City of Bryan

Storm Water Management Program Annual Report – Year 4

CITY OF BRYAN

The Good Life, Texas Style.™

Prepared in accordance with TPDES General Permit TXR040000

2017

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MS4 Annual Report

Phase II (Small) MS4 Annual Report Form

TPDES General Permit Number TXR040000

A. General Information

Authorization Number: TXR040336

Annual Reporting Year: (calendar year, permit year, or fiscal year): Fiscal Year (10/1/2016 – 9/30/2017)

Last day of fiscal year, if applicable: September 30, 2017

MS4 Operator Level: 4

Name of MS4/Permittee: City of Bryan

Contact Name: Mark Jurica Telephone Number: (979) 209-5932

Mailing Address: P.O. Box 1000 Bryan, TX 77803

E-mail Address: mjurica@bryantx.gov

B. Narrative Provisions (Part IV Section B.2.(a))

1. Provide information on the status of complying with permit conditions: (Part V - Standard Permit Conditions):

	Yes	No	Explain
Permittee is currently in compliance with the SWMP as submitted to and approved by the TCEQ.	✓		
Permittee is currently in compliance with recordkeeping and reporting requirements.	✓		With the hiring of a full-time drainage inspector, compliance with MCM 3 has been achieved with proper record keeping for small lot residential permits.
Permittee meets the eligibility requirements of the permit (e.g., TMDL requirements, Edwards Aquifer limitations, compliance history, etc.)	✓		TMDL I-Plan Approved by TCEQ August 22, 2012

2. Provide a general assessment of the appropriateness of the selected BMPs. Use table below or attach a summary, as appropriate (See Example 1 in instructions):

MCM(s)	BMP	BMP is appropriate for reducing the discharge of pollutants in stormwater (yes or no). Explain.
1A: Public Outreach	Community Education	Yes. Simple activities such as fertilizing, vehicle maintenance, and home improvements adversely impact our environment when performed incorrectly. Targeting educational materials to inform residents of safe alternatives and good housekeeping practices concerning home and yard maintenance will aid in lowering stormwater impact by this element.
1B: Public Education	School Education	Yes. Students have the potential to impact stormwater and water quality in the MS4 and can also positively affect their families' outlook. The City promotes stormwater education within the schools through service learning opportunities, participating in guest speaking opportunities, and by supporting Keep Brazos Beautiful (KBB) in its school education efforts.
1C: Public Education	Construction Site Operator Education	Yes. Runoff from construction sites has an identified potential to degrade water quality in the MS4. Waste management, erosion control, and sediment management are points of concern relating to construction sites. The combination of guidance materials and general meetings with City staff are vehicles used in educating construction site operators in protecting water quality within the MS4.
1D: Public Education	City Staff Education	Yes. Educational information is disseminated to City employees through electronic announcements, internet websites, new employee orientation, and group meetings. Topics include illicit discharges, floatables and litter, proper management and disposal of used oil and household hazardous wastes, and proper use, application, and disposal of pesticides, herbicides, and fertilizers. Task-specific training is provided, as required, to personnel directly involved in spill prevention and response.
1E: Public Education	Public Participation/Volunteer Activities	This measure includes opportunities for a wide variety of people who live, work, and play in Bryan to participate in SWMP development and implementation. Additionally, this measure promotes community awareness and protection of stormwater quality through participation in the storm drain marking, litter cleanup, and stream monitoring.
2A: Illicit Discharge	Illicit Discharge Detection and Elimination	Yes. The City's Illicit Discharge Detection and Elimination practices are used to locate and remove prohibited discharges from entering the storm drainage
2B: Illicit Discharge	Storm Sewer Screening and Illicit Discharge Inspections	Yes. Inspections are conducted in response to complaints received regarding illicit discharges and/or improper waste disposal or are triggered in response to information obtained through dry weather screening of the storm sewer system.
2C: Illicit Discharge	Storm Sewer Map Verification and Update	Yes. Maintaining an updated and accurate map of the storms sewer system is critical to providing timely emergency response for spills and detecting illicit discharges
2D: Illicit Discharge	Household Hazardous Waste and Oil Recycling	Yes. Most households routinely use small amounts of pesticides, herbicides, fertilizers, automotive fluids, batteries, paints, and solvents in the day-to-day upkeep of their homes, apartments and condominiums. Improper disposal of these materials through trash collection or poured down the storm drain can result in unwanted impact to the environment.

MCM(s)	BMP	BMP is appropriate for reducing the discharge of pollutants in stormwater (yes or no). Explain.
2E: Illicit Discharge	Septic Tanks	Yes. Brazos County Health Department (BCHD) serves as the City's designated health official. The City maintains legal authority prohibiting use of a septic tank when public sewer service is unavailable. The City and BCHD maintain a working relationship allowing co-review of septic tank applications to determine applicability before installation is granted. The City also maintains legal authority addressing closure requirements for failing septic tanks located within the city limits.
3A: Construction Run Off	Construction Plan Review	Yes. Expansion of the plan and permit issuance process is needed to ensure construction activity and land disturbance conforms to TXR0150000 and the City' SWMP. Amending legal authority to establish a stormwater permit process yields opportunity for improving this BMP. Review of internal policy and process relating to permit issuance for general construction and land disturbance (without amending the existing legal authority) serves as an alternative for BMP enhancement.
3B: Construction Run Off	Inspection of Construction Sites and Enforcement of Control Measure Requirements	Yes. The inspection verifies that the structural and non-structural control measures as outlined on the Erosion Control Plan and in the Stormwater Pollution Prevention Plan (SWPPP) are accurately reflected on the site, and are functioning as intended (maintained) to prevent pollution from leaving the site. The City maintains legal authority to inspect construction sites and require site compliance. The central database for storage of records pertaining to site inspections, forms relating to the site's permit status, and enforcement actions was created. We began the process of populating this database; however, it is a work in progress. Now that the City has funding for the new online permitting software this database will be replaced by that software. Currently the City is in the process of testing the new online permitting system readying for "go live" in 2018.
3C: Construction Run Off	Maintain Legal Authority and Guidelines	Yes. The City will maintain its legal authority and update as necessary to comply with the TXR150000, TXR040000, and TXR050000 General Permits. The City will maintain guidance documents for construction and design professionals and make them accessible through the internet. Maintain and revise as necessary the stormwater quality requirements in the standard construction contracts for capital improvement projects
4A: Post Construction	Bryan City Code Review and Updates	Yes. Regular Code updates maintain the City's ability to enforce the requirements of the permit, in addition to staying current with any updates to state and federal laws.
4B: Post Construction	Establish Post-Construction Stormwater Management Program	Some components of this program exist but development of a more formal program is still needed. For large residential sites and commercial sites, a one year warranty inspection is performed at which time any deficiencies are remedied by the owner. If no deficiencies are noted it is at that time that we insure all BMPs that were employed that are not long term BMPs (such as silt fence) are removed from the site. A program was established for inspections of existing stormwater detention ponds (private and public facilities)

MCM(s)	BMP	BMP is appropriate for reducing the discharge of pollutants in stormwater (yes or no). Explain.
4C: Post Construction	Evaluation of Flood Control Projects	Yes. The City evaluates capital improvement projects each year that offer the potential to integrate water quality design features into flood management-focused design. Additionally, all development projects that come through the Site Development Review process are required to provide stormwater detention if greater than one (1) acre for commercial and two (2) acres for single residential lots or prove to the City why the detention would be more detrimental; exemptions to providing detention are only possible low in the watershed adjacent to primary systems where detention would cause stacking of peak flows in the watershed.
4D: Post Construction	Implementation and Performance of Structural/Non-structural	Detention pond inspection program was launched and a total of 149 stormwater pond inspections were performed this permit term.
5A: Pollution Prevention & Housekeeping	Municipal Facilities Identification	Yes. The City maintains SOPs for general good housekeeping, equipment washing, and fueling operations and vehicle maintenance, and chemical application. Furthermore, city-owned facility assessments are performed one time per period term.
5B: Pollution Prevention & Housekeeping	Training for Municipal Employees	Yes. City employees are trained on the proper procedures for reporting, containing spills and preventing pollutants from entering the storm drains. The combination of monthly group meetings and area-specific focused meetings are used to satisfy the requirement of this element.
5C: Pollution Prevention & Housekeeping	Contractor Training Oversight	Yes. Contractors hired by the City for maintaining City-owned facilities are required to comply with good housekeeping practices, stormwater control measures, and facility-specific stormwater management procedures.
5D: Pollution Prevention & Housekeeping	Waste Management	Yes. Preventing environmental upset through waste management is as important for protecting the health and sanitation of the community. Disposal of regulated wastes such as motor oils, oil filters, automotive fluids, etc. used by the City are managed through contract or agreement with a service provider.
5E: Pollution Prevention & Housekeeping	Pesticides, Herbicides and Fertilizer Application	Yes. Minimizing discharge of pollutants related to storage and application of pesticides, herbicides and fertilizers applied by City staff or contractors to public rights-of-way, parks, and other public property is a key component to protecting water quality.
5F: Pollution Prevention & Housekeeping	Street Sweeping	Yes. Street sweeping is performed to limit litter and dust/dirt along public streets, public parking lots, and right-of-ways from being washed into the storm drain. Road debris from traffic flow can add to sediment loading of the storm drain if not properly managed.
5G: Pollution Prevention & Housekeeping	Grass Clippings, Leaf Litter, and Animal Waste	Yes. Grass clippings, leaf litter and animal wastes are addressed through several different initiatives to limit biological wastes and nutrients discharges into the MS4. The TMDL I-Plan establishes control measures to address bacteria within the permit area. Existing ordinances will be continually reviewed and revised as needed to ensure success of this measure.
5H: Pollution Prevention & Housekeeping	Road and Parking Lot Maintenance	Yes. Control of sediment and debris from municipally-owned road and parking lot maintenance is addressed through several different initiatives. Operating standards for road repair and maintenance (City and contractor) are established to protect water quality.

MCM(s)	BMP	BMP is appropriate for reducing the discharge of pollutants in stormwater (yes or no). Explain.
5I: Pollution Prevention & Housekeeping	Cold Weather Conditions	Yes. Application of salt or sand to roadways and sidewalks is performed on a limited basis.
5J: Pollution Prevention & Housekeeping	Spill Response	Yes. The City responds to spills and employs spill prevention procedures/practices for proper handling, storage, and disposal of hazardous and non-hazardous materials. HazMat services are used for circumstances requiring specialized handling and disposal of waste.
5K: Pollution Prevention & Housekeeping	WWTP Performance	Yes. A waste load allocation of 36.25 CFU/100 mL is established in the Carters Creek TMDL I-Plan for *E. coli* loading associated effluent discharges from the Burton Creek WWTP. Proper operation and maintenance of each WWTP plays a key role in reducing *E. coli* loading to each plant's receiving stream. See Attachments 1, 2 and 3
6A: MS4 Maintenance Activities	System Repair and Maintenance	Yes. Structural controls within the MS4 that are owned, operated and maintained by the City include the conveyances (creeks and channels) and engineered control systems (drainage inlets and piping systems, culverts, and detention and retention ponds). Ongoing operations and maintenance of these structural controls reduce the discharge of pollutants from the MS4.
6B: MS4 Maintenance Activities	Water Quality and Flood Control Structures	Yes. Structural controls within the MS4 that are owned, operated and maintained by the City include the conveyances (creeks and channels) and engineered control systems (drainage inlets and piping systems, culverts, and detention and retention ponds). Ongoing operations and maintenance of these structural controls reduce the discharge of pollutants from the MS4.
6C: MS4 Maintenance Activities	Floatables	Yes. Structural controls, litter abatement programs are in place to reduce discharge of floatables into the MS4. Floatables removal improves surface water quality, channel aesthetics, and drainage system conveyance.
6D: MS4 Maintenance Activities	Litter Abatement	Yes. The City partners with Keep Brazos Beautiful (KBB) for (1) promoting educational awareness regarding environmental stewardship, and (2) coordinating volunteer efforts in litter collection, and (3) benchmarking aesthetics for city streets and right-of-ways.

3. Describe progress towards reducing the discharge of pollutants to the maximum extent practicable. Summarize any information used (such as monitoring data) to evaluate reductions in the discharge of pollutants. Use a table or attach a narrative description as appropriate:

MCM	BMP	Parameter	Quantity	Units	Does BMP Demonstrate a Direct Reduction in Pollutants? (Yes / No / Explain)
1	Community Education	Outreach Materials	▪ 7,350 items ordered and distributed. $9,333.05 ✓ City of Bryan News Channel 16 ✓ Planet Earth Celebration ✓ Community Hero ✓ Bryan Police	▪ Dollars ▪ Events	Yes. Heavy emphasis on public education is focused to illegal dumping and general usage of the sewer system. Work order history combined with system overflows show a reduction in illicit discharges and system overflows.

			Academy ✓ National Night Out ✓ Bryan Police Academy (Sp) ✓ Habitat New Home Owners ✓ Neighborhood Night Out ✓ Radio Algeria ✓ Various HOA Meetings		
2	Illicit Discharge & Elimination	Overflows/Releases	▪ 39 ▪ 138 ▪ 10.4	▪ SSOs ▪ Defects Found ▪ Mile of Pipe Tested	Yes. Burton Creek and Country Club Branch are impaired stream segments located within the City of Bryan. A TMDL has been established for these stream segments. Requirements of the MS4 combined with the TDML I-Plan center on identification and elimination of point and non-point sources of *E. coli.* See Attachments 1,2 and 3
3	Construction Site Management	Plans Reviewed	▪ 71	Permits Issued changed	Yes. Sites were inspected on a regular basis with goal of inspecting at least monthly or more frequently if wet weather. Large sites were inspected more frequently than smaller sites.
4	Construction Site Management	Post Construction Controls	▪ 45	Inspections	Yes. Commercial and Residential subdivisions having public infrastructure associated with them (41) were inspected at the 1-year warranty period; and commercial sites w/o public infrastructure that we received complaints on (4);to note any deficiencies and to remove any remaining temporary BMPs such as silt fence. 149 detention pond inspections were performed.
5	Training for Municipal Employees	Employees Trained	▪ 185	Employees Trained	Yes. Training on topics relating to MS4 increase employee education and awareness to permit conditions and responsibilities.
6	System Screening	Inlet Inspections	▪ 717	Inspections	Yes. Inlet inspections are databased through work order history. Work orders deter illicit discharges in the future by allowing utility managers the ability to track current and previous conditions/occurrences of an individual inlet.

4. Provide the measurable goals for each of the MCMs, and an evaluation of the success of the implementation of the measurable goals (See Example 2 in instructions):

<table>
<tr><th>MCM(s)</th><th>Measurable Goal(s)</th><th>Success</th></tr>
<tr><td>1A: Public Education</td><td>a. Number of PSAs created
b. Traffic count (website, application, media, etc.)
c. Number of media avenues utilized
d. Number of promotional items purchased
e. Number of dual language materials created</td><td>a. 2
b. Web traffic tracked by Google Analytics. Traffic count:
<table><tr><th>Web Page</th><th>FY16 Page Views</th><th>FY17 Page Views</th><th>% Change</th></tr><tr><td>Code Enforcement</td><td>5,645</td><td>6,318</td><td>11.92%</td></tr><tr><td>Permits</td><td>9,893</td><td>10,547</td><td>6.61%</td></tr><tr><td>Building Services</td><td>4,866</td><td>4,521</td><td>7.09%</td></tr><tr><td>Building Design</td><td>902</td><td>861</td><td>-4.55%</td></tr><tr><td>Building FAQ</td><td>1,831</td><td>1,708</td><td>-6.72%</td></tr><tr><td>Environmental Svc</td><td>13,375</td><td>15,706</td><td>17.45%</td></tr><tr><td>Stormwater Mgt</td><td>824</td><td>965</td><td>18.12%</td></tr></table>c. City of Bryan Channel 16, City of Bryan Website, and City of Bryan social media pages are used as outreach to the public.
d. 7,350 items ordered and distributed. $9,333.05 (See Attachment 5)
e. 4</td></tr>
<tr><td>1B: Public Education</td><td>a. Number of presentations
b. Number of school events attended
c. Percentage of outreach materials offered in dual language</td><td>a. 4
b. 1
c. 100% for the four brochures referenced above. City of Bryan website is ADA compliant and providers site visitors with translation opportunity.</td></tr>
<tr><td>1C: Public Education</td><td>a. Number of pre-construction meetings performed
b. Number of outreach materials distributed</td><td>a. 32
b. 32</td></tr>
<tr><td>1D: Public Education</td><td>a. Number of employees trained in SWMP
b. Number training sessions completed
c. Number of employees trained in multi-sector permit</td><td>a. 151
b. 3
c. 16</td></tr>
<tr><td>1E: Public Education</td><td>a. Number of cleanups performed by volunteers
b. Number of volunteer sampling events (TMDL)
c. Website updated</td><td>a. 6: Grosebeck, Newton, Kemp Elementa School, Austin's Colony, Sam Rayburn Middle School, and Clear Leaf
b. TDML project has completed. No sampling events have been performed. Control measure will be retained for reconnaissance performed by the City or other.
c. City of Bryan website is updated annually with the submitted annual report. Brazos Clean Water Website is maintained by Texas Water Resource Institute. Website is updated with information provided by the contributing entities (Bryan, College Station, TAMU, Brazos Co., etc.).</td></tr>
<tr><td>2A: Illicit Discharge and Elimination</td><td>a. Number of illicit discharge sources identified and corrected
b. Number and types of illicit discharge related work order requests issued
c. TCEQ SSO Initiative</td><td>a. 286 (147 sewer/water cases, 110 private defects, 3 missing/broken cleanouts, 25 sewer main defects, 1 broken/damaged manhole)
b. 286 (147 sewer/water cases, 110 private defects, 3 missing/broken cleanouts, 25 sewer main defects, 1 broken/damaged manhole)
c. SSOI objectives met. SSOI report submitted to TCEQ</td></tr>
</table>

MCM(s)	Measurable Goal(s)	Success
	objectives met	
2B: Illicit Discharge and Elimination	a. Number of sanitary sewer SSOs b. Miles of sanitary sewer pipe cleaned c. Mile of pipe inspected for root invasion d. Number of sewer sub-basins inspected using smoke testing e. Number of private-side sewer defects identified and repaired f. Number of public-side sewer defects identified and repaired g. Number of grease traps inspected h. Number of educational events attended i. Number of educational materials distributed j. TCEQ SSO Initiative objectives met	a. 39 b. 96 c. 96 d. 1 e. 114 f. 26 g. 194 h. >20 (Neighborhood Night Out, Copperfield HOA, Citizens Police Academy, Radio Algeria) i. 7,350 items ordered and distributed. $9,333.05 (See Attachment 5) j. SSOI objectives met. Report submitted to TCEQ on October 31, 2016
2C: Illicit Discharge and Elimination	a. Number and types of updates to asset inventory and map b. Number of manholes and inlets inspected c. GIS layer updated and current	a. Assets are updated to GIS in real-time. Changes made to GIS are driven by (1) field observations and (2) new construction b. 1,411 manholes and 1,411 inlets were inspected this reporting period. c. GIS is updated daily to reflect changes and/or additions made to the water and sewer system base maps
2D: Illicit Discharge and Elimination	a. Participation rates per HHW reporting year b. Number of HHW events hosted per year c. Volume of used motor oil and cooking oil recycled	a. Traffic Count: October (1,452) and April 2017 (2,043) b. 2 c. 750 gallons of used cooking oil, 9 drums of used oil filters and 5,807 gallons of used motor oil (see Attachment 9)
2E: Illicit Discharge and Elimination	a. Number of septic tanks removed from service in city limits b. Number of enforcement actions against septic tanks located in the city limits	a. 1 b. 0

MCM(s)	Measurable Goal(s)	Success
3A: Construction Site Runoff	a. Number of outreach materials distributed b. Number of dual language materials created c. Number of Site Development Review cases d. Number of Building Permits issued e. Number of designed Capital Improvement Projects – percentage of Capital Improvement Projects with SWPPP f. Number of engineered construction plans related to public infrastructure	a. 32 b. 0 c. 265 new cases d. 8,093 total e. 7 – 100% f. 49 (#of projects total from inspectors list including upcoming)
3B: Construction Site Runoff	a. Number of complaint-driven inspections b. Number of engineered construction plans related to public infrastructure reviewed c. Number, type, and location of inspections completed d. Number of inspections needing improvement vs. total number of inspections e. Number of enforcement actions enacted	a. 12 b. 58 c. 593 commercial / subdivision construction site inspections; 448 new home sites were permitted and 280 inspections were performed d. 376 total inspections where deficiencies were found out of 873 total inspections e. 1
3C: Construction Site Runoff	a. Number of ordinances reviewed b. Number of ordinance amendments made or new ordinances adopted	a. 1 b. 0
4A: Post Construction Stormwater	a. Number of ordinances reviewed b. Number of ordinances modified c. Number of new ordinances adopted	a. 1 b. 1 (Bryan Code of Ordinances Chapter 46 "Stormwater Management"; Art. II "Flood Protection" being overhauled with changes to Art. III "Municipal Stormwater Management" included. c. 0

MCM(s)	Measurable Goal(s)	Success
4B: Post Construction Stormwater	a. Database established b. Number of site inspections performed c. Number of enforcement actions enacted d. Evaluate continued operation and maintenance practices	a. Database established, in 2018 an online permitting/inspection process will be launched to further enhance our inspection process. b. 45 commercial/subdivision inspections performed c. 0 – voluntary compliance on issues noted d. With the online permitting/inspection process development, our processes were evaluated and will continue to be modified to better our reporting/inspection capabilities.
4C: Post Construction Stormwater	a. Number of flood control and drainage construction projects with water quality measures initiated b. Number of flood control and drainage construction projects with water quality measures completed c. Types and locations of measures implemented d. Evaluate continued operation and maintenance practices	a. 16 b. 4 c. Compared to previous years where we listed zero, this year we added projects with 2yr (or stream bank erosion) detention as water quality measures. d. See Section E Stormwater Activities for planned stormwater activities in the next reporting period. Detention pond inspections were performed in this term and will continue in future terms. A total of 149 pond inspections were performed for existing stormwater facilities, with the goal to perform inspections on a 2 year rotation.
4D: Post Construction Stormwater	a. Number of new and redevelopment projects over 1 acre b. Number, type(s) and locations of LID features implemented at City facilities c. Evaluate continued operation and maintenance practices	a. 19 b. 0 c. Ongoing
5A: Pollution Prevention & Housekeeping	a. Applicable facilities identified b. Database created c. GIS layer created d. Facility assessments complete	a. City-owned facilities identified, databased, and mapped. Assessments completed February 2017. The City-owned facility inventory is updated as changes are made to City property. b. Yes c. Yes d. Yes
5B: Pollution Prevention & Housekeeping	a. Number of employees trained in SWMP b. Number training sessions completed c. Number of employees trained in multi-sector permit	a. 185 b. 4 c. 16
5C: Pollution Prevention & Housekeeping	a. Number of contractors educated on City's SWMP b. Number of outreach materials completed	a. 23 b. 3 documents exist for contractor education: *Keep it Clean* and *General Construction and Site Supervision to Improve Stormwater Quality*, (2) City's website, and (3) Bryan/College Station Design Standards. See Section 4, MCM 1 for web traffic information

MCM(s)	Measurable Goal(s)	Success
	c. Number of contactor performance forms completed for not meeting contact obligations	c. 0
5D: Pollution Prevention & Housekeeping	a. Number of City-sponsored in-house recycling efforts (city administration) b. Number of waste types recycled c. Percentage of facilities covered by a SOP and the number of inspections performed to verify SOP execution	a. 4: City Hall, Municipal Services Center, Parks, and BTU b. Office paper, oil, oil filters, fluorescent bulbs, vehicle fluids, brass and misc. water fittings, printer cartridges, computer and E-waste represent typical wastestreams recycled. c. 100% / 37
5E: Pollution Prevention & Housekeeping	a. SOP completed b. Schedule completed c. Number of licensed applicators employed by the City	a. SOPs completed – November 2014. All SOPs reviewed this reporting period. b. General guidance for application and use is found in the SOP. Frequency and occurrence for application is based upon season and weather c. 3
5F: Pollution Prevention & Housekeeping	a. Number of street miles swept b. Volume of debris collected through sweeping	a. All streets with a curb are scheduled to be swept 4 times per year. Over 3,000 miles of street were swept. Staffing and equipment outage prevented the above-listed schedule to be met. 118 citizen requested sweep orders were completed. Citizen orders are added to the scheduled sweeping frequency b. ~1,040 yards of waste
5G: Pollution Prevention & Housekeeping	a. Number of outreach materials created b. Number of PSAs created c. Percentage of city parks providing animal waste stations	a. 0 new materials created – continuation of existing practices. Website expanded to include GIS layer pinpointing completed work orders for sewer leaks, code enforcement cases, and public works-related job orders b. 0 new PSAs created – continuation of existing practices c. 50%. Installation of the stations is determined by park age and size
5H: Pollution Prevention & Housekeeping	a. SOPs completed b. Number of deicing events (location and volume) c. Number of road projects completed (maintenance)	a. SOPs completed – November 2014. SOPs reviewed this reporting period. b. Zero c. 147 road projects completed, 167 concrete patches completed, 211 in house road repairs completed (asphalt), 514 potholes completed, 178 sewer utility cuts completed and 77 water utility cuts completed.
5I: Pollution Prevention & Housekeeping	a. Number of city employees trained in spill response b. Number of spill events requiring response	a. The Bryan Fire Department (114) serves as the City's lead for emergency response and site containment. Code Compliance Officers (5) represent staff-level employees trained in basic spill response. b. Bryan Fire Department maintains an inventory record for dispatch calls and response. For purposes of this report "requiring response" is understood as a spill or release meeting TCEQ notification requirements. No reportable spills occurred this reporting period.

MCM(s)	Measurable Goal(s)	Success
5J: Pollution Prevention & Housekeeping	a. TPDES Discharge Permit met b. Discharge monitoring reports submitted	a. Permit compliance met for WWTPs. TCEQ granted reduced sample frequency for *E. coli* at Burton Creek and Still Creek WWTPs b. Monthly and reclaimed water discharge monitoring reports submitted monthly.
6A: MS4 Maintenance	a. Number of pipe areas scheduled for maintenance b. Number of repairs completed c. GIS layer created d. Database created e. Number of roadside ditches and culverts repaired f. Number of roadside culverts replaced g. Number of city-maintained ponds/stormwater inspected	a. Maintenance is not forecasted for pipe. Performed work on pipe is driven by findings from manhole and inlet inspections. b. ~1100 ft. of pipe has been repaired; ~27 creek banks were reclaimed; one detention pond bank was stabilized and no material was hauled out. c. GIS layer is established and updated by projects are complete d. GIS layer is a database of new installed or existing inspected pipes. The actual inspection record is kept in the work order system. When rehab projects change pipe segments the GIS layer is updated usually within 1 year to reflect the changes. e. 142 ditches and culverts were repaired. Activity within this Element has been expanded through an interlocal agreement with Brazos County for use of trustee labor (e.g. prisoners). $42,564.30 in trustee projects were completed this reporting period. f. One g. 8
6B: MS4 Maintenance	a. Number of inlets protected b. Number of events where litter intervention is provided c. Number of stream and creek cleanup events	a. 4,170 inlets citywide have a stormwater quality notice posted on the inlet. b. Six (6) community cleanup events completed through KBB, Cleanup of illegal dump sites and non-point litter/debris located within the public right-of-way is a shared duty between Solid Waste and Code Enforcement. As previously mentioned, trustee labor is now used to assist in community cleanups and system maintenance for correction of issues located on public property. 24 (~ $36,000) trustee projects were completed this reporting period. c. ~1,040 yards of waste are collected and removed through street sweeping (4 yds/day x 2 trucks). Waste associated with tree trimming and right-of-way clearance is not tracked
6C: MS4 Maintenance	a. Number of cleanup events participated in by City staff b. Number of KBB-led events performed c. Number of stream and creek cleanup events d. Number of Solid Waste Assessment Workers Employed	a. Six (6) community cleanup events completed through KBB, Cleanup of illegal dump sites and non-point litter/debris located within the public right-of-way is a shared duty between Solid Waste and Code Enforcement. As previously mentioned, trustee labor is now used to assist in community cleanups and system maintenance for correction of issues located on public property. 24 (~ $36,000) b. See Section 4, MCM 1 for performance activity c. One event was completed in conjunction with Texas A&M University Big Event d. 3 fulltime employees are hired to perform litter collection and removal from the right-of-way.

C. Stormwater Monitoring Data (Part IV Section B.2.(b))

1. The MS4 has conducted monitoring of stormwater quality and submitted in the annual report (i.e. analytical and visual observations).

Yes No ✓

a. Explain below or attach a summary to submit along with any monitoring data used to evaluate the success of the SWMP at reducing pollutants to the maximum extent practicable. Be sure to include a discussion of results:

D. Impaired Waterbodies (Part IV Section B.2.(c))

1. If applicable, explain below or attach a summary of any activities taken to address the discharge to impaired waterbodies, including any sampling results and a summary of the small MS4's BMPs used to address the pollutant of concern:

   Elements addressing water quality monitoring, infrastructure maintenance and operation, surface water runoff, and development safeguards outlined within the I-Plan are written into the SWMP to ensure continuity for reducing *E. coli* loading among both documents (I-Plan and SWMP).

   The TMDL Allocation Summary table will serve as the ultimate measure of program success. Measureable milestones and implementation schedules from the I-Plan will be used to steer monitoring efforts and measure program success. SCMs addressing *E. coli* that coincide with control of *E. coli* are highlighted green in each Element.

   Indicators of success regarding measures relating to *E. coli* will include: (1) number of sources identified or eliminated, (2) decrease in number of illegal dumping cases, (3) increase in reporting of illegal dumping, (4) number of educational opportunities conducted, (5) reduction in sanitary sewer overflows, and (6) increase in illegal discharge detection through dry screening.

   MCMs addressing impaired waterbodies are highlighted in green within this report.

   See Attachments 1 - 5

2. Describe the implementation of targeted controls if the small MS4 discharges to an impaired water body with an approved TMDL (*Part II Section D.4.(a)*):

   See D.1 above.

3. Report the benchmark identified by the MS4 and assessment activities (*Part II Section D.4.(a)(6)*):

Benchmark Parameter	Benchmark Value (MPN/day)	Description of additional sampling or other assessment activities	Year(s) conducted
Bacteria *(E. coli)*	See Attachments 2-5	Sampling efforts are performed by (1) TWRI, TCEQ, and BRA for stream sampling and (2) City of Bryan for WWTP performance.	2015/16

4. Provide an analysis of how the selected BMPs will be effective in contributing to achieving the benchmark (Part II Section D.4.(a)(4)):

Benchmark Parameter	Selected BMP	Contribution to achieving Benchmark
Bacteria *(E. coli)*	Community Education	Improve water quality within the watershed through public education and outreach.
Bacteria *(E. coli)*	Illicit Discharge Detection and Elimination	Continue implementation of SSO initiatives in the watershed, minimizing impacts of raw sewage being spilled in the watershed due to failures in the wastewater collection and treatment system. See Attachment 3 and 4
Bacteria *(E. coli)*	Storm Sewer Screening and Illicit Discharge Inspections	Improve water quality within the watershed through storm sewer maintenance and inspection to identify and correct illicit discharges or connections.
Bacteria *(E. coli)*	Sanitary Sewer Overflows and Infiltration	Continue implementation of SSO initiatives in the watershed, minimizing impacts of raw sewage being spilled in the watershed due to failures in the wastewater collection and treatment system. See Attachment 3
Bacteria *(E. coli)*	Septic Tanks	Improve identification, inspection, pre-installation planning, education, operation, maintenance, and tracking of all OSSFs in the watershed to minimize the potential negative water quality impacts from malfunctioning systems. Septic tanks are regulated by the Brazos County Health Department. The City is working with Brazos County to develop a GIS layer for tracking locations of septic tank installation in the City of Bryan to assist both agencies with system management.
Bacteria *(E. coli)*	WWTP Performance	Ensures WWTPs are performing in accordance with their TPDES discharge permit. See Attachment 2

5. If applicable, report on focused BMPs to address impairment (*Part II Section D.4.(a)(5)*):

Pollutant to Address	Description of Focused BMP	Comments/Discussion
Bacteria *(E. coli)*	Private Line Repairs/Smoke Testing	City crews proactively smoke test the sanitary sewer system for defects (public and private). 10.4 miles of sewer pipe were smoke tested for this reporting period. 110 private defects were identified and repaired. 162.2 miles of pipe have been smoke tested since FY2012.
Bacteria *(E. coli)*	Sewer Line Cleaning and Inspection	Approximately 96 miles (24% of the sanitary sewer system) was cleaned and inspected in FY2017.

Pollutant to Address	Description of Focused BMP	Comments/Discussion
Bacteria *(E. coli)*	Septic Tanks	OSSFs are prohibited for installation if a property is located within 150' of a sewer service. Bryan Code has established protocols for OSSF abandonment and closure when sewer service becomes available. Septic tanks are regulated by the Brazos County Health Department.
Bacteria *(E. coli)*	WWTP Performance	WWTPs are operating beneath discharge permit limitations for E. coli. See Attachment 2.

6. Describe progress in achieving the benchmark (*Part II.D.4.(a)(6)*):

Benchmark Indicator	Description/Comments
Sanitary sewer overflows (SSOs)	SSOs are point sources for *E. coli* and pollutant loading within the watershed. SSO frequency for public overflows decreased for the current monitoring period compared with FY2017 (39) compared with the previous FY2016 (41).
Dry weather screening of storm sewer system	Dry weather screening is performed during routine maintenance by staff to pinpoint cross connections and line breakage. 1,411 inlet and manhole inspections were completed.
Illegal dumping and prohibited discharge cases worked	Code Enforcement responds to citizen complaints concerning illegal dumping and prohibited discharges. See Attachment 4
Sanitary sewer system maintenance and inspection	Sanitary sewer pipe cleaning/inspection combined with smoke testing are tools used for upkeep and maintenance of the sanitary sewer system. ▪ Private Defects Found (current:114, FY2016: 190) ▪ Public Defects Found (current: 26, FY2016: 87) ▪ Miles of Pipe Cleaned/Inspected (current: 96, FY2016: 76)

E. Stormwater Activities (Part IV Section B.2.(d))

Describe any stormwater activities the MS4 operator has planned for the next reporting year. Use the table or attach a summary, as appropriate:

MCM(s)	BMP	Stormwater Activity	Description/Comments
1A: Public Outreach	Community Education	▪ Review existing outreach ▪ Continuation of outreach ▪ Brainstorm topics and ideas ▪ Brainstorm new media avenues	This MCM is a continuous effort that will be performed for the remainder of the permit term
1B: Public Education	School Education	▪ Continue existing outreach program with schools ▪ Evaluate existing programs for program expansion	This MCM is a continuous effort that will be performed for the remainder of the permit term. BEE Bins are no longer utilized for education. This program and measure will be evaluated and amended as needed.

MCM(s)	BMP	Stormwater Activity	Description/Comments
1C: Public Education	Construction Site Operator Education	▪ Continuation of existing programs and services ▪ Evaluate outreach materials and modify as needed ▪ Complete annual multi-sector training for affected staff	This MCM is a continuous effort that will be performed for the remainder of the permit term
1D: Public Education	City Staff Education	▪ Evaluate training materials and modify as needed ▪ Complete annual multi-sector training for affected staff	This MCM is a continuous effort that will be performed for the remainder of the permit term
1E: Public Education	Public Participation/Volunteer Activities	▪ Continuation of existing programs and services ▪ Brainstorm avenues for increasing public participation ▪ Update website with Annual Report	This MCM is a continuous effort that will be performed for the remainder of the permit term
2A: Illicit Discharge	Illicit Discharge Detection and Elimination	▪ Implement training program for illicit discharge investigation and elimination	This MCM is a continuous effort that will be performed for the remainder of the permit term
2B: Illicit Discharge	Storm Sewer Screening and Illicit Discharge Inspections	▪ Implement training program for illicit discharge investigation and elimination	This MCM is a continuous effort that will be performed for the remainder of the permit term
2C: Illicit Discharge	Storm Sewer Screening and Illicit Discharge Inspections	▪ Continuation of existing programs and services ▪ Identify and correct illicit discharge/connections ▪ Establish training program for illicit discharge investigation and elimination ▪ Facilitate mechanism for reporting and response to residential concerns regarding illegal dumping and discharge of non-stormwater materials	This MCM is a continuous effort that will be performed for the remainder of the permit term
2D: Illicit Discharge	Sanitary Sewer Overflows and Infiltration	▪ Continuation of existing programs and services ▪ Identify and correct illicit discharge/connections ▪ Establish training program for illicit discharge investigation and elimination ▪ Facilitate mechanism for reporting and response to	This MCM is a continuous effort that will be performed for the remainder of the permit term

MCM(s)	BMP	Stormwater Activity	Description/Comments
		residential concerns regarding illegal dumping and discharge of non-stormwater materials	
2E: Illicit Discharge	Storm Sewer Map Verification and Update	▪ Inspect and verify condition of outfall and water quality ▪ Inspect and verify condition of manholes and inlets (20% of system) ▪ Expansion and maintenance of GIS layers	This MCM is a continuous effort that will be performed for the remainder of the permit term
2F: Illicit Discharge	Household Hazardous Waste and Oil Recycling	▪ Continuation of used oil recycling services ▪ Increase marketing and outreach of recycling services	This MCM is a continuous effort that will be performed for the remainder of the permit term
2G: Illicit Discharge	Septic Tanks	▪ Continuation of application review with BCHD	This MCM is a continuous effort that will be performed for the remainder of the permit term
3A: Construction Run Off	Construction Plan Review	▪ Continuation of Site Development Review and plans review process for Capital Improvement Projects	This MCM is a continuous effort that will be performed for the remainder of the permit term
3B: Construction Run Off	Inspection of Construction Sites and Enforcement of Control Measure Req.	▪ Continuation of inspection protocol – (1) at least 1 inspection every 30 days for each active project and (2) after major rain events	This MCM is a continuous effort that will be performed for the remainder of the permit term. Inspection records will be entered into the laserfische database for the first time this year. 2017 a full time employee as dedicated drainage inspector will be hired and bolster the city's current inspection effort.
3C: Construction Run Off	Maintain Legal Authority and Guidelines	▪ Review existing ordinances and control mechanisms for conformance relating to General Permit requirements ▪ Internal planning and discussion ▪ Amend or propose new ordinance language where needed	Launch Laserfische application for data management relating to construction stormwater permits (NOI, NOT, CSN)
4A: Post Construction	Bryan City Code Review and Updates	▪ Identify needed change to Bryan City Code with regard to federal state, and local environmental regulations and design practices	This MCM is a continuous effort that will be performed for the remainder of the permit term
4B: Post Construction	Establish Post-Construction Stormwater Management Program	▪ Continuation of existing programs and focus ▪ Development written procedures for	Written procedures still need to be developed with remaining items currently being done. The database created will be used to track new and redevelopment projects meeting MS4 requirements. Full time drainage

MCM(s)	BMP	Stormwater Activity	Description/Comments
		enforcement, and management mechanism for post-construction stormwater management ▪ Review data acquisition procedures and revise as necessary ▪ Track number of new development and redevelopment projects meeting MS4 monitoring requirements ▪ Evaluate long-term operation and maintenance of stormwater controls Document enforcement actions enacted	inspector will be involved in developing the SOPs for development projects. NOC will be issued in 2017 to extend timeframe.
4C: Post Construction	Evaluation of Flood Control Projects	▪ Continuation of existing programs and focus ▪ Evaluate City capital improvement projects for flood control on a case-by-case basis to assess feasibility of incorporating stormwater controls to address water quality	This MCM is a continuous effort that will be performed for the remainder of the permit term. In this is permit term, detention pond inspection program was implemented and will continue through future tems.
5A: Pollution Prevention & Housekeeping	Municipal Facilities Identification	▪ Continue to draft facility SOPs ▪ Create inspection/assessment form	This MCM is a continuous effort that will be performed for the remainder of the permit term
5B: Pollution Prevention & Housekeeping	Training for Municipal Employees	▪ Continuation of existing programs and focus ▪ Perform department-specific annual training of staff execution of the City's SWMP ▪ Complete annual multi-sector training for affected staff	This MCM is a continuous effort that will be performed for the remainder of the permit term
5C: Pollution Prevention & Housekeeping	Contractor Training Oversight	▪ Revise bid and contract documents to include contractor performance requirements relating to SWMP ▪ Utilize mandatory pre-bid meetings as outreach (as necessary) ▪ Establish protocol for documenting contractor	This MCM is a continuous effort that will be performed for the remainder of the permit term

MCM(s)	BMP	Stormwater Activity	Description/Comments
		training ▪ Establish protocol for documenting poor contractor performance	
5D: Pollution Prevention & Housekeeping	Waste Management	▪ Continuation of existing programs and focus ▪ Perform task/department-specific annual training of staff execution of the City's SWMP ▪ Draft task/facility-specific SOPs	This MCM is a continuous effort that will be performed for the remainder of the permit term
5E: Pollution Prevention & Housekeeping	Pesticides, Herbicides and Fertilizer Application	▪ Continuation of service	This MCM is a continuous effort that will be performed for the remainder of the permit term
5F: Pollution Prevention & Housekeeping	Street Sweeping	▪ Continuation of existing programs and focus ▪ Sweep all streets at least 2 times per year; thoroughfares at least 4 times per year; city-owned parking lots 4 times per year	This MCM is a continuous effort that will be performed for the remainder of the permit term
5G: Pollution Prevention & Housekeeping	Grass Clippings, Leaf Litter, and Animal Waste	▪ Continuation of existing programs and focus ▪ Review existing outreach ▪ Continuation of outreach ▪ Review legal authority and amend as necessary ▪ Enforcement of city ordinances	Revision of the Solid Waste Ordinance, adoption of a Municipal Setting Designation, and adoption of Local Limits for Thompsons Creek is forecasted for the next reporting period This MCM is a continuous effort that will be performed for the remainder of the permit term
5H: Pollution Prevention & Housekeeping	Road and Parking Lot Maintenance	▪ Continuation of service	This MCM is a continuous effort that will be performed for the remainder of the permit term
5I: Pollution Prevention & Housekeeping	Cold Weather Conditions	▪ Continuation of service	This MCM is a continuous effort that will be performed for the remainder of the permit term
5J: Pollution Prevention & Housekeeping	Spill Response	▪ Continuation of existing programs and focus ▪ Review existing protocols	This MCM is a continuous effort that will be performed for the remainder of the permit term
5K: Pollution Prevention & Housekeeping	WWTP Performance	▪ Continuation of existing programs and focus	This MCM is a continuous effort that will be performed for the remainder of the permit term
6A: MS4 Maintenance Activities	System Repair and Maintenance	▪ Continuation of existing programs and focus ▪ Record damaged storm drain piping and schedule maintenance ▪ Investigate roadside	This MCM is a continuous effort that will be performed for the remainder of the permit term

MCM(s)	BMP	Stormwater Activity	Description/Comments
		ditches and culverts through service requests ▪ Asset management though GIS and database ▪ 20% system inlets inspected per year ▪ Clean and repair system inlets as needed ▪ Inspect all city-maintained retention and detention ponds annually	
6B: MS4 Maintenance Activities	Water Quality and Flood Control Structures	▪ Continuation of existing programs and focus ▪ Record damaged storm drain piping and schedule maintenance ▪ Investigate roadside ditches and culverts through service requests ▪ Asset management though GIS and database ▪ 20% system inlets inspected per year ▪ Clean and repair system inlets as needed ▪ Inspect all city-maintained retention and detention ponds annually	This MCM is a continuous effort that will be performed for the remainder of the permit term
6C: MS4 Maintenance Activities	Floatables	▪ Continuation of existing programs and focus	This MCM is a continuous effort that will be performed for the remainder of the permit term
6D: MS4 Maintenance Activities	Litter Abatement	▪ Continuation of existing programs and focus ▪ Support and participate in regional litter abatement programs (Keep Brazos Beautiful, Texas Trash Off, Big Event, etc.). ▪ Support and participate in service projects and volunteer efforts regarding illegal dumping ▪ Right-of-way litter collection by Solid Waste Assessment Workers	This MCM is a continuous effort that will be performed for the remainder of the permit term

F. SWMP Modifications (Part IV Section B.2.(e))

1. Changes have been made or are proposed to the SWMP since the NOI or the last annual report, including changes in response to TCEQ's review.

Yes No ✓

If 'Yes', report on changes made to measurable goals and BMPs:

MCM(s)	Measurable Goal(s) or BMP(s)	Implemented or Proposed Changes (Submit NOC as needed)

Note: If changes include additions or substitutions of BMPs, include a written analysis explaining why the original BMP is ineffective or not feasible and why the replacement BMP is expected to achieve the goals of the original BMP.

2. Explain additional changes or proposed changes not previously mentioned (i.e. dates, contacts, procedures, annexation of land etc.): None

G. Additional BMPs (Part IV Section B.2.(f))

Provide a description and schedule for implementation of additional BMPs that may be necessary, based on monitoring results, to ensure compliance with applicable TMDLs and implementation plans.

BMP	Description	Implementation Schedule (Start Date etc.)	Status / Completion Date (completed, in progress, not started)
Full time storm water inspector to be hired in 2017	Hiring of full time storm water inspector looking at building and development construction sites, post construction and other related MS4 inspections.	Spring 2017	Completed

H. Additional Information (Part IV Section B.2.(g))

1. Is the permittee relying on another entity/ies to satisfy some of its permit obligations?

Yes No ✓

If 'Yes," provide the name(s) of other entity/ies and an explanation of their responsibilities (add more spaces or pages if needed):

2.a. Is the named permittee sharing a SWMP with other entities?

Yes No ✓

2.b. If 'yes,' is this a system-wide annual report including information for all permittees?

Yes No

If 'Yes,' list all associated permit numbers and permittee names (add additional spaces or pages if needed):

Authorization Number: _____ Permittee:_____
Authorization Number: _____ Permittee: _____
Authorization Number: _____ Permittee: _____
Authorization Number: _____ Permittee: _____

I. Construction Activities (Part IV Section B.2.(h-i))

1. The number of construction projects in the jurisdiction of the MS4 where the permittee was not the construction site operator (as provided in submittals to the MS4 operator via notices of intent or site notices 25

2. a. Does the permittee utilize the optional seventh MCM related to construction?

Yes No ✓

2. b. If 'yes,' then provide the following information for this permit year:

J. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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.

Name (printed): Kean Register | Title: City Manager

Signature: | Date:

Name (printed): Jayson Barfknecht, PhD, P.E. | Title: Public Works Director

Signature: Jayson Barfknecht | Date: 12/05/2017

Name (printed): Paul Kaspar | Title: City Engineer

Signature: | Date:

Name (printed): Cody Cravatt | Title : Development Manager

Signature: | Date:

Name (printed): Robert Willis | Title : Streets & Drainage Supervisor

Signature: | Date:

Name (printed): Mark Jurica | Title : Treatment & Compliance Manager

Signature: | Date: 12-5-2017

Note: If this is this a system-wide annual report including information for all permittees, each permittee shall sign and certify the annual report in accordance with 30 TAC §305.128 (relating to Signatories to Reports).

Attachment 1 – Carters Creek Watershed Assessment

Carters Creek Total Maximum Daily Load Implementation Project Final Report

Texas Water Resources Institute TR-488
February 2016

Lucas Gregory, Brian Jonescu, Jason Murray,
Cassian Schulz, Anna Gitter, Kevin Wagner

Texas Water Resources Institute
make every drop count

Table of Contents

Executive Summary

The "Carters Creek Total Maximum Daily Load Implementation" project was developed to provide additional information to watershed stakeholders regarding the spatial and temporal distribution of *E. coli* concentrations in water across the watershed to aid in planning future implementation efforts across the watershed. This goal was accomplished through a variety of focused tasks that collected water quality data and *E. coli* source information from across the watershed. Water quality monitoring was greatly expanded by utilizing four different monitoring approaches. Routine monthly monitoring conducted at four stations over a two-year period provided additional data for future water body assessments. Reconnaissance monitoring was conducted by volunteers on a monthly basis at 10 locations and provided water quality information in many areas of the watershed that had not been previously monitored. Stormwater sampling was conducted at two locations and demonstrated the influences of runoff events on water quality. Lastly, an intensive water quality monitoring approach was utilized to collect a large number of samples within selected creek segments on the same day to illustrate changes in water quality from upstream to downstream. This approach enabled specific areas of the watershed to be identified where *E. coli* loading is likely to occur.

Sources of *E. coli* across the watershed were also explored through this project. Physical observations were made in multiple locations across the watershed and recorded a diverse suite of *E. coli* contributors across the watershed. Pets and urban wildlife were noted in many developed locations while livestock and wildlife were noted in many of the undeveloped areas. No major influxes of *E. coli* were suspected to come from animals in any one area, but they certainly contribute to the overall *E. coli* load in the watershed. Urban infrastructure was also evaluated to identify areas where it can potentially influence water quality. A geographic information system was used to map infrastructure across the watershed and identify areas where infrastructure density or proximity to the stream suggest an increase in potential for water quality influences.

Combining water quality information with source survey results illustrated areas across the watershed where water quality observations may be at least partly explained by source survey results. These areas warrant further investigation in many cases, especially where infrastructure could be contributing to observed *E. coli* concentrations. Through this project, no simple approach to addressing *E. coli* loading in the watershed was identified. Instead, it will take a concerted effort to address many diffuse sources of *E. coli* across the watershed. Many such measures are already underway in the watershed and the entities responsible for them are addressing this challenging issue.

water quality at an increased number of stations at an increased sampling frequency. As designed, the sampling effort provided information for small sub-watersheds within the larger Carters Creek watershed. This information allowed for comparisons between sub-watersheds to be made and areas contributing more or less *E. coli* than others to be identified.

A multi-faceted watershed source survey was also conducted to support the expansion of information gathering across the watershed. Traditional, on-the-ground surveys were completed in many areas of the watershed to provide concrete evidence of watershed usage and *E. coli* sources present. Geographic information system (GIS) data were also aggregated and generated based on survey information to further identify features within the watershed that may potentially be sources of *E. coli* or influencing water quality.

Collectively, this work provides information to watershed stakeholders that will allow them to compared measured water quality to the distribution of factors that can potentially influence water quality across the watershed. Using this information, management measure implementation can be directed to specific areas within the watershed to address *E. coli* loads as efficiently as possible.

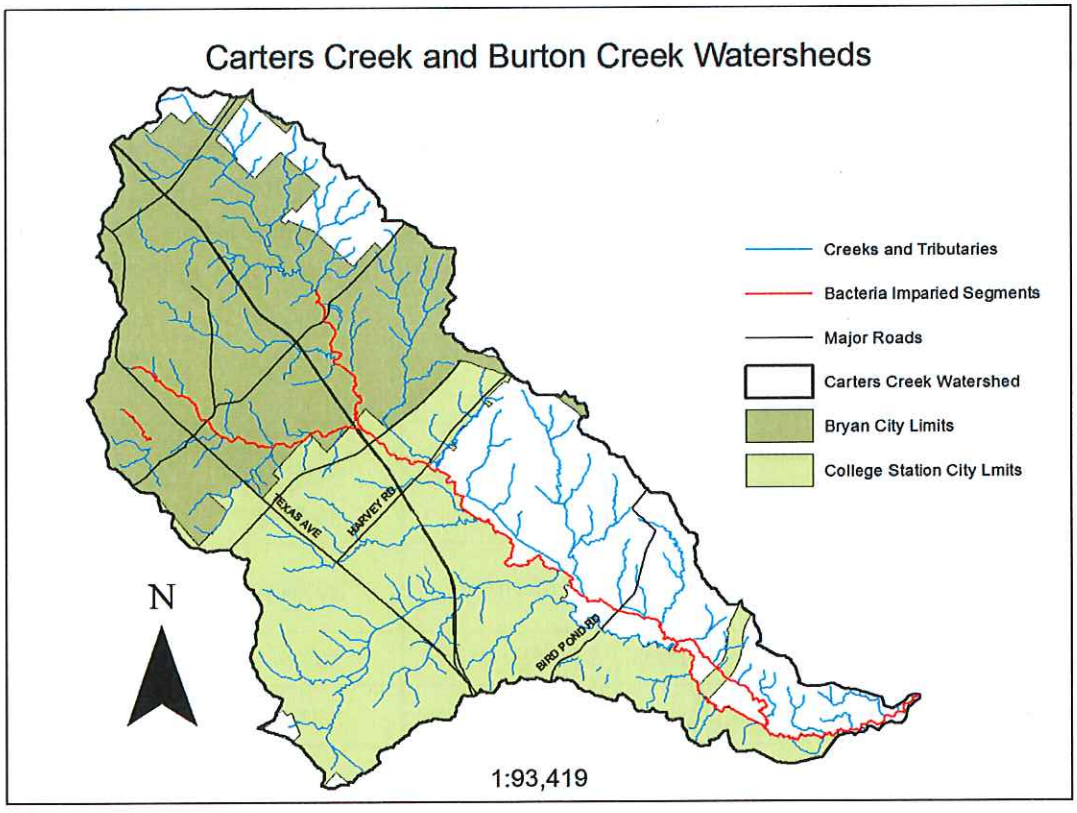


Figure 1. Carters Creek watershed and impaired segments

During each sampling event, stream flow volume measurements were recorded with an acoustic Doppler flow meter (SonTek FlowTracker, San Diego, CA) and were used to define *E. coli* loads transported by the creek on each sampling day. Other water quality parameters were also recorded using a handheld multi-parameter water quality sonde (YSI 556 MPS or EXO1, Yellow Springs, OH). Dissolved oxygen (DO), pH, specific conductance, and water temperature were all recorded with these devices. General observations were also made at each site and included flow severity, weather conditions, water surface conditions, the presence of odors, debris or other substances. Field notes regarding site specific occurrences and other useful information was also recorded.

Water samples were collected into pre-labeled sterile containers and transported in ice to the Soil and Aquatic Microbiology Lab (SAML) at Texas A&M University where *E. coli* concentrations were determined using the USEPA 1603 method. This method produces a direct count of *E. coli* colonies in 100 mL of water.

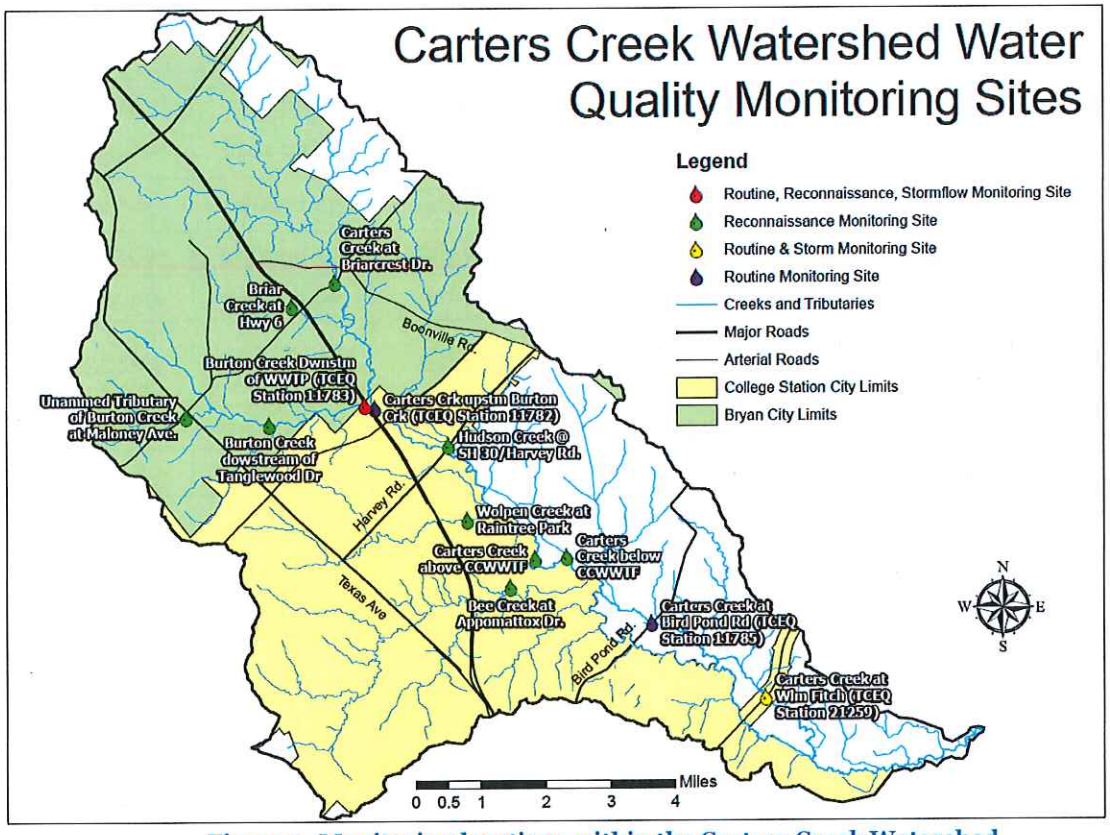
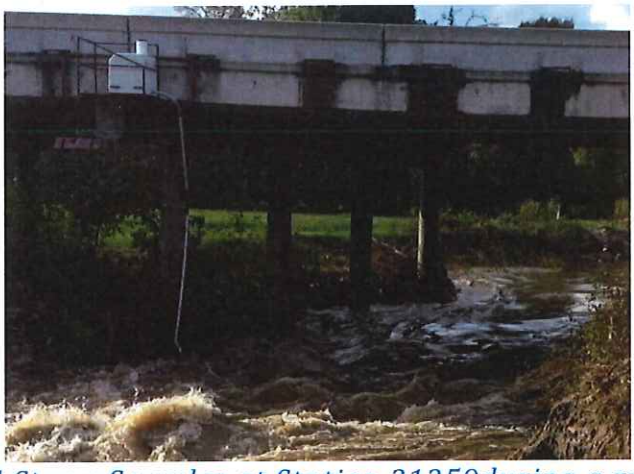


Figure 2. Monitoring locations within the Carters Creek Watershed

E. coli analysis for the reconnaissance samples were processed differently than routine samples. The City of Bryan Thompsons Creek Wastewater Treatment Facility (WWTF) processed samples from Bryan sub-watersheds and samples from College Station sub-watersheds were processed at the City of College Station's Carters Creek WWTF lab. *E. coli* enumeration was conducted using the IDEXX Colilert-18 method. This method produces results in a most probably number (MPN) or *E. coli* per 100 mL and is widely used for assessment purposes. These methods are considered equals by the state for assessment purposes thus justifying their use. Validation of this assumption of similar results was completed by processing water samples collected from a single site using both methods.

Storm Sampling

Automated sampling devices (ISCO Model 6712 Portable Samplers, Teledyne-ISCO, Lincoln, NE) were deployed on Burton Creek and Carters Creek at Stations 11783 and 21259 (Table 1, Figure 2), respectively to collect stormwater runoff influenced samples. These samplers were programmed to only sample after the creek sites rose to a predetermined level. Once samplers were enabled, they took flow-weighted composite samples of the runoff event and recorded water levels which were translated to stream flow volumes. This data allowed for *E. coli* loads in storm events to be calculated. Samples were processed for *E. coli* concentrations by SAML using the USEPA 1603 method. Only *E. coli* concentrations and water depth/stream flow were recorded for these sampling events.



Automated Storm Sampler at Station 21259during a runoff event

Load Duration Curves

Load Duration Curve Analyses (LDC) was performed in order to assess the bacterial loading for Carters and Burton Creeks. LDCs pair streamflow and *E. coli* concentrations collected on the same date to estimate the pollutant loading reductions needed to meet

the site. These detailed data improved the understanding of each location surveyed throughout the watershed and the distribution of potential water quality stressors.

Geographic information systems (GIS) data was also aggregated to further the understanding of the watershed as it relates to potential *E. coli* loading. The goal of the GIS was to aggregate information across the watershed so that it can be utilized to compare watershed characteristics with water quality and explore potential relationships with observed water quality. Available layers from local entities including Brazos County, COB, COCS, TAMU, and TxDOT were acquired and integrated with statewide and national datasets were also acquired from entities including TCEQ, TxDOT, the US Geologic Survey, the US Department of Agriculture (USDA) Natural Resource Conservation Service, USDA Farm Service Agency, and the Multi-Resolution Land Characteristics Consortium. New information was also created and integrated into the GIS. Watershed survey data were digitized and data layers were created that describe survey observations and depict their location across the watersheds. Water quality layers were also generated that illustrate measured water quality across the watershed.

To estimate the total number of on-site sewage facilities (OSSFs) in the watershed, data available from the Brazos County Health Department was aggregated with information regarding septage disposals made by septic pumping service companies who report the location where it originated. A method developed by Gregory et al. 2013 was also applied to identify other potential OSSFs in the watershed that may not have been noted in other data sets. Briefly, this approach combines Census data, aerial imagery and 911 address point locations to identify the number of residences in areas not serviced by centralized sewer systems. The points estimated were compared to those available from acquired data and locations where OSSFs were likely to be located but not known, were added to create an expected OSSF location layer.

Intensive Water Quality Monitoring

Tributaries of Carters and Burton Creeks routinely found with higher *E.coli* concentrations relative to other areas of the watershed with were sampled using a two-phase intensive sampling approach. The goal of this sampling type was to identify small sections of the monitored stream where *E. coli* concentrations rapidly increased. The approach utilized an initial screening sampling regime where numerous samples were taken along the stream on the same date to roughly identify areas within the stream where substantial *E. coli* concentration increases were observed. Stream reaches found to have rapid increases in *E. coli* as compared to other sampled reaches were resampled with a second intensive sampling event to further refine understanding of water quality

Table 3. P-values for median comparisons between each monitoring site

	80915	11782	80910	80912	80908	11783	80917	80914	80916	80913	80911	11785	21259
80909	**0.01**	0.09	0.13	**0.03**	**0.01**	**.02**	0.33	0.09	**<0.01**	**<0.01**	0.91	**<0.01**	**0.03**
80915		0.06	**<0.01**	**<0.01**	**<0.01**	**<0.01**	**0.04**	**<0.01**	**<0.01**	**<0.01**	**0.01**	**0.04**	**<0.01**
11782			**0.01**	**<0.01**	**<0.01**	**<0.01**	0.77	**<0.01**	**<0.01**	**<0.01**	0.19	**<0.01**	**<0.01**
80910				0.35	0.87	0.83	0.11	0.93	0.25	**0.04**	0.42	0.15	0.84
80912					0.48	0.43	**0.01**	0.46	0.80	0.27	0.09	0.81	0.48
80908						0.99	**<0.01**	0.84	0.13	**<0.01**	0.13	**0.01**	0.70
11783							**<0.01**	0.83	0.13	**<0.01**	0.14	**0.02**	0.82
80917								**0.03**	**<0.01**	**<0.01**	0.33	**<0.01**	**0.01**
80914									0.23	**<0.01**	0.30	**0.04**	0.83
80916										**<0.01**	**0.04**	0.11	0.32
80913											**<0.01**	**0.03**	**<0.01**
80911												**0.02**	0.16
11785													**0.03**

Table 4. *E. coli* load reductions needed to meet water quality standards in Carters Creek near SH6 (Station 11782)

Flow Condition	% Flow Exceedance	Percent Load Reduction*	Average Annual Loading (cfu/year)
High Flow	0-10%	73.57	2.65E+02
Moist Conditions	10-40%	47.77	1.74E+02
Mid-Range	40-60%	19.38	7.08E+01
Dry Conditions	60-90%	NA	NA
Low Flow	90-100%	NA	NA

* NA signifies that loads are within allowable limits within the flow category

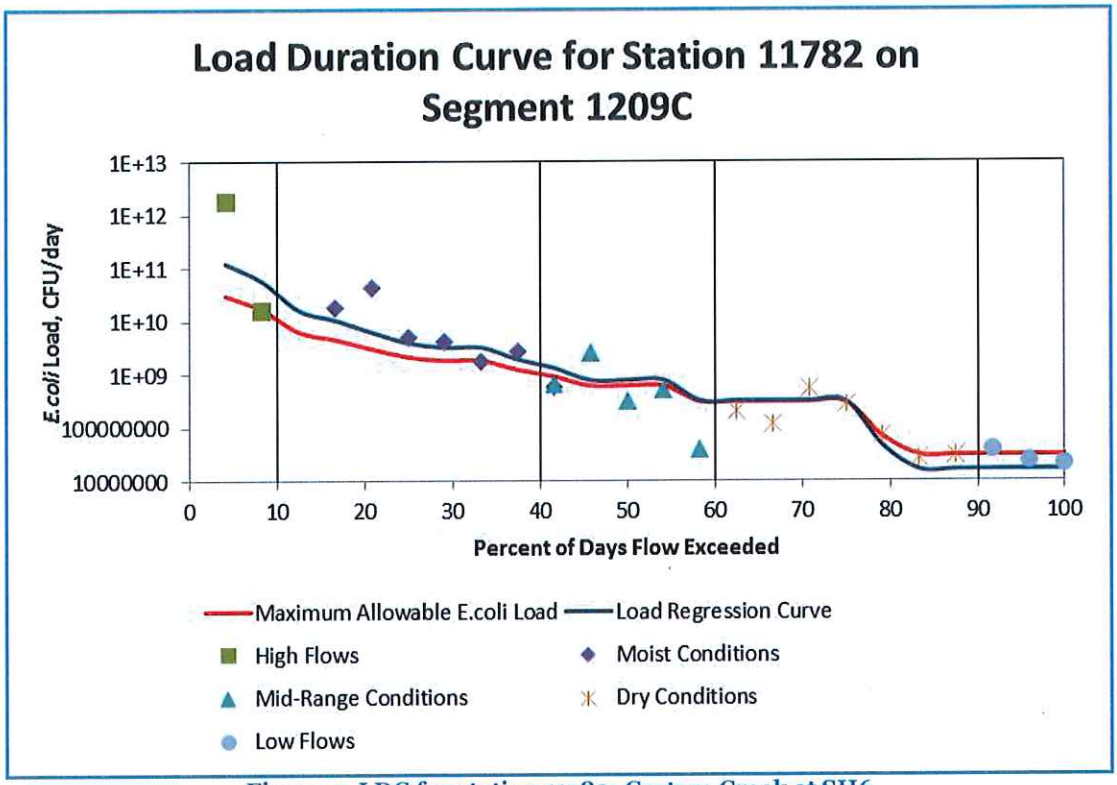


Figure 4. LDC for station 11782: Carters Creek at SH6

water quality may be adversely impacted by allowing for rapid visualization of potential water quality stressors and their proximity to local waterbodies.

Animal sources of *E. coli* were widely documented across the watershed as expected. Birds, dogs, and feral hogs or their evidence was most commonly observed and many other species were noted as well but at less frequent intervals. Garbage was also routinely observed across the watershed in a number of locations. Locations where observations were made are included in Figure 8. These maps do not depict the full extent of fecal loading from animals across the watershed.

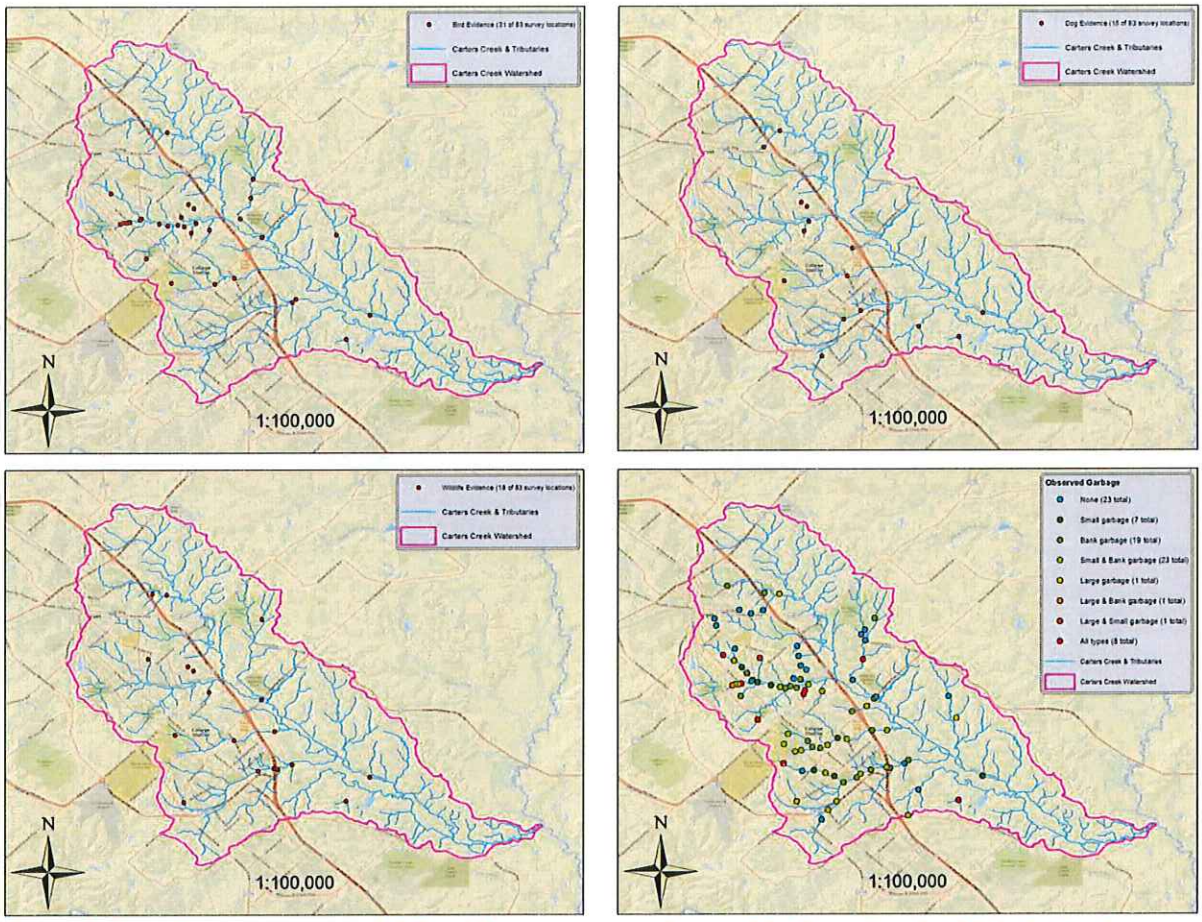


Figure 8. Locations were potential *E. coli* sources were observed in the watershed. Clockwise from top left: Birds, Dogs, Garbage, Wildlife

Infrastructure was also evaluated as a potential influence to water quality. Stormwater conveyances, wastewater conveyances, and streets can all have influences on water quality; particularly if system failures occur. Using GIS data provided by the entities within the watershed, cohesive layers of each infrastructure system was developed.

with any management system, failures can and do occur as a result of system age, improper maintenance, poor system installation or design, or system overload. Regardless of cause, failures increase the potential for wastewater to be released to the environment without proper treatment. Proximity of a failing OSSF to creeks or drainage ditches can influence the potential for improperly treated waste to make its way into downstream water bodies. In total, there are an estimated 769 OSSFs distributed across the watershed (Figure 10).

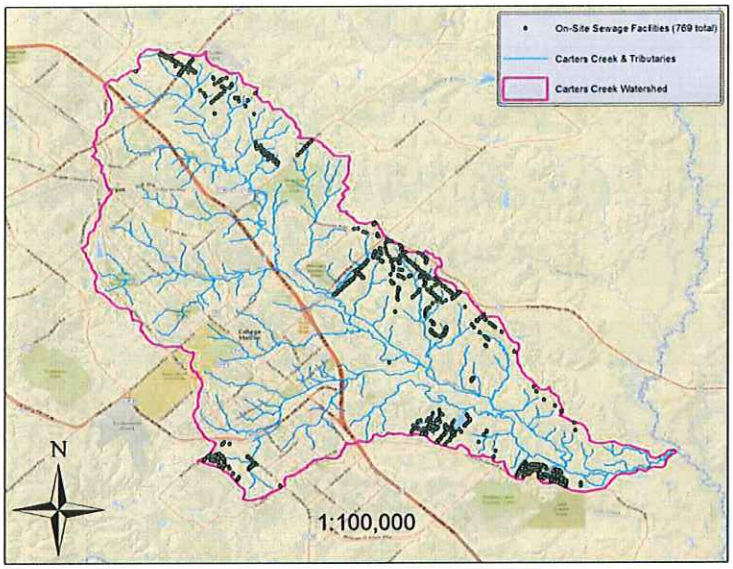


Figure 10. Estimated OSSF locations in the watershed

During the watershed survey, no obvious sources of *E. coli* loading other than fecal deposition by animals were noted and no infrastructure failures were identified.

Changes in land use and land cover were also evaluated as a potential water quality stressor. Land cover changes are often associated with changes in water quality. Generally, as the level of impervious surface increases, water quality degrades. This is due to multiple factors such as the concentration of potential pollutant sources, increased runoff production, and decreased water filtering and storage capacity of the watershed. Changes in land use and land cover in the watershed have increased considerably in recent years due to the rapid growth of Bryan and College Station and the surrounding areas. Land use and land cover layers from 2001 and 2011 were compared to quantify this level of change. This assessment demonstrated considerable loss of open space and a considerable increase in developed areas (Table 8 and Figure 11). In total, 8.5% of the watershed experienced a land use change in this 10 year assessment window. Land use losses occurred primarily in forests, shrub/scrub and in

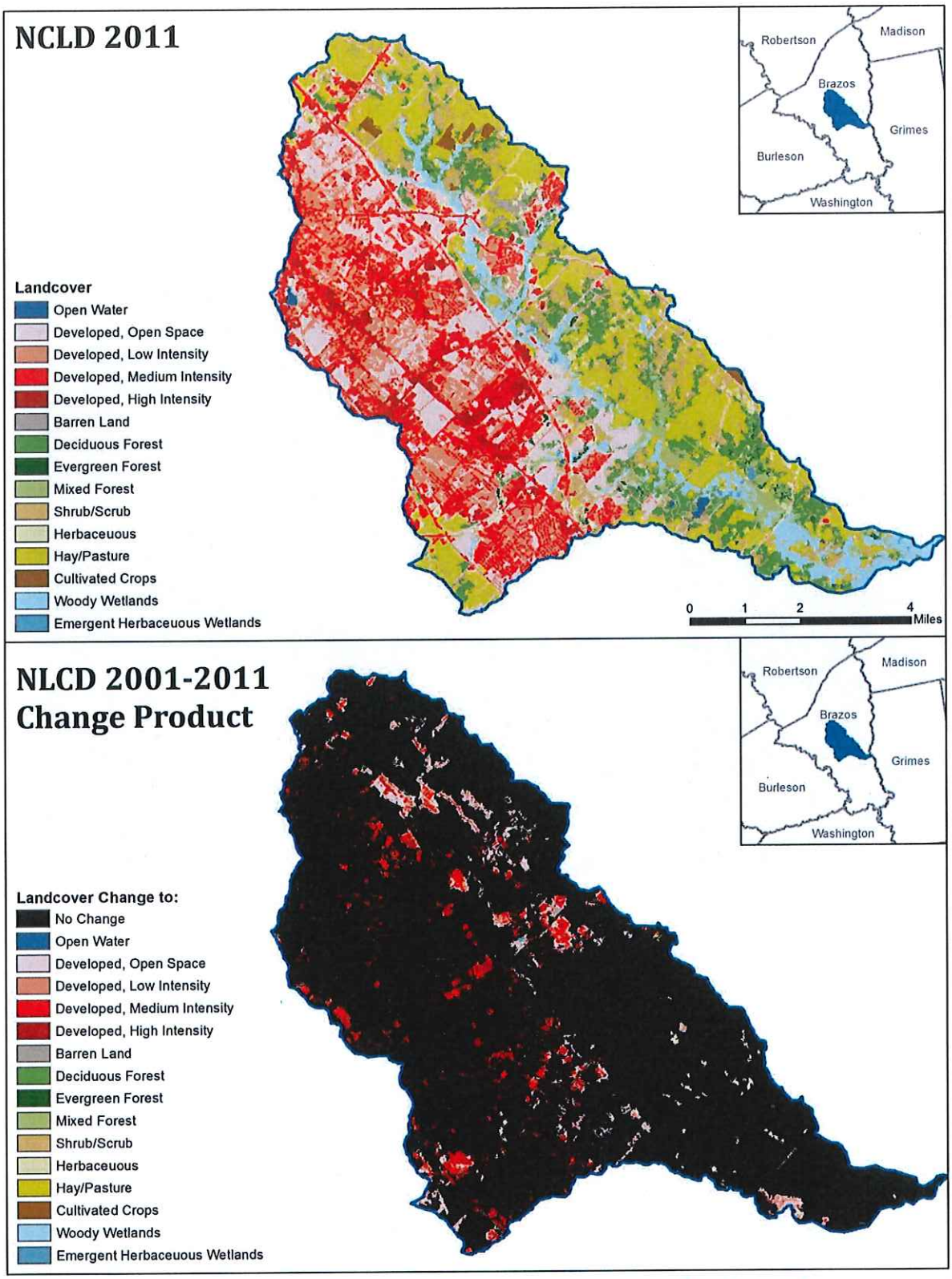


Figure 11. Land use and land cover (top) and the area where land use and land cover change occurred (bottom) in the Carters Creek watershed

waterbodies sampled, two sections of Bee Creek and one of its tributaries; two reaches of Burton Creek and two of its tributaries; and two reaches of Wolf Pen Creek and two of its tributaries were found to have the highest rates of *E. coli* increase. Following the first round of sampling, GIS and watershed survey information were reviewed to provide information on potential *E. coli* sources which may contribute to the increases observed. These potential sources were noted and extra care was taken regarding observations during the second sampling. No obvious influences of these sources were noted; however, the entire reach of each stream segment was not surveyed.

Waterbodies exhibiting considerably larger increases in *E. coli* concentrations between sampling locations were noted during the first sampling event. Two reaches of Bee Creek and one of its tributaries; two reaches of Burton Creek and two of its tributaries; and two reaches of Wolf Pen Creek and two of its tributaries were found to have the highest rates of increase. These sites were further investigated during a second sampling event.

The second round of intensive sampling provided additional insight into the specific loading areas within the sampled reaches. As in the first round of sampling, the portion of Bee Creek immediately upstream of Texas Ave. exhibited rapid increases and decreases of *E. coli* concentrations. The most upstream portion of the creek that drains from Spence Park on the TAMU campus also exhibited a considerable increase in *E. coli* concentrations that were 2 – 3 orders of magnitude higher than the primary contact recreation standard. Several reaches within the Burton Creek watershed also showed considerable changes in *E. coli* concentration within short distances. The unnamed tributary of Burton Creek that flows from Country Club Lake across Villa Maria and Texas Ave showed a rapid increase in *E. coli* immediately upstream and downstream of Villa Maria before levels declined to near the primary contact recreation standard. In Burton Creek between Broadmoor Ave. and the downstream end of Tanglewood Park, *E. coli* also increased steadily before beginning to decline. In the Wolf Pen Creek watershed, the tributaries monitored contained the higher observed *E. coli* concentrations than the creek. These areas included the headwaters of a tributary that drain the Bonfire Memorial and an unnamed tributary that flows under Harvey Rd. from Thomas Park into the Wolf Pen Creek park greenway immediately upstream of George Bush Dr. East. A more detailed assessment of intensive monitoring results is available in Gregory et al. 2016b.

shields *E. coli* from direct sunlight and prevents the inactivation of cells through UV exposure. Additionally, stormwater infrastructure could also intercept wastewater leaking from a failing sewer line or from an illicit connection. One example of stormwater infrastructure being a suspected source of *E. coli* in the watershed is the Wolf Pen Creek tributary that is formed near the Bonfire Memorial. Water collected from this stormwater outfall had a considerably higher *E. coli* concentration than the adjacent site and downstream sites. The headwaters of Bee Creek also showed high *E. coli* concentrations where the stream drains out of Spence Park on the TAMU campus. In addition to storm water infrastructure, the ongoing renovations to Kyle Field (at the time of sampling) represent a potential influence on the elevated *E. coli* concentrations. Further sampling at this location now that the Kyle Field renovations are complete may illustrate different *E. coli* concentrations.

Waterbody shading may also influence *E. coli* concentrations observed in stream. In some cases, increases were observed where the stream flowed through predominantly shaded areas. Subsequently, when stream flowed into areas where there is limited or no shade and the stream is shallow, the *E. coli* levels begin to fall again. An example of a segment with extensive shade on the stream is the upper portion of Bee Creek between George Bush Dr. and Glade St. In this reach, *E. coli* concentrations increase rapidly before beginning to slowly decline. Other inputs of bacteria within this reach are possible and likely given the drastic increase in observed *E. coli* concentrations. Wastewater infrastructure is also a potential source at many of the observed segments; however, there was no evidence of leakage during sampling or stream surveys. Several locations had unpleasant odors, but it is unknown whether the source of these smells came from wastewater infrastructure or another source. Inspection by the appropriate wastewater personnel is recommended to further investigate potential sources *E. coli* sources in these segments.

After sampling data assessment and review, several areas should be considered for further investigation. City or TAMU personnel with knowledge of the potential sources of *E. coli* in these areas (stormwater or wastewater infrastructure) would be the ideal persons to perform these inspections as they may be able to identify problems that can be readily addressed. Also, if infrastructure smoke testing or camera inspections that are currently underway in the watershed could be applied in these areas, they too may be able to identify the underlying cause of the observed *E. coli* loading in these areas.

Summary

Efforts to improve knowledge regarding the spatial and temporal variation in *E. coli* concentrations across the Carters Creek watershed were evaluated throughout the course of this project. Water quality monitoring combined with a watershed survey and

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Attachment 2 – City of Bryan WWTP Performance

Attachment 2
City of Bryan WWTP Performance

Burton Creek WWTP
E. coli Monitoring (CFU/100 mL)

	Geomean	Max
Oct-16	8	12
Nov-16	5	10
Dec-16	8	10
Jan-17	12	25
Feb-17	21	26
Mar-17	5	10
Apr-17	2	5
May-17	10	18
Jun-17	11	11
Jul-17	11	12
Aug-17	20	23
Sep-17	13	20

Attachment 2
City of Bryan WWTP Performance

Still Creek WWTP
E. coli Monitoring (CFU/100 mL)

	Geomean	Max
Oct-16	2	6
Nov-16	2	6
Dec-16	4	6
Jan-17	5	22
Feb-17	2	7
Mar-17	3	6
Apr-17	2	7
May-17	6	13
Jun-17	2	7
Jul-17	7	15
Aug-17	6	18
Sep-17	3	8

Attachment 2
City of Bryan WWTP Performance

Thompsons Creek WWTP
E. coli Monitoring (CFU/100 mL)

	Geomean	Max
Oct-16	1	5
Nov-16	1	8
Dec-16	1	7
Jan-17	1	10
Feb-17	1	8
Mar-17	1	4
Apr-17	1	4
May-17	1	4
Jun-17	1	4
Jul-17	1	3
Aug-17	1	9
Sep-17	2	62

Attachment 3 – City of Bryan SSOI

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October 30, 2017

Mr. Ryan Byer, Coordinator
Order Compliance Team, MC 149A
Enforcement Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Subject: 2017 Annual Report for SSOI Agreement Case No. 37476

This letter is to document the progress the City of Bryan has made on provisions 2 through 6 of the Sanitary Sewer Agreement signed on August 11, 2009.

Provision No. 2: The City shall implement and complete the list of projects contained within Attachment A of the Agreement.

Progress: Please find attached in Appendix A, a table that summarizes the progress of the projects to date included in the compliance agreement. Also included in this table is a final estimate of the completed length of each project for comparison to the original estimated length as listed in the Agreement. Appendix A has also been expanded to include projects previously completed as well as projects that are under construction which were not a part of the original compliance agreement.

Provision No. 3: Establish the causes of SSOs by:

i. Utilizing GIS mapping to develop a visual reference of SSOs by type and location
ii. Establish performance indicators and benchmarks

Progress: Please find attached in Appendix B, a map showing a sample of the GIS mapping used to locate public and private SSOs by type and location. The map is for reference and visual identification of causes.

Below is a list of performance measures. These measures have been incorporated into the work order system so they can be viewed in GIS for reference purposes. Tracking these measures over the timeframe of this agreement will allow the effectiveness of the program to be measured and benchmarks established.

3. Number of dry weather overflows by:
   (a) Volume: <100 gallons; 100 to 999 gallons; 1000 to 9999 gallons; >10,000 gallons.
   (b) Cause: roots, grease, debris, pipe failure, pump station failure, capacity.
   (c) Location – Private versus Public.

   See appendix C

4. Number of wet weather overflows by:
   (a) Volume: <100 gallons; 100 to 999 gallons; 1000 to 9999 gallons; >10,000 gallons.
   (b) Cause: roots, grease, debris, pipe failure, pump station failure, capacity.
   (c) Location – Private versus Public.

   See appendix C

5. Average response time:
   (a) SSO – 24:19 min: sec

   See appendix D

6. Number of cave-ins – 6

3. Number of dry weather overflows by:
   (a) Volume: <100 gallons; 100 to 999 gallons; 1000 to 9999 gallons; >10,000 gallons.
   (b) Cause: roots, grease, debris, pipe failure, pump station failure, capacity.
   (c) Location – Private versus Public.

   See appendix C

4. Number of wet weather overflows by:

   (a) Volume: <100 gallons; 100 to 999 gallons; 1000 to 9999 gallons; >10,000 gallons.
   (b) Cause: roots, grease, debris, pipe failure, pump station failure, capacity.
   (c) Location – Private versus Public.

   See appendix C

5. Average response time:
   (a) SSO – 24:19 min: sec

   See appendix D

6. Number of cave-ins – 6

8. Miles of sewer line smoke tested:

Smoke Testing (FY 2017)	CLEANOUTS Broken/Missing	PRIVATE SIDE Defects	CITY SEWER MAIN Defects	MANHOLES Broken/Damaged	Miles of Pipe
	3	110	25	1	10.4

Miles per fiscal year: FY 2016: 51
FY 2015: 45

The City of Bryan continues to proactively smoke test the collection system. For fiscal years 2015 to 2017, staff smoke tested 3% to 13% of the collection system per year looking for problems on both the public and private side. Staff has implemented a program to ensure all private defects are corrected by providing a financial mechanism that residents can utilize to fund repairs. With the majority of the problems on the private side, addressing these issues is paramount to reducing I&I into the collection system and the resulting wet weather overflows.

9. Miles of sewer line cleaned (Goal is 20% of the system or approximately 80 miles):

Roughly 96 of the 400 miles, or 24% of the system, were cleaned in FY 2017. For this report, the length of line as mapped in GIS was used to determine the total, rather than the estimated footage provided by field crews.

Miles per fiscal year: FY 2016: 76 or 19%
FY 2015: 84 or 22%

10. Number of manholes repaired – 9 (FY 2017)

11. Number of Grease Traps:
    (a) Inspections – 194 (FY 2017)
    (b) Violations – 0 (FY 2017)

number of miles cleaned, a more focused effort from 2011 to the present did achieve the goal for the number of miles of pipe cleaned. This area of work will continue to be monitored for its effectiveness on the overflows and sewer stops within the system. The City of Bryan will continue to be proactive in its efforts of smoke testing the system and identifying defects and proactively addressing the defects both on the private and public side of the sewer system.

This is a summary report of the actions taken by the City of Bryan to comply with the Agreement. If you should have any questions or need additional information related to information contained within this letter, please contact me at (979) 209-5929 or jbarfknecht@bryantx.gov.

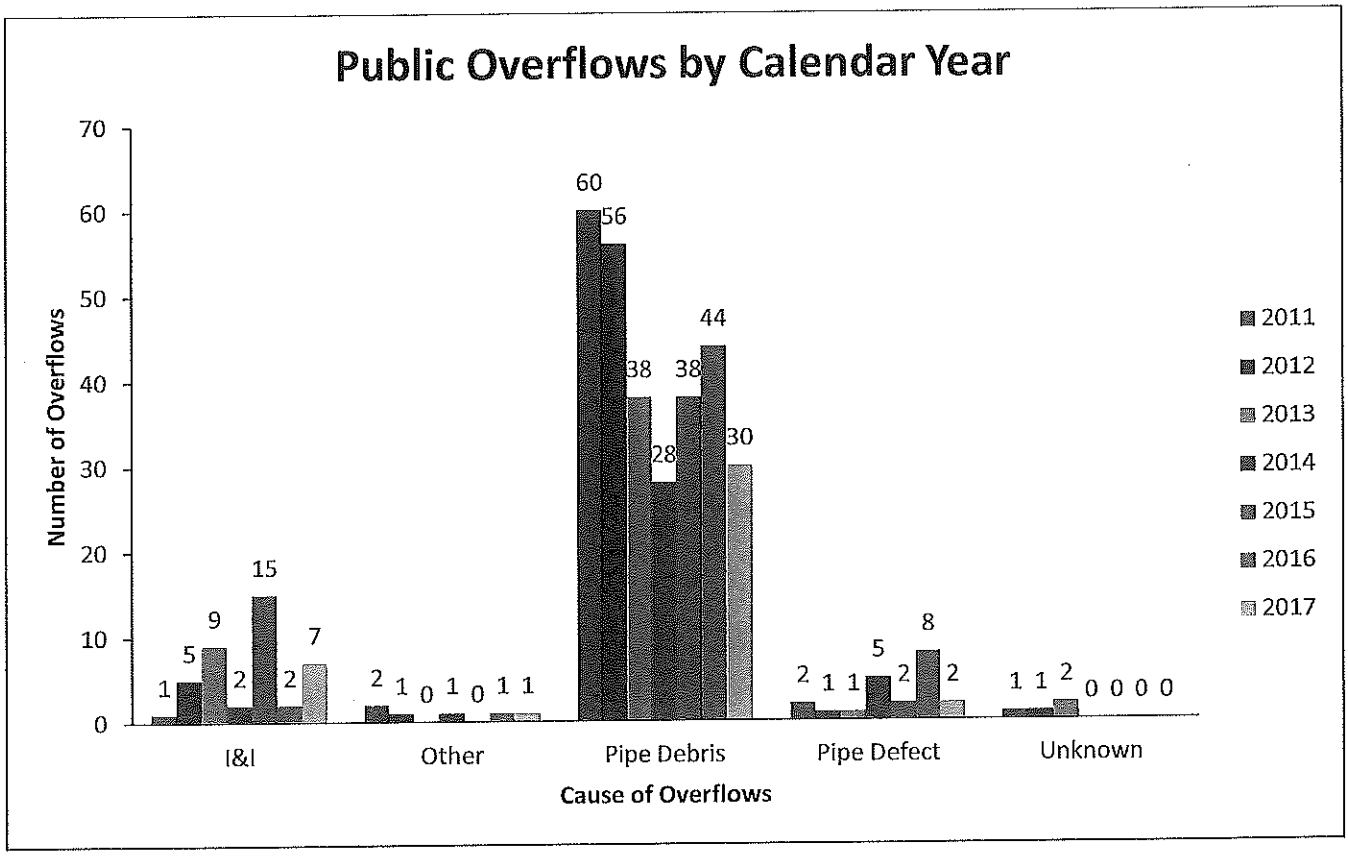
Best Regards,

Jayson Barfknecht, P.E., Ph.D.
Public Works Director

XC: Mr. Richard Monreal, Manager, Water Section, TCEQ Waco Regional Office

Villa Maria Rd	Burton Creek	2014	Complete		96
Coulter Drive	Burton Creek	2014	Complete		510
McCulloch Street	Still Creek	2015	Complete		1550
E. 23rd Street	Burton Creek	2015	Complete		980
Helena Street	Burton Creek	2015	Complete		900
Pauline Street	Still Creek	2015	Complete		540
Avondale Ave	Burton Creek	2015	Complete		300
Briar Bend Ct	Burton Creek	2016	Complete		450
West 26th Street	Still Creek	2016/2017	In Construction	1895	
Alamo Ave	Still Creek	2016/2017	In Construction	560	
Reed Ave	Still Creek	2016/2017	In Construction	550	
Baylor Ave	Still Creek	2016/2017	In Construction	485	
27th Street	Still Creek	2016/2017	In Construction	130	
Congress St	Still Creek	2016/2017	In Construction	500	
Randolph Ave	Still Creek	2016/2017	In Construction	490	
Sterling Ave	Still Creek	2016/2017	In Construction	600	
Logan Ave	Still Creek	2016/2017	In Construction	400	
Sims Ave	Still Creek	2016/2017	In Construction	540	
Garden Ln	Burton Creek	2016/2017	Complete		1335
Skrivanek Dr	Burton Creek	2016/2017	Complete		1510
Esther Blvd	Burton Creek	2016/2017	Complete		450
Carter Creek Pkwy	Burton Creek	2016/2017	Complete		1350
Esther 2 Blvd	Burton Creek	2016/2017	Complete		1825
Avon Street	Burton Creek	2016/2017	Complete		550
Villa Maria Rd	Burton Creek	2016/2017	Complete		1185
Kent Street	Burton Creek	2016/2017	Complete		295
Devonshire Street	Burton Creek	2016/2017	Complete		705
Oxford Street	Burton Creek	2016/2017	Complete		480
Kent Street 2	Burton Creek	2016/2017	Complete		485
Kent Street 3	Burton Creek	2016/2017	Complete		740
Bristol Street	Burton Creek	2016/2017	Complete		765
Ruskin Dr	Burton Creek	2016/2017	Complete		875
Dona Dr	Burton Creek	2016/2017	Complete		950
Carter Creek Pkwy 2	Burton Creek	2016/2017	Complete		490
Barak Ln	Burton Creek	2016/2017	Complete		670
Broadmoor Dr	Burton Creek	2016/2017	Complete		735
Freeman Av	Burton Creek	2016/2017	Complete		770
Graham Dr	Still Creek	2016/2017	Complete		775
			Totals:	**6,150**	**28,145**
			Overall Totals:		**86,807**

Appendix C


Public Overflows by Calendar Year
Number of Overflows
70
60
50
40
30
20
10
0
1 5 9 2 15 2 7
2 1 0 1 0 1 1
60 56 38 28 38 44 30
2 1 1 5 2 8 2
1 1 2 0 0 0 0
I&I
Other
Pipe Debris
Pipe Defect
Unknown
Cause of Overflows
2011
2012
2013
2014
2015
2016
2017

Dry Weather				
Year	Cause	Location	Volume (gallons)	Number of Occurrences
2016				
	Grease	Public	< 100	26
	Grease	Public	100 to 999	12
	Grease	Public	1000 to 9999	0
	Grease	Public	>10,000	0
	Roots	Public	< 100	0
	Roots	Public	100 to 999	0
	Roots	Public	1000 to 9999	0
	Roots	Public	>10,000	0
	Pipe Failure	Public	< 100	5
	Pipe Failure	Public	100 to 999	2
	Pipe Failure	Public	1000 to 9999	1
	Pipe Failure	Public	>10,000	0
	Pump Failure	Public	< 100	0
	Pump Failure	Public	100 to 999	0
	Pump Failure	Public	1000 to 9999	0
	Pump Failure	Public	>10,000	0
	Pipe Debris	Public	< 100	6
	Pipe Debris	Public	100 to 999	0
	Pipe Debris	Public	1000 to 9999	0
	Pipe Debris	Public	>10,000	0
	Total			**52**
2017				
	Grease	Public	< 100	7
	Grease	Public	100 to 999	19
	Grease	Public	1000 to 9999	3
	Grease	Public	>10,000	0
	Roots	Public	< 100	0
	Roots	Public	100 to 999	0
	Roots	Public	1000 to 9999	0
	Roots	Public	>10,000	0
	Pipe Failure	Public	< 100	2
	Pipe Failure	Public	100 to 999	0
	Pipe Failure	Public	1000 to 9999	0
	Pipe Failure	Public	>10,000	0
	Pump Failure	Public	< 100	0
	Pump Failure	Public	100 to 999	0
	Pump Failure	Public	1000 to 9999	0
	Pump Failure	Public	>10,000	0
	Pipe Debris	Public	< 100	0
	Pipe Debris	Public	100 to 999	1
	Pipe Debris	Public	1000 to 9999	0
	Pipe Debris	Public	>10,000	0
	Total			**32**

Note: Overflows due to "other" are not listed in the above tables.

Request #	Completion	Job #	Cat Code	Task	Call Time	Start Time	Response Time
WF0622615	10/20/2016	2	SSO	GPU	7:45:10	8:00:00	0:14:50
WF0625471	11/9/2016	2	SSO	GPU	18:00:00	18:35:00	0:35:00
WF0625888	11/14/2016	2	SSO	DPU	8:33:28	8:47:00	0:13:32
WF0626294	11/13/2016	2	SSO	GPU	9:35:00	9:50:00	0:15:00
WF0626436	11/17/2016	2	SSO	GPU	7:37:35	8:05:00	0:27:25
WF0627083	11/23/2016	2	SSO	DPU	12:31:00	12:55:00	0:24:00
WF0627005	11/22/2016	2	SSO	PFPU	21:50:00	22:15:00	0:25:00
WF0628802	12/12/2016	2	SSO	GPU	21:45:00	22:10:00	0:25:00
WF0629204	12/14/2016	2	SSO	PFPU	13:54:00	14:10:00	0:16:00
WF0629333	12/17/2016	2	SSO	GPU	9:00:00	9:30:00	0:30:00
WF0629335	12/18/2016	2	SSO	GPU	11:10:00	11:30:00	0:20:00
WF0629697	12/21/2016	2	SSO	PFPU	13:38:00	13:55:00	0:17:00
WF0629974	12/26/2016	2	SSO	GPU	15:40:00	15:55:00	0:15:00
WF0631012	1/5/2017	2	SSO	GPU	0:00:00	10:25:00	*No Call Time
WF0631583	1/11/2017	2	SSO	GPU	15:35:00	16:45:00	1:10:00
WF0631808	1/12/2017	2	SSO	PFPU	13:35:00	13:45:00	0:10:00
WF0632019	1/18/2017	2	SSO	GPU	7:50:00	8:10:00	0:20:00
WF0632103	1/18/2017	2	SSO	GPU	11:55:06	12:40:00	0:44:54
WF0632214	1/18/2017	2	SSO	GPU	13:12:00	13:20:00	0:08:00
WF0632291	1/19/2017	2	SSO	GPU	14:46:00	15:00:00	0:14:00
WF0633010	1/26/2017	2	SSO	GPU	11:36:00	11:40:00	0:04:00
WF0633107	1/27/2017	2	SSO	GPU	11:55:00	12:10:00	0:15:00
WF0634481	2/8/2017	2	SSO	GPU	23:15:00	23:30:00	0:15:00
WF0634920	2/13/2017	2	SSO	GPU	18:30:00	19:15:00	0:45:00
WF0634922	2/13/2017	2	SSO	GPU	19:30:00	20:30:00	1:00:00
WF0638533	3/22/2017	2	SSO	GPU	8:37:00	9:00:00	0:23:00
WF0638553	3/22/2017	2	SSO	GPU	9:34:00	9:40:00	0:06:00
WF0640754	4/12/2017	3	SSO	GPU	9:45:00	10:05:00	0:20:00
WF0641124	4/13/2017	2	SSO	GPU	19:45:00	20:00:00	0:15:00
WF0641130	4/15/2017	2	SSO	GPU	13:35:00	14:45:00	1:10:00
WF0641237	4/17/2017	2	SSO	GPU	10:19:00	10:45:00	0:26:00
WF0642112	4/23/2017	2	SSO	PFPU	10:45:00	11:00:00	0:15:00
WF0644939	5/22/2017	2	SSO	IIPU	8:50:00	9:00:00	0:10:00
WF0645492	5/25/2017	2	SSO	GPU	17:40:00	18:00:00	0:20:00
WF0648968	6/26/2017	2	SSO	GPU	11:55:00	12:20:00	0:25:00
WF0650403	7/5/2017	2	SSO	GPU	7:47:00	8:00:00	0:13:00
WF0650561	7/3/2017	2	SSO	GPU	19:45:00	20:00:00	0:15:00
WF0651937	7/13/2017	2	SSO	GPU	10:10:00	10:35:00	0:25:00
WF0652274	7/17/2017	3	SSO	GPU	12:01:00	12:15:00	0:14:00

Attachment 4 – Code Enforcement

Code Enforcement FY2017 Performance Report

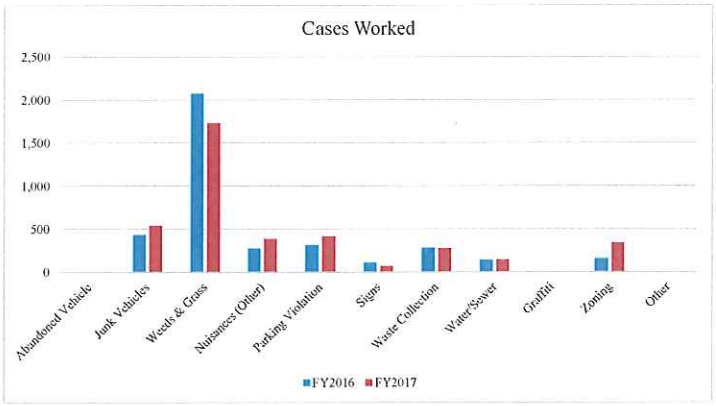
Cases Worked:	October - September	
	FY2016	FY2017
Abandoned Vehicle	10	9
Junk Vehicles	435	541
Weeds & Grass	2,081	1,733
Nuisances (Other)	278	389
Parking Violation	319	419
Signs	113	75
Waste Collection	287	279
Water/Sewer	144	147
Graffiti	8	12
Zoning	161	339
Other	3	0
Total	3,839	3,943

% Change Cases Worked FY16:FY17	3%

	October - September	
	FY2016	FY2017
Working Days:	260	260
Cases/Day:	15	15

Case Origination:	October - September			
	FY2016	FY2017	FY2016	FY2017
Citizen Complaint	1,590	1,222	41.4%	31.0%
City Council	32	4	0.8%	0.1%
Internal Complaint/Officer Initated	2,151	2,708	56.0%	68.7%
Referral	66	9	1.7%	0.2%
	3,839	3,943	100.0%	100.0%

Citations Issued:	October - September	
	FY2016	FY2017
	143	185



Attachment 5 – Education

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City of Bryan Finance Dept.
PO Box 1000
Bryan TX 77805

No. 23091
Date 11/7/16
P.O.

QUANTITY	DESCRIPTION	AMOUNT
750	Code Booklet 8pg + Cover, 8 1/2 x 5 1/2 Finished 80# Gloss Cover & Book 4/0 Process, 4/4 Process PDF proof, Color proof score, fold, stitch, box, local delivery, (6 pages) 001-3401-420-2105 ME7008	$981.11

Received
NOV 10 2016
City of Bryan
Finance

SPECIAL INSTRUCTIONS

SUB	981.11
TAX	
SHIPPING	0.00
TOTAL	981.11
NET DUE	$981.11

Please pay from this invoice

- Remit payments to: 2023 South Texas Avenue, Bryan, Texas 77802
- Please make checks payable to AlphaGraphics

RECEIPT FOR CASH SALES
CASH ☐ CHECK # _____ CREDIT CARD ☐

AMOUNT RECEIVED	
CSR INITIALS	

BROWN & BIGELOW

Marketing + Incentives + Recognition

Remit to:Brown & Bigelow
8001 Dunwoody Place, Suite 140, Atlanta, GA 30350

SOUTHERN REGIONAL OFFICE
Phone 678.381.8790

DATE 11/14/16

MEMO INVOICE

Bill City of Bryan
Code enforcement
1111 waco
Bryan Texas 77802

Ship To:

same

Comments or Special Instructions:

SALESPERSON	INVOICE #	SHIP DATE	P.O. #	CUSTOMER #	TERMS
Nancy S	001			06820375	Net30

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
300	Magnet full color imprint	.65	195.00
500	Sticky note pads	.56	280.00
500	Recycled pencils	.39	195.00
250	Money pens	1.35	337.50
300	School bags blue	2.16	648.00
	line 1-$475.00 line 2-$1200.45		
	Thank you for your business		

Prices included all imprints and ground freight.

SUBTOTAL	1655.50
Freight	Incuded
Handling fee	19.95
TOTAL DUE	1675.45

Amount not paid within 30 days may be assessed and APR of 18%
THANK YOU FOR YOUR BUSINESS!

515-4520-754-21-02
SG3072

BROWN & BIGELOW

Marketing + Incentives + Recognition

Remit to:Brown & Bigelow
8601 Dunwoody Place, Suite 140, Atlanta, GA 30350

SOUTHERN REGIONAL OFFICE
Phone 678.381.8780

DATE 11/14/16

MEMO INVOICE

Bill City of Bryan
Water Services
1111 waco
Bryan Texas 77802

Ship To:

same

Comments or Special Instructions:

SALESPERSON	INVOICE #	SHIP DATE	P.O. #	CUSTOMER #	TERMS
Nancy S	002			05820376	Net30

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
500	Fire Hydrant Stress toys	1.56	780.00
500	Toilet Stress Toys	1.25	625.00
500	Can Strain ite	1.54	770.00
750	Back packs	1.19	892.50
250	Funnels hard plastic	1.28	320.00
500	Recycled Penolls	.39	195.00
400	Dog Dispenser bags	1.62	648.00
500	Rain Gauges 4"	2.39	1195.00
500	Sponges	.92	460.00

Prices included all imprints and ground freight.

SUBTOTAL	5885.50
Freight	Incuded
Handling fee	19.95
TOTAL DUE	5905.45

LINE 1 001-340!-420 21 05 $1200.45 SE3072

Amount not paid within 30 days may be assessed and APR of 18%

THANK YOU FOR YOUR BUSINESS!

LINE 3 001-0821-430-21 02 $1,750 SE0313

LINE 2 515-4525-7545 21-02 3165 $2955.00 SE3072

Attachment 6 – Used Oils and Fluids

Acct #5121/33476
City of Bryan - Public Works
1111 Waco
Bryan, TX 77803

DATE	PRODUCT	USED OIL GALLONS	FILTER DRUMS
10/4/16	Used Oil	287	
10/19/16	Used Oil	210	
11/3/16	Used Oil	349	
11/16/16	Used Oil	203	
11/30/16	Used Oil	164	
12/16/16	Used Oil	143	
12/16/16	Used Oil Filters		2
12/29/16	Used Oil	169	
1/11/17	Used Oil	280	
1/25/17	Used Oil	300	
2/8/17	Used Oil	240	
2/22/17	Used Oil	290	
3/8/17	Used Oil	127	
3/21/17	Used Oil	163	
4/3/17	Used Oil Filters		2
4/5/17	Used Oil	285	
5/3/17	Used Oil	275	
5/17/17	Used Oil	250	
5/19/17	Used Oil Filters		2
5/31/17	Used Oil	44	
6/14/17	Used Oil	265	
6/28/17	Used Oil	311	
6/29/17	Used Oil Filters		1
7/11/17	Used Oil	152	
7/26/17	Used Oil	270	
7/31/17	Used Oil Filters		1
8/9/17	Used Oil	123	
8/29/17	Used Oil	328	
9/6/17	Used Oil	149	
9/18/17	Used Oil Filters		1
9/20/17	Used Oil	180	
		5557	**9**

Acct #20434/29494
City of Bryan
300 Park Road
Bryan, TX 77807

DATE	PRODUCT	USED OIL GALLONS	FILTER DRUMS
12/21/2016	Used Oil	**250**	

FARMER'S DIESEL, INC.
2017 REPORT

Picukp Date	Volume (gal)
8/16/2017	90
6/27/2017	150
5/2/2017	80
4/19/2017	200
3/20/2017	55
2/15/2017	50
12/2/2016	125
TOTAL GALLONS	750

Volume is what is pumped out of container.
Quality is based on how much oil vs. water collected.

Submitted by: Brandon Dixon brandon.dixon@farmersdiesel.com
Submitted Date: 09-28-17

COLLECTION POINT: 1111 WACO STREET, BRYAN, TX

Attachment 7 – Revised/Adopted Ordinances

Chapter 46 - STORMWATER MANAGEMENT[1]

Footnotes:

--- (1) ---

Editor's note— Ord. No. 1887, § 1, adopted Oct. 26, 2010, deleted in its entirety and replaced the former Ch. 46, §§ 46-1—46-10, 46-39—46-42, 46-73—46-80, 46-104, 46-105, 46-124, 46-125, 46-149—46-161, 46-191—46-195, 46-214, 46-237—46-243, 46-265—46-268, 46-300—46-307, 46-333—46-339 and enacted a new Ch. 46 as set out herein. The former Ch. 46 pertained to floods. For complete derivation see the Code Comparative Table at the end of this volume.

State Law reference— Responsibility to adopt flood ordinances, V.T.C.A., Water Code § 16.3145.

ARTICLE I. - IN GENERAL

Secs. 46-1—46-10. - Reserved.

ARTICLE II. - FLOOD PROTECTION

DIVISION 1. - GENERALLY

Sec. 46-11. - Statutory authorization.

The legislature of the State of Texas has in V.T.C.A. Water Code § 16.315, et seq., delegated the responsibility to local governmental units to adopt regulations designed to minimize flood losses.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-12. - Findings of fact.

As a part of these provisions, the city finds that:

(1) The special flood hazard areas of the city are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare.

(2) These flood losses are the result of the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of special flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, floodproofed, or otherwise protected from flood damage.

(3) The city, in an attempt to require the development of property in such a way as to not adversely impact on potential stormwater and flooding has caused this chapter to be enacted.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-13. - Statement of purpose.

It is the purpose of this article to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions by provisions designed to:

(1) Protect human life and health;

(2) Maximize the cost effectiveness of expenditures of public money for flood control projects;

Base flood elevation (BFE) means the water surface elevation of the base flood at a certain location assuming full encroachment onto the floodway fringe at all locations. This is the "with floodway" elevation shown in the flood insurance study.

Basement means any area of a building having its floor sub-grade (below ground level) on all sides.

Breakaway wall means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or the supporting foundation system.

Building—See Structure.

Certification means a certification by a registered professional engineer or other party but does not constitute a warranty or guarantee of performance, expressed or implied. Certification of data is a statement that the data is accurate to the best of the certifier's knowledge. Certification of analyses is a statement that the analyses have been performed correctly and in accordance with sound engineering practices. Certification of structural works is a statement that the works are designed in accordance with sound engineering practices to provide protection from the base flood. Certification of "as built" conditions is a statement that the structure(s) has been built according to the plans being certified, is in place, and is fully functioning.

Critical facility means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to schools, nursing homes, hospitals, police, fire and emergency response installations, installations which produce, use or store hazardous materials or hazardous waste.

Development means any substantial manmade 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 materials or equipment.

Elevated building means a nonbasement building built to have the lowest floor elevated above the ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

(1) Built, in the case of a building in zones A1-30, AE, A, A99, AO, AH, B, C, X, and D, to have the top of the elevated floor elevated above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the flow of the water; and

(2) Adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of zones A1-30, AE, A, A99, AO, AH, B, C, X, D, the term "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwaters.

Existing construction means, for the purposes of determining insurance rates, structures for which the "start of construction" commenced before the effective date of the FIRM. "Existing construction" may also be referred to as "existing structures."

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, and either final site grading or the pouring of concrete pads) is completed before August 22, 1977 when floodplain management regulations were adopted.

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* means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters or the unusual and rapid accumulation or runoff of surface waters from any source.

(3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the secretary of the interior; or

(4) Individually listed on a local inventory historic places in communities with historic preservation programs that have been certified either:

a. By an approved state program as determined by the secretary of the interior, or

b. Directly by the secretary of the interior in states without approved programs.

Increased cost of compliance (ICC) means the coverage by a standard flood insurance policy under the NFIP that provides for the payment of a claim for the cost to comply with the State of Texas and the City of Bryan floodplain management laws or ordinances after a direct physical loss by flood, when the city declares the structure to be "substantially" or "repetitively" flood-damaged. ICC coverage is provided for in every standard NFIP flood insurance policy, and will help pay for the cost to floodproof, relocate, elevate, or demolish the structure.

Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for the 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 nonelevation design requirements of this article.

Manufactured home means a structure transportable in one or more sections, built on a permanent chassis, and designed to be used with or without a permanent foundation when connected to the required utilities. The term does not include "recreational vehicle" unless it is placed on a site for greater than 180 consecutive days.

Manufactured home park or subdivision (mobile home park) 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 maps (FIRM) for a community issued by the agency.

Mean sea level (MSL) means the National Geodetic Vertical Datum (NGVD) of 1929 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 the nationwide reference surface for elevations throughout the United States made available by the National Geodetic Survey with the establishment of thousands of benchmarks throughout the continent.

New construction means construction for which the "start of construction" commenced after the effective date of the ordinance from which this article was derived.

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 chapter.

Participating community, also known as an eligible community, means a community in which FEMA has authorized the sale of flood insurance.

Principally above ground means that at least 51 percent of the actual cash value of the structure is above ground.

Recreational vehicle means a vehicle which is:

(1) Built on a single chassis;

(2) Four hundred 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; and

(4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use (includes park trailers and travel trailers).

Water surface elevation means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

(Ord. No. 1887, § 1, 10-26-2010)

Secs. 46-16—46-20. - Reserved.

DIVISION 2. - ADMINISTRATION AND ENFORCEMENT

Sec. 46-21. - Lands to which this article applies.

This article shall apply to all areas within the City of Bryan, and the area of extraterritorial jurisdiction (ETJ).

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-22. - Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in a scientific and engineering report entitled "Flood Insurance Study for Brazos County, Texas and Incorporated Areas," dated July 2, 1992, with accompanying flood insurance rate maps and any revisions thereto, are hereby adopted by reference and declared to be a part of this chapter.

Any revision or amendment to the flood insurance study which is requested by a landowner in the city shall be submitted to the floodplain administrator. All requests for map amendment or map revision must be approved by the floodplain administrator in writing prior to their submission to FEMA. If modification of any watercourse is involved an effective conditional letter of map amendment or conditional letter of map revision shall be on file with the floodplain administrator prior to any development. All submittals to FEMA shall be made at no cost to the city. No certificate of occupancy shall be issued for any structure whose construction required the revision or amendment of the flood insurance study until data supporting the revision has been submitted to the floodplain administrator.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-23. - Establishment of floodplain development permit.

A floodplain development permit is required for all proposed construction within regulatory floodplains or other areas of flooding identified by the City of Bryan to ensure conformance with the provisions of this article.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-24. - Compliance.

No development shall hereafter occur without full compliance with the terms and provisions of this article and other applicable regulations.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-25. - Abrogation and greater restrictions.

(5) Verify and record the actual elevation (in relation to mean sea level) of the lowest floor of all new construction and substantial improvements, by requiring an elevation certificate sealed by a licensed professional;

(6) Verify and record the actual elevation (in relation to mean sea level) to which the new or substantially improved nonresidential structures in A-Zones have been floodproofed by requiring an elevation certificate sealed by a licensed professional;

(7) Provide interpretation as needed as to the exact location of the boundaries of the areas of special flood hazard and regulatory floodway (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The floodplain administrator shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided for in this chapter;

(8) Notify in riverine situations adjacent communities and the Texas Commission on Environmental Quality (TCEQ) prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency, and assure that maintenance is provided within the altered or relocated portion of the watercourse so that the flood-carrying capacity is not diminished;

(9) When base flood elevation data or floodway data has not been provided in accordance with this article, the floodplain administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, in order to administer the provisions of this article;

(10) Coordinate with other departments in the city to assure that the requirements of this article are fully met;

(11) Participate actively in evaluating the variance requests and provide input and recommendations in variance hearings/proceedings;

(12) Coordinate all change requests to the FIS and FIRM or FBFM, or both, with the requestor, state, and FEMA;

(13) Submit new technical data. A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify FEMA of the changes by submitting technical or scientific data. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and floodplain management requirements will be based upon current data. This submittal to FEMA shall be at the developer's, who is requesting the change, expense and at no cost to the city;

(14) When a regulatory floodway has not been designated, the floodplain administrator shall not permit new construction, substantial improvements, or other development (including fill) within zones A1-30 and AE on the community's FIRM, unless it is demonstrated 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 foot at any point within the community; and

(15) The floodplain administrator shall maintain a record of all actions taken under the provisions of this article, including but not limited to appeals or request for a variance as a matter of public record or for submittal to the Federal Emergency Management Agency.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-30. - Floodplain development permit procedures.

A floodplain development permit application must be submitted to the floodplain administrator prior to undertaking any development activities. Application for a floodplain development permit must be

The floodplain administrator will review the lowest floor elevation and floodproofing certificate. If these documents do not conform to the requirements of this article, the permit holder must immediately cease further work, and correct any deficiencies. Failure of the permit holder to submit the surveyed lowest floor elevation and floodproofing certificate or failure to correct any deficiencies will result in a stop-work order for the project.

(4) *Revocation of permit.* The floodplain administrator may revoke a permit or approval issued under the provisions of this article when the applicant has made a false statement or misrepresentation of a material fact in the application or plans upon which the permit or approval was based.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-31. - Variance procedures.

(1) The zoning board of adjustment will hear and decide requests for variances from the requirements of this article.

(2) The board will hear and decide appeals only when it is alleged an error in any requirement, decision, or determination is made by the floodplain administrator in the enforcement or administration of this article. Any person aggrieved by the decision of the board may appeal the decision to a court of competent jurisdiction.

(3) Variances may only be granted when there is:

(a) A showing of good and sufficient cause,

(b) A determination that failure to grant the variance would result in exceptional hardship, and

(c) A determination that the granting of a variance will not result in increased flood heights, additional threats to public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

(4) Variances may only be granted for the minimum necessary deviation to accomplish the purposes of this article.

(5) Variances will not be granted within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result.

(6) Variances may be issued for the repair or rehabilitation of historic structures if the proposed repair or rehabilitation would not preclude the structure's continued designation as a historic structure, and the variance is the minimum necessary to preserve the historic character and design of the structure.

(7) Variances may be issued for new construction, substantial improvements, and for other development necessary for the conduct of a functionally dependent use if:

(a) The criteria of paragraphs (3) through (5) of this section are met, and

(b) The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-32. - Factors to consider in granting a variance request.

The zoning board of adjustment shall consider all technical evaluations, provisions specified in other sections of this article, and:

(1) The danger that materials may be swept onto other lands to the injury of others,

(2) The danger to life and property due to flooding or erosion damage,

to be given by the floodplain administrator; provided however, written notice shall follow within five working days from the time oral notice to stop is issued.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-36. - Penalties for violation.

Violation of the provisions of this article or failure to comply with any of its requirements shall constitute a misdemeanor. Each violation shall be deemed a separate offense for each and every day during which any violation of any of the provisions of this article is committed or continued. Any person found guilty of violating a provision of this article may be punished as provided for in section 1-14 of this Code.

(Ord. No. 1887, § 1, 10-26-2010)

Secs. 46-37—46-40. - Reserved.

DIVISION 3. - STANDARDS FOR FLOOD HAZARD REDUCTION

Sec. 46-41. - General standards.

In all areas of special flood hazards, determined by FEMA or by the community in areas where FEMA has not determined the areas of special flood hazard, the following provisions apply:

(1) Floodplain administrator shall review permits for proposed construction or other development, including the placement of manufactured homes, so that a determination may be made whether or not such construction or other development is proposed within flood-prone areas.

(2) The developer of new construction, substantial improvements, and other development proposals must assure that all necessary permits have been obtained from those governmental agencies from which approval is required by federal or state law, including section 404 of the Federal Water Pollution Control Act, as amended, or by wide-area agencies.

(3) All new construction and substantial improvements must be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

(4) All new construction and substantial improvements must be constructed with materials and utility elements resistant to flood damage.

(5) All new construction or substantial improvements must be constructed by methods and practices that minimize flood damage.

(6) Electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities, including duct work, must be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(7) Subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, must be assured that they will be reasonably safe from flooding. If a subdivision proposal or other proposed new development is in a flood-prone area, any such proposals shall be reviewed to assure that:

   a. All such proposals are consistent with the need to minimize flood damage within the flood-prone area,

   b. All public and private utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and

   c. Adequate drainage is provided to reduce exposure to flood hazards.

(9) Any alteration, repair, reconstruction or improvements to a building that is in compliance with the provisions of this article must meet the requirements of "new construction" as contained in this article; and

(10) Any alteration, repair, reconstruction or improvements to a building that is not in compliance with the provisions of this article may be undertaken only if the nonconformity is not furthered, extended, or replaced.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-43. - Specific standards for noncoastal high hazard areas.

In all noncoastal areas of special flood hazard where base flood elevation data has been provided, as set forth in section 46-22, but no regulatory floodways have been delineated, the following provisions apply:

(1) *Compliance with the standards in section 46-42.*

(2) *Residential structures.*

a. All new construction or substantial improvements of residential structures within Zones A1-30, AE and AH (including substantially damaged manufactured homes by flood) must have the lowest floor (including basement) elevated to one foot above the base flood elevation.

b. All new construction and substantial improvements of residential structures within AO Zone must have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM (at least two feet if no depth number is specified).

(3) *Nonresidential structures.*

a. All new construction or substantial improvements of nonresidential structures must have the lowest floor (including basement) elevated to one foot above the base flood elevation. Nonresidential structures within Zones A1-30, AE and AH may be flood-proofed in lieu of being elevated provided that together with all attendant utility and sanitary facilities, be designed so that below the base flood elevation plus one foot the structure is water-tight with walls substantially impermeable to the passage of water, and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect must certify that the provisions of this subsection are satisfied. The FEMA floodproofing certificate must be prepared and submitted to the floodplain administrator along with the corresponding operational and maintenance plans.

b. All new construction and substantial improvements of nonresidential structures within Zone AO must:

i. Have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM (at least two feet if no depth number is specified), or

ii. Together with attendant utility and sanitary facilities be completely flood proofed to that level to meet the floodproofing standard specified in subsection (3)a. of this section.

(4) *Elevated structures.* For all new construction or substantial improvements, fully enclosed areas below the lowest floor elevation may be usable solely for parking of vehicles, building access, or storage. These enclosed areas must be designed and constructed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

a. Designs for meeting this requirement must be certified by a professional engineer or architect, to meet or exceed the following minimum criteria:

On land located within areas of special flood hazard established in section 46-22, are designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris, potential projectiles and have significant erosion potential, the following provisions apply:

(1) Compliance with standards in section 46-43.

(2) Prohibition on encroachments, including fill, new construction, substantial improvements and other developments with the regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-45. - Critical facilities.

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the SFHA, preferably outside the 0.2 percent annual chance floodplain. Construction of new critical facilities may be permissible within the SFHA if feasible alternative sites are unavailable. Critical facilities constructed within the SFHA shall have the lowest floor elevated 3.0 feet above the base flood elevation at the site. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the maximum extent possible.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-46. - Management methods and practices.

The city shall utilize the following methods and practices for stormwater management:

(1) Limit or regulate the rate of stormwater runoff from development to that which existed under conditions prior to development in those portions of the city as specified by the city;

(2) Limit or control changes in the path of stormwater across or away from a site or development;

(3) Limit or control alterations to existing watercourses and drainage facilities either within or outside areas of special flood hazard;

(4) Control the use of existing or proposed drainage easements such that the easement remains useable for its intended purpose;

(5) Limit or prohibit development in areas of special flood hazard;

(6) Require compliance with city drainage design guidelines, specifications and details;

(7) Establish drainage easements to control development and limit flood damage;

(8) Prohibit dumping of refuse, fill, garbage, grass clippings, brush, waste concrete, or other objectionable material in existing drainage facilities including swales, ditches, storm drains, inlets, watercourses, gutters, or culverts;

(9) Regulate or control filling, grading, clearing, dredging, paving, berming, or other earthwork which may increase stormwater runoff, change drainage patterns, or otherwise increase flood hazard or damage;

(10) Control development that is dangerous to health, safety, or property in times of flooding, or which cause increases in flood heights, velocities, or flow rates;

treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

City shall mean the City of Bryan.

City manager shall mean city manager of the City of Bryan or designee.

Commercial pertains to any business, trade, industry, or other activity engaged in for profit activities.

Common plan of development means a construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development (also known as a "common plan of development or sale") is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities. A common plan of development does not necessarily include all construction projects within the jurisdiction of a public entity (e.g., a city or university). Construction of roads or buildings in different parts of the jurisdiction would be considered separate "common plans," with only the interconnected parts of a project being considered part of a "common plan" (e.g., a building and its associated parking lot and driveways, airport runway and associated taxiways, a building complex, etc.). Where discrete construction projects occur within a larger common plan of development or sale but are located one-quarter mile or more apart, and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale, provided that any interconnecting road, pipeline or utility project that is part of the same "common plan" is not included in the area to be disturbed.

Construction or construction activity shall mean soil disturbance activities, including clearing, grading, and excavating; and does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (e.g., the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities). Regulated construction activity is defined in terms of small and large construction activity.

Construction site notice (CSN) means the statewide form that must be completed and displayed on small and large construction activity as defined by this section.

Development permit means the city permit issued for any construction activity within the City of Bryan corporate limits or within the extra-territorial jurisdiction of the city, by which compliance with stormwater quality regulations are tracked.

Discharge is any addition or introduction of any pollutant, stormwater, or any other substance whatsoever into the MS4 or into waters of the United States.

Discharger is any person who causes, allows, permits, or is otherwise responsible for a discharge, including, without limitation, any operator of a construction site or industrial facility.

Facility is any building, structure, installation, process, or activity from which there is or may be a discharge of a pollutant.

Garbage shall mean putrescible animal and vegetable waste materials from the handling, preparation, cooking, or consumption of food, including waste materials from markets, storage facilities, and the handling and sale of produce and other food products.

Harmful quantity is the amount of any substance that will cause pollution of waters of the state, state water, or MS4.

Household hazardous waste (HHW) is any material generated in a household (including single and multiple residences, hotels, and motels, camp grounds, picnic ground, and day use recreational areas) by a consumer which, except for the exclusion provided in 40 CFR 261.4(b)(1), would be classified as a hazardous waste 40 CFR Part 261.

Hazardous materials are any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or

Pollution (from Texas Water Code (TWC) §26.001(14)) shall mean the alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any surface water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

Premises shall mean any building, lot, parcel of land, or portion of land whether improved or unimproved, including adjacent sidewalks and parking strips.

Public owned treatment works (POTW) means sewage or wastewater treatment works as defined by the Federal Clean Water Act and owned by the city. The definition includes any devices or systems used in the collection, storage, treatment, recycling, and reclamation of sewage sludge or industrial wastes of a liquid nature and any conveyances, which convey wastewater to a treatment plant.

Release shall mean any spilling, leakage, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the municipal separate stormwater system (MS4) or the waters of the United States.

Small construction activity means construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one acre and less than five acres of land. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five acres of land. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities.)

Stormwater is any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Stormwater pollution prevention plan (SWP3) shall mean a document that describes the best management practices and activities to be implemented by a person or entity to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyances system, and/or receiving waters to the maximum extent practicable. Such plan shall include an erosion and sedimentation control plan specific to the property the SWP3 is intended to cover.

Texas Pollutant Discharge Elimination System (TPDES) shall mean the regulatory program delegated to the State of Texas by the EPA pursuant to 33 USC § 1342(b).

Uncontaminated shall mean not containing a harmful quantity of any substance.

Vehicle shall mean any object used for transportation of persons or cargo, regardless of whether self-propelled or attached to another vehicle for transport.

Wastewater means liquid and water-carried wastes and sewage from residential dwellings, commercial buildings, institutions, and industrial or manufacturing facilities, whether treated or untreated, which are contributed to the POTW.

Waters of the United States means:

(1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(2) All interstate waters, including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds that the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(9) Individual residential vehicle washing;

(10) Natural riparian habitat or wetland flows;

(11) Firefighting activities;

(12) Agricultural stormwater runoff;

(13) Any other water source not containing pollutants.

(c) Any non-stormwater discharge permitted under a TPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the United States Environmental Protection Agency (EPA) or the Texas Commission on Environmental Quality (TCEQ), provided that the discharger is in full compliance with all the requirements of the permit, waiver, or order and other applicable laws and regulations, and provided further that written approval has been granted for any discharge to the MS4.

(d) Specific prohibitions and requirements:

(1) It shall be unlawful to construct, use, maintain or continue the existence of illicit connections to the MS4.

(2) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under the laws or practices applicable or prevailing at the time of connection.

(3) A person is considered to be in violation of this article if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

(4) No person shall dump, spill, leak, pump, pour, emit, empty, discharge, leach, dispose, or otherwise introduce or cause, allow, or permit to be introduced any of the following substances into the MS4:

a. Any used motor oil, antifreeze, or any other motor vehicle or marine vehicle fluid;

b. Any industrial waste;

c. Any hazardous waste, including household hazardous waste;

d. Any domestic sewage or septic tank waste, grease trap waste, sludge or grit trap waste;

e. Any garbage, rubbish, or yard waste;

f. Any dumpster or trailer overflow.

(5) Any wastewater from any of the following sources: commercial carwash facility; vehicle washing, cleaning, or maintenance at any new or used automobile or other vehicle dealership, rental agency, body shop, repair shop, or maintenance facility; or from any washing, cleaning, or maintenance of any business or commercial or public service vehicle, including a truck, bus, or heavy equipment;

(6) Any wastewater from a commercial mobile power washer or from the washing or cleaning of a building exterior that contains any soap, detergent, degreaser, solvent, or any other harmful cleaning substance;

(7) Any wastewater from commercial floor, rug, or carpet cleaning;

(8) Any wastewater from the wash down or other cleaning of pavement that contains any harmful quantity of soap, detergent, solvent. Degreaser, emulsifier, dispersant, or any other harmful cleaning substances; or any wastewater from the wash down or other cleaning of any pavement where any spill, leak, or other release of oil, motor fuel, or other petroleum or hazardous substance has occurred, unless all harmful quantities of such released materials have been previously removed;

(9) Any effluent from cooling tower, condenser, compressor, emissions scrubber, emissions filter, or the blow down from a boiler;

(g) A person commits an offense if the person reinstates water service, sanitary sewer service, or MS4 access to premises terminated pursuant to this section, without the prior approval of the administrator.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-122. - Nonemergency suspension of utility service and municipal stormwater drainage system access.

(a) The city may suspend the city provided water supply, sanitary sewer connection, or MS4 access for any person failing to comply with previous notices to cease discharges to the MS4 in violation of this article. Utilities will be subject to suspension if such measures would abate or reduce the discharge.

(b) The administrator will notify a violator of the proposed suspension of its water supply, sanitary sewer connection or MS4 access. The violator may petition the administrator for a reconsideration and hearing before the city manager.

(c) The city will not reinstate suspended services or MS4 access to the discharger until:

(1) The violator presents proof, satisfactory to the administrator, that the noncomplying discharge has been eliminated and its cause determined and corrected;

(2) The violator reimburses the city for all costs the city incurred in suspending and reinstating water service, sanitary sewer connection, and MS4 access; and

(3) The violator reimburses the city for all costs of testing, containment, cleanup, abatement, removal and disposal of any substance unlawfully discharged into the MS4 incurred by the city while responding to, abating, and remediating the discharge or threatened discharge.

(d) The remedies provided by this section are in addition to any other remedies set out in this article. Exercise of this remedy is not a bar against, or a prerequisite for, taking other action against a violator.

(e) A person commits an offense if the person reinstates water service, sanitary sewer service, or MS4 access to premises terminated pursuant to this section, without the prior approval of the administrator.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-123. - Industrial or construction activity discharges.

(a) Any person subject to an industrial or construction TPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required by the administrator prior to allowing discharges to the MS4.

(b) The operator of a facility that is required to have a TPDES permit to discharge stormwater associated with industrial activity shall submit a copy of the NOI to the city at the same time the operator submits the original NOI to the TCEQ, as applicable. The copy of the NOI may be delivered to the administrator either in person or by mail.

(c) A person commits an offense if the person operating a facility that is discharging stormwater associated with an industrial activity without having submitted a copy of the NOI to do so to the administrator.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-124. - Construction activity permit and application.

(b) A SWP3 is not required when a portion of a previously developed tract of land is redeveloped, unless the redevelopment will result in the disturbance of more than one acre of existing vegetation or impervious cover.

(c) The SWP3 must be prepared at the time of submission of the NOI or CSN to the city.

(d) The SWP3 must identify any environmentally sensitive areas that will receive any pollutants carried by stormwater from the site.

(e) The following requirements apply to development of sites five acres and greater or development of sites regardless of size that are part of a common plan of development:

(1) Obtain a city-issued development permit.

(2) A copy of the operator's SWP3, NOI provided to TCEQ, and CSN must be provided to the city before the construction activity commences.

(3) A copy of the operator's NOT provided to TCEQ must be provided to city after final stabilization has been achieved.

(4) The area of the development will be based upon any or all of the following: platted lot(s), site plan of the development, phased-in name of the development and/or ownership of the property or, if not platted, based upon the area of the tract owned by the developer, including all contiguous property owned by the same person.

(f) The following requirements apply to development of sites disturbing between one acre and five acres:

(1) Obtain a city-issued development permit.

(2) A copy of the operator's SWP3 and CSN must be provided to the city before the construction activity commences.

(3) A copy of the operator's notification of closure for the CSN must be provided to city when final stabilization has been achieved.

(4) The area of the development will be based upon any or all of the following: platted lot(s), site plan of the development, phased-in name of the development and/or ownership of the property or, if not platted, based upon the area of the tract owned by the developer, including all contiguous property owned by the same person.

(g) The following requirements apply to development of sites less than one acre, if not part of a common plan of development:

(1) Obtain a city-issued development permit.

(2) A copy of the operator's SWP3 must be provided to the city before the construction activity commences.

(3) The area of the development will be based upon platted lot(s), site plan of the development, phased-in name of the development, and/or ownership of the property or, if not platted, based upon the area of the tract owned by the developer, including all contiguous property owned by the same person.

(h) Minimum requirements of a SWP3 can be found in the most recent TPDES construction general permit.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-126. - Pollution control measures.

(a) The responsible party of any construction site within the city shall implement measures necessary to control erosion, sedimentation, debris, and stormwater pollution. The responsible party is responsible

(1) All soil disturbing activities at the site have been completed and a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

(2) For construction activities on land used for agricultural purposes (e.g. pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to surface water and areas which are not being returned to their pre-construction agricultural use must meet the final stabilization conditions of condition (c)(1) above.

(3) Acceptance of improvements by the city can occur before the final stabilization coverage requirement is met, if the developer agrees to maintain the stabilization until coverage is achieved and all other permanent measures are complete (i.e. performance bond).

(4) Once final stabilization has been achieved, the responsible party shall notify the administrator, or designated representative that final stabilization has been achieved.

(5) Erosion control structures must be provided where necessary to control erosive velocities in unlined channels or swales leaving the site.

(6) Sediment traps must be provided on the site, as necessary, to control sedimentation from concentrated stormwater discharges into an environmentally sensitive area. Individual assessments must be made on a site-specific basis. However, a rock rubble low berm must be installed around an outfall that discharges directly into an environmentally sensitive area, unless this requirement is waived by the administrator because the responsible party has installed another type of sediment trap that provides equal or better protection.

(d) *Scheduling of control measures* . pollution control measures must be implemented in a sequence that will provide maximum stormwater pollution control based on the following principles:

(1) Down slope and side slopes perimeter controls must be installed before land disturbing activity occurs.

(2) The responsible party shall not disturb the site until the responsible party is ready for construction to proceed.

(3) Efforts to provide cover or stabilize disturbed areas must occur as soon as possible.

(4) Temporary perimeter controls may not be removed until all upstream areas are permanently stabilized.

(e) *Inspection of pollution control measures.* The responsible party shall inspect all pollution control measures every 14 days and within 24 hours following a rainfall of 0.5 inches or greater, at the site. The inspection reports are to be considered part of the operator's SWP3, and as such, are subject to the same record retention schedule and availability requirements of the SWP3. The inspection reports, as well as, the entire SWP3 shall be made available for inspection by a representative of the city, during normal business hours.

(f) *Maintenance of pollution control measures.*

(1) The responsible party shall maintain and ensure adequate performance of the temporary pollution control measures until permanent pollution control measures are in place.

(2) Whenever the temporary or permanent pollution control measures do not keep soil, sediment, and debris on the construction site, such as excessive tracking of dirt offsite by vehicles and runoff of sediments from the site over sidewalks and into the streets and gutters, etc., the responsible party shall remove the soil, sediment, and debris from streets, sidewalks, inlets, or other areas including private property impacted such as determined by the administrator, return the soil and sediment to the areas to be stabilized, and properly dispose of the debris.

business day. Notifications in person or by phone shall be confirmed by written notice addressed and mail[ed] to the administrator within three business days of the phone notification. If the discharge of prohibited materials emanates from a commercial or industrial facility, the owner or operator of such facility shall also retain an on-site written record of the discharge and the actions taken to prevent its reoccurrence. Such records shall be retained for at least three years.

(Ord. No. 2133, § 1 , 1-12-2016)

Secs. 46-129—46-149. - Reserved.

DIVISION 4. - ENFORCEMENT[3]

Footnotes:

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Editor's note— Ord. No. 2133, § 1 , adopted Jan. 12, 2016, set out provisions intended for use as Div. 4, §§ 46-129—46-131. To preserve the style of the Code, and at the editor's discretion, these provisions have been included as Div. 4, §§ 46-150—46-152.

Sec. 46-150. - Penalty.

A person who violates any section of this article is guilty of a misdemeanor and upon conviction is punishable in accordance with section 1-14.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-151. - Notice.

The city will serve persons operating in violation of this article with written notice stating the nature of the violation and providing a reasonable time limit for satisfactory compliance. Failure of the city to provide such notice does not limit the authority of the city to take any action deemed appropriate.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-152. - Recovery of costs incurred by the city.

Any person violating any of the provisions of this article; causing damage to or impairing the MS4; or cause impairment or damage to the MS4 will be liable to the city for any expense, loss, or damage caused by such violation or action. The city will bill the person for the costs incurred for any cleaning, repair, replacement, or remediation work caused by the violation or action. Refusal to pay the assessed costs shall constitute a violation of this division enforceable under the provisions of this article.

(Ord. No. 2133, § 1 , 1-12-2016)

Attachment 2 – City of Bryan WWTP Performance

Attachment 2
City of Bryan WWTP Performance

Burton Creek WWTP
E. coli Monitoring (CFU/100 mL)

	Geomean	Max
Oct-16	8	12
Nov-16	5	10
Dec-16	8	10
Jan-17	12	25
Feb-17	21	26
Mar-17	5	10
Apr-17	2	5
May-17	10	18
Jun-17	11	11
Jul-17	11	12
Aug-17	20	23
Sep-17	13	20

Attachment 2
City of Bryan WWTP Performance

Still Creek WWTP
E. coli Monitoring (CFU/100 mL)

	Geomean	Max
Oct-16	2	6
Nov-16	2	6
Dec-16	4	6
Jan-17	5	22
Feb-17	2	7
Mar-17	3	6
Apr-17	2	7
May-17	6	13
Jun-17	2	7
Jul-17	7	15
Aug-17	6	18
Sep-17	3	8

Attachment 2
City of Bryan WWTP Performance

Thompsons Creek WWTP
E. coli Monitoring (CFU/100 mL)

	Geomean	Max
Oct-16	1	5
Nov-16	1	8
Dec-16	1	7
Jan-17	1	10
Feb-17	1	8
Mar-17	1	4
Apr-17	1	4
May-17	1	4
Jun-17	1	4
Jul-17	1	3
Aug-17	1	9
Sep-17	2	62

Attachment 3 – City of Bryan SSOI

COPY

CITY OF BRYAN
The Good Life, Texas Style.

October 30, 2017

Mr. Ryan Byer, Coordinator
Order Compliance Team, MC 149A
Enforcement Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Subject: 2017 Annual Report for SSOI Agreement Case No. 37476

This letter is to document the progress the City of Bryan has made on provisions 2 through 6 of the Sanitary Sewer Agreement signed on August 11, 2009.

Provision No. 2: The City shall implement and complete the list of projects contained within Attachment A of the Agreement.

Progress: Please find attached in Appendix A, a table that summarizes the progress of the projects to date included in the compliance agreement. Also included in this table is a final estimate of the completed length of each project for comparison to the original estimated length as listed in the Agreement. Appendix A has also been expanded to include projects previously completed as well as projects that are under construction which were not a part of the original compliance agreement.

Provision No. 3: Establish the causes of SSOs by:

i. Utilizing GIS mapping to develop a visual reference of SSOs by type and location
ii. Establish performance indicators and benchmarks

Progress: Please find attached in Appendix B, a map showing a sample of the GIS mapping used to locate public and private SSOs by type and location. The map is for reference and visual identification of causes.

Below is a list of performance measures. These measures have been incorporated into the work order system so they can be viewed in GIS for reference purposes. Tracking these measures over the timeframe of this agreement will allow the effectiveness of the program to be measured and benchmarks established.

1. Number of customer sewer complaints

   FY 2017 – 11

   FY 2016 – 3

2. Number of stoppages by:

   (a) Cause: roots, grease, debris, pipe failure, rain water infiltration.

   (b) Location: private vs. public.

FY16	
Cause	**Number**
Infrastructure Failure	12
Private Problem	200
Private Sewer Stop	14
Rain Water Infiltration	27
Unstopped Sewer (Debris)	371
Unstopped Sewer (Grease)	176
Unstopped Sewer (Private)	4
Unstopped Sewer (Roots)	42
Total:	**846**
FY17	
Cause	**Number**
Infrastructure Failure	62
Private Problem	185
Private Sewer Stop	26
Rain Water Infiltration	12
Unstopped Sewer (Debris)	239
Unstopped Sewer (Grease)	190
Unstopped Sewer (Private)	3
Unstopped Sewer (Roots)	29
Total:	**746**

3. Number of dry weather overflows by:
   (a) Volume: <100 gallons; 100 to 999 gallons; 1000 to 9999 gallons; >10,000 gallons.
   (b) Cause: roots, grease, debris, pipe failure, pump station failure, capacity.
   (c) Location – Private versus Public.

   See appendix C

4. Number of wet weather overflows by:

   (a) Volume: <100 gallons; 100 to 999 gallons; 1000 to 9999 gallons; >10,000 gallons.
   (b) Cause: roots, grease, debris, pipe failure, pump station failure, capacity.
   (c) Location – Private versus Public.

   See appendix C

5. Average response time:
   (a) SSO – 24:19 min: sec

   See appendix D

6. Number of cave-ins – 6

7. Number of pump station failures by:
   (a) Electrical supply failure.
   (b) Electrical component failure.
   (c) Pump failure.
   (d) Blockage.

Pump Station	Failure Type	Date
Burgess	Electrical supply failure	10/6/2016
Saddlewood	Electrical supply failure	10/7/2016
Cottonwood	Electrical component failure	11/8/2016
Cottonwood	Electrical component failure	12/9/2016
Burgess	Electrical supply failure	1/2/2017
Sbisa Way	Electrical component failure	1/18/2017
Sbisa Way	Electrical component failure	2/20/2017
Cottonwood	Electrical supply failure	2/25/2017
Sbisa Way	Electrical component failure	4/11/2017
Yegua	Electrical supply failure	4/11/2017
East Villa Maria	Electrical supply failure	4/11/2017
Saddlewood	Electrical supply failure	4/11/2017
Saddlewood	Electrical component failure	4/11/2017
Jones Rd	Pump failure (Pump #1)	4/11/2017
Burgess	Electrical supply failure	4/12/2017
Cottonwood	Electrical supply failure	4/26/2017
Yegua	Electrical supply failure	4/26/2017
Saddlewood	Electrical supply failure	4/26/2017
Verde	Electrical supply failure	4/26/2017
East Villa Maria	Electrical supply failure	4/26/2017
Cottonwood	Electrical supply failure	5/1/2017
Verde	Blockage	5/17/2017
Burgess	Electrical supply failure (x2)	5/20/2017
Flygt 1	Electrical supply failure	5/23/2017
Sbisa Way	Electrical component failure	5/23/2017
West Villa Maria	Electrical supply failure	7/3/2017
Jones Rd	Installed (re-built) Pump #1*	7/21/2017
Burgess	Electrical component failure	8/2/2017
Tiffany Park	Electrical supply failure	8/7/2017
Liftstation 158	Electrical supply failure	9/10/2017
Boonville	Electrical supply failure	9/10/2017
Winchester	Electrical supply failure	9/10/2017
Yegua	Electrical supply failure	9/29/2017

*Pump failure at Jones Rd from 4/11/2017 until 7/21/2017

8. Miles of sewer line smoke tested:

Smoke Testing (FY 2017)	CLEANOUTS Broken/Missing	PRIVATE SIDE Defects	CITY SEWER MAIN Defects	MANHOLES Broken/Damaged	Miles of Pipe
	3	110	25	1	10.4

Miles per fiscal year: FY 2016: 51
FY 2015: 45

The City of Bryan continues to proactively smoke test the collection system. For fiscal years 2015 to 2017, staff smoke tested 3% to 13% of the collection system per year looking for problems on both the public and private side. Staff has implemented a program to ensure all private defects are corrected by providing a financial mechanism that residents can utilize to fund repairs. With the majority of the problems on the private side, addressing these issues is paramount to reducing I&I into the collection system and the resulting wet weather overflows.

9. Miles of sewer line cleaned (Goal is 20% of the system or approximately 80 miles):

Roughly 96 of the 400 miles, or 24% of the system, were cleaned in FY 2017. For this report, the length of line as mapped in GIS was used to determine the total, rather than the estimated footage provided by field crews.

Miles per fiscal year: FY 2016: 76 or 19%
FY 2015: 84 or 22%

10. Number of manholes repaired – 9 (FY 2017)

11. Number of Grease Traps:
    (a) Inspections – 194 (FY 2017)
    (b) Violations – 0 (FY 2017)

12. Number of employees taking certification exams, as well as those passing exams.

(a) Track those taking exams as a requirement of job versus those wishing to obtain higher certifications.

Employee Name	Exam	Results
BALLARD, BRANDON	WASTEWATER COLLECTION OPERATOR I	FAIL
BALLARD, BRANDON	WATER DISTRIBUTION OPERATOR C	FAIL
LOEHR, WILLIAM	WASTEWATER COLLECTION OPERATOR II	FAIL
MARTINEZ, JAMES	WASTEWATER TREATMENT OPERATOR C	PASS
STEWARD, JAROD	WASTEWATER COLLECTION OPERATOR II	FAIL
VEGA, ROMAN	WASTEWATER COLLECTION OPERATOR II	FAIL

Provision No. 4: The City shall implement its Capacity, Management, and Operation Maintenance (CMOM) Program and review the SSO emergency response plan.

Progress: The CMOM document has been completed. The SSO emergency response plan has been incorporated into the CMOM report. Staff is utilizing this document to guide them in the management of the collection system as well as make operational changes.

Provision No. 5: The City shall implement its detailed I/I reduction project approach.

Progress: The City is utilizing the information collected during its I/I analysis to evaluate public and private defects within the system. This information helps focus repair locations to minimize the amount of rainwater entering the collection system. The larger line replacements are being designed, bid, and constructed by contractors. Smaller repairs are being completed by in-house staff. Staff is also smoke testing high priority basins based on the I/I study, as well as mobile home parks to identify public and private defects and missing private cleanout caps. The City continues to do visual inspections of the system during rain events to identify system problems. When other problematic areas are brought to our attention, staff is smoke testing, visually inspecting the pipe, and developing solutions to identify and eliminate the problem.

Provision No. 6: The City shall evaluate the effectiveness of its corrective actions on a yearly basis.

Progress: The City continues to evaluate the progress of the program through field observations, work orders, and reports from citizens. Staff reviews work order history to determine if problems are still evident. This past year, several projects were completed within the collection system. Staff will continue monitoring areas associated with the projects within this Agreement, as well as areas not included. The effectiveness of the corrective actions will be documented through the duration of this agreement.

Currently the City of Bryan experienced a reduction in overflows from 116 in 2010 to 40 in 2017. A review of the data shows that the most significant decrease in overflows was in the "pipe debris" category. This can be attributed to the cleaning program the City implemented on cleaning the collection system. While the first year in 2010 did not meet expectations with respect to the

number of miles cleaned, a more focused effort from 2011 to the present did achieve the goal for the number of miles of pipe cleaned. This area of work will continue to be monitored for its effectiveness on the overflows and sewer stops within the system. The City of Bryan will continue to be proactive in its efforts of smoke testing the system and identifying defects and proactively addressing the defects both on the private and public side of the sewer system.

This is a summary report of the actions taken by the City of Bryan to comply with the Agreement. If you should have any questions or need additional information related to information contained within this letter, please contact me at (979) 209-5929 or jbarfknecht@bryantx.gov.

Best Regards,

Jayson Barfknecht, P.E., Ph.D.
Public Works Director

XC: Mr. Richard Monreal, Manager, Water Section, TCEQ Waco Regional Office

Appendix A

List of Projects

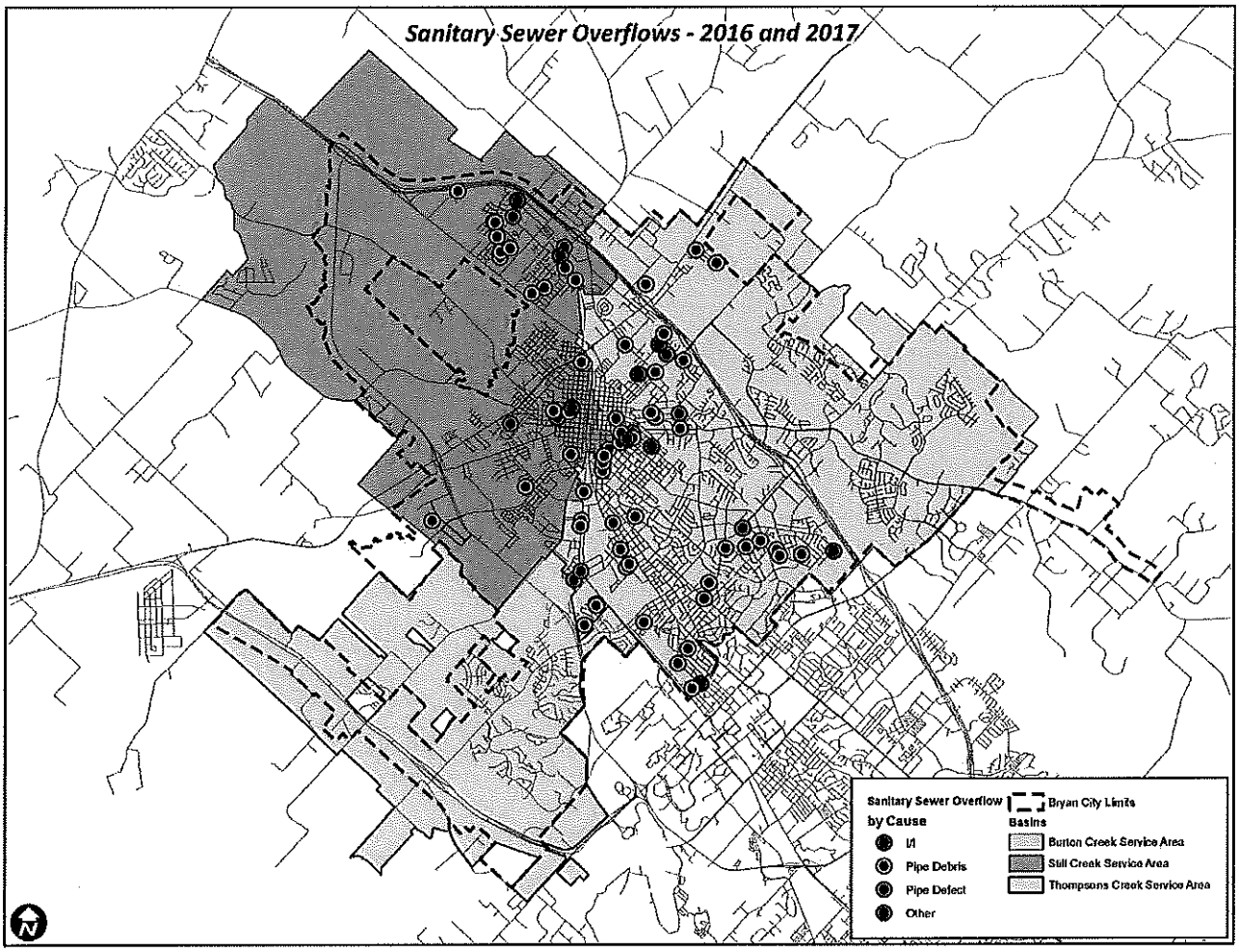
Project No.	Project Name	Basin	Complete by Date	Status	Length (ft)	Completed Length (ft)
S08-28	Tanglewood Park	Burton Creek	1-May-2009	Complete	1400	1440
S08-29	Yellowstone	Still Creek	1-May-2009	Complete	550	540
S08-01	Bonham Park	Still Creek	1-Jul-2009	Complete	675	1030
S08-30	American Legion	Burton Creek	1-Aug-2009	Complete	2100	2240
	Evaluation of Burton Creek	Burton Creek	1-May-2009	Complete		
S08-10	Washington/24th	Burton Creek	1-Jan-2010	Complete	550	750
S08-31	North Brazos	Still Creek	1-Jan-2010	Complete	450	1702
S08-41	Manhole Rehab	Burton Creek	1-May-2010	Complete		
S08-32	McHaney/Old Hearne	Still Creek	1-May-2010	Complete	2175	3120
S08-33	Colson	Burton Creek	1-Aug-2010	Complete	2175	3014
S08-20	Johnson/Cole	Burton Creek	1-May-2011	Complete	1275	1133
S08-42	Manhole Rehab Ph 2	Burton Creek	1-May-2011	Complete		
S08-23	Parker	Still Creek	1-May-2011	Complete	975	2514
S08-21	Henderson Park	Still Creek	1-Oct-2011	Complete	3700	3643
S08-25	Commerce Street	Still Creek	1-Oct-2011	Complete	4475	9736
S08-44	Beck Street	Still Creek	1-Dec-2011	Complete	5700	5789
S08-34	Downtown Ph 3	Still Creek	1-Jan-2012	Complete	700	1756
S08-16	Thompson's Creek WWTP	Turkey Creek	1-May-2012	Complete		
S08-43	Manhole Rehab Ph 3	Burton Creek	1-May-2013	Complete		
S08-35	Hutchins	Burton Creek	1-May-2013	Complete	1075	2070
S08-08	Louisiana	Still Creek	1-Jan-2014	Complete	1975	948
S08-36	Indiana	Still Creek	1-Jan-2014	Complete	500	494
S08-19	Wells Fargo	Burton Creek	1-Oct-2014	Complete	825	825
S08-37	Still Creek Phase 3	Still Creek	1-Oct-2014	Complete	6475	8675
S08-38	Missouri	Still Creek	1-Aug-2015	Complete	625	731
S08-39	Arizona	Still Creek	1-Aug-2015	Complete	650	550
S08-40	Minnesota	Still Creek	1-Aug-2015	Complete	475	595
S08-07	Montana	Still Creek	1-Aug-2015	Complete	1000	485
S08-06	Oklahoma	Still Creek	1-Aug-2015	Complete	1000	1084
S08-05	Alabama	Still Creek	1-Aug-2015	Complete	1000	1079
S08-04	Georgia	Still Creek	1-Aug-2015	Complete	1175	1215
S08-03	Tennessee	Still Creek	1-Aug-2015	Complete	1550	1504
				Totals:	**45,225**	**58,662**

Projects added that were not part of the original Compliance Agreement

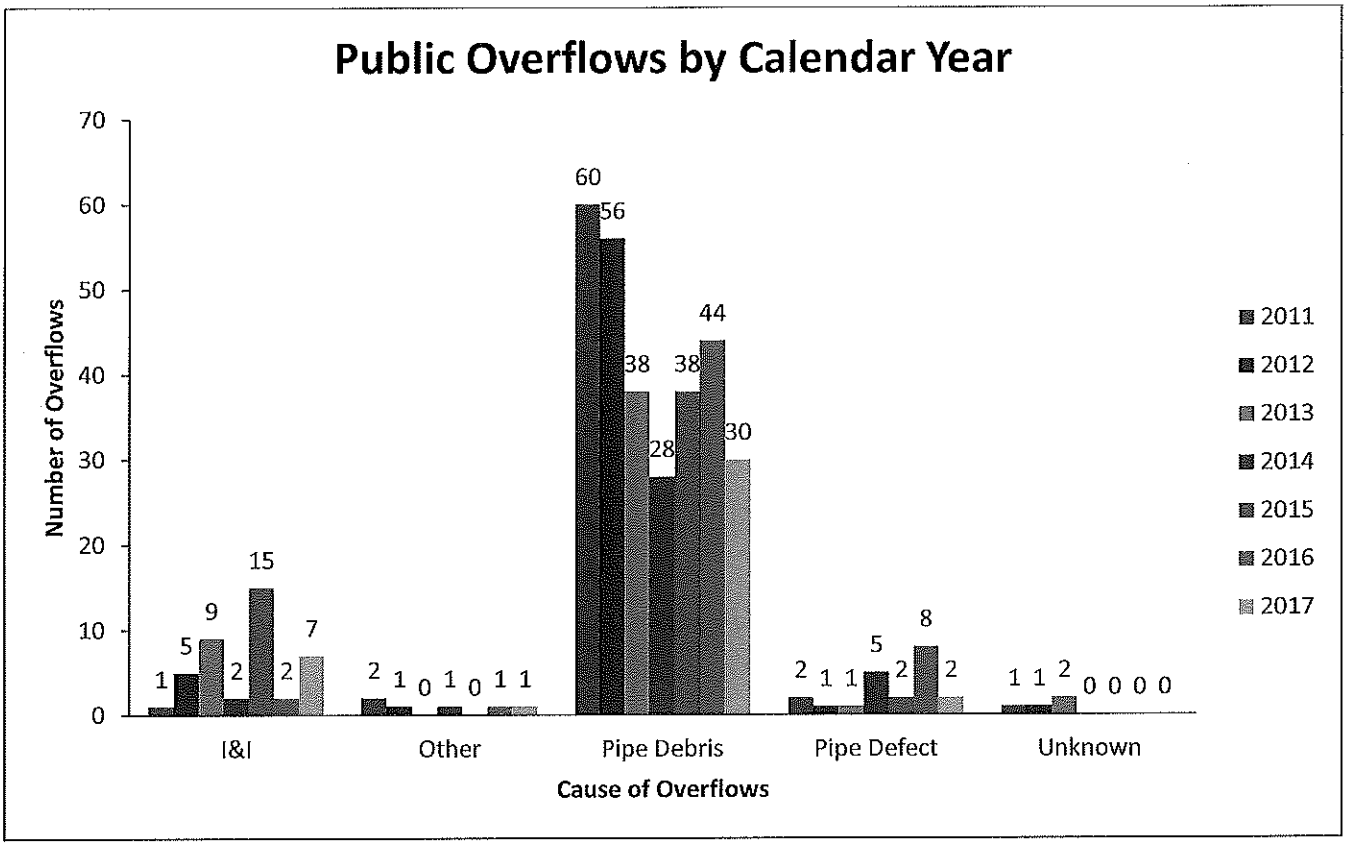
Project Name	Basin	Complete by Date	Status	Length (ft)	Completed Length (ft)
Peale Street	Still Creek	2010	Complete		580
Bennett Street	Burton Creek	2010	Complete		1650
South College	Burton Creek	2011	Complete		615
College Main Street	Burton Creek	2013	Complete		937
Glenn Oaks Drive	Burton Creek	2014	Complete		700
Memorial Drive	Burton Creek	2014	Complete		750
Bonham Drive	Still Creek	2014	Complete		647

Villa Maria Rd	Burton Creek	2014	Complete		96
Coulter Drive	Burton Creek	2014	Complete		510
McCulloch Street	Still Creek	2015	Complete		1550
E. 23rd Street	Burton Creek	2015	Complete		980
Helena Street	Burton Creek	2015	Complete		900
Pauline Street	Still Creek	2015	Complete		540
Avondale Ave	Burton Creek	2015	Complete		300
Briar Bend Ct	Burton Creek	2016	Complete		450
West 26th Street	Still Creek	2016/2017	In Construction	1895	
Alamo Ave	Still Creek	2016/2017	In Construction	560	
Reed Ave	Still Creek	2016/2017	In Construction	550	
Baylor Ave	Still Creek	2016/2017	In Construction	485	
27th Street	Still Creek	2016/2017	In Construction	130	
Congress St	Still Creek	2016/2017	In Construction	500	
Randolph Ave	Still Creek	2016/2017	In Construction	490	
Sterling Ave	Still Creek	2016/2017	In Construction	600	
Logan Ave	Still Creek	2016/2017	In Construction	400	
Sims Ave	Still Creek	2016/2017	In Construction	540	
Garden Ln	Burton Creek	2016/2017	Complete		1335
Skrivanek Dr	Burton Creek	2016/2017	Complete		1510
Esther Blvd	Burton Creek	2016/2017	Complete		450
Carter Creek Pkwy	Burton Creek	2016/2017	Complete		1350
Esther 2 Blvd	Burton Creek	2016/2017	Complete		1825
Avon Street	Burton Creek	2016/2017	Complete		550
Villa Maria Rd	Burton Creek	2016/2017	Complete		1185
Kent Street	Burton Creek	2016/2017	Complete		295
Devonshire Street	Burton Creek	2016/2017	Complete		705
Oxford Street	Burton Creek	2016/2017	Complete		480
Kent Street 2	Burton Creek	2016/2017	Complete		485
Kent Street 3	Burton Creek	2016/2017	Complete		740
Bristol Street	Burton Creek	2016/2017	Complete		765
Ruskin Dr	Burton Creek	2016/2017	Complete		875
Dona Dr	Burton Creek	2016/2017	Complete		950
Carter Creek Pkwy 2	Burton Creek	2016/2017	Complete		490
Barak Ln	Burton Creek	2016/2017	Complete		670
Broadmoor Dr	Burton Creek	2016/2017	Complete		735
Freeman Av	Burton Creek	2016/2017	Complete		770
Graham Dr	Still Creek	2016/2017	Complete		775
			Totals:	**6,150**	**28,145**
			Overall Totals:		**86,807**

Appendix B


Sanitary Sewer Overflows - 2016 and 2017
Sanitary Sewer Overflow by Cause
I/I
Pipe Debris
Pipe Defect
Other
Bryan City Limits
Basins
Burton Creek Service Area
Still Creek Service Area
Thompsons Creek Service Area

Appendix C

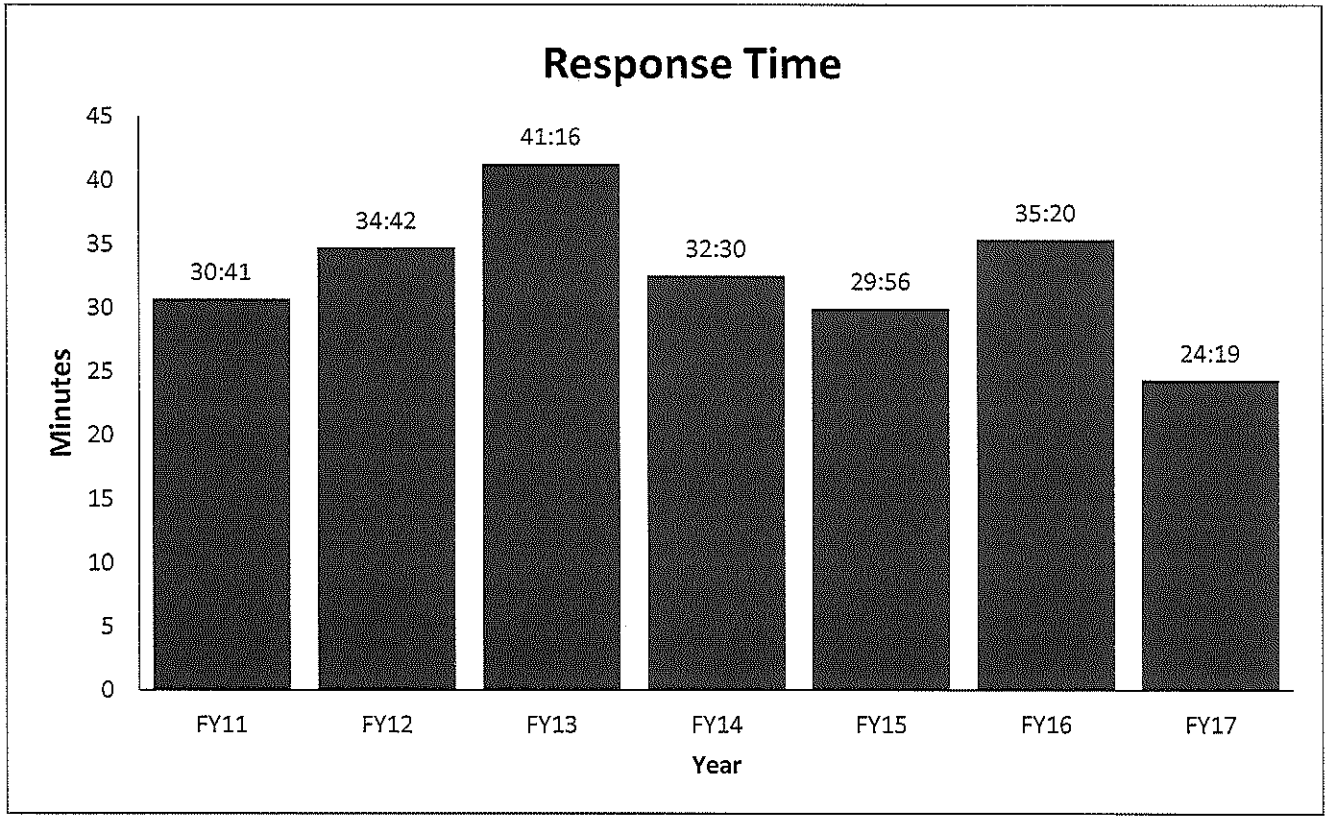

Public Overflows by Calendar Year
Number of Overflows
70
60
50
40
30
20
10
0
1 5 9 2 15 2 7
2 1 0 1 0 1 1
60 56 38 28 38 44 30
2 1 1 5 2 8 2
1 1 2 0 0 0 0
I&I
Other
Pipe Debris
Pipe Defect
Unknown
Cause of Overflows
2011
2012
2013
2014
2015
2016
2017

Wet Weather				
Year	Cause	Location	Volume (gallons)	Number of Occurrences
2016				
	Grease	Public	< 100	0
	Grease	Public	100 to 999	0
	Grease	Public	1000 to 9999	0
	Grease	Public	>10,000	0
	Roots	Public	< 100	0
	Roots	Public	100 to 999	0
	Roots	Public	1000 to 9999	0
	Roots	Public	>10,000	0
	Pipe Capacity	Public	< 100	2
	Pipe Capacity	Public	100 to 999	0
	Pipe Capacity	Public	1000 to 9999	0
	Pipe Capacity	Public	>10,000	0
	Pump Failure	Public	< 100	0
	Pump Failure	Public	100 to 999	0
	Pump Failure	Public	1000 to 9999	0
	Pump Failure	Public	>10,000	0
	Pipe Debris	Public	< 100	0
	Pipe Debris	Public	100 to 999	0
	Pipe Debris	Public	1000 to 9999	0
	Pipe Debris	Public	>10,000	0
	Total			**2**
2017				
	Grease	Public	< 100	0
	Grease	Public	100 to 999	0
	Grease	Public	1000 to 9999	0
	Grease	Public	>10,000	0
	Roots	Public	< 100	0
	Roots	Public	100 to 999	0
	Roots	Public	1000 to 9999	0
	Roots	Public	>10,000	0
	Pipe Capacity	Public	< 100	0
	Pipe Capacity	Public	100 to 999	1
	Pipe Capacity	Public	1000 to 9999	0
	Pipe Capacity	Public	>10,000	6
	Pump Failure	Public	< 100	0
	Pump Failure	Public	100 to 999	0
	Pump Failure	Public	1000 to 9999	0
	Pump Failure	Public	>10,000	0
	Pipe Debris	Public	< 100	0
	Pipe Debris	Public	100 to 999	0
	Pipe Debris	Public	1000 to 9999	0
	Pipe Debris	Public	>10,000	0
	Total			**7**

Dry Weather				
Year	Cause	Location	Volume (gallons)	Number of Occurrences
2016				
	Grease	Public	< 100	26
	Grease	Public	100 to 999	12
	Grease	Public	1000 to 9999	0
	Grease	Public	>10,000	0
	Roots	Public	< 100	0
	Roots	Public	100 to 999	0
	Roots	Public	1000 to 9999	0
	Roots	Public	>10,000	0
	Pipe Failure	Public	< 100	5
	Pipe Failure	Public	100 to 999	2
	Pipe Failure	Public	1000 to 9999	1
	Pipe Failure	Public	>10,000	0
	Pump Failure	Public	< 100	0
	Pump Failure	Public	100 to 999	0
	Pump Failure	Public	1000 to 9999	0
	Pump Failure	Public	>10,000	0
	Pipe Debris	Public	< 100	6
	Pipe Debris	Public	100 to 999	0
	Pipe Debris	Public	1000 to 9999	0
	Pipe Debris	Public	>10,000	0
	Total			**52**
2017				
	Grease	Public	< 100	7
	Grease	Public	100 to 999	19
	Grease	Public	1000 to 9999	3
	Grease	Public	>10,000	0
	Roots	Public	< 100	0
	Roots	Public	100 to 999	0
	Roots	Public	1000 to 9999	0
	Roots	Public	>10,000	0
	Pipe Failure	Public	< 100	2
	Pipe Failure	Public	100 to 999	0
	Pipe Failure	Public	1000 to 9999	0
	Pipe Failure	Public	>10,000	0
	Pump Failure	Public	< 100	0
	Pump Failure	Public	100 to 999	0
	Pump Failure	Public	1000 to 9999	0
	Pump Failure	Public	>10,000	0
	Pipe Debris	Public	< 100	0
	Pipe Debris	Public	100 to 999	1
	Pipe Debris	Public	1000 to 9999	0
	Pipe Debris	Public	>10,000	0
	Total			**32**

Note: Overflows due to "other" are not listed in the above tables.

Appendix D


Response Time
45
40
35
30
25
20
15
10
5
0
Minutes
30:41
34:42
41:16
32:30
29:56
35:20
24:19
FY11
FY12
FY13
FY14
FY15
FY16
FY17
Year

Request #	Completion	Job #	Cat Code	Task	Call Time	Start Time	Response Time
WF0622615	10/20/2016	2	SSO	GPU	7:45:10	8:00:00	0:14:50
WF0625471	11/9/2016	2	SSO	GPU	18:00:00	18:35:00	0:35:00
WF0625888	11/14/2016	2	SSO	DPU	8:33:28	8:47:00	0:13:32
WF0626294	11/13/2016	2	SSO	GPU	9:35:00	9:50:00	0:15:00
WF0626436	11/17/2016	2	SSO	GPU	7:37:35	8:05:00	0:27:25
WF0627083	11/23/2016	2	SSO	DPU	12:31:00	12:55:00	0:24:00
WF0627005	11/22/2016	2	SSO	PFPU	21:50:00	22:15:00	0:25:00
WF0628802	12/12/2016	2	SSO	GPU	21:45:00	22:10:00	0:25:00
WF0629204	12/14/2016	2	SSO	PFPU	13:54:00	14:10:00	0:16:00
WF0629333	12/17/2016	2	SSO	GPU	9:00:00	9:30:00	0:30:00
WF0629335	12/18/2016	2	SSO	GPU	11:10:00	11:30:00	0:20:00
WF0629697	12/21/2016	2	SSO	PFPU	13:38:00	13:55:00	0:17:00
WF0629974	12/26/2016	2	SSO	GPU	15:40:00	15:55:00	0:15:00
WF0631012	1/5/2017	2	SSO	GPU	0:00:00	10:25:00	*No Call Time
WF0631583	1/11/2017	2	SSO	GPU	15:35:00	16:45:00	1:10:00
WF0631808	1/12/2017	2	SSO	PFPU	13:35:00	13:45:00	0:10:00
WF0632019	1/18/2017	2	SSO	GPU	7:50:00	8:10:00	0:20:00
WF0632103	1/18/2017	2	SSO	GPU	11:55:06	12:40:00	0:44:54
WF0632214	1/18/2017	2	SSO	GPU	13:12:00	13:20:00	0:08:00
WF0632291	1/19/2017	2	SSO	GPU	14:46:00	15:00:00	0:14:00
WF0633010	1/26/2017	2	SSO	GPU	11:36:00	11:40:00	0:04:00
WF0633107	1/27/2017	2	SSO	GPU	11:55:00	12:10:00	0:15:00
WF0634481	2/8/2017	2	SSO	GPU	23:15:00	23:30:00	0:15:00
WF0634920	2/13/2017	2	SSO	GPU	18:30:00	19:15:00	0:45:00
WF0634922	2/13/2017	2	SSO	GPU	19:30:00	20:30:00	1:00:00
WF0638533	3/22/2017	2	SSO	GPU	8:37:00	9:00:00	0:23:00
WF0638553	3/22/2017	2	SSO	GPU	9:34:00	9:40:00	0:06:00
WF0640754	4/12/2017	3	SSO	GPU	9:45:00	10:05:00	0:20:00
WF0641124	4/13/2017	2	SSO	GPU	19:45:00	20:00:00	0:15:00
WF0641130	4/15/2017	2	SSO	GPU	13:35:00	14:45:00	1:10:00
WF0641237	4/17/2017	2	SSO	GPU	10:19:00	10:45:00	0:26:00
WF0642112	4/23/2017	2	SSO	PFPU	10:45:00	11:00:00	0:15:00
WF0644939	5/22/2017	2	SSO	IIPU	8:50:00	9:00:00	0:10:00
WF0645492	5/25/2017	2	SSO	GPU	17:40:00	18:00:00	0:20:00
WF0648968	6/26/2017	2	SSO	GPU	11:55:00	12:20:00	0:25:00
WF0650403	7/5/2017	2	SSO	GPU	7:47:00	8:00:00	0:13:00
WF0650561	7/3/2017	2	SSO	GPU	19:45:00	20:00:00	0:15:00
WF0651937	7/13/2017	2	SSO	GPU	10:10:00	10:35:00	0:25:00
WF0652274	7/17/2017	3	SSO	GPU	12:01:00	12:15:00	0:14:00

WF0652817	7/21/2017	2	SSO	GPU	9:36:07	9:45:00	0:08:53
WF0656570	8/22/2017	2	SSO	DPU	9:22:20	9:45:00	0:22:40
WF0656957	8/23/2017	2	SSO	GPU	13:13:00	13:30:00	0:17:00
WF0660101	8/27/2017	2	SSO	IIPU	20:45:00	21:15:00	0:30:00
WF0660126	8/27/2017	2	SSO	IIPU	12:00:00	12:15:00	0:15:00
WF0660129	8/27/2017	2	SSO	IIPU	21:45:00	22:00:00	0:15:00
WF0660131	8/26/2017	2	SSO	IIPU	20:00:00	20:45:00	0:45:00
WF0660133	8/26/2017	2	SSO	IIPU	18:45:00	20:15:00	1:30:00
WF0660136	8/26/2017	2	SSO	IIPU	18:40:00	19:15:00	0:35:00
WF0660146	8/1/2017	2	SSO	OTPU	9:20:00	9:45:00	0:25:00
WF0660159	9/21/2017	2	SSO	GPU	8:06:13	8:30:00	0:23:47
WF0660405	9/23/2017	2	SSO	GPU	13:55:00	14:15:00	0:20:00
WF0660484	9/25/2017	2	SSO	GPU	13:34:53	13:50:00	0:15:07
WF0660750	9/27/2017	2	SSO	GPU	7:38:21	8:00:00	0:21:39
						Average Response Time:	**0:24:19**
							*These response times were not included in the average.

Attachment 4 – Code Enforcement

Code Enforcement FY2017 Performance Report

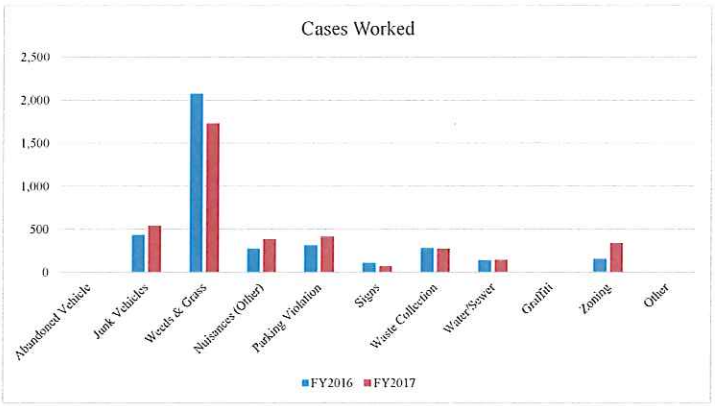
Cases Worked:	October - September	
	FY2016	FY2017
Abandoned Vehicle	10	9
Junk Vehicles	435	541
Weeds & Grass	2,081	1,733
Nuisances (Other)	278	389
Parking Violation	319	419
Signs	113	75
Waste Collection	287	279
Water/Sewer	144	147
Graffiti	8	12
Zoning	161	339
Other	3	0
Total	3,839	3,943

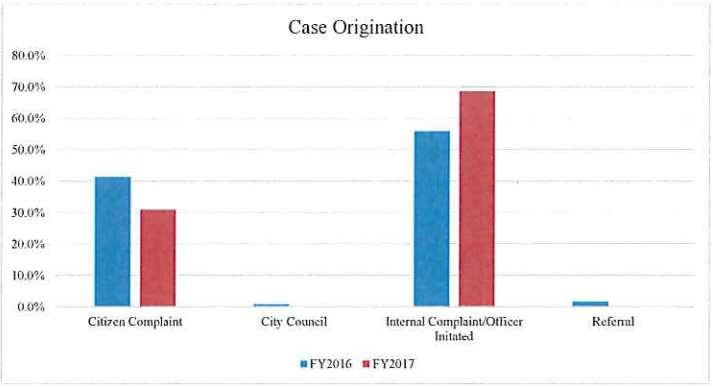
% Change Cases Worked FY16:FY17	3%

	October - September	
	FY2016	FY2017
Working Days:	260	260
Cases/Day:	15	15

Case Origination:	October - September			
	FY2016	FY2017	FY2016	FY2017
Citizen Complaint	1,590	1,222	41.4%	31.0%
City Council	32	4	0.8%	0.1%
Internal Complaint/Officer Initated	2,151	2,708	56.0%	68.7%
Referral	66	9	1.7%	0.2%
	3,839	3,943	100.0%	100.0%

Citations Issued:	October - September	
	FY2016	FY2017
	143	185





Attachment 5 – Education

alphagraphics
increase your reach

Code

ag SIGNS
banners • displays • graphics

invoice

2023 South Texas Avenue
Bryan, Texas 77802

Phone.979 779 1234
Fax 979.82[illegible] 2784
www.alphagraphicsbcs.com

Sold To Mark Jurica
City of Bryan Finance Dept.
PO Box 1000
Bryan TX 77805

No. 23556
Date 12/21/16
P.O.

QUANTITY	DESCRIPTION	AMOUNT
250	Code Booklet - Spanish 8pg + Cover, 8 1/2 x 5 1/2 Finished 80# Gloss Cover & Book 4/0 Process, 4/4 Process PDF proof, Color proof score, fold, stitch, box, local delivery, (6 pages) 001-3401-420-2105 ME7008	$471.04

Received
DEC 2[illegible]
City of Bryan
Finance

SPECIAL INSTRUCTIONS

SUB	471.04
TAX	
SHIPPING	0.00
TOTAL	471.04
NET DUE	$471.04

Please pay from this invoice

- Remit payments to: 2023 South Texas Avenue, Bryan, Texas 77802
- Please make checks payable to AlphaGraphics

RECEIPT FOR CASH SALES
CASH ☐ CHECK # _____ CREDIT CARD ☐

AMOUNT RECEIVED	
CSR INITIALS	

alphagraphics
increase your reach

ag SIGNS
banners • displays • graphics

invoice

2023 South Texas Avenue
Bryan, Texas 77802

Phone.979.779.1234
Fax.979.821.2784
www.alphagraphicsbcs.com

Sold To
Mark Jurica
City of Bryan Finance Dept.
PO Box 1000
Bryan TX 77805

No. 23091
Date 11/7/16
P.O.

QUANTITY	DESCRIPTION	AMOUNT
750	Code Booklet 8pg + Cover, 8 1/2 x 5 1/2 Finished 80# Gloss Cover & Book 4/0 Process, 4/4 Process PDF proof, Color proof score, fold, stitch, box, local delivery, (6 pages) 001-3401-420-2105 ME7008	$981.11

Received
NOV 10 2016
City of Bryan
Finance

SPECIAL INSTRUCTIONS

SUB	981.11
TAX	
SHIPPING	0.00
TOTAL	981.11
NET DUE	$981.11

Please pay from this invoice

- Remit payments to: 2023 South Texas Avenue, Bryan, Texas 77802
- Please make checks payable to AlphaGraphics

RECEIPT FOR CASH SALES
CASH ☐ CHECK # _____ CREDIT CARD ☐

AMOUNT RECEIVED	
CSR INITIALS	

BROWN & BIGELOW

Marketing + Incentives + Recognition

Remit to:Brown & Bigelow
8001 Dunwoody Place, Suite 140, Atlanta, GA 30350

SOUTHERN REGIONAL OFFICE
Phone 678.381.8790

DATE 11/14/16

MEMO INVOICE

Bill City of Bryan
Code enforcement
1111 waco
Bryan Texas 77802

Ship To:

same

Comments or Special Instructions:

SALESPERSON	INVOICE #	SHIP DATE	P.O. #	CUSTOMER #	TERMS
Nancy S	001			05820376	Net30

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
300	Magnet full color imprint	.65	195.00
500	Sticky note pads	.56	280.00
500	Recycled pencils	.39	195.00
250	Money pens	1.35	337.50
300	School bags blue line 1-$475.00 line 2-$1200.45	2.16	648.00
	Thank you for your business		

Prices included all imprints and ground freight.

SUBTOTAL	1655.50
Freight	Incuded
Handling fee	19.95
TOTAL DUE	1676.45

Amount not paid within 30 days may be assessed and APR of 18%
THANK YOU FOR YOUR BUSINESS!

515-4520-754-21-02
SG3072

BROWN & BIGELOW

Marketing + Incentives + Recognition

Remit to:Brown & Bigelow
8601 Dunwoody Place, Suite 140, Atlanta, GA 30350

SOUTHERN REGIONAL OFFICE
Phone 678.381.8790

DATE 11/14/16

MEMO INVOICE

Bill City of Bryan
Water Services
1111 waco
Bryan Texas 77802

Ship To:

same

Comments or Special Instructions:

SALESPERSON	INVOICE #	SHIP DATE	P.O. #	CUSTOMER #	TERMS
Nancy S	002			05620376	Net30

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
500	Fire Hydrant Stress toys	1.56	780.00
500	Toilet Stress Toys	1.25	625.00
500	Can Strain Its	1.54	770.00
750	Back packs	1.19	892.50
250	Funnels hard plastic	1.28	320.00
500	Recycled Pencils	.39	195.00
400	Dog Dispenser bags	1.62	648.00
500	Rain Gauges 4"	2.39	1195.00
500	Sponges	.92	460.00

Prices included all imprints and ground freight.

SUBTOTAL	5885.50
Freight	Incuded
Handling fee	19.95
TOTAL DUE	5905.45

LINE 1 001-3401-420 21 05 $1200.45 SE3072

Amount not paid within 30 days may be assessed and APR of 18%

THANK YOU FOR YOUR BUSINESS!

LINE 3 001-0821-430-21 02 $1,750 SE0313

~~SE3072~~

.45

LINE 2 515-4525-754-21-02 3155 $2955.00 SE3072

GM201I06 CITY OF BRYAN 8/08/17
Accounts Payable Transaction 14:51:22

```
Group number . . . . . :      1428  PI RECEIPTS
Accounting period  . . . :    02/2017              mm/yyyy
Posting date . . . . . :      11/08/2016           mm/dd/yyyy

  Transaction date . . . . :  11/03/2016            mm/dd/yyyy
  Invoice number . . . . . :  11032016
  Account number . . . . . :    1-3401-420.21-05 Printing
  Project number . . . . . :  ME7008               Code Enforcement
  Amount . . . . . . . . . :            300.00
  Liquidated amount  . . . :            300.00     Last voucher
  Discount amount  . . . . :               .00
  Retainage amount . . . . :               .00
  Net transaction amount . :            300.00
  Voucher number . . . . . :  PI1821
  PO number  . . . . . . . :  170313
  Vendor number  . . . . . :     9301  GRAPHIC DESIGN
  Description 1  . . . . . :  COMMUNICATIONS/MEDIA SERV
  Description 2  . . . . . :
  Transaction type code  . :
F3=Exit   F12=Cancel   F15=Group Inquiry                    F24=More keys
```

Attachment 6 – Used Oils and Fluids

Acct #5121/33476
City of Bryan - Public Works
1111 Waco
Bryan, TX 77803

DATE	PRODUCT	USED OIL GALLONS	FILTER DRUMS
10/4/16	Used Oil	287	
10/19/16	Used Oil	210	
11/3/16	Used Oil	349	
11/16/16	Used Oil	203	
11/30/16	Used Oil	164	
12/16/16	Used Oil	143	
12/16/16	Used Oil Filters		2
12/29/16	Used Oil	169	
1/11/17	Used Oil	280	
1/25/17	Used Oil	300	
2/8/17	Used Oil	240	
2/22/17	Used Oil	290	
3/8/17	Used Oil	127	
3/21/17	Used Oil	163	
4/3/17	Used Oil Filters		2
4/5/17	Used Oil	285	
5/3/17	Used Oil	275	
5/17/17	Used Oil	250	
5/19/17	Used Oil Filters		2
5/31/17	Used Oil	44	
6/14/17	Used Oil	265	
6/28/17	Used Oil	311	
6/29/17	Used Oil Filters		1
7/11/17	Used Oil	152	
7/26/17	Used Oil	270	
7/31/17	Used Oil Filters		1
8/9/17	Used Oil	123	
8/29/17	Used Oil	328	
9/6/17	Used Oil	149	
9/18/17	Used Oil Filters		1
9/20/17	Used Oil	180	
		5557	**9**

Acct #20434/29494
City of Bryan
300 Park Road
Bryan, TX 77807

DATE	PRODUCT	USED OIL GALLONS	FILTER DRUMS
12/21/2016	Used Oil	**250**	

FARMER'S DIESEL, INC.
2017 REPORT

Picukp Date	Volume (gal)
8/16/2017	90
6/27/2017	150
5/2/2017	80
4/19/2017	200
3/20/2017	55
2/15/2017	50
12/2/2016	125
TOTAL GALLONS	750

Volume is what is pumped out of container.
Quality is based on how much oil vs. water collected.

Submitted by: Brandon Dixon brandon.dixon@farmersdiesel.com
Submitted Date: 09-28-17

COLLECTION POINT: 1111 WACO STREET, BRYAN, TX

Attachment 7 – Revised/Adopted Ordinances

Chapter 46 - STORMWATER MANAGEMENT[1]

Footnotes:

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Editor's note— Ord. No. 1887, § 1, adopted Oct. 26, 2010, deleted in its entirety and replaced the former Ch. 46, §§ 46-1—46-10, 46-39—46-42, 46-73—46-80, 46-104, 46-105, 46-124, 46-125, 46-149—46-161, 46-191—46-195, 46-214, 46-237—46-243, 46-265—46-268, 46-300—46-307, 46-333—46-339 and enacted a new Ch. 46 as set out herein. The former Ch. 46 pertained to floods. For complete derivation see the Code Comparative Table at the end of this volume.

State Law reference— Responsibility to adopt flood ordinances, V.T.C.A., Water Code § 16.3145.

ARTICLE I. - IN GENERAL

Secs. 46-1—46-10. - Reserved.

ARTICLE II. - FLOOD PROTECTION

DIVISION 1. - GENERALLY

Sec. 46-11. - Statutory authorization.

The legislature of the State of Texas has in V.T.C.A. Water Code § 16.315, et seq., delegated the responsibility to local governmental units to adopt regulations designed to minimize flood losses.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-12. - Findings of fact.

As a part of these provisions, the city finds that:

(1) The special flood hazard areas of the city are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare.

(2) These flood losses are the result of the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of special flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, floodproofed, or otherwise protected from flood damage.

(3) The city, in an attempt to require the development of property in such a way as to not adversely impact on potential stormwater and flooding has caused this chapter to be enacted.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-13. - Statement of purpose.

It is the purpose of this article to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions by provisions designed to:

(1) Protect human life and health;

(2) Maximize the cost effectiveness of expenditures of public money for flood control projects;

(3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(4) Minimize prolonged business interruptions;

(5) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in special flood hazard areas;

(6) Help maintain a stable tax base for the city by providing for the organized development of all areas in such a manner as to minimize future areas of flooding; and

(7) Ensure that potential property owners are notified that property is in a special flood hazard area.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-14. - Methods of reducing flood losses.

To accomplish its purpose, this article uses the following methods:

(1) Restricts or prohibits uses that are dangerous to health, safety or property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

(2) Requires that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage throughout their intended life span;

(3) Controls the alteration of natural floodplains, their protective barriers and stream channels, which help accommodate or channel flood waters;

(4) Prevents the construction of barriers which will divert floodwaters and subject other lands to greater flood hazards; and

(5) Controls development which would cause greater erosion or potential flood damage such as grading, dredging, filling, and excavation.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-15. - Definitions.

In this article:

Appeal means a request to the director of public works for a review of the floodplain administrator's interpretation of any provision of this article.

Appurtenant structure means a structure that is located on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure.

Area of shallow flooding means a designated AO or AH Zone on the community's flood insurance rate map (FIRM) with base flood average depths of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by sheet flow or ponding.

Area of special flood hazard means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. The term "special flood hazard area", for purposes of these regulations, is synonymous with the phrase "area of special flood hazard".

Base flood means the flood having a one percent chance of being equaled or exceeded in any given year (also called the "regulatory flood").

Base flood elevation (BFE) means the water surface elevation of the base flood at a certain location assuming full encroachment onto the floodway fringe at all locations. This is the "with floodway" elevation shown in the flood insurance study.

Basement means any area of a building having its floor sub-grade (below ground level) on all sides.

Breakaway wall means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or the supporting foundation system.

Building—See Structure.

Certification means a certification by a registered professional engineer or other party but does not constitute a warranty or guarantee of performance, expressed or implied. Certification of data is a statement that the data is accurate to the best of the certifier's knowledge. Certification of analyses is a statement that the analyses have been performed correctly and in accordance with sound engineering practices. Certification of structural works is a statement that the works are designed in accordance with sound engineering practices to provide protection from the base flood. Certification of "as built" conditions is a statement that the structure(s) has been built according to the plans being certified, is in place, and is fully functioning.

Critical facility means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to schools, nursing homes, hospitals, police, fire and emergency response installations, installations which produce, use or store hazardous materials or hazardous waste.

Development means any substantial manmade 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 materials or equipment.

Elevated building means a nonbasement building built to have the lowest floor elevated above the ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

(1) Built, in the case of a building in zones A1-30, AE, A, A99, AO, AH, B, C, X, and D, to have the top of the elevated floor elevated above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the flow of the water; and

(2) Adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of zones A1-30, AE, A, A99, AO, AH, B, C, X, D, the term "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwaters.

Existing construction means, for the purposes of determining insurance rates, structures for which the "start of construction" commenced before the effective date of the FIRM. "Existing construction" may also be referred to as "existing structures."

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, and either final site grading or the pouring of concrete pads) is completed before August 22, 1977 when floodplain management regulations were adopted.

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* means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters or the unusual and rapid accumulation or runoff of surface waters from any source.

Flood boundary and floodway map (FBFM) means an official map of a community, on which the Federal Emergency Management Agency (FEMA) has delineated the areas of flood hazards and regulatory floodway.

Flood hazard boundary map (FHBM) means an official map of a community, issued by the Federal Emergency Management Agency (FEMA), on which special flood hazard areas have been designated as Zone A.

Flood insurance rate map (FIRM) means an official map on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

Flood insurance study (FIS) means the official report provided by the Federal Emergency Management Agency that contains flood profiles, as well as the flood hazard boundary-floodway map and the water surface elevations of the base flood.

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, structures and their contents.

Floodplain or *flood-prone area* means any land area susceptible to being inundated by water from any source (See 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, floodplain management regulations.

Floodplain management regulations means this ordinance and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance), and other applications of police power. This term describes federal, state or local regulations in any combination thereof, which provide provisions for the purpose of flood damage prevention and reduction.

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 of the base flood more than one foot.

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, bridge openings, and the hydrological effect of urbanization of the watershed.

Functionally dependent facility means a facility which cannot be used for 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 shipbuilding and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

Floodway fringe means that portion of the area of special flood hazard not occupied by the floodway.

Highest adjacent grade means the highest natural elevation of the ground surface prior to construction next 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 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 or a district preliminarily determined by the secretary to qualify as a registered historic district.

(3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the secretary of the interior; or

(4) Individually listed on a local inventory historic places in communities with historic preservation programs that have been certified either:

a. By an approved state program as determined by the secretary of the interior, or

b. Directly by the secretary of the interior in states without approved programs.

Increased cost of compliance (ICC) means the coverage by a standard flood insurance policy under the NFIP that provides for the payment of a claim for the cost to comply with the State of Texas and the City of Bryan floodplain management laws or ordinances after a direct physical loss by flood, when the city declares the structure to be "substantially" or "repetitively" flood-damaged. ICC coverage is provided for in every standard NFIP flood insurance policy, and will help pay for the cost to floodproof, relocate, elevate, or demolish the structure.

Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for the 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 nonelevation design requirements of this article.

Manufactured home means a structure transportable in one or more sections, built on a permanent chassis, and designed to be used with or without a permanent foundation when connected to the required utilities. The term does not include "recreational vehicle" unless it is placed on a site for greater than 180 consecutive days.

Manufactured home park or subdivision (mobile home park) 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 maps (FIRM) for a community issued by the agency.

Mean sea level (MSL) means the National Geodetic Vertical Datum (NGVD) of 1929 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 the nationwide reference surface for elevations throughout the United States made available by the National Geodetic Survey with the establishment of thousands of benchmarks throughout the continent.

New construction means construction for which the "start of construction" commenced after the effective date of the ordinance from which this article was derived.

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 chapter.

Participating community, also known as an eligible community, means a community in which FEMA has authorized the sale of flood insurance.

Principally above ground means that at least 51 percent of the actual cash value of the structure is above ground.

Recreational vehicle means a vehicle which is:

(1) Built on a single chassis;

(2) Four hundred 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; and

(4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use (includes park trailers and travel trailers).

Note: If the recreational vehicle is left in floodplain for more than 180 consecutive days, the recreational vehicle must comply with the requirements of this chapter as if it were a manufactured home.

Reasonably safe from flooding means base flood waters will not inundate the land or damage structures to be removed from the SFHA and that any subsurface waters related to the base flood will not damage existing or proposed buildings.

Repetitive loss means flood-related damages sustained by a structure on two separate occasions during a ten-year period ending on the date of the event for which the second claim is made, for which the cost of repairs at the time of each such flood event, on the average, equaled or exceeded 25 percent of the market value of the structure before the damages occurred.

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

Special flood hazard area (SFHA) (see area of special flood hazard) means an area having special flood hazard and shown on an FHBM or FIRM as Zone A, AO, A1-30, AE, A99, AH, V1-30, VE, or V.

Start of construction means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within 180 days of the permit date. It includes substantial improvement. The actual start means the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include 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 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.

Structure means a walled and roofed building, manufactured home, or any gas or liquid storage tank that is principally above ground.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to it's before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. Substantial damage also means flood-related damages sustained by a structure on two separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damages occurred.

Substantial improvement means any repair, reconstruction, addition, or other improvement of a structure, during the life of the structure, the cumulative cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. The term does not, however, include either:

(1) Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions; or

(2) Any alteration of a "historic structure" provided that the alteration would not preclude the structure's continued designation as a "historic structure".

Variance means a grant of relief by the zoning board of adjustment from the requirements of this article when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner that would be otherwise prohibited by this article.

Violation means the failure of a structure or other development to be fully compliant with this article. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this article 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 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

(Ord. No. 1887, § 1, 10-26-2010)

Secs. 46-16—46-20. - Reserved.

DIVISION 2. - ADMINISTRATION AND ENFORCEMENT

Sec. 46-21. - Lands to which this article applies.

This article shall apply to all areas within the City of Bryan, and the area of extraterritorial jurisdiction (ETJ).

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-22. - Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in a scientific and engineering report entitled "Flood Insurance Study for Brazos County, Texas and Incorporated Areas," dated July 2, 1992, with accompanying flood insurance rate maps and any revisions thereto, are hereby adopted by reference and declared to be a part of this chapter.

Any revision or amendment to the flood insurance study which is requested by a landowner in the city shall be submitted to the floodplain administrator. All requests for map amendment or map revision must be approved by the floodplain administrator in writing prior to their submission to FEMA. If modification of any watercourse is involved an effective conditional letter of map amendment or conditional letter of map revision shall be on file with the floodplain administrator prior to any development. All submittals to FEMA shall be made at no cost to the city. No certificate of occupancy shall be issued for any structure whose construction required the revision or amendment of the flood insurance study until data supporting the revision has been submitted to the floodplain administrator.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-23. - Establishment of floodplain development permit.

A floodplain development permit is required for all proposed construction within regulatory floodplains or other areas of flooding identified by the City of Bryan to ensure conformance with the provisions of this article.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-24. - Compliance.

No development shall hereafter occur without full compliance with the terms and provisions of this article and other applicable regulations.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-25. - Abrogation and greater restrictions.

This article is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this article and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-26. - Interpretation.

In the interpretation and application of this article all provisions shall be:

(1) Considered as minimum requirements;

(2) Liberally construed in favor of the city; and

(3) Deemed neither to limit nor repeal any other powers granted under state statutes.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-27. - Warning and disclaimer of liability.

The degree of flood protection required by this article is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This article 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 article shall not create liability on the part of the city or any official or employee thereof for any flood damages that result from reliance on this article or any administrative decision lawfully made thereunder.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-28. - Designation of floodplain administrator.

The city engineer, or his designee, is hereby appointed the floodplain administrator to administer and implement the provisions of this article.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-29. - Duties and responsibilities of the floodplain administrator.

Duties and responsibilities of the floodplain administrator include:

(1) Maintain and hold open for public inspection all records pertaining to the provisions of this article unless protected from disclosure by law;

(2) Review, approve or deny all applications for floodplain development permits required by this article;

(3) Review permits for proposed development to assure that the developer has obtained all necessary permits from those federal, state or local government agencies (including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334) from which prior approval is required. Developer will submit documentation of those necessary permits to the city and such documentation is to be maintained on file with the floodplain development permit;

(4) Review reports, studies, plans and specifications for compliance with the requirements of this article;

(5) Verify and record the actual elevation (in relation to mean sea level) of the lowest floor of all new construction and substantial improvements, by requiring an elevation certificate sealed by a licensed professional;

(6) Verify and record the actual elevation (in relation to mean sea level) to which the new or substantially improved nonresidential structures in A-Zones have been floodproofed by requiring an elevation certificate sealed by a licensed professional;

(7) Provide interpretation as needed as to the exact location of the boundaries of the areas of special flood hazard and regulatory floodway (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The floodplain administrator shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided for in this chapter;

(8) Notify in riverine situations adjacent communities and the Texas Commission on Environmental Quality (TCEQ) prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency, and assure that maintenance is provided within the altered or relocated portion of the watercourse so that the flood-carrying capacity is not diminished;

(9) When base flood elevation data or floodway data has not been provided in accordance with this article, the floodplain administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, in order to administer the provisions of this article;

(10) Coordinate with other departments in the city to assure that the requirements of this article are fully met;

(11) Participate actively in evaluating the variance requests and provide input and recommendations in variance hearings/proceedings;

(12) Coordinate all change requests to the FIS and FIRM or FBFM, or both, with the requestor, state, and FEMA;

(13) Submit new technical data. A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify FEMA of the changes by submitting technical or scientific data. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and floodplain management requirements will be based upon current data. This submittal to FEMA shall be at the developer's, who is requesting the change, expense and at no cost to the city;

(14) When a regulatory floodway has not been designated, the floodplain administrator shall not permit new construction, substantial improvements, or other development (including fill) within zones A1-30 and AE on the community's FIRM, unless it is demonstrated 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 foot at any point within the community; and

(15) The floodplain administrator shall maintain a record of all actions taken under the provisions of this article, including but not limited to appeals or request for a variance as a matter of public record or for submittal to the Federal Emergency Management Agency.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-30. - Floodplain development permit procedures.

A floodplain development permit application must be submitted to the floodplain administrator prior to undertaking any development activities. Application for a floodplain development permit must be

submitted on forms furnished by the city and must include: plans in duplicate drawn to scale showing the location, dimensions, and elevation of the area under consideration for development, drainage facilities, perimeter setbacks, environmental features such as base floodplain areas, wetlands, and other protected areas, proposed earth and landscape alterations, existing and proposed structures, and the location of the foregoing in relation to areas of special flood hazard. Additionally, the following information, certified by a professional who is authorized to certify such information in the state, is required:

(1) Application:

a. Elevations of the area of development in relation to mean sea level (such as a contour map) for both existing and proposed development;

b. Elevation in relation to mean sea level, of the lowest floor (including basement) of all new and substantially improved structures;

c. Elevation in relation to mean sea level to which any nonresidential structure will be floodproofed;

d. A certificate from a registered professional engineer or architect that the nonresidential floodproofed structure will meet the floodproofing criteria of section 46-43;

e. Existing and proposed infrastructure; and

f. Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.

(2) Approval or denial of a development permit by the administrator will be based on the requirements of this article and the following factors:

a. The danger to life and property due to flooding or erosion damage;

b. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

c. The danger that materials may be swept onto other lands to the injury of others;

d. The compatibility of the proposed development with existing and anticipated development;

e. The safety of access to or through the property in times of flooding for ordinary and emergency vehicles, city utility service vehicles, or maintenance vehicles;

f. The costs of providing governmental services during and after flood conditions including maintenance and repair of streets, bridges, public utilities and facilities such as sewer, gas, electrical, and water systems;

g. The expected heights, velocity, duration, rate or rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site;

h. The necessity of the facility of a waterfront location, where applicable;

i. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;

j. The relationship of the proposed use to the comprehensive plan for that area; and

k. The requirements of the Federal Emergency Management Agency as a part of the National Flood Insurance Program.

(3) *Construction.* Upon placement of the lowest floor, or floodproofing by whatever construction means, the permit holder must submit to the floodplain administrator a certification of the elevation of the lowest floor or floodproofed elevation, as built, in relation to mean sea level. Certification must be prepared by or under the direct supervision of a registered land surveyor or professional engineer who is authorized to certify such information in the state, and certified by same. Any work undertaken prior to submission of the certification will be at the permit holder's risk.

The floodplain administrator will review the lowest floor elevation and floodproofing certificate. If these documents do not conform to the requirements of this article, the permit holder must immediately cease further work, and correct any deficiencies. Failure of the permit holder to submit the surveyed lowest floor elevation and floodproofing certificate or failure to correct any deficiencies will result in a stop-work order for the project.

(4) *Revocation of permit.* The floodplain administrator may revoke a permit or approval issued under the provisions of this article when the applicant has made a false statement or misrepresentation of a material fact in the application or plans upon which the permit or approval was based.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-31. - Variance procedures.

(1) The zoning board of adjustment will hear and decide requests for variances from the requirements of this article.

(2) The board will hear and decide appeals only when it is alleged an error in any requirement, decision, or determination is made by the floodplain administrator in the enforcement or administration of this article. Any person aggrieved by the decision of the board may appeal the decision to a court of competent jurisdiction.

(3) Variances may only be granted when there is:

(a) A showing of good and sufficient cause,

(b) A determination that failure to grant the variance would result in exceptional hardship, and

(c) A determination that the granting of a variance will not result in increased flood heights, additional threats to public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

(4) Variances may only be granted for the minimum necessary deviation to accomplish the purposes of this article.

(5) Variances will not be granted within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result.

(6) Variances may be issued for the repair or rehabilitation of historic structures if the proposed repair or rehabilitation would not preclude the structure's continued designation as a historic structure, and the variance is the minimum necessary to preserve the historic character and design of the structure.

(7) Variances may be issued for new construction, substantial improvements, and for other development necessary for the conduct of a functionally dependent use if:

(a) The criteria of paragraphs (3) through (5) of this section are met, and

(b) The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-32. - Factors to consider in granting a variance request.

The zoning board of adjustment shall consider all technical evaluations, provisions specified in other sections of this article, and:

(1) The danger that materials may be swept onto other lands to the injury of others,

(2) The danger to life and property due to flooding or erosion damage,

(3) The susceptibility of the proposed facility and its contents to flood damage,

(4) The importance of the services provided by the proposed facility to the community,

(5) The necessity of the facility to a waterfront location,

(6) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage,

(7) The compatibility of the proposed use with existing and anticipated development,

(8) The relationship of the proposed use to the comprehensive plan and floodplain management program for the area,

(9) Access to the property in times of flood for ordinary and emergency vehicles,

(10) The expected heights, velocity, duration, rate of rise, and sediment of transport of the flood waters and the effects of wave action, if applicable, expected at the site,

(11) 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, and water systems, and streets and bridges; and

(12) The request for variance is not an after-the-fact request.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-33. - Special conditions.

The zoning board of adjustment may attach reasonable conditions to a variance to further the purposes of this article.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-34. - Variance notification.

(1) The floodplain administrator will notify in writing an applicant to whom a variance is granted that:

(a) The issuance of a variance to construct a structure below the base flood elevation will result in increased premium rates for flood insurance up to amounts as high as $25.00 for $100.00 of insurance coverage, and

(b) Construction below the base flood level increases risks to life and property.

(2) A copy of the notice will be recorded by the floodplain administrator in the Brazos County Deed Records in a manner so that it appears in the chain of title of the affected parcel of land. The floodplain administrator will maintain a record of all actions involving an appeal and will report all variances issued in his annual biennial report submitted to FEMA.

(3) The floodplain administrator will notify in writing if the variance is denied.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-35. - Stop work orders.

Upon notice from the floodplain administrator that work on any building, structure, dike, bridge or any improvement which would affect water drainage is being done contrary to the provisions of this article, or in a dangerous or unsafe manner, such work shall be immediately stopped. Notice will be in writing and be given to the owner of the property or to his agent, or to the person doing the work, and will state the conditions under which work may be resumed. When an emergency exists, no written notice is required

to be given by the floodplain administrator; provided however, written notice shall follow within five working days from the time oral notice to stop is issued.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-36. - Penalties for violation.

Violation of the provisions of this article or failure to comply with any of its requirements shall constitute a misdemeanor. Each violation shall be deemed a separate offense for each and every day during which any violation of any of the provisions of this article is committed or continued. Any person found guilty of violating a provision of this article may be punished as provided for in section 1-14 of this Code.

(Ord. No. 1887, § 1, 10-26-2010)

Secs. 46-37—46-40. - Reserved.

DIVISION 3. - STANDARDS FOR FLOOD HAZARD REDUCTION

Sec. 46-41. - General standards.

In all areas of special flood hazards, determined by FEMA or by the community in areas where FEMA has not determined the areas of special flood hazard, the following provisions apply:

(1) Floodplain administrator shall review permits for proposed construction or other development, including the placement of manufactured homes, so that a determination may be made whether or not such construction or other development is proposed within flood-prone areas.

(2) The developer of new construction, substantial improvements, and other development proposals must assure that all necessary permits have been obtained from those governmental agencies from which approval is required by federal or state law, including section 404 of the Federal Water Pollution Control Act, as amended, or by wide-area agencies.

(3) All new construction and substantial improvements must be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

(4) All new construction and substantial improvements must be constructed with materials and utility elements resistant to flood damage.

(5) All new construction or substantial improvements must be constructed by methods and practices that minimize flood damage.

(6) Electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities, including duct work, must be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(7) Subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, must be assured that they will be reasonably safe from flooding. If a subdivision proposal or other proposed new development is in a flood-prone area, any such proposals shall be reviewed to assure that:

a. All such proposals are consistent with the need to minimize flood damage within the flood-prone area,

b. All public and private utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and

c. Adequate drainage is provided to reduce exposure to flood hazards.

(8) New and replacement water supply systems must be designed to prevent infiltration of flood waters into the systems.

(9) New and replacement sanitary sewage systems must be designed to prevent infiltration of flood waters into the systems and discharges from the systems into flood waters, and on-site waste disposal systems must be located and constructed to avoid impairment to them or contamination from them during flooding.

(10) New construction and substantial improvements, when located in multiple flood zones with varying base flood elevations or in same flood zone with multiple base flood elevations must meet the requirements for the flood zone with the most stringent requirements and the highest base flood elevation.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-42. - Standards for approximate A-Zones.

On land located within the areas of special flood hazard established in section 46-22, where streams exist for which no base flood elevation data or regulatory floodway has been provided by FEMA, the following provisions apply:

(1) Compliance with the standards listed in section 46-41.

(2) Base flood elevation data must be submitted to the floodplain administrator for all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or five acres, whichever is the lesser, if not otherwise required by this article.

(3) The floodplain administrator will obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, including data developed pursuant to subsection (2). When such base flood elevation data is utilized, the new construction, substantial improvements, or other development must meet the elevation and nonelevation requirements of sections 46-43 through 46-45.

(4) When the base flood elevation data is utilized, the floodplain administrator will:

a. Obtain from the developer in the form of an elevation certificate the elevation (in relation to the mean sea level) of the lowest floor (including the basement) of all new and substantially improved structures,

b. Obtain, if the structure has been flood proofed in accordance with the requirements of section 46-43, the elevation in relation to the mean sea level to which the structure has been flood proofed, and

c. Maintain a record of all such information.

(5) Notify, in riverine situations, adjacent communities and the state coordinating office prior to any alteration or relocation of a watercourse, and submit copies of such notifications to FEMA.

(6) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.

(7) Manufactured homes must be installed using methods and practices that minimize flood damage. Manufactured homes must be elevated and anchored to prevent flotation, collapse, or 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 and local anchoring requirements for resisting wind forces.

(8) When the base flood elevation data is not available from any source, the lowest floor of the new construction and substantial improvements must be elevated to three feet above the highest adjacent grade, (or two [feet] above the highest crown of the adjacent roadway).

(9) Any alteration, repair, reconstruction or improvements to a building that is in compliance with the provisions of this article must meet the requirements of "new construction" as contained in this article; and

(10) Any alteration, repair, reconstruction or improvements to a building that is not in compliance with the provisions of this article may be undertaken only if the nonconformity is not furthered, extended, or replaced.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-43. - Specific standards for noncoastal high hazard areas.

In all noncoastal areas of special flood hazard where base flood elevation data has been provided, as set forth in section 46-22, but no regulatory floodways have been delineated, the following provisions apply:

(1) *Compliance with the standards in section 46-42.*

(2) *Residential structures.*

a. All new construction or substantial improvements of residential structures within Zones A1-30, AE and AH (including substantially damaged manufactured homes by flood) must have the lowest floor (including basement) elevated to one foot above the base flood elevation.

b. All new construction and substantial improvements of residential structures within AO Zone must have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM (at least two feet if no depth number is specified).

(3) *Nonresidential structures.*

a. All new construction or substantial improvements of nonresidential structures must have the lowest floor (including basement) elevated to one foot above the base flood elevation. Nonresidential structures within Zones A1-30, AE and AH may be flood-proofed in lieu of being elevated provided that together with all attendant utility and sanitary facilities, be designed so that below the base flood elevation plus one foot the structure is water-tight with walls substantially impermeable to the passage of water, and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect must certify that the provisions of this subsection are satisfied. The FEMA floodproofing certificate must be prepared and submitted to the floodplain administrator along with the corresponding operational and maintenance plans.

b. All new construction and substantial improvements of nonresidential structures within Zone AO must:

i. Have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM (at least two feet if no depth number is specified), or

ii. Together with attendant utility and sanitary facilities be completely flood proofed to that level to meet the floodproofing standard specified in subsection (3)a. of this section.

(4) *Elevated structures.* For all new construction or substantial improvements, fully enclosed areas below the lowest floor elevation may be usable solely for parking of vehicles, building access, or storage. These enclosed areas must be designed and constructed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

a. Designs for meeting this requirement must be certified by a professional engineer or architect, to meet or exceed the following minimum criteria:

i. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding must be provided,

ii. The bottom of all openings must be no higher than one foot above grade, and

iii. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided they provide the required net area of the openings and permit the automatic entry and exit of floodwaters.

b. Access to the enclosed area must be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator), and

c. The interior portion of the enclosed areas may not be partitioned, temperature-controlled, or finished into separate rooms.

(5) *Provisions for manufactured homes and recreational vehicles.*

a. All manufactured homes to be placed or substantially improved in an existing manufactured home park or subdivision within Zones A1-30, AH, and AE, must be elevated on a permanent foundation and be securely anchored to an adequately anchored foundation system to resist foundation collapse and lateral movement so that:

i. The lowest floor of the manufactured home is elevated to 2.0 feet above the base flood elevation, and

ii. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least an equivalent strength that are no less than 36 inches in height above the grade and be securely anchored to an adequate foundation system to resist flotation, collapse, and lateral movement as certified by a licensed professional engineer.

b. All recreational vehicles placed on sites within Zones A1-30, AH, and AE must either:

i. Be on the site for fewer than 180 consecutive days,

ii. Be fully licensed and ready for highway use, or

iii. Meet the requirements for new construction, including anchoring and elevation requirements for manufactured homes in subsection 5a.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

c. Require until a regulatory floodway is designated, that no new construction, substantial improvements, or other development including fill shall be permitted within Zones A1-30 and AE on the FIRM, unless it is demonstrated 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 foot at any point within the community.

d. Within Zones AH and AO on the FIRM, adequate drainage paths around structures on slopes shall be provided to guide floodwaters around and away from proposed structures.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-44. - Standards for floodways.

On land located within areas of special flood hazard established in section 46-22, are designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris, potential projectiles and have significant erosion potential, the following provisions apply:

(1) Compliance with standards in section 46-43.

(2) Prohibition on encroachments, including fill, new construction, substantial improvements and other developments with the regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-45. - Critical facilities.

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the SFHA, preferably outside the 0.2 percent annual chance floodplain. Construction of new critical facilities may be permissible within the SFHA if feasible alternative sites are unavailable. Critical facilities constructed within the SFHA shall have the lowest floor elevated 3.0 feet above the base flood elevation at the site. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the maximum extent possible.

(Ord. No. 1887, § 1, 10-26-2010)

Sec. 46-46. - Management methods and practices.

The city shall utilize the following methods and practices for stormwater management:

(1) Limit or regulate the rate of stormwater runoff from development to that which existed under conditions prior to development in those portions of the city as specified by the city;

(2) Limit or control changes in the path of stormwater across or away from a site or development;

(3) Limit or control alterations to existing watercourses and drainage facilities either within or outside areas of special flood hazard;

(4) Control the use of existing or proposed drainage easements such that the easement remains useable for its intended purpose;

(5) Limit or prohibit development in areas of special flood hazard;

(6) Require compliance with city drainage design guidelines, specifications and details;

(7) Establish drainage easements to control development and limit flood damage;

(8) Prohibit dumping of refuse, fill, garbage, grass clippings, brush, waste concrete, or other objectionable material in existing drainage facilities including swales, ditches, storm drains, inlets, watercourses, gutters, or culverts;

(9) Regulate or control filling, grading, clearing, dredging, paving, berming, or other earthwork which may increase stormwater runoff, change drainage patterns, or otherwise increase flood hazard or damage;

(10) Control development that is dangerous to health, safety, or property in times of flooding, or which cause increases in flood heights, velocities, or flow rates;

(11) Require adequate maintenance by landowner of drainage facilities and watercourses such that they retain their capacity for conveying stormwater. Maintenance within public drainage easements will be performed by the city.

(Ord. No. 1887, § 1, 10-26-2010)

Secs. 46-47—46-99. - Reserved.

ARTICLE III. - MUNICIPAL STORWMATER MANAGEMENT[2]

Footnotes:

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Editor's note— Ord. No. 2133, § 1 , adopted Jan. 12, 2016, repealed the former Art. III, §§ 46-100, 46-101, 46-110, 46-120—46-123, 46-130, 46-131, 46-140—46-144, 46-150, 46-151, 46-160, 46-161, 46-170, 46-171, 46-180—46-186, and enacted a new article as set out herein. The former Art. III pertained to municipal stormwater protection and derived from Ord. No. 1887, § 1, adopted Oct. 26, 2010.

DIVISION 1. - IN GENERAL

Sec. 46-100. - Purpose and intent.

The purpose of this article is to protect the public health, safety, environment and general welfare through the regulation of non-stormwater discharges into the municipal separate storm system (MS4) to the maximum extent practicable as required by Federal Law. This article establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system in order to comply with requirements of the Texas Pollution Discharge Elimination System (TPDES) permit. The objectives of this article are to:

(1) Regulate the contribution of pollutants into the MS4 system by any person or entity;

(2) Prohibit illicit discharges and illegal connections to the MS4;

(3) Prevent non-stormwater discharges, generated as a result of spills, inappropriate dumping or disposal, into the MS4; and,

(4) To enforce legal authority to carry out all inspections, surveillance, monitoring and enforcement procedures necessary to ensure compliance with the City of Bryan's TPDES permit.

(Ord. No. 2133, § 1 , 1-12-2016)

Secs. 46-101—46-109. - Reserved.

DIVISION 2. - DEFINITIONS

Sec. 46-110. - Definitions

In this article:

Administrator shall mean the public works director of the City of Bryan or designee.

Best management practices (BMP) shall mean schedules of activities, prohibitions of practices, general housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater receiving waters, or municipal separate storm system. BMPs also include

treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

City shall mean the City of Bryan.

City manager shall mean city manager of the City of Bryan or designee.

Commercial pertains to any business, trade, industry, or other activity engaged in for profit activities.

Common plan of development means a construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development (also known as a "common plan of development or sale") is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities. A common plan of development does not necessarily include all construction projects within the jurisdiction of a public entity (e.g., a city or university). Construction of roads or buildings in different parts of the jurisdiction would be considered separate "common plans," with only the interconnected parts of a project being considered part of a "common plan" (e.g., a building and its associated parking lot and driveways, airport runway and associated taxiways, a building complex, etc.). Where discrete construction projects occur within a larger common plan of development or sale but are located one-quarter mile or more apart, and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale, provided that any interconnecting road, pipeline or utility project that is part of the same "common plan" is not included in the area to be disturbed.

Construction or construction activity shall mean soil disturbance activities, including clearing, grading, and excavating; and does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (e.g., the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities). Regulated construction activity is defined in terms of small and large construction activity.

Construction site notice (CSN) means the statewide form that must be completed and displayed on small and large construction activity as defined by this section.

Development permit means the city permit issued for any construction activity within the City of Bryan corporate limits or within the extra-territorial jurisdiction of the city, by which compliance with stormwater quality regulations are tracked.

Discharge is any addition or introduction of any pollutant, stormwater, or any other substance whatsoever into the MS4 or into waters of the United States.

Discharger is any person who causes, allows, permits, or is otherwise responsible for a discharge, including, without limitation, any operator of a construction site or industrial facility.

Facility is any building, structure, installation, process, or activity from which there is or may be a discharge of a pollutant.

Garbage shall mean putrescible animal and vegetable waste materials from the handling, preparation, cooking, or consumption of food, including waste materials from markets, storage facilities, and the handling and sale of produce and other food products.

Harmful quantity is the amount of any substance that will cause pollution of waters of the state, state water, or MS4.

Household hazardous waste (HHW) is any material generated in a household (including single and multiple residences, hotels, and motels, camp grounds, picnic ground, and day use recreational areas) by a consumer which, except for the exclusion provided in 40 CFR 261.4(b)(1), would be classified as a hazardous waste 40 CFR Part 261.

Hazardous materials are any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or

significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Illicit discharge is any direct or indirect non-stormwater discharge to the MS4, except as exempted in section 46-120 herein.

Illicit connection means any drain or conveyance connecting an illicit discharge directly to the MS4, whether on the surface or subsurface, which allows an illicit discharge to enter the stormwater system, including, but not limited to, any conveyances that allow any non-stormwater discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drainage system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency or, any drain or conveyance system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

Industrial activity means any of the ten categories of industrial activities included in the definition of "stormwater discharges associated with industrial activity" as defined in the TPDES multi-sector general permit.

Industrial waste is any waterborne liquid or solid substance that results from any process of industry, manufacturing, mining, production, trade, or business.

Large construction activity means construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than five acres of land. Large construction activity also includes the disturbance of less than five acres of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five acres of land. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities.)

Municipal separate storm sewer system (MS4) is the system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned and operated by the city and designed or used for collecting or conveying stormwater, and which is not used for collecting or conveying sewage.

Notice of intent (NOI) means a written submission to the executive director of the TCEQ (Texas Commission of Environmental Quality) from an applicant requesting coverage under a TCEQ general permit requesting coverage.

Notice of change (NOC) means a written submission to the executive director of the TCEQ (Texas Commission on Environmental Quality) from a discharge authorized under a TCEQ general permit requesting change of coverage.

Notice of termination (NOT) means a written submission to the executive director of the TCEQ (Texas Commission of Environmental Quality) from a discharger authorized under a TCEQ general permit requesting termination of coverage.

Non-stormwater discharge is any discharge to the stormwater drain system that is not composed entirely of stormwater runoff.

Person shall mean any individual, association, organization, partnership, firm, corporation, or other entity recognized by law and acting as either the owner or the owner's agent.

Pollutant shall mean anything that causes or contributes to pollution. Pollutants may include, but are not limited to the following: paints, varnishes, and solvents; oil and other automotive or marine vessel fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects; articles and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coli, form and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

Pollution (from Texas Water Code (TWC) §26.001(14)) shall mean the alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any surface water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

Premises shall mean any building, lot, parcel of land, or portion of land whether improved or unimproved, including adjacent sidewalks and parking strips.

Public owned treatment works (POTW) means sewage or wastewater treatment works as defined by the Federal Clean Water Act and owned by the city. The definition includes any devices or systems used in the collection, storage, treatment, recycling, and reclamation of sewage sludge or industrial wastes of a liquid nature and any conveyances, which convey wastewater to a treatment plant.

Release shall mean any spilling, leakage, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the municipal separate stormwater system (MS4) or the waters of the United States.

Small construction activity means construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one acre and less than five acres of land. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five acres of land. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities.)

Stormwater is any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Stormwater pollution prevention plan (SWP3) shall mean a document that describes the best management practices and activities to be implemented by a person or entity to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyances system, and/or receiving waters to the maximum extent practicable. Such plan shall include an erosion and sedimentation control plan specific to the property the SWP3 is intended to cover.

Texas Pollutant Discharge Elimination System (TPDES) shall mean the regulatory program delegated to the State of Texas by the EPA pursuant to 33 USC § 1342(b).

Uncontaminated shall mean not containing a harmful quantity of any substance.

Vehicle shall mean any object used for transportation of persons or cargo, regardless of whether self-propelled or attached to another vehicle for transport.

Wastewater means liquid and water-carried wastes and sewage from residential dwellings, commercial buildings, institutions, and industrial or manufacturing facilities, whether treated or untreated, which are contributed to the POTW.

Waters of the United States means:

(1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(2) All interstate waters, including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds that the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

a. Which are or could be used by interstate or foreign travelers for recreational or other purposes;

b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

c. Which are used or could be used for industrial purposes by industries in interstate commerce;

d. All impoundments of waters otherwise defined as waters of the United States under this definition;

e. Tributaries of waters identified in subsections a. through d. of this definition;

f. The territorial sea; and

g. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in subsections a. through f. of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of Clean Water Act (other than cooling ponds as defined in 40 CFR §423.11(m) which also meet the criteria of this definition) are not waters of the U.S. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the U.S. (such as disposal area in wetlands) nor resulted from the impoundment of waters of the U.S. Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Yard waste is any leaves, grass clippings, yard and garden debris, and brush that results from landscaping maintenance and land-clearing operations.

(Ord. No. 2133, § 1 , 1-12-2016)

Secs. 46-111—46-119. - Reserved.

DIVISION 3. - PROHIBITIONS

Sec. 46-120. - Discharge prohibitions.

(a) Prohibition of illicit discharges: It shall be unlawful for any person to discharge or cause to be discharged into the MS4 or watercourses any materials, including, but not limited to pollutants or waters containing pollutants that cause or contribute to a violation of applicable water quality standards, other than stormwater.

(b) Exceptions: The commencement, conduct or continuance of any illicit discharge to the MS4 is prohibited, except as described as follows:

(1) Flushing of water lines or other potable water sources;

(2) Landscape irrigation or lawn watering;

(3) Diverted stream flows;

(4) Rising ground water;

(5) Uncontaminated pumped ground water;

(6) Foundation or footing drains (not including active groundwater dewatering systems);

(7) Crawl space pumps;

(8) Springs;

(9) Individual residential vehicle washing;

(10) Natural riparian habitat or wetland flows;

(11) Firefighting activities;

(12) Agricultural stormwater runoff;

(13) Any other water source not containing pollutants.

(c) Any non-stormwater discharge permitted under a TPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the United States Environmental Protection Agency (EPA) or the Texas Commission on Environmental Quality (TCEQ), provided that the discharger is in full compliance with all the requirements of the permit, waiver, or order and other applicable laws and regulations, and provided further that written approval has been granted for any discharge to the MS4.

(d) Specific prohibitions and requirements:

(1) It shall be unlawful to construct, use, maintain or continue the existence of illicit connections to the MS4.

(2) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under the laws or practices applicable or prevailing at the time of connection.

(3) A person is considered to be in violation of this article if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

(4) No person shall dump, spill, leak, pump, pour, emit, empty, discharge, leach, dispose, or otherwise introduce or cause, allow, or permit to be introduced any of the following substances into the MS4:

a. Any used motor oil, antifreeze, or any other motor vehicle or marine vehicle fluid;

b. Any industrial waste;

c. Any hazardous waste, including household hazardous waste;

d. Any domestic sewage or septic tank waste, grease trap waste, sludge or grit trap waste;

e. Any garbage, rubbish, or yard waste;

f. Any dumpster or trailer overflow.

(5) Any wastewater from any of the following sources: commercial carwash facility; vehicle washing, cleaning, or maintenance at any new or used automobile or other vehicle dealership, rental agency, body shop, repair shop, or maintenance facility; or from any washing, cleaning, or maintenance of any business or commercial or public service vehicle, including a truck, bus, or heavy equipment;

(6) Any wastewater from a commercial mobile power washer or from the washing or cleaning of a building exterior that contains any soap, detergent, degreaser, solvent, or any other harmful cleaning substance;

(7) Any wastewater from commercial floor, rug, or carpet cleaning;

(8) Any wastewater from the wash down or other cleaning of pavement that contains any harmful quantity of soap, detergent, solvent. Degreaser, emulsifier, dispersant, or any other harmful cleaning substances; or any wastewater from the wash down or other cleaning of any pavement where any spill, leak, or other release of oil, motor fuel, or other petroleum or hazardous substance has occurred, unless all harmful quantities of such released materials have been previously removed;

(9) Any effluent from cooling tower, condenser, compressor, emissions scrubber, emissions filter, or the blow down from a boiler;

(10) Any ready-mixed concrete, mortar, ceramic, or asphalt base material or hydro-mulch material, or from cleaning of vehicles or equipment containing, or used in transporting or applying, such material;

(11) Any substance or material that will damage, block, or clog the MS4;

(12) No person shall introduce or cause to be introduced into the MS4 any harmful quantity of sediment, silt, earth, soil, sludge, or other material associated with clearing, grading, excavation, or other construction activities, or associated with land filling or other placement or disposal of soil, rock, or other earth materials, in excess of what could be retained on site or captured by employing sediment and erosion control measures to the maximum extent practicable.

(13) No person shall connect a line conveying sanitary sewage, domestic or industrial, to the MS4, or allow such a connection to continue.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-121. - Emergency suspension of utility service and municipal stormwater drainage system access.

(a) The city may, without prior notice, suspend water service, sanitary sewer service or MS4 discharge access to a person discharging to the MS4, waters of the United States, when such suspension is necessary to stop an actual or threatened discharge which:

(1) Presents or may present imminent and substantial danger to the environment or to the health or welfare of persons; or

(2) Presents or may present imminent and substantial danger to the MS4 or waters of the United States.

(b) As soon as is practicable after the suspension of service or MS4 discharge access, the administrator will notify the violator of the suspension and order the violator to cease the discharge immediately.

(c) If the violator fails to comply with an order issued, the administrator may take such actions as the administrator deems necessary to prevent or minimize harmful discharges to the MS4, waters of the United States, or to persons or wildlife.

(d) The city will not reinstate suspended services or MS4 access to the violator until:

(1) The violator presents proof, satisfactory to the administrator that the noncomplying discharge has been eliminated and its cause determined and corrected;

(2) The violator reimburses the city for all costs the city incurred in suspending and reinstating water service, sanitary sewer connection, and MS4 access; and

(3) The violator reimburses the city for all costs of testing, containment, cleanup, abatement, removal and disposal of any substance unlawfully discharged into the MS4 incurred by the city while responding to, abating, and remediating the discharge or threatened discharge.

(e) A violator whose service or access has been suspended or disconnected may appeal the enforcement action to the city manager's attention, in writing, within ten days of notice of the suspension. The city manager will render a decision within seven days upon written receipt of the petition.

(f) The remedies provided by this section are in addition to any other remedies set out in this article. Exercise of this remedy is not a bar against, or a prerequisite for, taking other action against a violator.

(g) A person commits an offense if the person reinstates water service, sanitary sewer service, or MS4 access to premises terminated pursuant to this section, without the prior approval of the administrator.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-122. - Nonemergency suspension of utility service and municipal stormwater drainage system access.

(a) The city may suspend the city provided water supply, sanitary sewer connection, or MS4 access for any person failing to comply with previous notices to cease discharges to the MS4 in violation of this article. Utilities will be subject to suspension if such measures would abate or reduce the discharge.

(b) The administrator will notify a violator of the proposed suspension of its water supply, sanitary sewer connection or MS4 access. The violator may petition the administrator for a reconsideration and hearing before the city manager.

(c) The city will not reinstate suspended services or MS4 access to the discharger until:

(1) The violator presents proof, satisfactory to the administrator, that the noncomplying discharge has been eliminated and its cause determined and corrected;

(2) The violator reimburses the city for all costs the city incurred in suspending and reinstating water service, sanitary sewer connection, and MS4 access; and

(3) The violator reimburses the city for all costs of testing, containment, cleanup, abatement, removal and disposal of any substance unlawfully discharged into the MS4 incurred by the city while responding to, abating, and remediating the discharge or threatened discharge.

(d) The remedies provided by this section are in addition to any other remedies set out in this article. Exercise of this remedy is not a bar against, or a prerequisite for, taking other action against a violator.

(e) A person commits an offense if the person reinstates water service, sanitary sewer service, or MS4 access to premises terminated pursuant to this section, without the prior approval of the administrator.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-123. - Industrial or construction activity discharges.

(a) Any person subject to an industrial or construction TPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required by the administrator prior to allowing discharges to the MS4.

(b) The operator of a facility that is required to have a TPDES permit to discharge stormwater associated with industrial activity shall submit a copy of the NOI to the city at the same time the operator submits the original NOI to the TCEQ, as applicable. The copy of the NOI may be delivered to the administrator either in person or by mail.

(c) A person commits an offense if the person operating a facility that is discharging stormwater associated with an industrial activity without having submitted a copy of the NOI to do so to the administrator.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-124. - Construction activity permit and application.

(a) No person shall commence construction activities meeting the requirements of the TPDES general construction permit without a development permit issued by the city. A person shall make application for a permit to the city on forms furnished by the city and shall provide the following information:

(1) Name, legal name of business or entity, business address, and telephone number of the applicant.

(2) Site-specific SWP3 for the construction activity.

(3) A copy of the NOI and/or CSN depending on the area (e.g. acreage) disturbed by the construction activity.

(4) A copy of the TCEQ-issued TPDES permit number for the project (if applicable).

(b) Fees. All fees required under this section will be set by resolution of the city council.

(c) Permit decisions. The city will evaluate the data furnished by the applicant and may require additional information. Within seven calendar days of receipt of a completed permit application, the city will determine whether or not to issue a development permit. The city may deny an application or a permit for any of the following grounds:

(1) Failing to provide all of the information required by the city;

(2) The applicant's past record of ordinance violations;

(3) Safety record of the applicant or any driver, based on such things as civil and criminal lawsuits and violations of environmental laws and ordinances;

(4) Providing false, misleading or inaccurate information to the city.

(d) Permit.

(1) Permits shall remain active until final stabilization for the construction activity has been achieved.

(2) A new permit application is required to be submitted within 15 days of the following, whereupon the previous permit will be voided and the previous permit canceled:

a. When ownership of the operating entity is changed; or

b. The city determines that operations or management methods are no longer adequately described by the existing permit application.

c. The effective date of the renewed TPDES construction general permit.

(3) Permits are not transferrable.

(4) Suspension or revocation of permit. A permit may be revoked by the city for any violation of this section.

(5) Appeals. An applicant has the right to appeal a determination made by the administrator to the city manager by submitting a written appeal to the city secretary, with a copy to the administrator, not more than five days after receiving notice of the suspension or denial of permit. The city manager or his or her designee will hear the appeal and issue a written finding not more than 20 days after the notice was delivered to the city secretary. The city manager's determination is final.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-125. - Planning requirements for site construction.

(a) The SWP3 shall describe and ensure the implementation of practices that will be used to reduce the pollutants in stormwater discharges associated with construction activity at the construction site and assure compliance with the terms and conditions of a TCEQ stormwater permit.

(b) A SWP3 is not required when a portion of a previously developed tract of land is redeveloped, unless the redevelopment will result in the disturbance of more than one acre of existing vegetation or impervious cover.

(c) The SWP3 must be prepared at the time of submission of the NOI or CSN to the city.

(d) The SWP3 must identify any environmentally sensitive areas that will receive any pollutants carried by stormwater from the site.

(e) The following requirements apply to development of sites five acres and greater or development of sites regardless of size that are part of a common plan of development:

(1) Obtain a city-issued development permit.

(2) A copy of the operator's SWP3, NOI provided to TCEQ, and CSN must be provided to the city before the construction activity commences.

(3) A copy of the operator's NOT provided to TCEQ must be provided to city after final stabilization has been achieved.

(4) The area of the development will be based upon any or all of the following: platted lot(s), site plan of the development, phased-in name of the development and/or ownership of the property or, if not platted, based upon the area of the tract owned by the developer, including all contiguous property owned by the same person.

(f) The following requirements apply to development of sites disturbing between one acre and five acres:

(1) Obtain a city-issued development permit.

(2) A copy of the operator's SWP3 and CSN must be provided to the city before the construction activity commences.

(3) A copy of the operator's notification of closure for the CSN must be provided to city when final stabilization has been achieved.

(4) The area of the development will be based upon any or all of the following: platted lot(s), site plan of the development, phased-in name of the development and/or ownership of the property or, if not platted, based upon the area of the tract owned by the developer, including all contiguous property owned by the same person.

(g) The following requirements apply to development of sites less than one acre, if not part of a common plan of development:

(1) Obtain a city-issued development permit.

(2) A copy of the operator's SWP3 must be provided to the city before the construction activity commences.

(3) The area of the development will be based upon platted lot(s), site plan of the development, phased-in name of the development, and/or ownership of the property or, if not platted, based upon the area of the tract owned by the developer, including all contiguous property owned by the same person.

(h) Minimum requirements of a SWP3 can be found in the most recent TPDES construction general permit.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-126. - Pollution control measures.

(a) The responsible party of any construction site within the city shall implement measures necessary to control erosion, sedimentation, debris, and stormwater pollution. The responsible party is responsible

for the maintenance and performance of the temporary pollution control measures until permanent measures are in place. The pollution controls are designed and should be selected by the responsible party to achieve the best results in controlling the pollution.

(b) *Temporary pollution control measures (during construction).* This subsection provides examples of temporary pollution control measures that can be used to control erosion and sedimentation.

(1) *Structural control of soil erosion.*

a. Stilt fences may be utilized, where necessary, to retain the sediments from disturbed areas within the site and decrease the velocity of sheet flows.

b. Straw bales may be utilized, where necessary, to retain sediments from disturbed areas within the site and decrease the velocity of sheet flows. Straw bales are particularly useful in paved areas where silt fences cannot be erected.

c. Stabilized construction entrances shall be designed to reduce the amount of soil tracked off the construction site by vehicles leaving the site. A stabilized construction entrance should be utilized to control tracking of material from the site. The responsible party shall ensure that vehicles entering and leaving the construction site use the stabilized construction entrance. The owner or operator of a vehicle entering or leaving a construction site may not track soil off the construction site.

d. Vegetative buffer strips, of appropriate size, should be maintained, where necessary and practical, to aid in reducing the velocity of stormwater and in trapping sediments in the stormwater leaving the site. A vegetative buffer will usually suffice as a structural control until final stabilization is accomplished.

e. Inlet protection barriers must be installed around all inlets to the storm sewer system and remain in place until the area surrounding the inlet is paved or stabilized sufficiently to prevent silt laden runoff from entering the storm sewer system.

(2) *Waste controls.* Waste disposal must be accompanied in a manner so that no solid wastes, including building materials, hazardous substances, oil, or packaging leave the site, except for disposal at an appropriate, approved solid waste management facility, in conformance with the Texas Solid Waste Disposal Act. To the extent practicable, no solid waste, including building materials, hazardous substances, or oil may be allowed to enter the city MS4, city streets, or waters of the United States. Building materials include, but are not limited to, uncovered stockpiles of soil, sand, dry cement, lumber, bricks, packaging or other products used in construction. The general contractor and/or builder, to whom the development permit and/or building permit is issued, is responsible for the conduct of all subcontractors with regards to disposal of wastes generated by the construction activities at the site.

(3) *Dust control.* Reasonable measures shall be taken to control dust, particulate matter, and windblown debris.

(4) *Hazardous material storage* . Chemicals, paints, solvents, fertilizers, and other toxic materials must be stored in waterproof containers. Except during applications, the contents must be kept in trucks or in storage facilities. Runoff containing such materials shall be collected, removed from the site, and disposed of at an approved solid waste or chemical disposal facility.

(5) *Concrete trucks.* The responsible party may not allow the owner or operator of a concrete truck to wash out or discharge surplus concrete or drum wash water at a construction site, unless the surplus concrete or drum wash water in concrete trucks is discharged at a facility on the construction site that will retain all concrete wash waters or leachates, including any wash waters or leachates mixed with stormwater. Concrete wash waters and leachates may not be allowed to enter the MS4, city streets, adjacent properties, the waters of the United States, or ground waters.

(c) *Final pollution control measures (post construction*). These measures, specific to the type of site, provide final stabilization of the construction sites:

(1) All soil disturbing activities at the site have been completed and a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

(2) For construction activities on land used for agricultural purposes (e.g. pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to surface water and areas which are not being returned to their pre-construction agricultural use must meet the final stabilization conditions of condition (c)(1) above.

(3) Acceptance of improvements by the city can occur before the final stabilization coverage requirement is met, if the developer agrees to maintain the stabilization until coverage is achieved and all other permanent measures are complete (i.e. performance bond).

(4) Once final stabilization has been achieved, the responsible party shall notify the administrator, or designated representative that final stabilization has been achieved.

(5) Erosion control structures must be provided where necessary to control erosive velocities in unlined channels or swales leaving the site.

(6) Sediment traps must be provided on the site, as necessary, to control sedimentation from concentrated stormwater discharges into an environmentally sensitive area. Individual assessments must be made on a site-specific basis. However, a rock rubble low berm must be installed around an outfall that discharges directly into an environmentally sensitive area, unless this requirement is waived by the administrator because the responsible party has installed another type of sediment trap that provides equal or better protection.

(d) *Scheduling of control measures* . pollution control measures must be implemented in a sequence that will provide maximum stormwater pollution control based on the following principles:

(1) Down slope and side slopes perimeter controls must be installed before land disturbing activity occurs.

(2) The responsible party shall not disturb the site until the responsible party is ready for construction to proceed.

(3) Efforts to provide cover or stabilize disturbed areas must occur as soon as possible.

(4) Temporary perimeter controls may not be removed until all upstream areas are permanently stabilized.

(e) *Inspection of pollution control measures.* The responsible party shall inspect all pollution control measures every 14 days and within 24 hours following a rainfall of 0.5 inches or greater, at the site. The inspection reports are to be considered part of the operator's SWP3, and as such, are subject to the same record retention schedule and availability requirements of the SWP3. The inspection reports, as well as, the entire SWP3 shall be made available for inspection by a representative of the city, during normal business hours.

(f) *Maintenance of pollution control measures.*

(1) The responsible party shall maintain and ensure adequate performance of the temporary pollution control measures until permanent pollution control measures are in place.

(2) Whenever the temporary or permanent pollution control measures do not keep soil, sediment, and debris on the construction site, such as excessive tracking of dirt offsite by vehicles and runoff of sediments from the site over sidewalks and into the streets and gutters, etc., the responsible party shall remove the soil, sediment, and debris from streets, sidewalks, inlets, or other areas including private property impacted such as determined by the administrator, return the soil and sediment to the areas to be stabilized, and properly dispose of the debris.

(3) The responsible party is responsible for the maintenance of any permanent pollution control measures located on the site, unless the owner has dedicated the permanent pollution control measure to the city and has provided the city with any easements necessary to allow access to the permanent pollution control measure and to conduct any required maintenance activities.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-127. - Monitoring of discharges.

(a) *Applicability.* This section applies to all facilities that have stormwater discharges associated with industrial and construction activities.

(b) *Access to facilities.*

(1) The administrator shall be permitted to enter and inspect facilities subject to regulation under this article as often as necessary to determine compliance with this article. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access.

(2) Facility operators shall allow the administrator ready access to all parts of the premises for the purpose of the inspection, sampling, examination and copying of records that must be kept under the conditions of a TPDES permit to discharge stormwater, and to the performance of any additional duties as defined by the state and federal law.

(3) The administrator shall have the right to set up on any permitted facility such devices as are necessary in their opinion to conduct monitoring and/or sampling of the facility's stormwater discharge.

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

(5) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the administrator and shall not be replaced. The costs of clearing such access shall be borne by the operator.

(6) If the administrator has been refused access to any part of the premises from which stormwater is discharged, and the administrator is able to demonstrate probable cause to believe that there may be a violation of this article, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this article or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the administrator may seek issuance of a search warrant from any court of competent jurisdiction.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-128. - Notification of spills.

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for an emergency response for a facility or operation has information of any known or suspected release of materials which are resulting, or may result in illegal discharges or pollutants discharging into stormwater or the storm drainage system, or waters of the United States, said 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, said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the authorized enforcement agency no later than the next

business day. Notifications in person or by phone shall be confirmed by written notice addressed and mail[ed] to the administrator within three business days of the phone notification. If the discharge of prohibited materials emanates from a commercial or industrial facility, the owner or operator of such facility shall also retain an on-site written record of the discharge and the actions taken to prevent its reoccurrence. Such records shall be retained for at least three years.

(Ord. No. 2133, § 1 , 1-12-2016)

Secs. 46-129—46-149. - Reserved.

DIVISION 4. - ENFORCEMENT[3]

Footnotes:

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Editor's note— Ord. No. 2133, § 1 , adopted Jan. 12, 2016, set out provisions intended for use as Div. 4, §§ 46-129—46-131. To preserve the style of the Code, and at the editor's discretion, these provisions have been included as Div. 4, §§ 46-150—46-152.

Sec. 46-150. - Penalty.

A person who violates any section of this article is guilty of a misdemeanor and upon conviction is punishable in accordance with section 1-14.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-151. - Notice.

The city will serve persons operating in violation of this article with written notice stating the nature of the violation and providing a reasonable time limit for satisfactory compliance. Failure of the city to provide such notice does not limit the authority of the city to take any action deemed appropriate.

(Ord. No. 2133, § 1 , 1-12-2016)

Sec. 46-152. - Recovery of costs incurred by the city.

Any person violating any of the provisions of this article; causing damage to or impairing the MS4; or cause impairment or damage to the MS4 will be liable to the city for any expense, loss, or damage caused by such violation or action. The city will bill the person for the costs incurred for any cleaning, repair, replacement, or remediation work caused by the violation or action. Refusal to pay the assessed costs shall constitute a violation of this division enforceable under the provisions of this article.

(Ord. No. 2133, § 1 , 1-12-2016)