



City of Norman
Phase II MS4 Annual Report
Reporting Period 1/1/2016 to 12/31/2016



**Phase II Small Municipal Separate Storm Sewer
System (MS4) General Permit (OKR04)
Authorization No. OKR040015
March 1st, 2017**



City of Norman Phase II MS4 Annual Report

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Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit (OKR04) Authorization No. OKR040015

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Section 1. Compliance Status

1.1 Executive Summary

The 2016 Phase II MS4 Annual Report for the City of Norman (City) is submitted as required by Part V.C.1 of the Oklahoma Department of Environmental Quality Phase II Municipal Separate Storm Sewer System (MS4) General Permit, OKR04, Authorization No. OKR040015, and covers the reporting period of January 1, 2016, through December 31, 2016. As part of these requirements, the City conducted an assessment of permit compliance, including an assessment of the appropriateness of Best Management Practices (BMPs), progress toward the goal of reducing the discharge of pollutants, and achieving measurable goals for each Minimum Control Measure (MCM). The City's assessment indicates that it is in compliance with permit requirements.

On November 29, 2005, the City received Authorization No. OKR040015. General Permit OKR04 expired on February 9, 2010, but was administratively continued until its reauthorization, which became effective on November 1, 2015. A Notice of Intent (NOI) and other permit application material were submitted as part of the OKR04 application on January 29, 2016. On December 2, 2016, the City was notified by ODEQ that review of the NOI and supporting documentation had been completed. On December 7, 2016, ODEQ informed the City that an additional annual report for calendar year 2016 would be required under the general permit, OKR04, which expired on February 9, 2010. In anticipation of receiving the permit authorization, the Stormwater Division began implementing the BMPs as outlined in the permit application material submitted on January 29, 2016. Section 1 of this report will detail the City's progress towards meeting these goals.

Some of the major accomplishments during the 2016 reporting period include removing pollutants from the MS4 through street sweeping, spill response, dry weather field screening, and infrastructure maintenance; educating the public on the importance of stormwater pollution prevention through public clean-up events, meetings, and discussions; and enhanced inspections and enforcement of construction site stormwater violations. The City's single stormwater inspector has conducted 1,549 inspections of 109 sites during the reporting period. During the City's annual Household Hazardous Waste Collection event, held on November 5, 2016, over 132,900 pounds of materials were collected and properly disposed. Street sweeping operations increased in 2016 with the purchase of a new vacuum sweeper, which has allowed the City to sweep over 1,600 lane miles.

A new requirement for this reporting period involves implementation of the Lake Thunderbird Watershed TMDL Compliance and Monitoring Plans. On November 10, 2013, ODEQ issued a Total Maximum Daily Load (TMDL) for the Lake Thunderbird watershed, which established a waste load allocation for the cities of Norman, Oklahoma City, and Moore, and required that each city submit Compliance and Monitoring Plans. The City's Compliance and Monitoring Plans were approved by ODEQ on September 21, 2016, and subsequently adopted by the City Council on October 25, 2016. Monitoring began in March 2016, and implementation of non-structural BMPs outlined in the Compliance Plan is currently underway.

As an example of non-structural BMP implementation, on October 30, 2016, the Stormwater Division held the First Annual Lake Thunderbird Watershed Clean-up Event at the Lake Thunderbird Boathouse. The goal of the event was to educate Norman citizens on the impact stormwater has on Lake Thunderbird's water quality. In addition, everyone who came took an active role in removing pollution, in the form of trash, from the watershed. Approximately 55 people were in attendance. Trash and recyclables were collected from various locations on the west side of the lake. Awards were given for the team(s) who collected the most recyclables by weight and the most unusual item. A group of students from Rose State College collected the most recyclables at 37.2 pounds. The Bailey family (right) collected the most unusual group of items, which consisted of a large piece of Styrofoam, a leopard-printed chair, and a pink life jacket. Overall, the volunteers collected 180.6 pounds of recyclable materials, 39 bags of trash, and approximately 100 pounds of large debris that may otherwise have ended up in Lake Thunderbird.



An additional non-structural BMP that began in 2016 was the establishment of the Lake Thunderbird Watershed TMDL Technical Working Group. The Cities of Norman, Moore, and Oklahoma City established the Working Group to coordinate activities related to the Lake Thunderbird watershed. The group currently meets on a quarterly basis and is discussing ways to work together on public education and other BMPs.

The major challenge encountered by the City of Norman during the 2016 reporting period was the failure to approve a Stormwater Utility Fee (SWU) to provide a dedicated funding source for the Stormwater Division. It was based on a rate structure of \$1.25 per 1,000 square feet of impervious cover. On August 23, 2016, the SWU was brought to a vote by the citizens of Norman and was rejected. The City of Norman is currently working on reevaluating the rate structure with plans to bring a new fee structure up for a vote later in 2017.

1.2 BMP Implementation and Evaluation

In anticipation of receiving the permit authorization, the City's Stormwater Division began implementing the BMPs as outlined in the permit application material submitted on January 29, 2016. The City considers the revised BMPs as submitted to ODEQ on January 29, 2016, as part of the permitting process to be appropriate and effective during this reporting period. Evaluation of the BMPs will be on going, and if any are found to be no longer effective or appropriate, the BMP will be amended, deleted and/or replaced.

An assessment of the BMPs currently being implemented by the City is presented in the tables in Section 1.3.

1.3 MCM Measurable Goals

Progress in achieving the measurable goals for each BMP of the six MCMs is presented in the following tables. Supporting documentation for each MCM is attached in Appendix A.

Public Education and Outreach MCM

BMP	Goal	Frequency/ Implemented	Comments
Distribute informational brochure with utility bills	One brochure to 75% of all utility accounts	Annually	Distributed two utility bill inserts: <ol style="list-style-type: none"> 1. Fertilizer Use Tips April 2016 2. SWU Information August 2016 3. Yard Waste Tips September 2016
Add stormwater pollution prevention information to city web site	Information posted	Annual review/update	Quarterly newsletter posted on December 29, 2016. Changes to the Stormwater Division pages prepared for incorporation in 2017. Information on SWU, rain barrels, and public meetings posted throughout 2016.
Operate Action Center Hotline	Receive and respond to 90% of verified complaints	Annually	Action Center complaints are received and responded to throughout the year. In 2016, Stormwater Division responded to 131 citizen complaints.
Public stormwater education event	Coordinate with Environmental Services for Earth Day event	Annually	Participated at annual Earth Day event on April 24, 2016.
Educational event & materials for schools	Supply material to 2 elementary schools annually and participate in Public Works Week event at local school	Annually	Participated in annual Public Works Week event on May 18, 2016. The goal of supplying materials to 2 schools in 2016 was not met.
Newspaper ads	Quarterly ads in local paper with water quality, pollution prevention or watershed protection information	Annually	Five newspaper ads on stormwater topics were placed in the Norman Transcript in 2016: <ol style="list-style-type: none"> 1. Fertilizer Use April 2016 2. Don't Blow It May 2016

BMP	Goal	Frequency/ Implemented	Comments
			<ul style="list-style-type: none"> 3. Pool Draining Tips August 2016 4. Pet Waste Pickup December 2016 5. Rain Barrel Promo December 2016
Develop stormwater pollution prevention brochure for fertilizer use	Distribute to 75% of all utility accounts	Once	A brochure on fertilizer use was developed and distributed on May 25, 2016.
Develop Spanish language SWPP brochure	Develop Spanish language stormwater pollution prevention informational materials	Once	Spanish language brochure on improper disposal of yard waste was developed distributed on September 1, 2016.
Develop educational materials on the Lake Thunderbird TMDL	Provide educational material to the public about water quality impairments in Lake Thunderbird and the Lake Thunderbird TMDL	Annually	On October 30, 2016, the City held the First Annual Lake Thunderbird Clean-up Event to educate Norman citizens on Lake Thunderbird water quality and the role stormwater plays and to have them play an active role in removing pollution, in the form of trash, from the watershed.

Public Participation and Involvement MCM

BMP	Goal	Frequency/ Implemented	Comments
Establish web site link for receipt of email regarding stormwater issues	Respond to 90% of all emails received	Annually	<p>pwstormwater@normanok.gov has been established for receipt of email regarding stormwater issues.</p> <p>77 contacts were made using this email address in 2016.</p>
Environmental Control Advisory Board (ECAB)	A stormwater quality representative will meet with ECAB quarterly to provide information on stormwater pollution issues.	Annually	<p>Worked with ECAB to distribute door hanger with information on the City's Manufactured Fertilizer Ordinance, which was distributed during OU's Big Event on April 9, 2016.</p> <p>The new Stormwater Engineer was hired in July 2016. Since that time, she has attended ECAB meetings on a monthly</p>

BMP	Goal	Frequency/ Implemented	Comments
			basis and is working with the group on several ongoing stormwater issues.
Operate Action Center Hotline	Receive and respond to 90% of verified complaints	Annually	Action Center complaints are received and responded to throughout the year. In 2016, Stormwater Division responded to 131 citizen complaints.
Public meeting for stormwater issues	Hold one public meeting annually	Annually	In preparation for the SWU vote, 18 public meetings were held (see Appendix A). In addition, public meetings on the Lake Thunderbird TMDL (October 30, 2016) and Water Quality (November 14, 2016) were also held.
Public Stormwater Education Event	Coordinate with Environmental Services for one event annually	Annually	Participated at annual Earth Day event on April 24, 2016, with Environmental Services. Environmental Services Coordinator discussed the Household Hazardous Waste Collection Event on November 5 th with volunteers at the First Annual Lake Thunderbird Clean-up Event on October 30, 2016.
Blue Thumb/Oklahoma Conservation Commission Partnership	Maintain working relationship with Blue Thumb and coordinate for one stormwater public education event annually	Annually	Jeri Fleming with Blue Thumb discussed how people could volunteer and set up a model to demonstrate infiltration and runoff rates of various surfaces from concrete to forest soil at the Lake Thunderbird Clean-up Event on October 30, 2016. The Stormwater Division also coordinated creek clean-ups with Blue Thumb volunteers and Hitachi employees on June 16, 2016, and November 17, 2016.
Lake Thunderbird TMDL public meeting	Hold one public meeting annually for education and discussion of the Lake Thunderbird TMDL	Annually	First Annual Lake Thunderbird Clean-up Event held on October 30, 2016.

Illicit Discharge Detection and Elimination MCM

BMP	Goal	Frequency/ Implemented	Comments
Operate Action Center Hotline	Receive and respond to 90% of complaints received	Annually	Action Center complaints are received and responded to throughout the year. In 2016, Stormwater Division responded to 131 citizen complaints.
Household Hazardous Waste Collection Day	Provide annual event for the public to drop off unwanted household waste and report amount of waste collected	Annually	Conducted on November 5, 2016.
Dry Weather Field Screening	90% of visual screening points inspected each year	Annually	44 outfalls were inspected in 2016.
Illicit Discharge Investigations	Perform source investigation on all identified illicit discharges and connections	Annually	Conducted throughout the year as identified. No illicit discharges were identified in 2016.
Enforcement Actions	Take enforcement actions as allowed by City regulations where responsible parties for illicit discharges are identified	Annually	Enforcement actions are taken as necessary to eliminate illicit discharges. None were required in 2016.
Inspect MS4 System	Visually inspect open channels and camera enclosed conduits. Inspect 10% of system each year	Annually	Infrastructure inspected and maintained: <ol style="list-style-type: none"> 1. Inlets – 6,891 cleaned 2. Channels and pipes are inspected and maintained as time and resources allow.

Construction Site Runoff Control MCM

BMP	Goal	Frequency/ Implemented	Comments
Earth Change Permit	Permit 90% of all earth disturbing operations over 1 acre in size	Annually	35 Earth Change Permits were issued in 2016.
Construction site inspection	Inspect 90% of sites within 30 days of permit issuance and at least monthly. Perform enforcement actions as needed	Annually	96.5% of sites were inspected within 15 days. 1,549 inspections were conducted at 109 sites in 2016.
Education event for construction/development	Hold two events for developers, construction crews, utility contractors and engineering companies	Annually	One Builders Workshop on Erosion Control was held on March 9, 2016.

BMP	Goal	Frequency/ Implemented	Comments
Water Quality Protection Zone Ordinance	Implement requirements of the Water Quality Protection Zone Ordinance including establishment and maintenance of streamside buffers	Annually	WQPZ ordinance has been established and zones are identified as property is platted on an ongoing basis.
Lake Thunderbird TMDL building/development workshop	Hold annual workshop for the building and development community on the Lake Thunderbird TMDL compliance requirements and Lake Thunderbird watershed protection	Annually	Not yet implemented.

Post-Construction Site Runoff from New/Redevelopment MCM

BMP	Goal	Frequency/ Implemented	Comments
Review/amend City engineering and development regulations	Remove any barriers to Low Impact Development (LID)	Review every 5 years	Review of engineering and development regulations is ongoing.
Implement Water Quality Protection Zone (WQPZ) ordinance	Establish water quality protection zones in riparian areas	Annually	WQPZ ordinance has been established and zones are identified as property is platted.
Fertilizer Ordinance	Implement the Manufactured Fertilizer Ordinance to educate the public and commercial fertilizer applicators on proper fertilizer use	Annually	A letter regarding the Manufactured Fertilizer Ordinance was sent to public and commercial applicators on March 22, 2016.
Stormwater impoundment inspection	Inspect 50% of stormwater impoundments	Annually	27 stormwater impoundments were inspected in 2016.
Post-Construction Events	Include information on post-construction BMPs in construction/development events listed for MCM 4	Annually	This is ongoing.

Municipal Good Housekeeping MCM

BMP	Goal	Frequency/ Implemented	Comments
Develop employee training program	Provide one training session for 75% of targeted employees	Annually	This BMP is under development. Due to employee turnover, current staff have been unable to complete this task.
Street Sweeping	Sweep at least 2,500 curb miles annually to prevent sediment, debris and pollutants from entering the MS4	Annually	1,691.5 lane miles were swept in 2016. The acquisition of additional street sweepers will allow us to meet this goal in future years.
City facility stormwater inspections	Inspect half of all facilities identified as potential sources of stormwater pollution	Annually	The Lindsey Yard was inspected on December 7, 2016.
Map City facility storm sewer (SS) systems	Locate all SS inlets and outfalls at two City facilities every year	2 facilities annually until complete	SS inlets and outfalls were identified at the Lindsey Yard on December 7, 2016.
Spill Kits	Provide spill containment kits to 25% of City vehicles	Annually	Spill kits have been purchased and made available to vehicles in the Street and Stormwater Divisions.
Employee Newsletter	Distribute stormwater pollution prevention information to City Employees through the newsletter once each quarter	Annually	Information on addressing spills and leaks was included in the November 2016 City of Norman Employee Newsletter.
Employee education on Lake Thunderbird TMDL	Incorporate Lake Thunderbird TMDL requirements into City employee training events.	Annually	This BMP is under development. Due to employee turnover, current staff have been unable to complete this task.

1.4 Pollutant Reduction

The City of Norman believes that BMPs currently implemented have resulted in a reduction in the discharge of pollutants to the storm sewer system. The effectiveness and efficiency of all current BMPs will be reviewed annually and used in the development of the Minimum Control Measure BMPs for the next five-year permit term. Pollutant recovery/reduction activities are shown below.

1. Street Sweeping
 - a. 1,184 tons of material were removed from the MS4 during 2016.
2. Storm Drain Inlet Cleaning
 - a. 6,891 inlet cleanings were done during 2016.
 - b. 664 tons of debris were removed from the MS4 during the reporting period.
3. Litter Removal
 - a. 18.4 tons of trash were removed from the MS4 during 2016 through the City's litter program.
4. Hazardous Waste Collection Event
 - a. 44,000 pounds of chemicals collected
 - b. 8,200 pounds of used oil collected
 - c. 1,700 pounds of used antifreeze collected
 - d. 52,000 pounds of paint collected
 - e. 27,000 pounds of e-waste collected
 - f. 520 tires collected
 - g. 140 automotive batteries collected
 - h. 80 old appliances collected
5. Spills
 - a. Approximately 55 gallons of grease and 10 gallons of diesel fuel were recovered during response operations to 2 spills in the permit year.

Section 2. Information/Activities

2.1 2016 Reporting Cycle

MCM #1: PUBLIC EDUCATION AND OUTREACH AND MCM #2: PUBLIC PARTICIPATION AND INVOLVEMENT

The City hosts several public education and outreach events throughout the year. Some of the ways stormwater messages are provided to Norman residents include utility bill inserts, newspaper ads, public meetings, Council meetings, and public events like Earth Day and the Household Hazardous Waste Event. In 2016, a significant amount of time was spent educating residents and community groups on stormwater quality and maintenance related issues in preparation for the August 23, 2016 vote. Eighteen public meetings were held to discuss stormwater, the reasons the SWU is needed, and what activities it would fund. Establishing a SWU is a key component of the Storm Water Master Plan. It would provide a funding source to allow the City to improve stormwater quality, manage streambank erosion and stability, protect drinking water supplies, enhance public recreational opportunities at Lake Thunderbird, and prevent flooding events throughout Norman. Unfortunately, the Stormwater Utility was not approved by the voters, but the need for a dedicated funding source still exists. Additional efforts will be needed in 2017 to reach residents and show them the benefits of such a funding source.

Also in 2016, ODEQ approved the Lake Thunderbird Watershed TMDL Compliance and Monitoring Plans. In order to satisfy certain requirements of the Compliance Plan, the City must educate the public on the requirements on the Lake Thunderbird TMDL. On October 30th, 2016, Stormwater Quality held the First Annual Lake Thunderbird Watershed Clean-up Event at the Lake Thunderbird BoatHouse. The goal of the event was to educate Norman citizens on Lake Thunderbird water quality and the role stormwater plays and to have them take an active role in removing pollution, in the form of trash, from the watershed. The event satisfies public education requirements in the City's Stormwater Management Program and Lake Thunderbird TMDL Compliance Plan.



Aaron Milligan discussing the impact of stormwater runoff on Lake Thunderbird's water quality.

Approximately 55 people were in attendance to learn more about stormwater and the Lake Thunderbird watershed. Trash and recyclables were collected from various locations on the west side of the lake. Awards were given for the team(s) who collected the most recyclables by weight and the most unusual item. A group of students from Rose State College collected the most recyclables at 37.2 pounds. The Bailey family collected the most unusual group of items, which consisted of a large piece of Styrofoam, a leopard-printed chair, and a pink life jacket. Overall, the volunteers collected 180.6 pounds of recyclable materials, 39 bags of trash, and

approximately 100 pounds of large debris that may otherwise have ended up in Lake Thunderbird.



From left to right, Aaron Milligan helping move trash, the Bailey Family with their most unusual items, & the Rose State College students with recyclables collected.

In addition to receiving information on the connection between stormwater runoff and Lake Thunderbird’s water quality, participants received valuable information on other water quality-related activities and volunteer opportunities with the Oklahoma Conservation Commission’s Blue Thumb Program, Keep Oklahoma Beautiful, the Thunderbird Sailing Club, and the City of Norman’s Environmental Services.

Ms. Jeri Fleming with Blue Thumb discussed how people could volunteer and also set up a model to demonstrate infiltration and runoff rates of various surfaces from concrete to forest soil. Ms. Debra Smith, Environmental Services Coordinator, discussed the Household Hazardous Waste Collection Event scheduled for November 5th. Keep Oklahoma Beautiful donated trash bags, gloves, and water, and the Thunderbird Sailing Club allowed us to use their facility free of charge.

MCM #3: ILLICIT DISCHARGE DETECTION AND ELIMINATION

The City’s Illicit Discharge Detection and Elimination Program primarily consists of dry weather field screening, responding to citizen complaints, and addressing spills or leaks that have the potential to enter the storm sewer system.

The City has identified sixty-three (63) outfalls for dry weather field screening (see map below for locations). Forty-four (44) outfalls were inspected during the reporting period. Outfall inspection forms were completed and photos taken at each outfall. No illicit discharges were identified during 2016 as a result of these activities.

During 2016, the City received one hundred thirty-one (131) citizen inquiries, either directly from the citizen, through the City Action Center, or by referral from other City staff and Council members. All complaints receive an initial investigation to verify the report and determine if the Stormwater Division had jurisdiction over the issue. Those not regulated by the Stormwater Division are referred to the appropriate department and/or State agency.

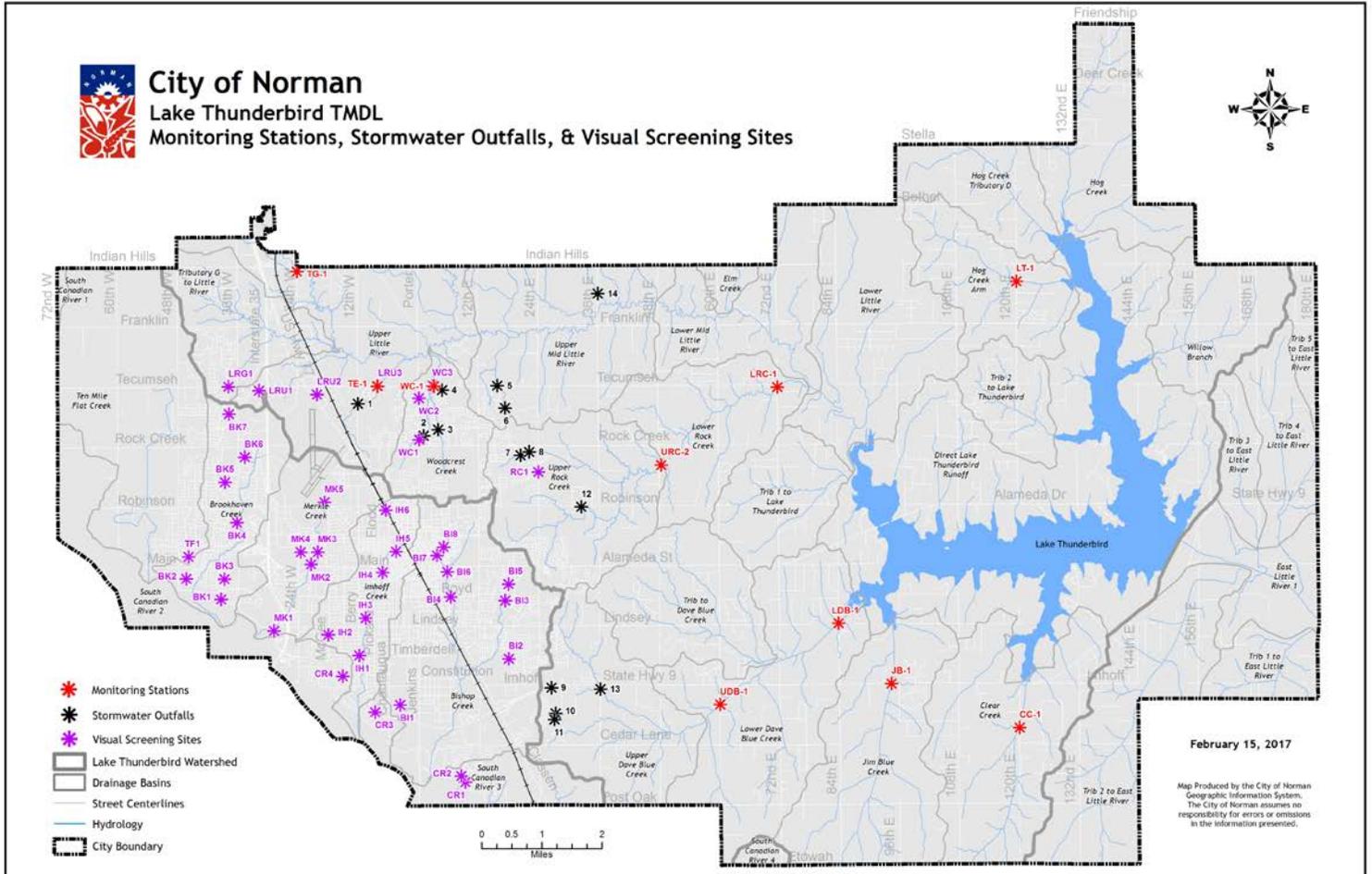
A summary of all complaints received in 2016 is presented in Appendix B.

Received	Response	Resolved
131	131	131

The City responded to 2 spills during the reporting period.

Date	Location/Event
8/10/2016	Oil/Diesel Spill at the intersection of Van Buren Street and 24 th Ave SW
11/28/2016	Grease Spill at Taco Bell located at the intersection of Lindsey St and 12 th Ave SE

City of Norman MS4 Sampling and Visual Screening Points



MCM #4: CONSTRUCTION SITE RUNOFF CONTROL

The City's Construction Site Runoff Control Program primarily consists of issuing Earth Change Permits to sites within city limits that disturb an acre or greater or those that disturb less than an acre and are part of a larger common plan of development, inspecting these sites to ensure that they are in compliance with the construction stormwater requirements set out in Section 5000 of the City's Engineering Design Criteria Manual, and issuing enforcement actions for any non-compliant sites. Below is a summary of the activities conducted in 2016:

- Earth Change Permits

During the 2016 reporting period, 37 new sites were permitted.

- Construction Site Inspections

New sites started during reporting period:	37
Continuing sites during reporting period:	76
Closed sites during reporting period:	16
Total number of open sites during reporting period:	87
Total number of sites inspected during reporting period:	109
Total number of inspections performed:	1549

- Construction Site Enforcement

The City issued 41 Notices of Violation and 1 Citation for non-compliance in 2016.

In the next reporting cycle, the Engineering Design Criteria Manual will be updated and changes to the Construction Site Runoff Control Program will be made to improve stormwater pollution prevention and compliance and ensure city regulations mirror state requirements.

MCM #5: POST-CONSTRUCTION STORMWATER MANAGEMENT

The City encourages the use of green infrastructure and low impact development (LID) practices as part of the development process and has adopted the City of Wichita/Sedgwick County, Kansas, LID Manual. The City has also passed a Water Quality Protection Zone ordinance and a Manufactured Fertilizer ordinance. Routine inspections of stormwater detention ponds are also conducted in an attempt to address pollution in post-construction stormwater runoff.

The WQPZ ordinance was established to protect riparian buffer areas in the Lake Thunderbird watershed, and zones are identified as property is platted. The Manufactured Fertilizer Ordinance was established to regulate the application of manufactured fertilizers in Norman, require a soil test before phosphorus-containing fertilizers can be applied, restrict fertilizer from being applied to impervious areas, and require commercial fertilizer applicators to register with the City. Each year, a letter is sent to commercial applicators to remind them of this requirement. In 2016, the letter was sent to public and commercial applicators on March 22. Twenty-seven (27) stormwater detention ponds were inspected in 2016, and additional efforts and changes to procedures are being planned for the next reporting period.

MCM #6: MUNICIPAL GOOD HOUSEKEEPING

As part of the Municipal Good Housekeeping Program, the City's goal is to address potential pollution sources at municipal maintenance facilities. This includes training municipal employees on topics such as spill prevention and response and general good housekeeping measures. One major activity that occurs as part of the Municipal Good Housekeeping Program is street sweeping. The City currently operates three (3) vacuum sweepers on a routine basis. During the reporting period, 1,184 tons of material were removed from the MS4 and 1,691.5 lane miles were swept. Street sweepers also respond to non-hazardous material spills and clean inlets as necessary.

One goal for 2016 was to inspect municipal facilities and develop Good Housekeeping plans for each. Due to staff turnover, only the Lindsey Yard, which houses both the Streets and Stormwater Divisions, was inspected during the reporting period, and annual staff training was unable to be completed. One article on handling spills and leaks was included in the November Employee Newsletter. Additional facility inspections and employee training are planned for 2017.

2.2 Next Reporting Cycle

The next reporting period will include data from January 1, 2017, through June 30, 2018. The Annual Report covering that period will be submitted by September 30, 2018. Recurring BMPs will be continued pending issuance of an authorization under the Phase II MS4 General Permit, OKR04.

2.3 Proposed Changes

There are no changes proposed to the Stormwater Management Program at this time.

Section 3. TMDLs

3.1 TMDL Compliance

The ODEQ issued a TMDL for the Lake Thunderbird watershed in November 2013. The TMDL required the Cities of Norman, Moore, and Oklahoma City to develop Compliance and Monitoring Plans to limit the amount of nitrogen, phosphorus, and sediment entering Lake Thunderbird from stormwater runoff. The City submitted the Compliance and Monitoring Plans (Plans) to ODEQ in November 2015. After much review and discussion, ODEQ approved the City's Plans on September 23, 2016. On October 25, 2016, City Council approved Council Resolution R-1617-41, which adopted the Plans.

The City has been proactive in measures to reduce the contaminant load to Lake Thunderbird. In November of 2009, the Norman City Council accepted the Storm Water Master Plan which recommended the establishment of Stream Planning Corridors in the Lake Thunderbird watershed to protect the creeks and streams and thereby protect lake water quality. The WQPZ was established by City ordinance in June 2011 and provided the stream buffers for new development in the Lake Thunderbird watershed as recommended by the Storm Water Master Plan. A Manufactured Fertilizer Ordinance was adopted by the Norman City Council in 2013 which required that certain criteria be met in order to use fertilizer containing phosphorus in the Lake Thunderbird watershed. The Fertilizer Ordinance included banning the blowing of grass clippings into the gutters and storm drains. All of these steps have been taken by the City to improve the quality of storm water runoff discharged from the City.

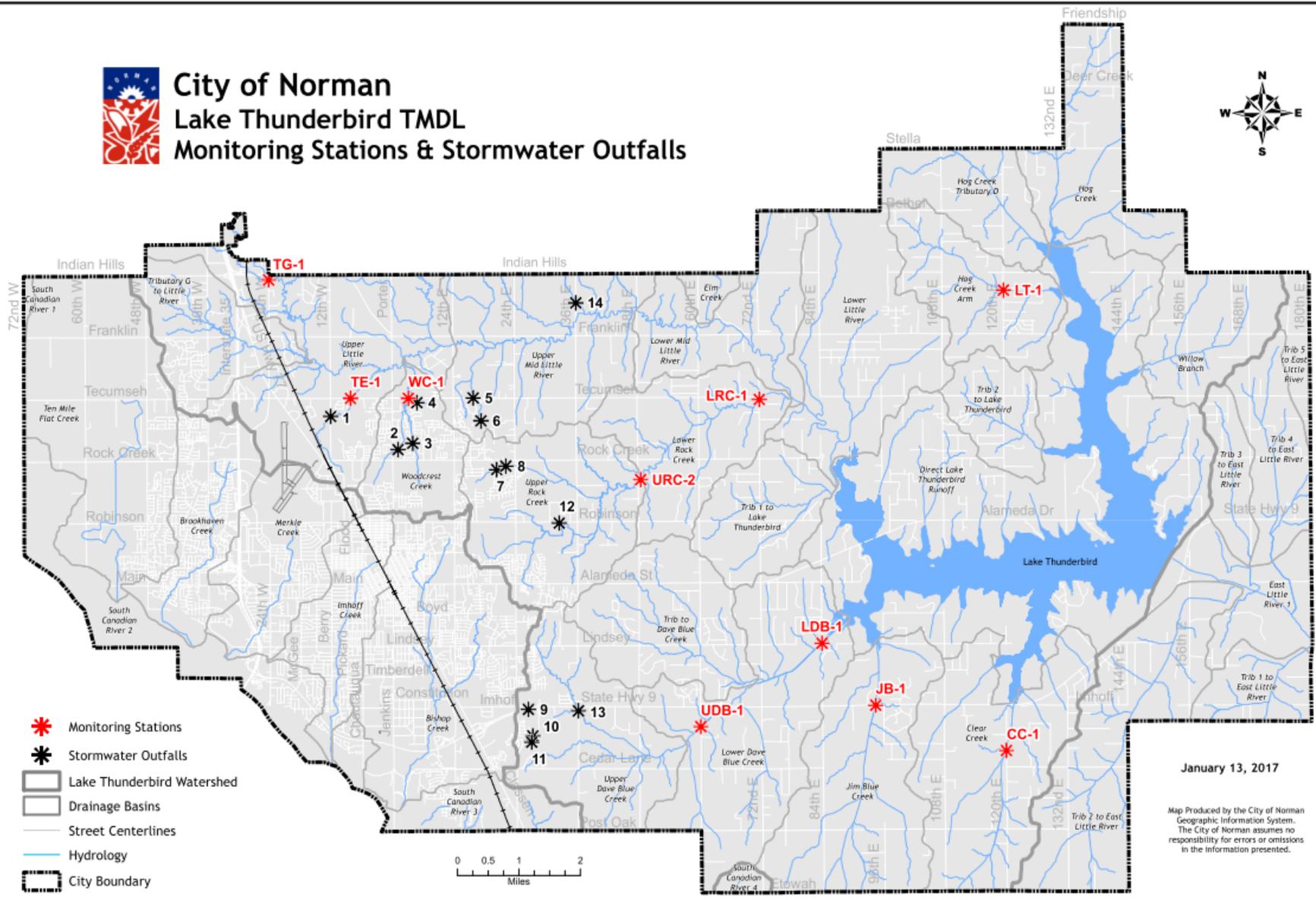
Implementation of the Plans will be established on a 5 year permit cycle basis. The City will begin the first 5 year cycle by implementing a Monitoring Plan to establish a baseline for flow and pollutant loading of streams flowing from or through the City to Lake Thunderbird. Pollutants to be monitored are nitrogen, phosphorus, and total suspended solids. BMPs will also be implemented as part of the City's Compliance Plan beginning with education campaigns and enhancing programs already in place, progressing to increasing cleaning efforts. These efforts during the first 5 years are aimed at reducing pollutants in stormwater runoff at the source. The Plans and the results of the monitoring will be reviewed at the end of this initial 5 year cycle to determine where best to establish structural BMPs during the next 5 year cycle.

On January 26, 2016, City Council approved Contract No. K-1516-79 by and between the City of Norman and OWRB in the amount of \$229,756.23. OWRB implemented the monitoring program in March 2016. Installation of stream gauging stations was completed in May 2016. Monthly monitoring is ongoing at ten (10) permanent monitoring stations. An additional fourteen (14) major stormwater outfalls have been identified, and seven (7) of these sites will be sampled once per year.

A Lake Thunderbird Watershed TMDL Technical Working Group has been established. This Working Group includes technical staff from the Cities of Moore, Norman, and Oklahoma City. The goal of the group is to collaborate on common non-structural BMPs and share information each has learned during the TMDL implementation process. The Working Group is currently working on establishing a branding strategy for the Lake Thunderbird watershed, including a logo, mascot, and tagline, for use by all three cities.



City of Norman Lake Thunderbird TMDL Monitoring Stations & Stormwater Outfalls



- Monitoring Stations
- Stormwater Outfalls
- Lake Thunderbird Watershed
- Drainage Basins
- Street Centerlines
- Hydrology
- City Boundary



January 13, 2017

Map Produced by the City of Norman
Geographic Information System.
The City of Norman assumes no
responsibility for errors or omissions
in the information presented.

Section 4. Optional Permit Coverage under MCM #7

All City construction projects active in the reporting period were either under control of a contractor/construction site operator and/or less than one acre of disturbed area. All construction site operators performing earth disturbing activities within the boundary of the City of Norman are informed that they must comply with all federal, state and local regulations related to erosion control and stormwater runoff.

4.1 Active Projects

- None in reported period

4.2 Started Projects

- None in reported period

4.3 Completed Projects

- None in reported period

Section 5. Summary/Permittee Information

5.1 Permittee Information

Permittee	City of Norman, Oklahoma
Address	201 West Gray, Bldg A
City/State/Zip	Norman, OK 73069
Contact	Carrie J. Evenson, Ph.D., P.E., Stormwater Engineer
Contact Phone	(405) 366-5455
Authorization No.	OKR040015
Authorization Date	November 29 th , 2005

5.2 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.

Signature: _____

Date: _____

Name (printed): Lynne Miller

Title: Mayor

Appendix A: Supporting Documentation

MCM #1: PUBLIC EDUCATION AND OUTREACH

Stormwater Quality Website

City of Norman
Building an Inclusive Community
Home of the University of Oklahoma

Search NormanOK.gd Search

City Government Public Safety Parks & Recreation How Do I... Quick Links Norman Life Implementation Plan

Home » Public Works » Street Division » Stormwater Quality

LINKS

- Public Works
 - Administration
 - Engineering Division
 - Fleet Division
 - Moving Forward
 - Street Division
 - Stormwater Division
 - Master Plan
 - Related Links
 - Staff
 - Storm Drain Marking
 - Stormwater Quality**
 - Traffic Division
- Lindsey Street

Stormwater Quality

Storm Water Quality

Rainfall waters our lawns and fills our lakes and streams, but it can also carry pollution from paved areas and construction sites. Any pollutant exposed to rainfall is at risk of being washed into storm drains and carried to local waters that we use for drinking water or recreation. Fertilizers, pesticides, sediment and automotive fluids in storm water runoff can be harmful to human health and our environment.

The City's storm drains deposit this untreated runoff directly into local streams and rivers. It is called "non-point source" pollution because it comes from many different sources. It is also difficult to control.

Need a Rain Barrel? ([more information](#)) [Video](#)

City of Norman
Public Works
201 West Gray, Bldg. A
Norman, OK 73069

Stormwater Pollution Prevention
Phone: (405) 366-5435

Construction Site Erosion Control
Phone: (405) 366-5456

Stormwater Drainage
Phone: (405) 366-5455

FAX: (405) 366-5418

Email

GreenNorman – Environmental Information Website

City of Norman
Building an Inclusive Community
Home of the University of Oklahoma

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QUICK LINKS

- Blue Thumb
- Citizens Organized to Recycle our Environment (CORE)
- Energy Audits (OG&E)
- U.S. Environmental Protection Agency (EPA)
- Oklahoma Department of Environmental Quality
- Train Service (AMTRAC)

GREEN NORMAN

- Green Norman**
 - Accomplishments
 - Energy Conservation
 - Green Team
 - Land Use & Transportation
 - Norman 2025 Plan
 - Waste Management
 - Water
 - Water Conservation

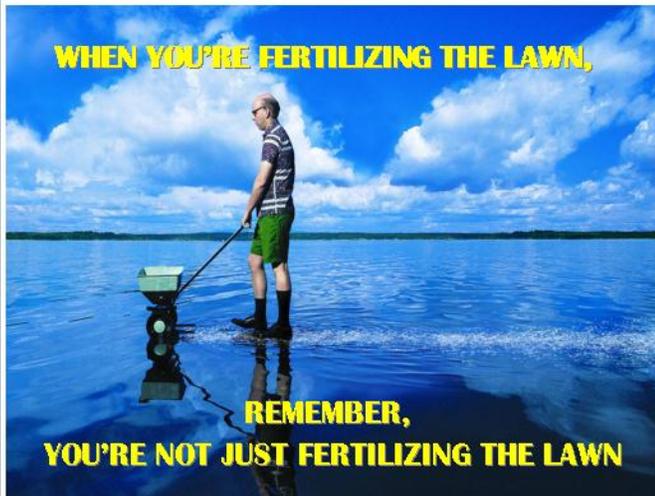
Green Norman

- [City of Norman Accomplishments](#)
- [City of Norman Green Team](#)
- [Water Conservation Information](#)
- [Fertilizer Ordinance Brochure](#)
- [Water's Worth It PSAs](#)
- [Eastern Red Cedar](#)
- [Recycling and Compost Information](#)

UPCOMING EVENTS

Check back often for upcoming Green Norman events!

City of Norman, 201 W Gray St, Norman, OK 73069
Contact Us: About the Site
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Fertilizers and pesticides are among the many common stormwater pollutants that can hurt drinking water quality. Though fertilizers contain chemicals that are good for lawns and plants when used properly, excessive amounts applied to lawns and gardens wash off and can pollute local streams and Lake Thunderbird. This causes algae blooms and other water quality problems. So if you fertilize, follow these tips and comply with the City of Norman Manufactured Fertilizer Ordinance.

-  Don't apply fertilizer when its raining or rain is forecast.
-  Sweep or blow fertilizer from streets, driveways and sidewalks back onto your yard or dispose of it properly.
-  Don't apply fertilizer within 25 feet of any streams, creek banks or storm water pond. Phosphorus fertilizer causes algae to grow in creeks and Lake Thunderbird
-  Don't blow or dump grass clippings, leaves or any yard waste in streets, storm drains or waterways.
-  Test your soil before applying phosphorus-containing fertilizer. Phosphorus levels are printed on the fertilizer bag.

City of Norman Public Works
Storm Water Quality 366-5435
pwstormwater@normanok.gov



School Kits with Environmental Info.



Rain Barrel Newspaper Ad – December 2016

Recycle the Rain 



Central Oklahoma Storm Water Alliance A rain barrel promotes conservation and saves you money on water bills by harvesting rain water for your garden

Visit the COSWA booth (#2236) at the OKC Home & Garden Show January 20-22

Using Rain Barrel Water

- Water your flowers, trees, shrubs, and lawn
- Wash your car
- Rinse tools or muddy boots
- Wash house windows

Advantages

- Saves money
- Helps reduce stormwater pollution
- Conserves water resources
- Better for plants and gardens

Order online at upcyclerrainbarrel.com/normanok.html for pick up in Norman on March 31 from 4 - 6 p.m. or April 1 from 9 a.m. - 1 p.m. at 668 E Lindsey Street

Free Rain barrel installation workshops on April 1 at 9 am & 11 am



Facebook Posts



City of Norman, OK - City Government shared their photo.

17 mins · 🌐

Just a reminder about the rain barrel promotion ... the Central Oklahoma Storm Water Alliance will be at the Home and Garden Show in OKC January 20-22 in booth #2236. Drop by and see one of the rain barrels and learn about all of their benefits! Order here: <http://bit.ly/2g4Vqhh>

Recycle the Rain

ONLY \$63.50

Central Oklahoma Storm Water Alliance

A rain barrel promotes conservation and saves you money on water bills by harvesting rain water for your garden

Member Organizations

- City of Bethany
- City of Choctaw
- City of Del City
- City of Edmond
- Town of Jones City
- City of Midwest City
- City of Moore
- City of Mustang
- City of Norman
- City of Oklahoma City
- City of Spencer
- City of Yukon

Using Rain Barrel Water

- Water your flowers, trees, shrubs, and lawn
- Wash your car
- Rinse tools or muddy boots
- Wash house windows

Advantages

- Saves money
- Helps reduce stormwater pollution
- Conserves water resources
- Better for plants and gardens



City of Norman, OK - City Government added 2 new photos.

Published by Claudia Lackey Deakins (?) · 5 mins · 🌐

A big THANK YOU to all of the amazing volunteers who came out to Lake Thunderbird yesterday to help us clean up the lake! Here's the difference 55 adults and children made in a couple of hours on a sunny Sunday afternoon: You picked up 39 bags of trash (about 100 pounds of debris) and 180 pounds of recyclable materials! Thank you also to Blue Thumb, Keep Oklahoma Beautiful, Thunderbird Sailing Club, Ideal Homes, SMC Consulting Engineers and the City of Norman's Environmental Services who helped make the event such a big success!



Lake Thunderbird Clean Up Event - Oct 30



OCT 30

Lake Thunderbird Clean-Up

Public · Volunteering · Hosted by City of Norman, OK · City Government

Boost Event

Invite

Edit



Sunday, October 30 at 2 PM - 4 PM

4324 Cannon Dr, Norman, OK 73072-6503, United States [Show Map](#)

About

Discussion

Write Post | Add Photo / Video | Create Poll



Write something...

Details

If you are a boy or girl scout or a member of a civic club who is looking for a great service project, you can make a difference on Sunday, October 30 from 2 to 4 p.m. The City of Norman Stormwater Quality team is hosting a Lake Thunderbird Watershed Clean-up at the Lake Thunderbird Sailing Club.

We'll provide the trash bags and gloves so you help us "clean" the lake of trash and debris. There will be snacks and prizes for the most unusual trash item collected, the most recyclable trash items collected and more!

You'll also have an opportunity to learn about everyday things you can do to help keep the lake clean and to protect the water quality at the lake.

Find more info: http://bit.ly/LT_cleanup

EVENT TIPS

Next Tip

Reach More People, Share Your Event



Help people find out about your event by sharing it in News Feed.

Share Event

GUESTS

1

interested

2

going

0

invited

INSIGHTS

36 Reached

+36 this week

6 Viewed

+6 this week

3 Responded

+3 this week

Since 10/11/2016

[View All Insights](#)

INVITE FRIENDS

+ Add friends to this event



Runoff Roundup



December 2016

Lake Thunderbird Cleanup

On October 30th, 2016, Stormwater Quality held the First Annual Lake Thunderbird Watershed Clean-up Event at the Lake Thunderbird Boathouse. The goal of the event was to educate Norman citizens on the impact stormwater has on Lake Thunderbird's water quality. In addition, everyone who came took an active role in removing pollution, in the form of trash, from the watershed. Approximately 55 people were in attendance.



Trash and recyclables were collected from various locations on the west side of the lake. Awards were given for the team(s) who collected the most recyclables by weight and the most unusual item. Gift cards were donated by Ideal Homes and SMC Consulting Engineers. A group of students from Rose State College collected the most recyclables at 37.2 pounds. The Bailey family (right) collected the most unusual group of items, which consisted of a large piece of Styrofoam, a leopard-printed chair, and a pink life jacket. Overall, the volunteers collected 180.6 pounds of recyclable materials, 39 bags of trash, and approximately 100 pounds of large debris that may otherwise have ended up in Lake Thunderbird.

In addition to receiving information on the connection between stormwater runoff and Lake Thunderbird's water quality, participants received valuable information on other water quality-related activities and volunteer opportunities. Oklahoma Conservation Commission's Blue Thumb Program, Keep Oklahoma Beautiful, the Lake Thunderbird Sailing Club, and the City of Norman's Environmental Services. Jeri Fleming with Blue Thumb discussed how people could volunteer and set up a model to demonstrate infiltration and runoff rates of various surfaces from concrete to forest soil. Debra Smith, Environmental Services Coordinator, discussed the Household Hazardous Waste Collection Event coming up on November 5th. Keep Oklahoma Beautiful donated trash bags, gloves, and water, and the Lake Thunderbird Club allowed us to use their facility free of charge. Thank you to everyone who participated!

City of Norman Contact Information

Zack Henson, Stormwater Compliance Inspector
Office: 405-366-5456
Cell: 405-370-3295

Stormwater Protection Specialist
Office: 405-366-5435
Cell: 405-473-0578

Carrie Evenson, Ph.D., P.E. Stormwater Engineer
Office: 405-366-5455,
Cell: 405-365-4928

Email: pwstormwater@normanok.gov

Website: <http://www.normanok.gov/content/storm-water-quality>

Oklahoma Department of Environmental Quality Contact Information

Stormwater Program Office: 405-702-8100
Website: <http://www.deq.state.ok.us/wq/new/stormwater/index.html>

Don't Blow It... Compost It!

Did you know that all of those fall leaves can be a source of pollution when washed into the storm drain? Yard waste, like leaves and grass clippings, contain nutrients such as nitrogen and phosphorus which can cause excessive growth of algae and aquatic weeds which in turn degrade water quality in our local creeks.

So, if yard waste ends up in the gutter or on paved surfaces, sweep or blow it back on your lawn or consider bagging it up to send it to the City Compost Facility.

BUILDERS WORKSHOP

Join us at the Builders Association of South Central Oklahoma (BASCO) offices for a discussion of the latest issues in construction stormwater compliance. **Lunch will be provided.** Please RSVP to Dana Kelso, Executive Officer, BASCO, dane@basco-ok.com.

DATE: FEBRUARY 23, 2017

TIME: 11:30 AM TO 1:00 PM

PLACE:
BASCO
210 36TH AVE
5W, SUITE 1H
NORMAN, OK
73072-5045



RAIN BARREL DISTRIBUTION



This spring, the Central Oklahoma Storm Water Alliance (COSWA) member cities of Norman, Moore, Midwest City, Edmond, Yukon, and Oklahoma City are partnering with Upcycle Products Inc. in a regional effort to encourage Oklahoma residents to use rain barrels.

Rain barrels help promote water conservation and reduce stormwater pollution. When properly installed, rain water that would otherwise enter the stormwater system is collected and helps to minimize the amount of water that is sent to our creeks and streams. Plus, the water collected can be used to water your plants or lawn and save you some money on your water bill.

Rain barrels can be purchased for \$63.50 by going to www.upcyclerrainbarrel.com/normanok.html. Orders must be placed by March 20th, 2017, if ordering by mail or by March 26th, 2017, if ordering online. Barrels must be picked up at the City of Norman Streets Maintenance Yard, 668 East Lindsey Street, on March 31st, 2017, from 4 pm to 6 pm or on April 1st, 2017, from 9 am to 1 pm.

Rain barrel installation workshops will be offered on April 1st at 9 am and 11 am.

Please contact Carrie Evenson at carrie.evenson@normanok.gov or (405) 366-5455 to register for a workshop or if you need any additional information.



PET WASTE IS POLLUTION



Pet waste left on sidewalks, city parks and yards does not magically disappear or fertilize the ground. Improperly disposed of animal feces can be picked up by stormwater runoff and carried into storm drains or nearby water sources.

Storm drains do not connect to sanitary sewer systems or treatment facilities, so pet waste can be a significant cause of storm water pollution and present risks to people and animals. So, be a polite pet owner and pick up the poo!

- Scoop It
- Bag It
- Trash It

City of Norman Public Works
Stormwater Quality - 405-366-5435 - pwstormwater@normanok.gov



Your Pet • Your Responsibility

MCM #2: PUBLIC PARTICIPATION AND INVOLVEMENT

Earth Day Festival, April 24, 2016

EARTH DAY FESTIVAL 2016

Sunday, April 24 12-5 pm
Reaves Park Norman, OK

FUN FAMILY ACTIVITIES
TEACHING THE IMPORTANCE OF PROTECTING
OUR EARTH'S AIR, WATER, FOREST, WILDLIFE
AND ALL NATURAL RESOURCES!

FREE

- HANDS-ON ART PROJECTS
- MUSICAL ENTERTAINMENT
- LOVEABLE MASCOTS
- PET ADOPTIONS & MUCH MORE!

WWW.NORMANFUN.COM

For Information
366-5473 or 292-9731

Reduce, reuse, recycle, replenish, restore, refresh, replant, rebuild!

SWU Public Meetings in July and August 2016

Stormwater Utility Election Schedule July/August 2016							
SUN	MON	TUE	WED	THU	FRI	SAT	
24	25	26 Norman City - 12:00 First Christian Church Fellowship Hall 228 S. Webster Avenue Shawn O'Leary	27	28 Norman Utility Club - 12:00 First Christian Church 228 S. Webster Ave. O'Leary West 31 Meeting - 6pm Fire Station #9 - 3801 East Alameda Scott Davis & Greg Hinkle West 44 Meeting - 6pm Central Christian O'Leary, Karpis, & Hickman	29 Norman Parkers Assoc. - 7am The Value Golf Club 3300 S. Berry Rd. Shawn O'Leary	30	
31	1 East 7 Meeting - 6pm Cobleskill Creek Golf Club 1306 Cobleskill Creek Dr. Shawn O'Leary & Stephen Hansen	2 Norman Senior Center - 7am 1700 Country Club 2301 24th Ave. SW Shawn O'Leary	3	4	5	6	
7	8 West 6 Meeting - 6pm Jefferson Elementary School Library, 2816 Coover Shawn O'Leary & Bruce Clark	9 Cherokee Action Conservation Committee - 11:30am Walt Whitman Airport 2nd Floor Classroom 1700 Lexington Ave. Shawn O'Leary	10 League of Women Voters 11:30 Information Shawn O'Leary West 31 Meeting - 6pm Franklin Primary Library 601 Meadow Ridge Rd. O'Leary, Startz, & Castanberry	11	12	13	
14	15 Public Meeting - 6pm Central Christian Shawn O'Leary, Scott Startz, Carrie Cronin, Sydney Karstens	16	17 West 6 Meeting - 6pm Roosevelt Elementary School 4200 W. Toussaint Rd. O'Leary, Startz, & Kyrle Allison	18 Early Voting 8am - 5pm Cleveland County Election Board 141 East Robinson	19 Early Voting 8am - 5pm Cleveland County Election Board 141 East Robinson Carroll & Rogers - 11:30am Stonewall Church, 1300 W. Boyd St. Shawn O'Leary	20	21 Early Voting 8am - 2pm Cleveland County Election Board 141 East Robinson
21	22 Stormwater Utility Election Polls Open 7am - 7pm						

Water Quality Public Presentation – November 14, 2016

Presentation by the Oklahoma Water Resources Board
 to the City Council and Residents of Norman

THE HEALTH OF OUR WATER

*"water is life, and clean water means health."
 — Audrey Hepburn*

Residents of Norman are invited to attend a presentation to the City Council on the status of our water quality by Derek Smithee, Division Chief, Oklahoma Water Resources Board (OWRB). A panel discussion will follow the presentation.

- H** **TOPIC: HEALTH OF OUR WATER**
 Learn about water quality trends at Lake Thunderbird, including information about impairments and the data behind them as well as water quality information from our streams, river and groundwater.
- P** **PANEL DISCUSSION, Q&A**
 Panel includes Derek Smithee, (OWRB); Dr. Roger Frech, (COMCD); Amanda Nairn, (ECAB); and Ken Komiske, Norman Utilities Director. You'll find bios for our panelists on the reverse side of this flyer.
- C** **CHILDREN'S ACTIVITY**
 Parents who are attending the presentation can drop their children off at the Central Library (Lowry Room) at 225 N. Webster for fun, educational activities sponsored by students from the University of Oklahoma.

**MONDAY,
 NOVEMBER 14
 6 PM - 7:30 PM
 CITY COUNCIL CHAMBERS
 201 W GRAY**

**TELEVISED LIVE ON COX
 CHANNEL 720 AND AT&T
 UVERSE CHANNEL 99**



PARTICIPATING AGENCIES
 Oklahoma Water Resources Board
 Central Oklahoma Master Conservancy District
 Norman's Environmental Control Advisory Board
 City of Norman

CITY OF NORMAN
 201 W. Gray
 Norman, OK 73069
 (405) 366-5396

MCM #3: ILLICIT DISCHARGE DETECTION AND ELIMINATION

- Dry Weather Field Screening Form – Example from December 2016



**City of Norman
Storm Water Quality**



MS4 Outfall Visual Inspection

Site Name: *TE-1*

Inspector: *ZACH HENSON*

Date: *12-27-16*

Time: *12:00 P*

Inspection Type: Routine Other

Weather: *CLEAR*

Last Rain Date: *12-26* Amount: *0.2"*

Type: Pipe Outfall

Concrete Channel

Natural Channel/Creek

Swale

Inspection Checklist	Yes	No	Comments/Notes.
Flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Trash/Debris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>TREE, GENERAL LITTER</i>
Sheen or surface scum	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Floating solids or foam	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Structures in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Chemical/offensive odors	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Color	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Excess Vegetation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
Other			

- Spill Response Form – Example from November 2016

**Spill Incident Report
Intersection of Lindsey
November 3, 2016**

Summary:

Public Works received a call at approximately 11:50 am of a paint spill at the intersection of West Lindsey Street and South Berry Road. Carrie J. Evenson, Ph.D., P.E., Stormwater Engineer, responded to the site of the spill at 12:14 pm. It appeared that a 5-gallon bucket of paint had been spilled in this intersection and been tracked onto South Berry Road on the north and south sides of the intersection. At the time of the inspection, the paint had already dried and was no longer being tracked out of the intersection or adhering to vehicle tires.



Figure 1: Intersection of West Lindsey Street and South Berry Road Looking East.



Figure 2: Intersection of West Lindsey Street and South Berry Road Looking North.

Site/Spill Characteristics:

It was estimated that approximately 5 gallons of paint was spilled at this intersection. There was no evidence that paint had entered the storm drains. At the time of the inspection, it appeared that the material had dried and was no longer being tracked. No adverse effect on aquatic life was observed.

Follow-up: None.

MCM #4: CONSTRUCTION SITE RUNOFF CONTROL



CITY OF NORMAN STORM WATER QUALITY EARTH CHANGE PERMIT APPLICATION



Note: Please print or type all data.

PROJECT INFORMATION

NAME OF PROJECT: _____
 ADDRESS: _____
 DISTURBED AREA (ACRES): _____ LATITUDE: _____ LONGITUDE: _____
 PROPOSED START DATE: _____ PROPOSED END DATE: _____
 LOCATION OF STORM WATER POLLUTION PREVENT PLAN (SWP3): [] ONSITE [] OFFSITE [] N/A
 ADDRESS (IF LOCATED OFFSITE): _____

APPLICANT/OWNER/OPERATOR

NAME (PRINTED): _____ COMPANY: _____
 ADDRESS: _____ CITY: _____ STATE: _____ ZIP: _____
 PHONE: _____ FAX: _____ CELL: _____

GENERAL CONTRACTOR

[] CHECK IF SAME AS APPLICANT

NAME (PRINTED): _____ COMPANY: _____
 ADDRESS: _____ CITY: _____ STATE: _____ ZIP: _____
 PHONE: _____ FAX: _____ CELL: _____

ENGINEER/DESIGNER

NAME (PRINTED): _____ COMPANY: _____
 ADDRESS: _____ CITY: _____ STATE: _____
 PHONE: _____ FAX: _____ CELL: _____

SIGNATURE: _____ DATE: _____

FOR OFFICE USE			
PERMIT#: _____	WARD: _____	FEE: _____	
WATERSHED: _____	SUB-WATERSHED: _____		
APPROVED BY: _____		DATE: _____	

December 22, 2010



City of Norman Stormwater Quality



CONSTRUCTION SITE INSPECTION REPORT

Site Name: _____ Address: _____
 Date: _____ Time: _____ Inspection Type: Initial Routine Other
 Last Inspection Date: _____ Weather: _____ Last Rain Date: _____ Quantity: _____
 Current Construction Phase: Clearing/Site Preparation Mass Grading/Utility Work
 Building/Final Grading Final Stabilization

Inspection Checklist	Yes/ Good	No/ Violation	N/A	Comments/Recommendations about the overall effectiveness of the erosion and sediment control measures. Note: For each item checked "Violation", refer to the follow-up information on page 2.
DEQ Permit Posted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SWP3 Location Noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Records Up to Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BMPs Properly Installed as Per ECP Specs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Silt Fence / Perimeter Controls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Inlet Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Construction Entrance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Offsite Tracking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dust Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Outlet / Flume / Culvert Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unauthorized Discharge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Offsite Sediment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Solid Waste Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete Washout Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check Dams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fuel Storage Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pollutants Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Stabilization / Erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bare Areas >14 Days Stabilized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Portable Toilet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Inspectors Name: _____ Date: _____

MCM #5: POST-CONSTRUCTION STORMWATER MANAGEMENT

- Water Quality Protection Zone

§ 2. THAT, Section 22:429.6 shall be added as follows:

SEC. 429.6 – WP, WATERSHED PROTECTION DISTRICT

1. Description and Purpose. The Watershed Protection District encompasses areas through which water drains into the Lake Thunderbird watershed, thus affecting the water supply derived from City wells and Lake Thunderbird. The City of Norman adopts a goal of nondegradation which maintains or improves the quality of water entering the various waterways in Norman and ultimately ending in Lake Thunderbird. Pollution prevention will be assured by requiring best management practices and development restrictions, where appropriate. Land uses which could adversely affect the water supply are generally prohibited, unless acceptable alternate methods are used that can be shown to substantially reduce or eliminate their negative affect on the water supply, thereby preventing the risk of contaminants in the surface water and ground water within the Lake Thunderbird watershed, and reducing the risks to the public health.



Detention Pond Inspection Form – September 21, 2016



City of Norman
Storm Water Quality



STORM WATER POND INSPECTION FORM

Site Name: *Shadowlake* Number: *29* Location: *Leaning Elm + Redwood*
 Date: *9/21/16* Time: *9:45* Inspection Type: Initial Routine Other
 Weather: *dry* Last Rain Date: *> 4 days* Amount:
 Status: Under Construction Completed Agricultural Pond*
 Dry Pond Wet Pond

Inspection Checklist	Yes	No	N/A	Comments/Recommendations.
Trash/Debris in or around pond?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Erosion on pond side slopes, berms or outlet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sediment entering pond?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Excessive vegetation in pond?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Inlet/Outlet structures in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>No defined inlet + outlet</i>
Trees in pond or on pond berms?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sheen or foam on water surface?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Chemical/offensive odors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Nuisance wildlife present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Other notes				<i>Old natural pond or farm pond</i>

Inspector: *A. Miley*

*previously existing agricultural pond converted to detention use.

MCM #6: MUNICIPAL GOOD HOUSEKEEPING

- **Monthly Employee Newsletter**

**CITY OF NORMAN
EMPLOYEE NEWSLETTER**

November 2016

Employee Spotlight



Thomas Grady is our Employee Spotlight this month. Thomas was born in Bartlesville, Oklahoma. He grew up in Norman where he attended school and still resides today. He is married and has four children and two grandchildren.

Thomas began his career with the City of Norman as a young man in 1984 working in the Utilities Department. He started his career as a Sanitation Worker I and was promoted to Sanitation Worker II in 2002. He works in the residential division of Sanitation and enjoys the solitude of driving his side loader truck while attending to his route. His routes include town and country residential locations. He serves as a floater for the division with a diverse schedule completing each route. He also enjoys meeting and interacting with the citizens of Norman along his route.

Some of the challenges he faces during his route is maneuvering the side loader truck in tight areas. There are many narrow residential streets and alleyways in Norman and the trash receptacles are often times in confined areas that make maneuvering his vehicle very difficult. Inclement weather can also serve as challenging when driving his route.

Thomas's hobbies include fishing, lawnmower racing and drag racing. He is an avid OU and Thunder fan and enjoys watching their games.

Thomas has great admiration for both his father and mother who were nurturing and taught him life lessons that are instilled in him today. Thomas looks forward to retiring to pursue his love of drag racing and lawnmower racing. He would also like to take about a month off to fish and enjoy the outdoors.

When asked if Thomas had any advice to give; he simply wanted to encourage employees to always practice safety while on the job as he has recently returned to work from an extensive injury.

Thanks for all you do!

Volume 26, No. 5

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Shop Norman/Holiday Parade	8
Thank You/For Sale	9
Small Business Day	10
Blood Drive/Stormwater Runoff.....	11
25th Holiday Celebration.....	12

Happy Thanksgiving



November 26th

Blood Drive - Stormwater Runoff

City of Norman Blood Drive Results

of Norman made a life-saving difference by hosting a blood drive with the Blood Institute on October 19, 2016. With the City's support, patients in hospitals across our area and their loved ones had one less thing to be concerned with while facing a serious health crisis.

caring people stepped up to help, and 20 of them were eligible to donate. o be commended for sharing their valuable time and life-saving gifts. Oklaod Institute could not carry on this mission without caring, community part-as you. Your spirit of concern and willingness to step up by hosting this e are greatly valued now and in the future.



Oil & Water Don't Mix

Used motor oil from vehicle leaks, spills or dumping can be carried by stormwater runoff into our local waterbodies where it can be harmful to people, fish and other wildlife. Each year about 180 million gallons of used oil are spilled into the waters of the U.S. You can help prevent this with a few simple steps.

- Check your vehicles and equipment for leaks and fix them promptly
- Know where to locate spill kits
- Use spill kits, drip pans or absorbents to contain leaks until they are fixed
- Recycle used motor oil
- NEVER dispose of used oil in a storm drain, gutter or water body.

City of Norman Public Works
Stormwater Quality—366-5435

Appendix B

<i>Category</i>	<i>Description</i>
Blowing Dust	Calls regarding dust or sand being blown from construction sites
Debris/Dumping	Calls regarding improper disposal of materials or debris
Discharge	Calls regarding liquids other than stormwater flowing down the street or from a particular location
Drainage	Calls regarding stormwater runoff issues onto or away from property
Erosion	Calls regarding removal and transport of soil due to water or wind
Illicit Discharge	Calls regarding anything other than stormwater entering a storm drain or pipe
Property Maintenance	Calls regarding improper maintenance of property (e.g. overspray from pesticide or fertilizer applications)
Sewage Bypass	Calls regarding sanitary sewer/wastewater spill or leak from sewer system
Spill	Calls regarding the release of any material/substance from its container
Storm Drain Maintenance	Calls regarding various issues related to storm drains (e.g. maintenance needs, unusual smells, etc.)
Swimming Pool Discharge	Calls regarding the discharge of swimming pool water into street or storm drain or onto neighboring property
Tracking	Calls regarding the transport of dirt off a construction site due to vehicle or equipment traffic
Utility Project	Calls regarding municipal utility projects
Yard Waste	Calls regarding blowing, sweeping, or otherwise placing grass clippings or leaves in the street or down a storm drain
<Unknown>	Calls that need additional follow-up or don't fit into other categories

Summary of All Calls Received in 2016

<i>Date Received</i>	<i>Location</i>	<i>Routed To</i>	<i>Category</i>	<i>Status</i>
1/22/2016	303 East Brooks	Nick Prince	Blowing Dust	CLOSED
1/29/2016	3651 Hwy 77	Nick Prince	Blowing Dust	CLOSED
2/1/2016	3651 Hwy 77	Aaron Milligan	Blowing Dust	CLOSED
2/1/2016	3651 Hwy 77	Aaron Milligan	Blowing Dust	CLOSED
3/7/2016	3651 Hwy 77	Aaron Milligan	Blowing Dust	CLOSED
11/2/2016	510 24th Ave. NW	Zack Henson	Blowing Dust	CLOSED
3/8/2016	2005 Providence	Aaron Milligan	Debris / Dumping	OPEN
3/11/2016	2644 Smalley Circle	Code Compliance	Debris / Dumping	CLOSED
3/29/2016	3600 W. Main	Aaron Milligan	Debris / Dumping	CLOSED
8/23/2016	505 Meadow Park Dr.	Aaron Milligan	Debris / Dumping	CLOSED
1/20/2016	1010 Thistlewood Drive	Aaron Milligan	Discharge	OPEN
5/8/2016	2500 Brentwood	Aaron Milligan	Discharge	CLOSED
5/11/2016	1728 Homeland	Aaron Milligan	Discharge	CLOSED
1/5/2016	4311 Salem Ct.	Aaron Milligan	Drainage	CLOSED
1/11/2016	Kohl's	Nick Prince	Drainage	OPEN
3/3/2016	4504 Green Meadow Cir.	Aaron Milligan	Drainage	OPEN
3/7/2016	Windstone	Streets SW Drainage	Drainage	OPEN
3/7/2016	3300 Bart Conner Dr	Streets SW Drainage	Drainage	CLOSED
3/8/2016	Woodsboro Dr.	Streets SW Drainage	Drainage	CLOSED
4/7/2016	4500 Green Meadow Circle	Aaron Milligan	Drainage	OPEN

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4/15/2016	3099 Birmingham	Streets SW Drainage	Drainage	CLOSED
4/22/2016	3000 84th Ave SE	Aaron Milligan	Drainage	OPEN
5/25/2016	2704 Barry Switzer	Aaron Milligan	Drainage	CLOSED
5/25/2016	1513 Old Farm Rd.	Aaron Milligan	Drainage	CLOSED
6/3/2016	215 N. Ponca	Aaron Milligan	Drainage	CLOSED
6/23/2016	4604 Foxborough Ct.	Todd McLellan	Drainage	OPEN
7/7/2016	304 Nathan	Aaron Milligan	Drainage	CLOSED
10/11/2016	Hallbrooke 4	Aaron Milligan	Drainage	CLOSED
1/6/2016	1037 Joe Keeley Drive	Nick Prince	Erosion	CLOSED
1/8/2016	4525 Moorgate	Aaron Milligan	Erosion	CLOSED
1/11/2016	1629 Eagle Nest	Aaron Milligan	Erosion	CLOSED
2/1/2016	2107 Bates Way	Aaron Milligan	Erosion	CLOSED
2/3/2016	48th Ave NW & Indian Hills	Aaron Milligan	Erosion	OPEN
2/15/2016	Hwy 9 & 36th Ave SE	Aaron Milligan	Erosion	OPEN
4/15/2016	2501 108th Ave. NE	Aaron Milligan	Erosion	OPEN
5/16/2016	417 Elm	Zack Henson	Erosion	CLOSED
5/24/2016	1704 Dartmouth Ct.	Aaron Milligan	Erosion	CLOSED
5/27/2016	12th Ave. NW & Tecumseh Rd	Zack Henson	Erosion	CLOSED
6/14/2016	1101 156 Ave SE	Aaron Milligan	Erosion	CLOSED
6/27/2016	1948 Burning Tree	Zack Henson	Erosion	CLOSED
6/28/2016	2200 Alameda Park Dr.	Zack Henson	Erosion	CLOSED
7/13/2016	2200 Alameda Park Dr.	Zack Henson	Erosion	CLOSED
7/20/2016	531 S. University	Aaron Milligan	Erosion	CLOSED
7/26/2016	4210 W. Tecumseh	Zack Henson	Erosion	CLOSED
8/3/2016	5500 Cottonwood Creek Cir.	Aaron Milligan	Erosion	CLOSED
9/26/2016	333 E. Brooks	Zack Henson	Erosion	CLOSED
10/25/2016	623 Greystone	Aaron Milligan	Erosion	OPEN
12/6/2016	133 Foreman	Aaron Milligan	Erosion	CLOSED
12/12/2016	106 Castro	Aaron Milligan	Erosion	OPEN
3/8/2016	Tecumseh Rd	Aaron Milligan	Illicit Discharge	OPEN
5/17/2016	2635 Beaurue	Aaron Milligan	Illicit Discharge	CLOSED
5/23/2016	Eastwood Park	Utilities Admin	Illicit Discharge	CLOSED
11/1/2016	950 N. Porter	Aaron Milligan	Illicit Discharge	CLOSED
11/15/2016	831 Willow lane	Aaron Milligan	Illicit Discharge	OPEN
3/4/2016	1301 Northcliff	Aaron Milligan	Property Maintenance	CLOSED
8/10/2016	2131 Turtle Creek	Aaron Milligan	Property Maintenance	CLOSED
8/29/2016	Rock Creek Polo Club	Aaron Milligan	Property Maintenance	CLOSED
8/30/2016	2301 Louise Lane	Aaron Milligan	Property Maintenance	CLOSED
1/19/2016	2224 W. Main	Aaron Milligan	Sewage Bypass	CLOSED

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7/5/2016	1024 Robinhood Ln.	Ken Komiske	Sewage Bypass	CLOSED
2/4/2016	4105 Penrith Place	Aaron Milligan	Spill	CLOSED
3/22/2016	1729 S. Jenkins	Aaron Milligan	Spill	CLOSED
3/28/2016	3450 Chautauqua	Aaron Milligan	Spill	CLOSED
8/16/2016	821 E. Mosier	Zack Henson	Spill	CLOSED
4/11/2016	2002 Morren	Streets SW Drainage	Storm Drain Maintenance	CLOSED
5/27/2016	3308 Valley Meadow	Streets SW Drainage	Storm Drain Maintenance	CLOSED
7/5/2016	Crestland & Vanessa	Aaron Milligan	Storm Drain Maintenance	CLOSED
7/7/2016	2111 Jackson Dr.	Aaron Milligan	Swimming Pool Discharge	CLOSED
8/24/2016	Unknown	Aaron Milligan	Swimming Pool Discharge	CLOSED
9/2/2016	4109 Queensbury Ct.	Aaron Milligan	Swimming Pool Discharge	OPEN
9/22/2016	3306 Pheasant Run	Aaron Milligan	Swimming Pool Discharge	CLOSED
2/11/2016	333 E. Brooks	Aaron Milligan	Tracking	OPEN
3/3/2016	36th Ave. NW & Rock Creek Rd	Aaron Milligan	Tracking	CLOSED
4/15/2016	24th Ave. NW & Tecumseh	Aaron Milligan	Tracking	CLOSED
8/5/2016	1114 Sequoyah Trails	Aaron Milligan	Utility Project	CLOSED
2/19/2016	1115 Biloxi Dr.	Aaron Milligan	Yard Waste	CLOSED
3/14/2016	300 N. Crawford	Aaron Milligan	Yard Waste	OPEN
4/6/2016	911 W. Main	Aaron Milligan	Yard Waste	CLOSED
4/7/2016	1802 E. Lindsey	Aaron Milligan	Yard Waste	CLOSED
5/3/2016	326 Emelyn	Zack Henson	Yard Waste	CLOSED
5/19/2016	2120 E. Lindsey	Aaron Milligan	Yard Waste	CLOSED
5/20/2016	Frances Cate Park	Aaron Milligan	Yard Waste	CLOSED
5/23/2016	2145 Harbor Dr.	Aaron Milligan	Yard Waste	CLOSED
6/7/2016	402 Golden Oaks	Aaron Milligan	Yard Waste	CLOSED
6/7/2016	2000 W. Lindsey	Aaron Milligan	Yard Waste	CLOSED
6/9/2016	1300 Creekside	Aaron Milligan	Yard Waste	CLOSED
6/17/2016	2312 Spoonwood	Aaron Milligan	Yard Waste	CLOSED
6/21/2016	401 N. Flood	Aaron Milligan	Yard Waste	CLOSED
6/29/2016	821 E. Frank	Aaron Milligan	Yard Waste	CLOSED
6/30/2016	1300 Creekside	Zack Henson	Yard Waste	CLOSED
7/6/2016	24th Ave SE & Hwy 9	Aaron Milligan	Yard Waste	CLOSED
7/12/2016	2011 W. Lindsey	Aaron Milligan	Yard Waste	CLOSED
7/19/2016	2707 Winding Creek Circle	Aaron Milligan	Yard Waste	CLOSED
7/22/2016	1309 Amhurst	Aaron Milligan	Yard Waste	CLOSED
7/25/2016	1608 Normandy	Aaron Milligan	Yard Waste	CLOSED
7/25/2016	709 E. Boyd	Aaron Milligan	Yard Waste	CLOSED
7/25/2016	1419 Peter Pan	Aaron Milligan	Yard Waste	CLOSED
8/1/2016	901 23rd Ave. SE	Aaron Milligan	Yard Waste	CLOSED
8/1/2016	4300 Salem Ct.	Aaron Milligan	Yard Waste	CLOSED

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8/1/2016	Mosier & Peters	Aaron Milligan	Yard Waste	CLOSED
8/2/2016	2320 W. Main	Aaron Milligan	Yard Waste	CLOSED
8/5/2016	36th Ave NW	Aaron Milligan	Yard Waste	CLOSED
8/8/2016	1305 Superior	Aaron Milligan	Yard Waste	CLOSED
8/8/2016	1211 Blue Lakes Dr.	Aaron Milligan	Yard Waste	CLOSED
8/11/2016	500 S. University	Aaron Milligan	Yard Waste	CLOSED
8/11/2016	1800 E. Lindsey	Aaron Milligan	Yard Waste	CLOSED
8/16/2016	University North Park	Zack Henson	Yard Waste	CLOSED
8/17/2016	2306 Crestmont	Zack Henson	Yard Waste	CLOSED
8/26/2016	2417 W. Main	Aaron Milligan	Yard Waste	CLOSED
9/12/2016	806 Hughbert	Aaron Milligan	Yard Waste	CLOSED
9/15/2016	407 Nebraska	Aaron Milligan	Yard Waste	OPEN
9/19/2016	501 E. Robinson	Carrie Evenson	Yard Waste	OPEN
9/20/2016	2900 Oak Tree Ave.	Aaron Milligan	Yard Waste	CLOSED
9/21/2016	900 E. Lindsey	Aaron Milligan	Yard Waste	CLOSED
9/23/2016	400 Nebraska	Zack Henson	Yard Waste	CLOSED
10/6/2016	4020 Worthington	Aaron Milligan	Yard Waste	CLOSED
10/11/2016	2709 Walnut	Aaron Milligan	Yard Waste	CLOSED
11/2/2016	133 Creekdale	Aaron Milligan	Yard Waste	CLOSED
11/2/2016	1509 Oklahoma	Aaron Milligan	Yard Waste	CLOSED
3/2/2016	1629 Eagle Nest	Aaron Milligan	<Unknown>	CLOSED
5/23/2016	Cedar Lane Rd.	Aaron Milligan	<Unknown>	CLOSED
6/6/2016	2200 Alameda Park Dr.	Zack Henson	<Unknown>	CLOSED
6/16/2016	Astor & Teton	Zack Henson	<Unknown>	CLOSED
7/5/2016	8400 Alameda	Aaron Milligan	<Unknown>	OPEN
7/20/2016	1502 E. Lindsey	Aaron Milligan	<Unknown>	CLOSED
9/29/2016	3913 Worthington	Zack Henson	<Unknown>	CLOSED
10/28/2016	1915 S. Classen	Aaron Milligan	<Unknown>	OPEN