for Municipal Operations

Pollutant control efforts for all municipal operated facilities that maintain or store motorized equipment, oils, or other hazardous materials? (4.1.d.)
- Contained in Facility SWPPP, not SWMP
Y N Public Education and Outreach
Y N Public Involvement/Participation
Y N Illicit Discharge and Elimination

Y N Construction Site Stormwater Runoff Control
Y N Permanent Stormwater Management
Y N Pollution Prevention/Good Housekeeping for Municipal Operations

Are all applicable inspections and monitoring programs described in detail? (4.1.e.)
Y (N/A) N Public Education and Outreach
Y (N/A) N Public Involvement/Participation
Y N Illicit Discharge and Elimination
Y N Construction Site Stormwater Runoff Control
Y N Permanent Stormwater Management
Y (SWPPP) N Pollution Prevention/Good Housekeeping for Municipal Operations

146. Y N Have they coordinated SWMP implementation among various agencies or units within the MS4 and with third parties responsible for SWMP implementation? Describe. Both Jerry McClinton and Lauren Patterson have communicated with personnel in other departments about stormwater requirements and have the full support of the Mayor. Additionally, City staff in various departments have attended stormwater training and are thus, well aware of the stormwater program and the need to prevent stormwater pollution.

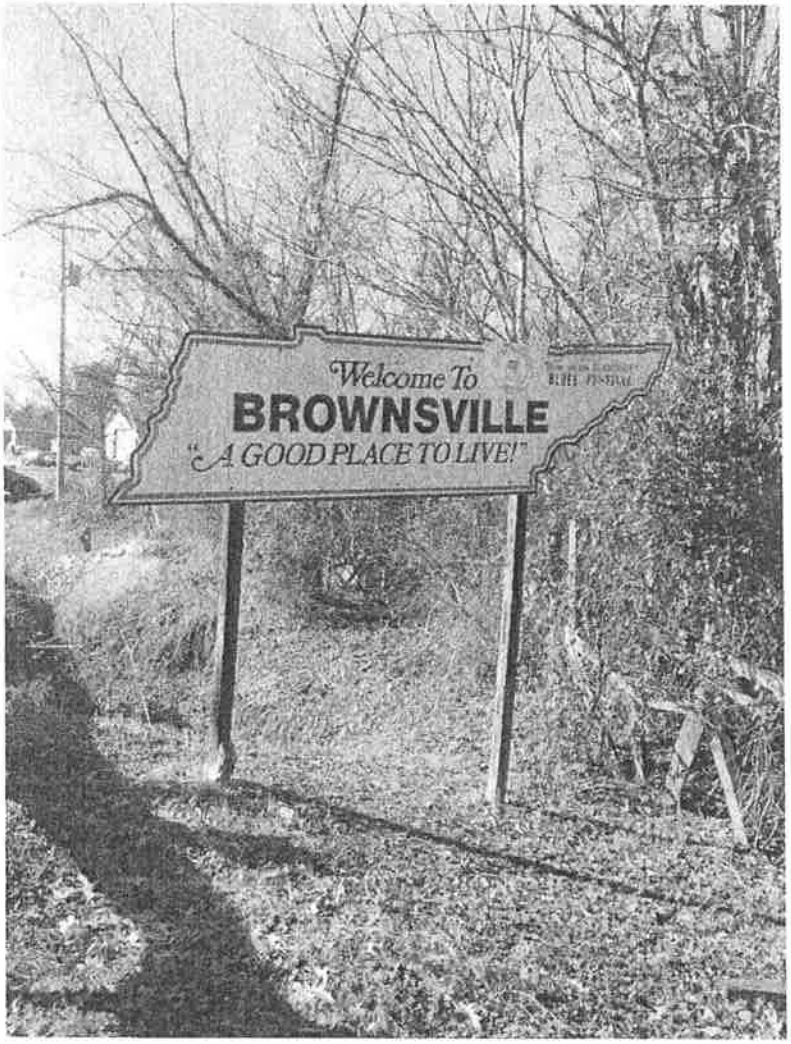
Additional Comments:

Name/Agency of Lead Inspector:	**TDEC-DWR James W. Scott**	**Signature of Lead Inspector:**
Names/Agencies of Other Inspectors:	**NONE**	

* This worksheet applies to MS4s that have been previously permitted.

STORMWATER MANAGEMENT PLAN

City of Brownsville, Tennessee



STORMWATER MANAGEMENT PLAN

City of Brownsville

111 North Washington Avenue

Brownsville, TN 38012

Stormwater Program Contact

and

Person Responsible for Implementation of the SWMP:

Jerry McClinton

Manager – Stormwater

111 N. Washington Avenue

Brownsville, TN 38012

731-772-1212

jmcclinton@brownsvilletn.gov

SWMP Date: March 1, 2015

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8. Additional Stormwater Pollution Prevention Measures

ATTACHMENTS

1: FIGURE

2: CITY OF BROWNSVILLE NPDES PERMIT

SECTION 1: CITY OF BROWNSVILLE INFORMATION

The City of Brownsville is located in Haywood County, Tennessee with a population of 10,292. The City has been identified as a Municipal Separate Storm Sewer System (MS4) by the State of Tennessee Department of Environment and Conservation (TDEC). The City was issued coverage under the TDEC NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems Permit No. TNS000000, dated August 31, 2010, effective May 16, 2011, with Tracking No. TNS075191.

The City is crossed by a ridgeline, thus, the southern portion of the City drains to Sugar Creek on the South and the northern portion of the city drains to Nixon Creek and Little Nixon Creek on the north. Much of the historical storm drainage is in underground pipes, which drain to open channels, many of which have been modified for the urban environment to protect property and to minimize flooding.

Since coverage under the MS4 general permit began, the city has implemented a variety of programs to address the potential for discharges to the City storm drainage system. The City of Brownsville has no known on-going discharges to its storm drainage system. Therefore, the City is focusing its stormwater program on addressing non-point sources of possible pollutants to the surface water system.

– TEKNOR APEX
BT REDY M.
DYNAMETALS
~~HOOPER~~

This Stormwater Management Plan is designed to give a general description of the methods that the City will use to address stormwater quality and to provide additional discussion of the City's approach to meet the requirements in the TDEC NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems ("Small MS4 General NPDES Permit" or "Permit"), along with time frames for implementation of the programs. The Permit lists six minimum control measures that are discussed in detail in Section 2 through Section 7 below. Section 8 lists additional aspects of the City's MS4 Program that are not covered in the minimum control measures.

SECTION 2: PUBLIC EDUCATION AND OUTREACH

The City has developed a Public Information and Education Plan (PIE) that includes a discussion of the methods that the City will use to conduct outreach to the City's residents. Outreach will include the required approaches discussed in the MS4 Permit, including the following issues:

a. General public awareness on the impacts on water quality from general housekeeping maintenance/activities.
b. Home owner associations and other operators of permanent BMPs awareness of the importance of maintenance activities.
c. Local engineering and development community awareness of the stormwater ordinances, regulations, and guidance materials related to long-term water quality impacts.
d. General public and professional chemical applicators awareness on the proper storage, use, and disposal of pesticides, herbicides, and fertilizers use. JOHN DEERE CASE IH BEST TIRE ETC.
e. General public and professional chemical applicators awareness on the proper storage, use, and disposal of oil and other automotive-related fluids. MAINTENACE SHOP OR SHOPS -
f. General public and municipal employees on the awareness of identifying and reporting procedures for illicit connections/discharges, sanitary sewer seepage, spills, etc.* (INFO. ON CITY VEHICLE, AUA'S VEHICLES, GARBAGE TRUCKS, ~~ETC~~ Public WORKS ETC.)
g. Local engineering, development, and construction community awareness of stormwater ordinances, regulations and guidance materials related to construction phase water quality impacts.
h. Municipal employee/contractor awareness of water quality impacts from daily operations.

I. SCHOOL PRESENTATIONS

Public Education and Outreach Stormwater Management Plan Activities
Continue to publish brochures on a variety of stormwater topics as needed.
Continue to make brochures available to the public on an on-going basis.
Develop new brochures as needed.
Conduct presentations as needed.
Participate in the TNSA Statewide radio outreach program annually as budget allows.
Continue the Mayor's radio program on an on-going basis.

J. COUNTY FAIR

K. *

SECTION 3: PUBLIC INVOLVEMENT/PARTICIPATION

Covered within the PIE is the City's public involvement and participation program. The program is designed to allow the public to get involved in activities to learn about stormwater issues and to get them involved to address stormwater issues, to encourage and promote citizen reporting of illegal and illicit discharges. As described in the MS4 Permit, the public involvement and participation activities may include the following:

a. Local stormwater management workgroups.
b. Public notices of MS4 meetings and public hearings.
c. Recruiting education volunteers.
d. Involving the public with program coordination, detection of illicit discharges and monitoring efforts.
e. Citizens' stormwater advisory council.
f. Volunteer stream monitoring programs. EXPAND ON THIS
g. Storm drain marking.
h. Riparian plantings.
i. Stream clean-up events.

Public Involvement/Participation Stormwater Management Plan Activities
Hold Annual stormwater event at City Hall for public comment on the City's MS4 Annual Report.
Continue to publish stormwater event notices in the newspaper at least once annually.
Conduct additional events as staffing, budget and community interest allow.

SECTION 4: ILLICIT DISCHARGE DETECTION AND ELIMINATION

The illicit discharge detection and elimination program was established to work on the elimination of illicit discharges and illegal dumping into the City's storm drain system. The City is using the term "illicit discharge" to include both illicit discharges (which are generally considered to be on-going or recurrent discharges to an MS4, usually at the same location) as well as illegal dumping (which is generally considered to be placement of a material into the MS4 that is more of an episodic nature and may occur throughout the system).

Due to the City's compact physical size, relatively small population and the general knowledge of the public that illicit discharges will be investigated, there are very few illicit discharges into the MS4. Historically, complaints to the City would have been investigated by a code enforcement officer or other City employee, thus the City has maintained a presence to the public that the system is being monitored. Additionally, City employees work throughout the City and would notify the Stormwater Department if discharges were observed. Stormwater awareness training has been conducted for City workers.

The phone number to report illicit discharges (901-772-1218) is well publicized and is shown on the City's webpage. Additionally calls received at the City Hall general number (901-772-1212) are forwarded to the applicable department. Other notifications may be received from City personnel during the performance of their duties

As part of the compliance for the City's MS4 Permit, the City does the following:

a. Maintain a storm drain map.
b. Maintain a City ordinance prohibiting certain discharges to the MS4.
c. Implement an Enforcement Response Plan to address illicit discharges.
d. Educate the public about the hazards of illicit discharges and the improper disposal of waste through the City's public outreach efforts.
e. Monitor the types and quantities of illicit discharges to identify "hot spots" and to determine additional actions that need to be undertaken, such as enforcement, legislation or education, to address a problem.
f. Foster interagency coordination with local spill response agencies and/or TEMA to minimize the discharge to the MS4 from emergency response activities.
g. USE ALL LOCAL AGENCIES TO BE EYES FOR THE MS4 PROGRAM. POLICE, FIRE, SOLID WASTE COLLECTION, METER READERS, ETC. PARKS EMPLOYEES

Illicit Discharge Detection and Elimination Stormwater Management Plan Activities
Maintain storm drain map on an on-going basis.
Maintain City ordinance and update as needed.
Receive and respond to illicit discharge notifications as soon as possible in accordance with the ERP. Normally investigations are conducted within ~~a day~~ TWO DAY or so of receiving the notice. *
Review discharge data and determine if additional actions are needed.
Work with response agencies on an on-going basis to minimize the discharge from emergency response activities. CONTROL ~~ATT~~ & MINIMIZE ENVIRONMENTAL IMPACT

* BUT MORE THAN A WEEK

SECTION 5: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

Nationwide research has identified stormwater runoff from construction sites as a contributor to stormwater pollution. In addition to sediment, construction site runoff can include oils, trash, sanitary waste, concrete truck washout, concrete waste, paint and other construction materials. The City has developed a construction site stormwater runoff control program to minimize the discharge of sediment and construction materials to the City's storm water system. The City's Construction Site Stormwater Runoff Control Program includes the following elements:

a. An Ordinance to prohibit the discharge of soil and construction waste materials and to require erosion prevention and sediment controls, as well as sanctions to ensure compliance.
b. An inventory of active construction sites greater than or equal to one acre. The City may also include sites less than one acre that are also being monitored for compliance.
c. Procedures for construction site plan review.
d. Procedures for managing public input on projects.
e. Procedures for construction site inspection and enforcement, which are described in the City's Enforcement Response Plan (ERP).
f. Training for City's Construction Site Inspection staff, including TDEC Level I and II.
g. A Priority Construction Activity Program, including identification of priority construction activities, pre-construction meetings, and inspection of priority construction sites at least once per month. Priority Construction Activities in the City of Brownsville are identified as those construction sites that are covered by the State of Tennessee Construction General Permit (CGP) and at which construction is occurring.

INSURE A CGP HAS BEEN ISSUED BEFORE APPROVAL

Construction Site Stormwater Runoff Control Stormwater Management Plan Activities
Maintain City ordinance and update as needed.
Maintain inventory of active construction sites greater than one acre, including additional smaller sites as needed.
Review EPSC plans on an on-going basis.
Maintain forum for public input and address public input received regarding construction site runoff control on an on-going basis.
Inspect priority construction sites at least once per month and other sites as needed. Follow up with appropriate enforcement using the ERP, based on the inspection observations.
Maintain TDEC EPSC training certifications (Level I recertification required every 3 years).
Review data from inspections and enforcement actions to determine if modifications to the program are needed and modify as needed.

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Construction Site Stormwater Runoff Control Stormwater Management Plan Activities
Maintain City ordinance and update as needed.
Maintain inventory of active construction sites greater than one acre, including additional smaller sites as needed.
Review EPSC plans on an on-going basis.
Maintain forum for public input and address public input received regarding construction site runoff control on an on-going basis.
Inspect priority construction sites at least once per month and other sites as needed. Follow up with appropriate enforcement using the ERP, based on the inspection observations.
Maintain TDEC EPSC training certifications (Level I recertification required every 3 years).
Review data from inspections and enforcement actions to determine if modifications to the program are needed and modify as needed.

SECTION 6: PERMANENT STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

The City's permanent stormwater management in new development and redevelopment program is designed to address possible on-going impacts to stormwater quality due to the change in land use from an undeveloped condition to a developed condition. Primarily, this is accomplished during the design and construction phase by the incorporation of development and design features (practices) that minimize the impact of pollutants to the stormwater, that treat the stormwater runoff, that absorb a portion of the stormwater runoff and/or that detain a portion of the runoff in order to mimic the pre-development hydrology. Note that other forms of compliance described in the Small MS4 General NPDES Permit, such as off-site mitigation and payment into a fund for public stormwater projects, may be considered for use in the City.

Once the practices are installed, maintenance and upkeep of the practices is of paramount importance to ensure that the practices are operating properly to protect downstream water resources. While the maintenance and upkeep of the practices is to be done by the responsible party, the City will implement a program to identify those locations where maintenance is needed.

Due to the novel nature of the program, the City of Brownsville is implementing the program utilizing the guidance developed by TDEC and in conjunction with the other Tennessee MS4s, who are also developing new permanent stormwater management programs.

Once fully developed, the City of Brownsville Permanent Stormwater Management Program will consist of the following elements:

a. An Ordinance to address permanent stormwater runoff management to minimize water quality impacts from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, as well as sanctions to ensure compliance.
b. Adoption of the TDEC Permanent Stormwater Manual or other Permanent Stormwater Manual. Once the TDEC Permanent Stormwater Manual has been reviewed, the City may choose to develop its own manual or to create a modified manual based on local regulations and conditions.
c. Requirements to establish, protect and maintain a permanent water quality buffer along all waters of the State at new development and redevelopment projects, to the extent feasible.

d. Runoff reduction standards, as outlined in the Small MS4 General NPDES Permit.
e. Development of a project plan review program.

Permanent Stormwater Management Stormwater Management Plan Activities
Maintain City ordinance and update as needed.
Ensure that City ordinances, codes and regulations allow a reasonable suite of permanent stormwater management practices, including water quality buffers, to achieve the goal of "the greatest improved protection of receiving waters" and the runoff reduction standards as discussed in the Small MS4 General NPDES Permit. Update as needed.
Update EPA Water Quality Scorecard as needed.
Review submitted plans for appropriate permanent stormwater management practices on an on-going basis.
Verification program to ensure that permanent stormwater management practices have been installed per design specifications, including enforceable procedures for bringing noncompliant projects into compliance. Verification will be conducted after a project is completed.
Development and implementation of a long term maintenance plan to ensure that permanent stormwater management practices are being adequately maintained by the responsible party for the desired function. Each year, the locations that are required to submit documentation of maintenance of the post construction practice will be documented.
Create inventory to track the permanent stormwater practices installed within the City within one year of implementation of the program and update on an on-going basis as new practices are installed.
Conduct enforcement as needed to address violations caused by runoff from new development and redevelopment projects as needed.
Review data from inspections and enforcement actions to determine if modifications to the program are needed and modify as needed.

SECTION 7: POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The City of Brownsville pollution prevention/good housekeeping for municipal operations program is designed to work within the City government to ensure that City municipal facilities and operations are designed and monitored to minimize the impact to stormwater runoff.

The program is implemented by providing stormwater pollution awareness and prevention training to City employees whose jobs could affect stormwater runoff. City employees are encouraged to maintain awareness and to identify and report stormwater pollution problems that are observed during their work throughout the City.

City facilities were inspected to identify and eliminate potential stormwater pollution issues. For each municipal facility, a Stormwater Pollution Prevention Plan (SWPPP) was developed. There are several facilities within the City of Brownsville that are owned and/or operated by entities other than the City of Brownsville and City of Brownsville employees may perform work anywhere throughout the City, particularly when maintaining municipal infrastructure. Thus, the City also created a SWPPP for municipal operations to cover City employees working throughout the City.

Pollution Prevention/Good Housekeeping for Municipal Operations Stormwater Management Plan Activities
Develop SWPPPs for municipal facilities. Update as needed.
Conduct employee stormwater awareness and prevention training. Provide employee training updates as needed.
Conduct municipal facility stormwater pollution prevention inspections as needed.
Investigate and document stormwater pollution issues identified by municipal employees. Investigate reports in accordance with the ERP.

SECTION 8: ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES

ANNEXATIONS (Small MS4 General NPDES Permit 1.3.2): Areas annexed to the City of Brownsville will be covered by the City's SWMP. Within 180 days of the finalization of the annexation, the City will develop a plan to extend the stormwater program into the annexed area and will expand the program to the extent possible. Some specific aspects of the City's Stormwater Program may need to be phased in, such as for the requirements affecting new construction and redevelopment, since plans may have been designed and/or approved prior to annexation.

TOTAL MAXIMUM DAILY LOADS (TMDLs - Small MS4 General NPDES Permit 3.1 and 5.1): One TMDL has been issued that includes streams that flow through the City of Brownsville. The TMDL is for E. Coli in the South Fork Forked Deer River Watershed (HUC 08010205), which was approved by EPA Region 4 on December 15, 2011. The waterways listed within the TMDL that flow through the City of Brownsville are Little Nixon Creek (TN08010205005-0100) and Nixon Creek (TN08010205005-1000). The City submitted a TMDL Stream Monitoring Plan on October 1, 2008, and the stream monitoring was performed in December 2013.

Additionally, the south part of the City is drained by Sugar Creek, which is within the Hatchie River Watershed. There is a Hatchie River TMDL for e-coli, which is dated March 5, 2008 (no approval date noted) and a Lower Hatchie River TMDL for Siltation and Habitat Alteration, which was approved by EPA Region 4 on September 17, 2009. Sugar Creek was not identified as a contributor to the impairments within either TMDL.

For all discharges from the City's MS4, whether or not into a waterway with a TMDL for that pollutant, the City will work with TDEC and other agencies as needed to identify the source of an impairment and to eliminate the discharge causing an impairment.

PROTECTION OF STATE OR FEDERALLY LISTED SPECIES (Small MS4 General NPDES Permit 3.2): The Permit requires that the City conduct an annual evaluation of "whether or not stormwater discharges, allowable non-stormwater discharges and discharge-related activities are likely to jeopardize the continued existence of any state or federally listed species or result in the adverse modification or destruction of habitat that is designated as critical under the ESA (critical habitat)." As of the date of this document, there has been no known information provided to the City that there has been any impact. The City will conduct the evaluation process described in the permit annually.

NON-ANALYTICAL MONITORING (Small MS4 General NPDES Permit 5.2): The permit requires that the City conduct visual stream surveys and impairment inventories for streams impaired for siltation, habitat alteration and pathogens in order to identify and prioritize MS4 stream impairment sources, where discharges from the MS4 have been identified as a source of the impairment. The City plans to conduct visual stream assessments (VSAs) at the location of the MS4 outfalls utilizing the State of Maryland Department of Natural Resources protocol.

Additional Stormwater Pollution Prevention Measures Stormwater Management Plan Activities
Develop an annexation plan and implement the annexation plan within 180 days of annexation of areas to the City.
Conduct TMDL monitoring as required by TDEC.
Work with TDEC and other agencies as needed to identify the source of waterway impairments identified by TDEC and to eliminate the discharge causing the impairment on an on-going basis.
Conduct State or Federally listed species evaluation per the procedures described in the permit annually.
Conduct VSAs for MS4 outfalls within the five year permit period.
Develop prioritized MS4 impairment source list based on VSAs within the five year permit period.

ATTACHMENT 1

FIGURE

Brownsville Location Map

(Source: TDEC OIS – GIS Service on-line mapping tool)

ATTACHMENT 2

CITY OF BROWNSVILLE NPDES PERMIT