Phase II Small Municipal Separate Storm Sewer System (MS4)

# Stormwater Management Program (SWMP)

for the
City of Bartlesville, Oklahoma

Effective Date:
January 29th, 2016

Revised December 31, 2023

**SIGNATURE OF RESPONSIBLE OFFICIAL**

**for the City of Bartlesville, Oklahoma**

Per OKR04 Part VI.H, the following certification is hereby made in order to comply with the signatory requirements of the State of Oklahoma's Phase II Stormwater General Permit for Small Municipalities (OKR04).

*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.*

Micah Siemers, Director of Engineering Date

## EXECUTIVE SUMMARY

The City of Bartlesville has prepared this Stormwater Management Program (SWMP) document which provides descriptions of all activities that will be conducted on behalf of the City of Bartlesville, to meet its obligations under the Oklahoma Department of Environmental Quality (ODEQ) General Permit for Phase II Small Municipal Separate Storm Sewer System Discharges Within the State of Oklahoma (OKR04), having an effective date of June 1, 2021.

Per OKR04 Part IV.A, this SWMP document will be kept up to date during the term of the permit. Interim progress will be made in developing and implementing program elements during the term of the permit. Per OKR04 Part V.C.1.a.v, a copy of the current SWMP, NOI, and all related records are available to the public for review.

All of the six required Minimum Control Measures (MCMs) have been addressed in this SWMP. The City of Bartlesville has elected NOT to participate in MCM 7; Optional Permit Requirements for Municipal Construction Activities (OKR04 Part VIII).

Each MCM has a number of Best Management Practices (BMPs) that constitute the core activities pertaining to that particular MCM. Appendix A summarize the BMPs including Measurable Goals, target audiences, persons responsible for implementation, and time of year and frequency each will occur. In addition, the SWMP text provides additional information about each MCM.

Every reasonable effort has been made to comply with all requirements of the State's OKR04 General Permit for Small Municipal Separate Storm Sewer Systems (SMS4s). This SWMP document shall be amended as needed to reflect program and implementation changes per requirements of ODEQ and the OKR04 permit.

As a member of Green Country Stormwater Alliance (GCSA), the City of Bartlesville will receive assistance from the Indian Nations Council of Governments (INCOG), to help implement certain aspects of the Phase II requirements, particularly regarding public education, public participation, and training of city staff and crews. Through GCSA, INCOG will provide regional services related to stormwater education, employee training, and technical support. INCOG's activities are described where appropriate throughout the SWMP.

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# 1.0 INTRODUCTION

In 1990 the U.S. Environmental Protection Agency (EPA) promulgated regulations for establishing water quality based municipal stormwater programs to address stormwater runoff from certain industrial and construction activities and from medium and large Municipal Separate Storm Sewer Systems (MS4s) serving populations of 100,000 or greater. These "Phase I" regulations were incorporated into the existing National Pollutant Discharge Elimination System (NPDES) permit rules that address point source dischargers. As a result, urban nonpoint source runoff became regulated as point source discharges. On December 8, 1999, EPA published final "Phase II" stormwater regulations that addressed urban stormwater runoff from cities under 100,000 population and counties that lie within the Urbanized Area (UA) as designated by the latest US Bureau of Census. Phase II permits were also required for certain non-UA cities designated by the Oklahoma Department of Environmental Quality (ODEQ).

The 1999 EPA Phase II regulations required that all permitted cities and counties must develop a comprehensive Stormwater Management Program (SWMP) that addresses six "Minimum Control Measures" (MCMs). These were:

1. *Public Education and Outreach*
2. *Public Participation and Involvement*
3. *Illicit Discharge Detection and Elimination*
4. *Construction Site Stormwater Runoff Control*
5. *Post Construction Management in New Development and Re-Development*
6. *Pollution Prevention and Good Housekeeping*

The ODEQ has primary jurisdiction over permitting and enforcement of the Phase II Stormwater Program for Oklahoma. On February 8, 2005, the ODEQ finalized the first General Permit for Phase II Small Municipal Separate Storm Sewer System Discharges within the State of Oklahoma (OKR04). On October 1, 2015 ODEQ reauthorized OKR04 with an effective date of November 1, 2015. The revised OKR04 permit reflected new requirements from EPA and the latest practices for controlling urban stormwater pollution.

OKR04 requires that each permittee submit a Notice of Intent (NOI) to apply for coverage and develop a Stormwater Management Program (SWMP) document that specifies, for each MCM, what activities will be performed as Best Management Practices (BMPs), along with BMP implementation schedules and Measurable Goals.

Then, on April 30th, 2021, ODEQ authorized a newly revised OKR04 Permit with an effective date of June 1, 2021. The permit reflects the latest requirements from EPA regarding control of urban stormwater pollution.

This SWMP document has been updated to fulfill the 2021 OKR04 General Permit's requirement of preparing a plan detailing how the City of Bartlesville MS4 will address the latest requirements regarding non-stormwater discharges within its permitted municipal boundary area.

# 2.0 SWMP PROGRAM OVERVIEW

## 2.1 Regulatory Authority

In compliance with the provisions of the Clean Water Act (CWA), Public Law 92-500, as amended, 33 U.S.C. § 1251 *et seq*.; as required under the Stormwater Phase II Rule at 40 CFR §§ 122-124; and the provisions of the Oklahoma Pollutant Discharge Elimination System (OPDES) OAC 252:606-l-3(b)(3), incorporating by reference 40 CFR §§ 122.26, 122.30-122.35; operators of Small Municipal Separate Storm Sewer Systems (MS4s) are authorized to discharge in accordance with the conditions and requirements set forth herein. The Stormwater Phase II Rule was originally published on December 8, 1999, (64 FR 68722) and became effective on February 7, 2000.

The 2021 OKR04 General Permit is a reissuance by the ODEQ with an effective date of June 1, 2021. The OKR04 General Permit and the authorization to discharge shall expire at midnight on May 31, 2026. As provided in the permit, operators of Small MS4s located in areas specified herein and who submit a Notice of Intent (NOI) in accordance with PART III of the general permit are authorized to discharge pollutants to waters of the State in accordance with the conditions and requirements set forth within the general permit.

The 2021 OKR04 General Permit authorizes discharges of stormwater and certain non-stormwater discharges from small MS4s, as defined in 40 CFR § 122.26(b)(16), adopted and incorporated by reference in Oklahoma Administrative Code (OAC) 252:606-1-3(b)(3). This includes MS4s designated under 40 CFR § 122.32(a)(1) and 40 CFR § 122.32(a)(2) that describe the referenced area with a population greater than or equal to (≥) 10,000 but less than or equal to (≤) 100,000, and small MS4s located in Urbanized Areas (UAs). Operators of small MS4s located outside of an UA may be designated as a regulated MS4.

This SWMP document is a comprehensive program to manage the quality of stormwater discharged from the municipal separate storm sewer system (MS4). It includes all of the actions that the City of Bartlesville will take to comply with the stormwater regulations and addresses the six "Minimum Control Measures" required by EPA and by ODEQ's Phase II General Permit for Small MS4s (OKR04).

All information contained in this SWMP represents a good faith effort on the part of the City of Bartlesville to comply with all requirements of the current OKR04 Permit. This SWMP will be reviewed annually and amended, if necessary, to meet requirements of the current OKR04 General Permit, therefore ensuring continued compliance with the CWA.

## 2.2 SWMP Organization

The SWMP's organization was assisted by staff at INCOG's Green Country Stormwater Alliance (GCSA). GCSA is a regional coalition of stormwater permitted cities and counties in Oklahoma. INCOG's support services include assistance in the following areas:

- Public education and participation;
- Mapping of MS4s, 303(d) waterbodies and TMDLs;
- Employee training on OKR04-required topics and technical, scientific and legal issues;
- Sampling, monitoring and quality assurance;
- GCSA member education about water quality, sensitive waterbodies, TMDLs, etc.
- Educating local councils, commissions and management about OKR04 requirements.
- Development of local codes and ordinances, and
- Data management and reporting.

This SWMP addresses all elements of ODEQ's General Permit for MS4s (OKR04). The six Minimum Control Measures from OKR04 Part V.C are addressed in the SWMP Section 3.0. Appendix A is a summary table of all BMPs selected by the City of Bartlesville, to be used in this program. The table includes the following for each selected BMP: applicable MCMs, implementation schedule, measurable goal, target audience, and person(s) responsible for implementation. Appendix B documents the endangered species protection determination for the City of Bartlesville. Section 2.10 of this SWMP details how the City of Bartlesville currently addresses 303(d) listed waterbody impairments within the MS4. Appendix C contains a map of the MS4 boundary for the City of Bartlesville. The map also shows the Waters of the State, 303(d) waterbodies, Aquatic Resources of Concern (ARC) waterbodies, and any completed TMDL waterbodies that fall within or partially within the MS4 boundary.

**Appendix E contains a brief list of Acronyms and Definitions of many terms contained herein.**

## 2.3 Authorized Allowable Non-Stormwater Discharges (OKR04 Part II.B)

The City of Bartlesville has determined the following non-storm water discharge sources as not being substantial contributors of pollutants to the MS4 or as being from activities required to protect public health and safety and therefore are allowable non-stormwater discharge sources (see assessment summary table below):

a. Landscape irrigation and lawn watering, provided all pesticides, herbicides, and fertilizers have been applied in accordance with the approved manufacturers' instructions and/or labeling;
b. Diverted stream flows;
c. Residential building wash water that does not use detergents, solvents, and/or soaps;
d. Uncontaminated pumped ground water or spring water;
e. Uncontaminated ground water or spring water;
f. Uncontaminated discharges from potable water sources, including water line flushing and fire hydrant flushing;
g. Foundation drains;
h. Air conditioning condensate;
i. Water from crawl space pumps;
j. Footing drains;
k. Residential, non-commercial, and charity car washing;
l. Uncontaminated and dechlorinated swimming pool discharges;
m. Street wash water including wash water generated from the washing of other impervious surfaces such as sidewalks and parking lots, that does not use detergents, solvents, and/or soaps;
n. Uncontaminated discharges from riparian areas and wetlands;
o. Discharges in compliance with a separate Oklahoma Pollutant Discharge Elimination System (OPDES) or National Pollutant Discharge Elimination System (NPDES) permit;
p. discharges of gray water from municipal splash pads (aka, spray parks or spray grounds) as defined in 27A O.S. § 2-6-107, unless otherwise permitted or regulated by DEQ, provided the discharges comply with all applicable municipal or county ordinances enacted pursuant to law (discharges from recirculating systems shall be de-chlorinated); and
q. discharges or flows from emergency firefighting activities or training activities that are not taking place at a permanent facility, provided standard operating procedures (SOP) are in place for the Incident Commander, Fire Chief, or other on-scene firefighting official in charge to make an evaluation regarding potential releases of pollutants from the scene. These procedures shall be

followed in order to reduce any such pollutant releases to the maximum extent practicable, subject to all appropriate actions necessary to ensure public health and safety:

**Hazardous Spill Standard Operating Procedures (SOP)**:

i. The local incident commander of the fire-fighting scene will report to the Bartlesville stormwater coordinator any observed releases of chemicals into the MS4 and/or waterbodies.
ii. Local remediation will be implemented and will consist of deploying absorbents, chemical neutralizers and/or booms and water skimmers to contain, neutralize, and/or remove the chemicals.
iii. If the release is beyond the capability of local resources to safely and effectively remediate, then Bartlesville will contact a company from the state approved list for large-scale hazardous waste remediation.

Any individual non-stormwater discharge will be prohibited if suspected of or determined to be contributing significant amounts of pollutants to the MS4 by either City or DEQ Personnel.
The list of occasional, incidental, allowable non-stormwater discharges will be periodically reviewed by the City of Bartlesville and updated, as needed, in this SWMP. Any local controls or discharge conditions required by the City of Bartlesville on these incidental discharges will also be placed in this SWMP. The following table summarizes the assessments made by the City of Bartlesville for each of the allowable non-stormwater discharges.

| ALLOWABLE DISCHARGE | SAFETY (1) | IMPACT (2) | NATURAL (3) | PERMIT (4) |
|---|---|---|---|---|
| a. Landscape irrigation & Lawn Watering | | X | | |
| b. Diverted stream flows | X | | X | |
| c. Residential building wash water, no detergents | | X | | |
| d. Uncontaminated pumped ground water | | X | X | |
| e. Uncontaminated ground water or spring water | | | X | |
| f. Discharge from potable water sources & hydrants | X | | | |
| g. Foundation drains | X | | | |
| h. Air conditioning condensate | | X | | |
| i. Water from crawl space pumps | X | | | |
| j. Footing drains | X | | | |
| k. Residential, Non-Commercial, Charity car washing | | X | | |
| l. Uncontaminated de-chlorinated swimming pool discharge | | X | | |
| m. Street, sidewalk, parking lot wash water | X | | | |
| n. Discharges from riparian areas and wetlands | | | X | |
| o. Discharges with a OPDES or NPDES permit | | | | X |
| p. Grey water from municipal splash pads | X | X | | |
| q. Discharges or flows from emergency firefighting | X | | | |

(1) Overriding public health and safety concerns make this allowable.
(2) Flow or source is intermittent or small; not considered to be a significant source.
(3) Flow from natural processes, mostly intermittent; not considered a significant source.
(4) Authorized and allowed under another OPDES or NPDES permit.

If any release is beyond the capability of local resources to safely and effectively remediate, then the City of Bartlesville will contact one of the following service provider for large-scale hazardous waste remediation.

Sooner Emergency Services, Inc.
2131 S. 49 W. Avenue
Tulsa, OK 74107 (918) 583-2021 (24 hour number)
(alternate phone number) (918) 584-1804
www.sooneremergency.com

Environmental Remediation Specialist, Inc.
1105 N. Peoria Avenue
Tulsa, OK 74106 1-800-700-0777
(alternate phone number) (918) 832-8888
www.ersok.com

## 2.4 Historic Preservation (OKR04 Part II.D)

The Oklahoma DEQ's OPDES permitting activities are not Federal undertakings and, therefore, are not subject to review under Section 106 of the National Historic Preservation Act however, applicants and permittees must comply with the Oklahoma State Register of Historic Places Act *(53 O.S. § 361)*, where applicable, and the Burial Disturbance Law *[21 Oklahoma Statutes (O.S.) §§ 1168.0-1168.6)*, as well as with any applicable local laws concerning the identification and protection of historic properties.

OKR04 permittees who receive Federal funding or other Federal assistance in the completion of their OKR04-related projects may have to comply with Section 106 of the Historic Preservation Act. For information about the Section 106 review process in Oklahoma, Oklahoma properties listed on or eligible for the National Register of Historic Places, and related topics, the following shall be contacted**:**

**State Historic Preservation Office:** *(contact info listed in Part II.D of the OKR04 permit)*

**Oklahoma Archeological Survey:** *(contact info listed in Part II.D of the OKR04 permit)*

The City of Bartlesville will comply with OKR04 Part II.D (Historic Preservation) whenever permit related activities require such action. This will include communications with the State Historic Preservation Office and Oklahoma Archeological Survey to discuss what actions the City of Bartlesville may have to take to comply with rules governing preservation of historical sites and resources, including compliance with the Oklahoma State Register of Historic Places Act and the Burial Disturbance Law of Oklahoma. It is understood that normal OKR04 permit-compliance actions taken by the City of Bartlesville under OKR04 do not require Section 106 review under the National Historic Preservation Act.

## 2.5 Meeting Eligibility Criteria for Endangered Species (OKR04 Part II.E)

The City of Bartlesville has reviewed the Endangered Species Eligibility Criteria and Requirements of OKR04's Part II.E and has determined that no part of the City of Bartlesville's MS4 lies within any Aquatic Resources of Concern (ARC) Areas as shown on Exhibit 1 map in the OKR04 Permit therefore Criterion A has been specified in Item V of the MS4's NOI Form. Appendix B provides the method of this assessment and documentation used by the City of Bartlesville to select Criterion A.

## 2.6 Information on MS4 OKR04 NOI (OKR04 Part III.B.2)

**Urbanized Area (UA) or Core Municipality**: The City of Bartlesville MS4 is a core municipality with its boundary being defined by the City's Corporate City Limits boundary lines. Appendix C contains a map of the City of Bartlesville's MS4 area. The following latitude-longitude coordinates represent the approximate center point of the MS4's area:

Latitude: 36.749753
Longitude: -95.978103

**Names of Major Receiving Waters**: The City of Bartlesville's MS4 discharges to the following major receiving waters; the table notes the applicable designations of 303(d), ORW, TMDL and/or ARC with an "X" for each one applicable:

| Waterbody Name | WBID (1) | 303(d) (2) | ORW (3) | TMDL (4) | ARC (5) |
|---|---|---|---|---|---|
| Caney River **(* first < 1% within MS4)** | OK121400010010_10 | *X | | *X | |
| Caney River (last < 5% within MS4) | OK121400020010_10 | X | | | |
| Caney River ( 100% in MS4) | OK121400020010_00 | | | | |
| Sand Creek **(**last < 1% within MS4)** | OK121400040010_00 | **X | | **X | |
| Turkey Creek (70% within MS4) | OK121400020030_00 | X | | | |

(1) WBID = Waterbody ID identifier, used by ODEQ and other agencies in Oklahoma.
(2) 303(d) = 2022 303(d) list of Impaired Waterbodies
(3) ORW = OWRB Outstanding Resource Water
(4) TMDL = TMDL Study completed and EPA/ODEQ approved
(5) ARC = Aquatic Resources of Concern (see ARC list and map in OKR04 Exhibit 1)

## 2.7 Relying on Another Government Entity (OKR04 Part III.D)

OKR04 Part III.D. requires that the permittee indicate if "*another government entity, already regulated under the stormwater regulations,*" will be relied upon to "*satisfy one or more of your permit obligations*". Part V.A.5 requires written acceptance if "*another governmental entity*" will implement "*one or more of your stormwater MCMs*", but does not apply to implementing individual BMPs. Part VI.C.1.i (regarding Annual Report contents) requires a written agreement with "*another government entity*" if you are relying on them "*to satisfy some of your permit obligations*". The City of Bartlesville herein indicates in the tables below all entities with whom we are working collaboratively. Appendix D contains copies of all written agreements from the entities identified below to accomplish MCMs and BMPs on behalf of the City of Bartlesville.

**OKR04 Part III.D: Another Permitted Government Entity Already Regulated:**

| Government Entity | Permit Obligation to be Completed by Permitted Entity |
|---|---|
| none | none |

**OKR04 Part V.A.5: Another Government Entity Responsible for MCMs:**

| Government Entity | MCM(s) to be Completed by Entity |
|---|---|
| none | none |

**OKR04 Part VI.C.1.i: Another Government Entity helps to Satisfy Some Permit Obligations:**

| Government Entity | Permit Obligations to be Completed by Entity |
|---|---|
| INCOG | Green Country Stormwater Association www.stormwaterok.net |
| INCOG | Education and Assistance on OKR04-required topics |
| OCC | Blue Thumb assists with volunteer testing and educational services |

## 2.8 Certification of Compliance (OKR04 Part II.E.2.a)

The City of Bartlesville hereby certifies compliance with all applicable OKR04 requirements by taking the actions as stated in the various parts of this signed SWMP.

## 2.9 Co-Permittees (OKR04 Part III.D)

The City of Bartlesville has elected not to share OKR04 compliance with another entity as a co-permittee.

## 2.10 Special Conditions & Compliance with Water Quality Standards (OKR04 Part IV.A.1)

The City of Bartlesville will annually review the latest ODEQ Water Quality Report and compile a list of all waterbodies within the MS4 boundary where special conditions apply.

### 2.10.1 Addressing 303d Impaired Waterbodies (OKR04 Part IV.A.1.a)

In order to protect 303(d) impaired waters and not cause or contribute to a violation of water quality standards, the City of Bartlesville has implemented and will maintain the following BMPs to specifically target and reduce the 303(d) pollutants of concern. These BMPs have been selected by the City of Bartlesville as being the most effective for reducing pollutants of concern in stormwater runoff. Appendix C contains a map of the MS4 with respect to 303(d) waterbodies.

**2022 303(d) Listed Waterbodies Within the City of Bartlesville MS4:**

| Waterbody Name | Total Length (miles) | Portion within MS4%** | WBID | WB Ctgry | Impairment Cause | Impaired Use/ Targeted Sources |
|---|---|---|---|---|---|---|
| Caney River | 25.54 | Last < 5% | OK121400020010_10 | 5c | Fish Bioassessments | *WWAC / Septic Systems, Grazing, Residential |
| Caney River | 46.50 | First < 1% | OK121400010010_10 | 4a | **Enterococcus** | *PBCR / Septic Systems, Grazing, Pet Waste |
| Sand Creek | 59.85 | Last < 1% | OK121400040010_00 | 4a | **Enterococcus** | *PBCR / Septic Systems, Grazing, Pet Waste |
| Turkey Creek | 5.34 | 70% | OK121400020030_00 | 5c | Macroinvertebrate Bio | *WWAC / source unknown (urban) |

** Impaired Use Acronyms: WWAC = Warm Water Aquatic Community PBCR = Primary Body Contact Rec*

***Approximate percentage of 303(d) waterbody area within Bartlesville MS4 boundary*

The following table of BMPs are being taken by the City of Bartlesville to address the 303(d) impairments' targeted sources for the purpose of ensuring that stormwater discharges from the MS4 will not cause, have reasonable potential to cause, or contribute to an in-stream exceedance of the water quality standards.

***ACRONYM KEY:*** *SWM = Stormwater Manager SWI = Stormwater Inspector*

**Table of BMPs Specifically Targeting 303(d) Pollutants of Concern**

| BMP # | BMP Description | How its achieving reduction of 303(d) Pollutants of Concern (POC) (BACTERIA - see targeted sources in Table above) |
|---|---|---|
| 1 | Distribute 100 educational brochures and flyers targeting Citizens (40), Ranchers (5), Pet Owners (48), Septic System Owners (5), & Pond Owners (2) | Educating Owners of Ranches, Pets, & Septic Systems targets the citizens who are most likely to contribute bacterial pollutants to our waterways and educates them on reducing and preventing those sources. |
| 7 | Illicit Discharge Detection & Elimination (IDDE) Program | Our IDDE program allows us to receive reports, investigate, and remove bacterial discharge sources such as failing septic system leaks and broken sanitary sewer lines. |
| 11 | Stormwater Educational Display | Our educational display allows us to reduce bacterial pollutants by educating the public about pet waste NOT being a good fertilizer and the importance of disposing of it properly in order to protect the health of our citizens and our area waterways. |
| 13 | School Age Education Program | Our educational program allows us to reduce bacterial pollutants by teaching children about the importance of picking up pet waste in their yards and disposing of it properly in order to protect the health of our community and our area waterways. |
| 23 | Public Media Article | Our public media article allows us reduce bacterial pollutants by spreading the word about the harmful effects of pet waste and the importance of disposing of it properly in order to protect the health of the citizens and the area waterways. |

| BMP # | BMP Description | How its achieving reduction of 303(d) Pollutants of Concern (POC) (BACTERIA - see targeted sources in Table above) |
|---|---|---|
| 26 | Digital Newsletter Ads | Our digital newsletter ads allows us reduce bacterial pollutants by informing area citizens about the harmful effects of pet waste and the importance of disposing of it properly in order to protect the health of the citizens and the area waterways. |
| 31 | Dry Weather Field Screenings | Our DWFS program allows us to identify, investigate, and eliminate bacterial discharges from sources such as failing septic systems and broken sanitary sewer lines. |
| 32 | Maintain and Refill Pet Waste Stations | Our pet waste stations allows area citizens to help reduce bacterial pollutants in our waterways by directly removing the harmful waste and disposing of it properly in order to protect the health of the citizens and the area waterways. |
| 34 | San Sewer System Inspections targeting high-priority areas | Our high-priority sanitary sewer system inspections allow us to find breaks and leaks that may allow bacterial pollutants to get into our waterways. |
| 35 | Sanitary Sewer System Repairs | Our sanitary sewer system repairs eliminate breaks and leaks that can allow bacterial pollutants to get into our area waterways. |
| 36 | Lift Station Inspections targeting high-priority areas | Our high-priority lift station inspections allow us to find potential problems that may allow bacterial pollutants to get into our waterways. |
| 37 | Lift Station Maintenance | Our lift-station maintenance helps prevent leaks and other issues that may allow bacterial pollutants to get into our area waterways. |
| 40 | Identify & Inspect 5 On-Site Sanitary Sewer Facilities (OSSFs) | Our OSSF inspections allow is to share tips and guidance with OSSF Owners, educating them on proper system maintenance which helps us prevent system failures and bacterial pollutants getting into our area waterways. |

**Target Audiences** (OKR04 Part IV.A.1.b)

The City of Bartlesville has selected its public education and outreach program BMPs are directed toward targeted groups of residential, commercial, industrial, and institutional entities likely to have significant stormwater impacts on the MS4's 303(d) impaired waters. By focusing the types of educational materials on high priority target audiences, the City of Bartlesville will have greater success in reducing pollution through its educational outreach program.

**Non-Stormwater Discharges** (OKR04 Part IV.A.1.c)

The City of Bartlesville has examined potential non-stormwater discharges within its MS4 that could likely contribute significant pollutants to 303(d) impaired waters. The following potential discharge sources have been identified within the MS4:

| Source Identifier | Location | 303(d) Pollutants | Notes: |
|---|---|---|---|
| 46- Grazing in Riparian or Shoreline Zones | Sand Creek, Caney South of Sand Creek | Bacteria | Educational Brochures targeting Ranchers |
| 85- Municipal Point Source Discharge (at WWTP) | Caney South of Sand Creek | Bacteria | Permitted thru ODEQ; constant monitoring, testing, inspecting, and improving of system |
| 92- On-Site Sewer Treatment Facilities | Sand Creek, Caney South of Sand Creek | Bacteria | OSSF Inspections and Educational Materials |
| 111- Residential Districts | Sand Creek, Caney South of Sand Creek | Bacteria | Educational Posts, Articles, and Literature |
| 133- Pet Waste | Residential Yards throughout MS4 | Bacteria | Educational Program and Pet Waste Station BMPs in place |

**Inspect Illicit Discharges in Priority Areas** (OKR04 Part IV.A.1.d)

The City of Bartlesville has located areas most likely to have illicit discharges and conducts inspections based on those priority areas within the watersheds of the 303(d) listed waterbodies. Details of the inspections and enforcement program are presented in Section 3.3 of this SWMP. The City of Bartlesville has put together a basic filed testing kit and has prepared a Standard Operating Procedure (SOP) document with steps to be followed during IDDE inspections. The SOP is included in Appendix G.

**Operation & Maintenance Procedures for Structural & Non-Structural Controls (**OKR04 IV.A.1.e**)**

The City of Bartlesville has developed the following operation & maintenance procedures for structural and non-structural stormwater controls to reduce pollutants discharged into 303(d) impaired waters. O&M of privately owned structures is discussed separately below, followed by a discussion of O&M of non-structural controls.

**Summary of O&M Procedures:**

| O&M Procedure | Frequency | Methods | Limitations |
|---|---|---|---|
| Detention / Retention Ponds | Annual visual inspections; maintenance as needed. (1) | Visual inspection using city staff. Maintenance depending on factors.(1) | High priority given to structures that are new with a projected long life and greater usefulness. |
| Maintenance of drainage system and street cleaning | Annual visual inspections; maintenance as needed. (1) | Visual inspection using city staff. Maintenance depending on factors.(1) | Modifications to structure may need to be coordinated with other changes. |
| Ordinance review and inspection enforcement | Annual inspections; maintenance requirement as needed and regulation review. | Inspections using city staff. Maintenance depending on factors | Cooperation and participation. |

(1) Decision on repair / replacement of features will depend upon factors such as cost, age, future effectiveness of structure, and availability of materials and resources.

*O&M of City-Owned Structural Stormwater Controls:*
The City of Bartlesville defines city-owned structural stormwater controls to mean any physical structure owned and maintained by the City of Bartlesville, including: wet and dry retention and detention basins and ponds; culverts and open channels that are owned by or within the City of Bartlesville's easements or rights-of-way and for which the City of Bartlesville has an obligation under city ordinance to maintain; and physical stormwater structures owned by the City of Bartlesville that are designed for managing stormwater flow and direction.

*O&M of Privately-Owned Structural Stormwater Controls:*
The City of Bartlesville defines privately-owned structural stormwater controls to mean any physical structure not owned and maintained by the City of Bartlesville, instead being owned and maintained by a private interest, such as a business, individual or Homeowners Association. Types of privately-owned stormwater structures will include: wet and dry retention and detention basins and ponds; culverts and open channels that are privately owned and for which the owner or association has an obligation under city ordinance to maintain; and physical stormwater structures privately owned that are designed for managing stormwater flow and direction.

*O&M of City-Owned Non-Structural Stormwater Controls:*
The City of Bartlesville defines city-owned non-structural stormwater controls to mean any stormwater-related program implemented by the City of Bartlesville, including: preservation of open space; expanding disconnections of impervious surfaces; expansion of vegetation and natural systems; grass swales and other types of natural, vegetated infiltration areas; and protection and expansion of riparian stream buffers. The City of Bartlesville will not impose requirements of non-structural controls on private property. Hence there will be no O&M actions needed regarding privately-owned non-structural controls. Instead, the City of Bartlesville will encourage and provide education about such programs as private development expands within the City of Bartlesville.

## **Flood Management Projects** (OKR04 Part IV.A.1.f)

Because portions of the MS4 discharge to 303(d) waters, it is required that the MS4 assess new flood management projects and review existing projects to determine if incorporating additional water quality protection devices are necessary.

For each new flood management project discharging to a 303(d) listed waterbody, the MS4 shall review the plans to ensure the project has adequately assessed the pollutants of concern and, referring to the EPA's BMP menu, determine if any additional water quality protection devices or practices might be recommended for managing the identified pollutants.

To make this pre-design process work more smoothly, the City of Bartlesville will make educational materials available to building permit applicants and developers, to aid in the preparation of their plans and specifications.

## **Selecting BMPs** (OKR04 Part IV.A.1.g)

The City of Bartlesville MS4 has chosen BMPs from the EPA's BMP menu and other sources, for the purpose of managing identified pollutants in the MS4's discharges. BMPs are selected based on their

ability to meet at least one, and preferably several, of the MCM requirements. Many of the selected BMPs specifically focus on target groups likely to have the most significant stormwater impact on the 303(d) listed waters for the purpose of reducing pollutants and protecting the City's stormwater quality.

**BMPs Addressing Bacteria in 303(d) Waters** (OKR04 Part IV.A.1.h)

Per OKR04 Part IV.A.1.h, the MS4 has put together the list below of identified BMPs addressing the following list of areas and has included these BMPs under each associated minimum control measure under Part V.(C);

| | | |
|---|---|---|
| (i) | sanitary sewer systems | (see Bacteria Category 1 Section below) |
| (ii) | on-site sewage facilities | (see Bacteria Category 2 Section below) |
| (iii) | illicit discharge and dumping | (see Bacteria Category 3 Section below) |
| (iv) | animal sources | (see Bacteria Category 4 Section below) |
| (v) | residential education | (see Bacteria Category 5 Section below) |

**Bacteria Category 1 - Sanitary Sewer Systems** (OKR04 Part IV.A.1.h.i)

| **Sub-Category in OKR04** | **Selected BMP** (BMP #) | **Implementation Notes** |
|---|---|---|
| (1) Identify improvements to sanitary sewer system | (34) Inspection of sewer lines | Min. 400 feet annually by Sewer Dept Field Crew |
| (1) Make improvements to sanitary sewer system | (35) Repair and replace breaks in sewer lines and appurtenances | Sewer Dept Field Crew will make repairs covered by annual budget as discovered |
| (2) Identify lift station inadequacies | (36) Inspect lift stations in bacteria 303d watersheds | Annually by Sewer Dept Field Crew |
| (2) Correct lift station inadequacies | (37) Perform lift station maintenance & evaluate needs | Annually by Sewer Dept Field Crew |
| (3) Make improvements on reporting of violations | (2) Annual Field Staff IDDE training | Annually by City Stormwater Inspector |
| (4) Strengthen controls | (38) Review spill response SOP, equipment, and supplies - update as needed | Annually by Public Works Director |
| (4) Strengthen controls | (39) Conduct employee training on spill response SOP | Annually by Public Works Director |

**Bacteria Category 2 - On-Site Sewage Facilities (OSSFs)** (OKR04 Part IV.A.1.h.ii)

| **Sub-Category in OKR04** | **Selected BMP** (BMP #) | **Implementation Notes** |
|---|---|---|
| (1) Identify & address failing systems | (40) Inspect OSSFs for evidence of bypasses. | 5 annually (min.) by Utilities Director |
| (2) Address inadequate maintenance of OSSFs | (1) Distribute 5 maintenance and inspection brochures and provide guidance to OSSF Owners. | Annually by Utilities Director |

**Bacteria Category 3 - Illicit Discharges and Dumping** (OKR04 Part IV.A.1.h.iii)

| **Sub-Category in OKR04** | **Selected BMP** (BMP #) | **Implementation Notes** |
|---|---|---|
| Additional effort to reduce waste sources of bacteria | (2) Train all field personnel on illicit discharge detection and elimination | Annually by City Stormwater Inspector |

**Bacteria Category 4 - Animal Sources** (OKR04 Part IV.A.1.h.iv)

| Sub-Category in OKR04 | Selected BMP (BMP #) | Implementation Notes |
|---|---|---|
| Expand existing program to identify and target additional potential animal sources | (1,23) Distribute 45 educational brochures and 1 social media post regarding residential pet waste removal | Annually by Stormwater Manager |
| Expand existing program to identify and target additional potential animal sources | (1) Distribute 5 brochures on rangeland grazing and pasture management to area farm & ranch stores. | Annually by Stormwater Inspector |
| Expand existing program to identify and target additional potential animal sources | (32) Install and maintain "pet-waste" stations and signage in MS4-owned parks. | By Parks Dept Mgr |

**Bacteria Category 5 - Resident Education Programs** (OKR04 Part IV.A.1.h.v)

| Sub-Category in OKR04 | Selected BMP (BMP #) | Implementation Notes |
|---|---|---|
| Public education regarding bacteria discharging from residential sites either directly or during runoff events | (26, 11, 1) Provide 2 Digital Ads, 1 public display, and distribute 40 educational brochures | Annually by Stormwater Manager |
| Public & area business education about preventing fats, oils and grease from clogging sanitary sewer lines and resulting in overflows | (1,12) Distribute water quality protection brochures to Public & 3 educational brochures to businesses about fats, oils, and grease best mgmt. practices | Annually by Stormwater Manager |
| Public education regarding decorative pond maintenance | (1) Distribute 5 educational brochures about pond maintenance to pond owners | Annually by Stormwater Manager |
| Public education regarding the importance of pet waste pick up | (23, 11, 1) Post 1 Social Media Ad and distribute 45 educational brochures | Annually by Stormwater Manager |

## 2.10.1 Addressing 303d Impaired Waterbodies (OKR04 Part IV.A.2)

Where a discharge is already authorized under this permit and is later determined to cause, have the reasonable potential to cause, or contribute to the in-stream exceedance of an applicable water quality standard, DEQ will notify the MS4. Subsequently, the MS4 will take all necessary actions to ensure that future discharges do not cause, have the reasonable potential to cause, or contribute to in-stream exceedance of a water quality standard and must document these actions in the SWMP.

## 2.10.2 TMDL Allocations (OKR04 Part IV.B)

As of the 2022 ODEQ Water Quality Report TMDL documentation, the City of Bartlesville MS4 has no TMDL Waste Load Allocations (WLAs) assigned to it. The table below contains a list of two waterbodies,

each with less than 1% of their total area falling within the MS4 boundary, that have completed TMDL's on them, but no requirements were placed on the City of Bartlesville:

TABLE: Waterbodies within the MS4 Having Completed TMDLs

| Waterbody Name | Waterbody Id. (WBID) | MS4 Percent * | TMDL Pollutants of Concern | TMDL Codes |
|---|---|---|---|---|
| Caney River | OK121400010010_10 | < 1% | Enterococcus, Turbidity | 39216** |
| Sand Creek | OK121400040010_00 | < 1% | Enterococcus, Escherichia coli | 37064** |

** Approximate percentage of the TMDL watershed containing Bartlesville's MS4 area. Both are located in the southwest corner of the MS4.*

*** The final TMDL document states that there are no permitted MS4s within the study area, so no TMDL WLAs were assigned to any stormwater permittee in the TMDL.*

The TMDLs listed in the table above were both completed prior to late 2013. TMDLs in Oklahoma that were completed prior to late 2013 require that ODEQ notify the MS4 to begin initiating any compliance actions specified in the TMDL document. TMDL obligations will be reviewed annually.

### 2.10.3 Discharges to Outstanding Resource Waters (ORWs) (OKR04 Part IV.C)

For the present OKR04 2021-2026 permit cycle, no part of the City of Bartlesville MS4 area discharges to any waterbody designated as an Outstanding Resource Water (ORW) in Oklahoma's Water Quality Standards.

# 3.0 MINIMUM CONTROL MEASURES (MCMs) & BMPs

Each permitted small MS4 operator is required to identify, detail, and implement BMPs to comply with the OKR04 permit's required minimum control measures (MCMs): public education & involvement; illicit discharge detection and elimination; construction site runoff control; post-construction runoff control; and pollution prevention/good housekeeping. Each BMP must include a measurable goal which allows for the annual evaluation of the BMP's success toward reaching its goal of protecting water quality and reducing pollutants to the MEP. In general, measurable goals for existing BMPs monitor the effectiveness of the BMP, whereas measurable goals for new BMPs monitor their implementation progress. The Table in Appendix A includes a list of all the BMPs; each with a description, applicable MCM(s), measurable goal, implementation schedule or maintenance schedule, target audience, and person(s) responsible for implementation, along with any specific implementation information required for the BMP. The City of Bartlesville will annually review the BMPs and update or replace them as necessary, following all applicable guidelines regarding SWMP changes. A general description of each MCM is provided in the following sections:

## 3.1 MCM 1: Public Education and Involvement:

The OKR04 Permit requires that MS4 programs include distribution of information and educational materials to the community, as well as to the MS4 staff, and requires the MS4 to conduct public involvement activities, both for the purpose of promoting behavior changes that will reduce pollutants in stormwater runoff and to eliminate illicit discharges. Public involvement activities must be tailored using a mix of locally appropriate strategies, targeting specific audiences and stormwater concerns in the community. Since some of the Bartlesville MS4 area discharges to waters identified on the ODEQ 303(d) list of impaired waters, many of the program's BMPs have been selected to specifically target groups likely to have the most significant stormwater impact on the impaired waters. MCM1 requires the MS4 to provide a way for the public to submit comments regarding the SWMP to the person(s) responsible for the document. This information will be placed on the City of Bartlesville's Stormwater Management Web Page and updated as needed. Records including the NOI and SWMP will be placed there as well and kept up-to-date.

| City of Bartlesville (Cat 2) Minimum Public Education and Involvement Activities Per Year | | |
|---|---|---|
| **MCM #** | **Activity Description** | **Activities Per Year** |
| 1 | Public Education | 4 activities per year |
| | Public Involvement | 2 activities per year |
| 3 | Outreach or educational activity for illicit discharge | once per year |
| | Staff Training - IDDE | once per year |
| 4 | Outreach or educational activity for construction runoff | once per year |
| | Staff Training - Site Inspection | once per year |
| 5 | Public education for post-construction runoff | once per year |
| 6 | Staff Training - Good Housekeeping | once per year |

## 3.1.1 MCM 1 - Part 1: Public Education

Public education activities have been chosen from the following list:

| Public Education Activities |
|---|
| -brochures/pamphlets |
| -displays/posters/kiosks |
| -local public service announcements |
| -newspaper articles/press releases |
| -publication of MS4 annual report, SWMP, or ordinances |
| -signage |
| -storm drain markings |
| -utility bill insert or other mailing |
| -videos |
| -website |

**In coordination with MCM 3**

- implement an education program to involve public employees, businesses, and the general public make them aware of hazards associated with illegal discharges and improper disposal of waste;
- promote, publicize and facilitate the reporting of illicit discharges; and
- conduct staff training to identify and report illicit discharges.

**In coordination with MCM 4**

- implement an education program to involve local developers,
- implement and enforce procedures for receipt and consideration of information submitted by the public, and
- conduct staff training to address requirements for inspection and enforcement of erosion and sediment control measures once construction begins.

**In coordination with MCM 5**

- implement an education program to involve developers and the public and make them aware of project designs that minimize water quality impacts, including LID strategies.

**In coordination with MCM 6**,
conduct staff training to prevent and reduce stormwater pollution from MS4 activities.

### 3.1.1.1 Best Management Practices for Public Education

The City of Bartlesville uses a variety of public education BMPs to inform individuals and groups within the community about steps they can take to reduce stormwater pollution and become more involved in the stormwater program. Appendix A lists all BMPs that will be used for this MCM. Appendix A also lists the Measurable Goals, Target Audience, Person Responsible for Implementation, and schedule for each BMP.

### 3.1.1.2 Target Audience

The following target audiences were selected because the City of Bartlesville considers them most likely to be significant sources of stormwater pollutants:
The following target audiences were selected because the City of Bartlesville considers them to be most likely to have significant stormwater impacts: For residential area, the City of Bartlesville will target education programs to individual homeowners, renters and multi-family residents. For commercial chemical use and disposal, the City of Bartlesville will target education programs to commercial retailers and those businesses that store and use chemicals, including construction sites. Elementary school educational materials and coloring books will be available throughout the year at City Hall, free to all citizens. Blue Thumb volunteer program will be utilized to acquire local stream data and options for pollutant disposal will be offered and promoted (e.g. recycling and collection events).

### 3.1.1.3 Target Pollutant Sources

The City of Bartlesville's Public Education program will primarily address bacteria and pollutants from residential neighborhoods by educating individual homeowners on the proper disposal of such household chemicals as:

- pet waste
- on-site sewer treatment facilities (OSSFs)
- grazing and riparian or shoreline zones
- pesticides
- fertilizers
- detergents
- solvents
- motor oil
- antifreeze
- other motor and engine fluids
- oil-based paints
- rubbish ("floatable" materials)
- yard waste (grass clippings, leaves)

By encouraging the public to use local and regional recycling centers and household pollutant collection events, additional household chemicals such as heavy metals, solvents, acids and poisons can be safely disposed of. Proper storage, use and disposal of chemicals by local businesses will also be addressed in the education program.

### 3.1.1.4 Outreach Strategy

The City of Bartlesville participates in the regional stormwater education activities sponsored by INCOG's Green Country Stormwater Alliance (GCSA). Some education materials will be provided by INCOG from existing Federal, State or other sources while other materials will be developed collaboratively from all GCSA members. The City of Bartlesville will also develop some public education BMPs locally.

The City of Bartlesville's public education program will target several different areas:

a. Homeowners will be educated on how to properly use and disposal of fertilizers and other household chemicals as well as proper septic system maintenance.

b. INCOG's GCSA regional stormwater web site (www.stormwaterok.net) will provide information to the general public about local and regional water quality and program issues as well as numerous web links to water quality resources.

c. The public education program will also provide information on how to get involved in stream cleanups, restoration activities and other local conservation efforts that may periodically be conducted in the City of Bartlesville.

d. The City of Bartlesville will promote citizen participation in area-wide stream and city cleanup events, use of recycling centers in the vicinity, and participation in pollutant collection events.

e. The stormwater web site will provide to the general public timely information about local and regional water quality and program issues as well as numerous web links to water quality resources.

f. Secondary education grades will learn about water quality and urban sources of pollution through the Blue Thumb's classroom programs for school children.

g. The Blue Thumb volunteer stream monitoring program will emphasize student and adult education through practical hands-on experience with water quality sampling as well as provide formal training in water quality, pollution effects and ecosystem health.

h. The City of Bartlesville's education program will develop written materials that target commercial and industrial enterprises that have business activities that may negatively impact the stormwater quality of the MS4.

The City of Bartlesville's Public Education program has a goal of providing stormwater education material to homeowners in Bartlesville during the first five-year permit cycle.

#### 3.1.1.5 Management Responsibility

The City of Bartlesville has overall project management responsibility. The Director of Engineering will coordinate all local activities and the implementation of all program elements for the Public Education and Outreach MCM. The City of Bartlesville will implement activities addressing illicit discharges in the program by developing education materials, conducting training, coordinating educational activities and maintaining the stormwater web site.

#### 3.1.1.6 Evaluating Program Effectiveness

OKR04 Part VI.C.1.b requires each Ph 2 Small MS4 to annually evaluate program effectiveness by assessing progress made toward achieving each BMP's measurable goal and by reviewing data collected to determine overall effectiveness. The City of Bartlesville will employ the following strategy to assess program effectiveness in the Annual Report:

**Measurable Goals** have been established for each Public Education BMP. These are summarized in Appendix A and include implementation schedules and milestones for each BMP. The Measurable Goals for the BMPs were selected by the City of Bartlesville to accommodate local resources with the intent of establishing BMPs efficiently and cost effectively. Sufficient time was built into the implementation schedules to allow for corrective actions to be taken to have an improved program by the end of the permit cycle.

**BMP Effectiveness** will be demonstrated by keeping records of feedback from individuals and stakeholders in the general public and from agencies and organizations involved with the construction site control program. Feedback from the public, agencies and organizations (email, phone call, fax, letter or personal visit) including outputs and outcomes of education events will be recorded in writing. BMP effectiveness will be demonstrated by compiling and evaluating data from city administrative staff. If pollution sources are abated as a result of the inspection and enforcement program, then the abatement action will be logged as a BMP success. Changes in types of issues reported by the general public and businesses over several years of BMP implementation should demonstrate effectiveness of this MCM.

## 3.1.2. MCM 1 - Part 2: Public Involvement:

Public education and involvement activities have been chosen from the following list:

| Public Involvement Activities |
|---|
| -waterway/watershed clean-up or trash removal event |
| -contests |
| -household hazardous waste collection event |
| -involvement in development of MS4 SWMP |
| -meetings (e.g. public hearing, council meeting, citizen committee meeting, etc.) |
| -school programs |
| -special events/fairs |
| -targeted group training |
| -volunteer event |
| -water monitoring event |
| -workshop |

Some of the activities under the Public Education MCM also apply to the Public Participation and Involvement MCM. These include the Blue Thumb stream monitoring, use of recycling centers, participation in household pollutant collection events, storm drain marking, and community cleanup events. Appendix A lists each Public Participation BMP including implementation schedules and Measurable Goals for each BMP.

The Public Participation MCM is different from the Public Education MCM in that the citizens of the City of Bartlesville will actively participate in a program component such as stream cleanups or storm drain marking. By participating, citizens not only learn about the urban stormwater quality issues but contribute towards improving water quality in their community.

### 3.1.2.1 Best Management Practices for Public Participation

The City of Bartlesville will use several public participation BMPs to involve individuals and groups in activities and programs to reduce stormwater pollution and become involved in the stormwater program. Appendix A summarizes all BMPs that will be used for this MCM along with the Measurable Goals and schedule of implementation for each BMP.

### 3.1.2.2 Public Involvement in Program Development

In cooperation with ODEQ and INCOG, the City of Bartlesville has taken a number of steps to inform and include the public in understanding and providing input in the development of the Phase II program. These include:

a. The City of Bartlesville presents staff and budget information about the Phase II program in City Council public meetings.

b. City staff responds to questions from the public, and the city distributes information to the community upon request.

c. As part of its existing Public Education and Outreach MCM, the City of Bartlesville provides information about the MS4 program to citizens, and encouraged them to contact the stormwater coordinator for additional information.

d. The City welcomes input from its citizens regarding the stormwater program.

e. ODEQ hosted a public meeting and held a formal 30-day public comment period in April 2015 on the draft OKR04 General Permit; ODEQ responded to all comments in writing.

f. ODEQ has placed all relevant information about the Phase II program, including cities affected and activities required under Phase II, on their public website (www.deq.state.ok.us/) with links to various types of technical information for the public.

g. INCOG's (www.incog.org/) Green Country Stormwater Alliance (GCSA) website (www.stormwaterok.net) contains web pages for the public about the Phase II stormwater permit program, including invitations to contact local stormwater managers of each GCSA member to learn more about their own local program.

h. The ODEQ will place a notice of the availability of the Notice of Intent (NOI) on the ODEQ web site, and provide a 30-day public comment period for any organization or individual to make formal comments or inquiries on the draft NOI and draft SWMP of each OKR04 applicant. The City of Bartlesville will make available to any group or individual, upon request, a copy of the NOI and SWMP, and provide any other information upon request.

### 3.1.2.3 Public Involvement Program Implementation

Throughout each five-year permit cycle, the City of Bartlesville will use several methods to educate the public about the Phase II program and opportunities for participation. These include:

a. The City of Bartlesville will continue to include information on its website detailing how individuals and organizations can become more fully informed and participate in water quality improvement efforts under the Phase II program.

b. INCOG's (www.incog.org) regional GCSA stormwater web site (www.stormwaterok.net) will continue to provide updated information about local and regional activities in which citizens can participate.

c. City Council agenda items dealing with aspects of the program (e.g. budget approvals, approval of program activities) will be open to the public and receive public comment.

### 3.1.2.4 Target Audience

The public participation program primarily targets homeowners, adult residents, public school classes and organizations, non-profit organizations (e.g. Boy Scouts), and civic organizations. For school-age children, the participation program will focus on storm drain marking volunteer program. Regional waste collection events and community cleanup events target individual residents in the MS4 area by encouraging participation. All ethnic and socio-economic groups are encouraged to participate. The Phase II program for the City of Bartlesville has been implemented to benefit all residents and all local enterprises.

### 3.1.2.5 Public Involvement Activities

Appendix A lists all of the Public Participation BMPs that will be used by the City of Bartlesville, including the assigned Measurable Goals and schedule for each BMP. The City of Bartlesville participates with INCOG's GCSA regional public participation and education activities. Some education materials are provided by INCOG from Federal, State and other sources while other materials are developed collaboratively and by the MS4.

The City of Bartlesville's Public Participation program is conducted to promote and educate its citizens about opportunities to play an active role in water quality improvement efforts. Several of the Public Participation BMPs in Appendix A are joint ventures between the City of Bartlesville and other agencies or organizations.

The City of Bartlesville's public participation program relies upon the City's effort to promote and educate its citizens about opportunities to play an active role in water quality improvement efforts. The City of Bartlesville uses the following types of activities for Public Participation:

a. Distribute brochures to encourage proper use and disposal of household chemicals;
b. Comply with all State and local public notice requirements during program implementation;
c. Provide information on the stormwater web site about local events;
d. Sponsor an annual cleanup event in the city limits;
e. Encourage citizens to participate in Blue Thumb school education programs;
f. Encourage citizens to participate in Blue Thumb stream monitoring;
g. Sponsor the Blue Thumb storm drain marking program;
h. Establish a process to receive and review comments on the SWMP from the public and document responses to issues raised;
i. Promote area-wide household pollutant collection events; and
j. Encourage citizens to use recycling stations in the vicinity.
k. Public Input - Set up phone number and email options for public to submit drainage complaints and concerns:

   OKR04 Part V.C.4.a(5) requires the MS4 to, "*implement and enforce procedures for receipt of, and consideration of, information submitted by the public*". The City of Bartlesville has established the following administrative process for taking input from the public:

   - Designating one or more MS4 staff as the primary contact person for stormwater communications from the general public;
   - Educating administrative staff on how to document public input from email, letters, faxes, phone calls and personal contacts;
   - Processing of input from the public will be allowed from all sources, including emails, letters, faxes, phone calls and personal contacts;
   - The MS4 documents the response actions taken to resolve each request for assistance; and
   - The public input program will be part of the annual program assessment for the Annual Report and will include evaluation of the success of addressing reported issues.

### 3.1.2.6 Management Responsibility

The City of Bartlesville has overall project management responsibility. The Director of Engineering will coordinate all local activities and implementation of all program elements. INCOG's GCSA program will be managed by the Environmental and Energy Division at INCOG. The City of Bartlesville will provide sufficient funds to implement public participation programs outlined in the agreement. The program will address development of brochures and training materials, as well as the coordination of education activities.

### 3.1.2.7 Evaluating Program Effectiveness

OKR04 Part VI.C.1.b requires each Ph II Small MS4 to annually evaluate Public Education and Involvement program's effectiveness by assessing progress made toward achieving each applicable BMP's measurable goal and by reviewing related data collected to determine overall program effectiveness. The City of Bartlesville will employ the following strategy to assess the program's effectiveness in the Annual Report:

**Measurable Goals** have been established for each Public Participation BMP. These are summarized in Appendix A and include implementation schedules and milestones for each BMP. The Measurable Goals and target dates for the BMPs were selected by the City of Bartlesville to accommodate local resources with the intent of establishing BMPs efficiently and cost effectively. Sufficient time was built into the implementation schedules to allow for corrective actions to be taken to have an improved program by the end of the permit cycle.

**BMP Effectiveness** will be demonstrated by keeping records of feedback from individuals and stakeholders in the general public and from agencies and organizations involved with the construction site control program. Feedback from the public, agencies and organizations (email, phone call, fax, letter or personal visit) including outputs and outcomes of education events will be recorded in writing. BMP effectiveness will be demonstrated by compiling and evaluating data from city administrative staff. If pollution sources are abated as a result of the inspection and enforcement program, then the abatement action will be logged as a BMP success. Data from the stormwater inspections will be used to verify successful implementation of on-site construction BMPs. The City of Bartlesville will record pollution abatement episodes as described in the SWMP, including date, location, pollutant, observations, measurements, interviews, photos, field form data, abatement and enforcement steps taken, and results of each investigation. The increased number of pollution discharge quantities removed from the environment over a period of several years of BMP implementation and inspections conducted should demonstrate effectiveness of this MCM.

## 3.2 MCM 2: Industrial Stormwater Runoff Control:

The City of Bartlesville is a Category 2 MS4 and therefore is not currently required to implement and enforce an industrial program at this time. At this time, only Category 3 MS4s are required to implement and enforce an industrial stormwater runoff program from independently-owned industrial activities discharging into the MS4. Individual OKR05 industrial permits are required for industrial sites and are obtained and monitored directly through ODEQ. No changes are expected to this status in the next year.

## 3.3 MCM 3: Illicit Discharge Detection and Elimination:

The City of Bartlesville Illicit Discharge Detection and Elimination (IDDE) Program is being implemented and enforced for the purpose of detecting and eliminating illicit discharges, including illegal dumping and on-site sewage disposal systems, into the small MS4. The program includes the creation of an ordinance that prohibits non-stormwater discharges into the MS4, except as outlined as allowable non-stormwater discharges in Section 3.3.8 of this Plan, and gives the City the authority to perform inspections and enforce requirements through defined mechanisms, for the continued reduction of pollutants into the MS4 system. The program also includes annual dry weather field screenings (DWFS) to aid in the locating of illicit non-stormwater flows and defines the subsequent process of investigating, tracing, and addressing any illicit discharges found. New elements of the program will be developed and implemented as necessary. The City's IDDE Program includes the following procedures:

1. Identify priority areas including areas with a higher likelihood of illicit connections or discharges (e.g., areas with older sanitary sewer lines or with a history of sewer overflows or cross-connections; areas with older infrastructure that are more likely to have illicit connections; areas of industrial, commercial, or mixed use; areas with a history of past illicit discharges; areas with a history of illegal dumping or citizen complaints; and any areas that discharge to ARCs or ORWs. The priority area list shall be reviewed and updated annually to reflect changing priorities.
2. Source tracing or investigating any discovered illicit discharge (see flow chart in Appendix H). The investigation shall take place within 72 hours of the receipt of any complaint, report, or monitoring information received, that indicates a potential illicit discharge.
3. Remove or eliminate the source of the illicit discharge.
4. Identify problems using visual indicators and simple field test kit. (Laboratory methods are reserved for situations where a problem has been identified and enforcement on a suspected illicit discharger is needed.)
5. DWFS shall be conducted on a total of 40% of all identified outfalls each year and shall include all high priority areas.
6. Implement an ordinance or other regulatory mechanism, and enforcing it to the maximum extent allowable under state or local law, for the purpose of effectively prohibiting illicit discharges into the MS4. (See Appendix F for copy of implemented Ordinance #3184)
7. Maintain and annually update the storm sewer system map showing locations of all outfalls and the names and locations of all waters of the state that receive discharges from those outfalls.
8. Maintain and annually update a list of occasional incidental non-stormwater discharges or flows as allowed in OKR04 Permit's Part II(B)(2), that will not be addressed as illicit discharges (see Section 3.3.8 of this Plan for current list).

## 3.4 MCM 4: Construction Site Stormwater Runoff Control:

The City of Bartlesville will implement a comprehensive education, inspection, and enforcement program to address the pollution of stormwater runoff from active construction sites which shall include addressing each of the following OKR04 Permit requirements:

a) Implement and enforce an ordinance, or other regulatory mechanism, to the extent allowable under state or local law, to require erosion and sediment controls as well as sanctions to ensure compliance. This must be reviewed annually and revised as necessary to ensure continued compliance.
b) Implement and enforce procedures for site plan review which incorporate consideration of potential water quality impacts including erosion and sediment controls, controls of other wastes,

and any other impacts that must be examined according to the requirements of the local ordinance or other regulatory mechanism.

c) Implement and enforce procedures for site inspection and enforcement of control measures including enforcement escalation procedures for recalcitrant or repeat offenders. Document inspection findings and take all necessary follow-up actions (i.e., re-inspection, enforcement) to ensure site compliance.
d) Public education and involvement requirements for MCM 4 activities include:
    i) implementing an education program involving local developers,
    ii) implementing and enforcing procedures for receipt and consideration of information submitted by the public, and
    iii) conducting staff training to address requirements for inspection and enforcement of erosion and sediment control measures once construction begins.

### 3.4.1 Best Management Practices for Construction Site Runoff Control

The City of Bartlesville will use Best Management Practices BMPs in Appendix A and Appendix G to implement an effective erosion and pollutant control program for active construction sites. The erosion and sediment control ordinance, site plan reviews, construction site inspections, enforcement, and educational components are each addressed in the MS4's selected BMPs.

### 3.4.2 Ordinance

The City will adopt an ordinance prohibiting the discharge of pollutants and sediment from construction sites, and requiring the deployment of adequate sediment and erosion control measures. The ordinance must be reviewed and revised as needed to meet current permit requirements.

### 3.4.3 Plan to Ensure Compliance by Site Operators

The City will ensure compliance by Site Operators through the use of site plan reviews, site inspections, enforcement control measures, and education programs.

### 3.4.4 Site Plan Reviews

OKR04 Part V.C.4.a.ii requires the MS4 to *implement and enforce procedures for site plan review which incorporate consideration of potential water quality impacts…*". The City of Bartlesville will require all new development and redevelopment construction to consider potential impacts on water quality from construction activities. Requirements include sediment and erosion control and control of other on-site wastes that can impact water quality.

To meet this OKR04 permit requirement, the City will establish and utilize administrative procedures for site plan review to ensure consistent enforcement and adequate compliance with the following two items:

- Erosion and sediment control requirements
- Floodplain requirements

### 3.4.5 Construction Site Inspections

OKR04 Part V.C.4.a.iii requires the MS4 to "*Implement and enforce procedures for site inspection".* At a minimum, site inspections shall be conducted once per month at all OKR10 permitted construction sites within the MS4 area. Smaller construction sites, not requiring an OKR10 permit, shall be inspected at a minimum of once per quarter.

The City of Bartlesville will develop a program for inspecting construction activities that includes the following:

a. For each OKR10 permitted site, the Stormwater Inspector will schedule and perform routine inspections and follow-up inspections using standard inspection forms created by the City Stormwater Manager;
b. For any complaint received relating to construction site stormwater, the Stormwater Inspector will immediately or as soon as practicable, go and conduct an inspection;
c. The stormwater inspection form will document the adequacy of the erosion and sediment control measures being used on each OKR10 permitted project and will note any remedial actions needed;
d. Inspection data from the forms will be entered into a computer database or otherwise stored in City paper files;
e. Enforcement will rely upon initially encouraging remediation by the construction owner / operator verbally, followed by a written warning to remediate within a reasonable time, followed by issuance of a fine or a stop work order under authority of the local ordinance;
f. Any immediate and significant threat to health, safety or the environment will be enforced immediately using best professional judgment of the city inspector and/or Bartlesville administrative / public works staff, including police and fire personnel, as the situation merits, including reporting the violation to ODEQ for OKR10 enforcement.

### 3.4.6 Management Responsibility

The City of Bartlesville has overall project management responsibility. The Director of Engineering will coordinate all local activities and the implementation of all program elements. The City of Bartlesville will develop education materials, conduct training of inspectors, develop forms, and other data management items.

INCOG's GCSA program will be managed by the Environmental and Energy Division at INCOG. INCOG will submit an annual written scope of services to the City of Bartlesville, as well as maintain the GCSA stormwater website on behalf of the City of Bartlesville and other GCSA members.

### 3.4.7 Evaluating Program Effectiveness

OKR04 Part VI.C.1.b requires each Ph 2 Small MS4 to annually evaluate the Construction Site Stormwater Runoff Control Program's effectiveness by assessing progress made toward achieving each applicable BMP's measurable goal and by reviewing related data collected to determine overall effectiveness. The City of Bartlesville will employ the following strategy to assess program effectiveness in the Annual Reports:

**Measurable Goals** have been established for each construction site control BMP. These are listed in Appendix A. Each BMP includes applicable MCMs, measurable goal, target audience, person responsible, and schedule. The Measurable Goals for the BMPs were selected by the City of Bartlesville to accommodate local resources with the intent of establishing BMPs efficiently and cost effectively. Sufficient time was built into the implementation schedules to allow for corrective actions to be taken to have an improved program.

**BMP Effectiveness** will be demonstrated by keeping records of feedback from individuals and stakeholders in the general public and from agencies and organizations involved with the construction site control program. Any feedback received from the public, agencies, or organizations (emails, phone calls, faxes, letters or personal visits). BMP effectiveness will be demonstrated by compiling and evaluating data from city administrative staff. If pollution sources are abated as a result of the

inspection and enforcement program, then the abatement action will be logged as a BMP success. Changes in types of issues reported by the general public and businesses over several years of BMP implementation should demonstrate effectiveness of this MCM.

## 3.5 MCM 5: Post-Construction Management in New Development and Redevelopment:

The City of Bartlesville will implement and enforce a Post-Construction Management Program for the purpose of maintaining pre-development runoff conditions and ensuring controls are in place to prevent or minimize water quality impact from new developments and redevelopment projects disturbing greater than or equal to one (1) acre, including projects less than one (1) acre if part of a larger common plan of development or sale, and which discharge into the City's MS4 area. The following items are included in the City's program:

i) Implement and enforce an ordinance, or other regulatory mechanism, to the extent allowable under state or local law, to require the use of BMPs, with highest preference given to LID techniques and practices, to address post-construction runoff from new development and redevelopment projects.

ii) Implement and enforce procedures, such as ordinances or other regulatory mechanisms, to ensure adequate long-term operation and maintenance of BMPs that are installed during and left in place after the completion of a construction project. Maintenance may be conducted by the MS4 or by the owner/operator of the BMP(s). For this part, the owner/operator is the party with control over operational and maintenance activities of the BMP(s), including home owner associations (HOAs), commercial and industrial entities. Owners of individual residential properties, which serve as the owner's primary residence, may be excluded.

iii) Review local ordinances, regulations, and engineering plans or specifications to identify any legal/regulatory barriers to LID as well as opportunities to promote LID. Develop a schedule to remove those barriers and implement identified opportunities. If a barrier is not removed or an opportunity is not implemented, provide a justification. You may use the EPA Water Quality Scorecard as a guide. You can download the document from the following EPA website: https://19january2017snapshot.epa.gov/sites/production/files/201404/documents/water-quality-scorecard.pdf.

iv) Assess current street design, parking lot guidelines, and other requirements that affect the creation of impervious cover and implement additional guidelines or design standards to support LID design options. Provide a justification if additional guidelines are not implemented.

v) Implement an education program to involve developers and the public and make them aware of project design options that minimize water quality impacts, including low impact development (LID) strategies.

### 3.5.1 MCM 5 Program Implementation and Objectives

The post-construction program will be developed to address local conditions within the City. Factors that will be considered in developing the local post-construction program are:

- Proximity of the site to impaired waterbodies on the State's 303(d) list;
- Erosivity of the site (e.g. slope, soil type, vegetative cover, etc.);
- Size of construction activities and site disturbance;

• Receiving water characteristics (flows, depths, riparian cover, etc.)

#### 3.5.1.1 Non-Structural BMP

The City will encourage the use of the following non-structural City policies and BMP at new development and redevelopment sites:

- Utilization of the most recent Comprehensive Plan for the City to direct growth to identified areas and protect sensitive water resources such as local wetlands and riparian zones;
- Encourage new development and re-development projects to maintain open spaces, provide buffers along sensitive waterbodies and minimize impervious surfaces and disturbance of soils and vegetation wherever practical; and
- Encourage developers to implement source control measures as good housekeeping practices.

#### 3.5.1.2 Structural BMP

The City will encourage the use of the following structural BMP at new development and redevelopment sites:

- Encourage contractors to use stormwater storage structures such as wet ponds and detention basins; and
- Encourage contractors to use LID and filtration practices such as grassy swales and filter strips and infiltration practices such as infiltration basins and infiltration trenches.

### 3.5.2 Ordinance

The City will establish and annually review an ordinance or other regulatory mechanisms requiring the implementation of post-construction runoff policies and BMP's described above. The ordinance will give highest preference to LID techniques and practices by offering incentives to developers who use low impact development to address post-construction runoff from new development and redevelopment projects.

### 3.5.3 Long-Term Operation & Maintenance

The City will ensure long-term operation and maintenance (O&M) of Post-Construction BMPs by requiring new developers to either transfer ownership of new structural BMP (storm sewer infrastructure, detention basins, etc.) to the City or provide for third-party ownership and maintenance responsibilities (e.g. transfer ownership to a homeowner's association). Dedication certification must be included on a Final Plat or other legal document, establishing ownership and maintenance responsibilities for all new detention/retention areas. Sample language can be found in the City's Subdivision Regulations - Appendix B.

Existing Post-Construction BMP annual inspections and any required maintenance shall be conducted by the City Stormwater Inspector and City Field Crews unless responsibility is specifically stated otherwise on a previously filed document.

**Post-Construction Inspection Program**

Annual Post-Construction Inspections will be conducted by the City Stormwater Inspector or a certified 3rd party inspector hired by the "Owner/Operator". Responsibility will be determined by property ownership and other filed legal documents. A list and a map of post-construction BMP locations and related information will be assembled for annual inspections and will be updated as required.

In regard to Long-Term Operation & Maintenance, "Owner/Operator**"** shall be defined as the party with control over operational and maintenance activities of the BMP(s) including home owners' associations

(HOAs), commercial entities, and industrial entities. Owners of individual residential properties, which serve as the owner's primary residence, shall be excluded.

### 3.5.4 Low Impact Development (LID) Program

The City of Bartlesville will comply with this requirement by taking the following actions:

a. Annually review ordinances, regulations, standards, and specifications to identify new opportunities to promote LID and any potential legal barriers relating to LID. (see Appendix I & J)
b. Implement an incentive for developers to encourage the use of LID.
c. Implement and enforce design standards that will promote the use of appropriate street widths based on traffic flow, match parking space numbers to levels of demand, and offer flexibility regarding alternative parking options to help meet requirements (e.g., shared parking, off-site parking), all in order to minimize excessive impervious areas.
d. Implement an education program to involve developers and the public and make them aware of project design options that minimize water quality impacts, including low impact development (LID) strategies.
   Strategies the City may employ are as follows:

   i) Structural Controls
      (1) Retention/irrigation ponds
      (2) Extended detention (wet/dry basins)
      (3) Vegetative filter strips
      (4) Vegetated swales
      (5) Constructed wetlands
      (6) Sedimentation ponds/traps
      (7) Infiltration ponds
      (8) Catch basins
      (9) Grated inlets
      (10) Outfall velocity dissipation controls

   ii) Non-Structural Controls may include the following:
      (1) Street sweeping
      (2) Litter collection
      (3) "No Mow" areas
      (4) Storm drain markers

### 3.5.5 Education Program for Developers and the Public

The City will implement an education program to involve developers and the public and make them aware of project design options that minimize water quality impacts, including low impact development (LID) strategies by the following measures:

- Distribute LID Brochures to Developers at Project Planning Meetings
- Post LID Brochures for Developers on the City's Stormwater Website

Also, The GCSA website (www.stormwaterok.net) contains a number of educational LID materials for developers and the public that are periodically updated by INCOG.

### 3.5.6 Management Responsibility

The City of Bartlesville has overall project management responsibility. The Director of Engineering will coordinate all local activities and implementation of all program elements. The City of Bartlesville will develop and distribute education materials, conduct training of inspectors, develop forms, and other data management items.

INCOG's GCSA program will be managed by the Environmental and Energy Division at INCOG. INCOG will submit an annual written scope of services to the City of Bartlesville, as well as maintain the GCSA stormwater web site on behalf of the City of Bartlesville and other GCSA members.

### 3.5.7 Evaluating Program Effectiveness

OKR04 Part VI.C.1.b requires each Ph 2 Small MS4 to annually evaluate the Post-Construction Management Program's effectiveness by assessing progress made toward achieving each applicable BMP's measurable goal and by reviewing related data collected to determine overall program effectiveness. The City of Bartlesville will employ the following strategy to assess program effectiveness in the Annual Reports:

**Measurable Goals** have been established for each post-construction BMP. These are listed in Appendix A. Each BMP includes applicable MCMs, measurable goal, target audience, person responsible, and schedule. BMPs were selected by the City of Bartlesville to accommodate local resources with the intent of establishing BMPs efficiently and cost-effectively.

**BMP Effectiveness** will be demonstrated by keeping records of inspections, abatements, and feedback received from individuals and public stakeholders as well as from agencies and organizations involved with the construction site stormwater control program. Any feedback received will be documented. BMP effectiveness will be demonstrated by compiling and evaluating data gathered by city administrative staff. If pollution sources are abated as a result of the inspection and enforcement program, then the abatement action will be logged as a BMP success. Changes in types of issues reported by the public and area businesses over several years of BMP implementation should demonstrate effectiveness of this MCM.

## 3.6 MCM 6: Pollution Prevention / Good Housekeeping:

The OKR04 Permit requires the MS4 to implement and enforce an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from MS4 operations such as streets, roads, highways, parking lots, maintenance and storage yards, fueling areas, waste transfer stations, fleet or maintenance shops, salt/sand storage locations. and snow disposal areas.

In summary, this MCM requires the following program goals for all MS4 levels:

i. Maintain and annually update an inventory of all your MS4 operations that are impacted by this program.

| | |
|---|---|
| WQNEC04889 | CITY OF BARTLESVILLE Water Supply (exp 7/4/2027) |
| WQNEC04915 | CITY OF BARTLESVILLE Sewerage Systems (exp 7/4/2027) |
| OKR053963 | BARTLESVILLE AIRPORT (exp 7/4/2027) |
| NPDES OK0030333 | Major publicly owned treatment works (POTWs) w/ Pretreatment Program BARTLESVILLE |

ii. Maintain and annually update a list of industrial facilities you own or operate that

are subject to the OKR05, or individual OPDES or NPDES permits for discharges of stormwater associated with industrial activity, that ultimately discharge to your small MS4. Include the authorization number or a copy of the industrial NOI form for each facility.

iii. Implement and enforce procedures for controlling, reducing or eliminating the discharge of pollutants. At a minimum, you must proceed as follows:

(1) Require implementation of BMPs,8 including sediment and erosion controls during

(a) routine maintenance,

(b) water line breaks and emergency repairs, and

(c) after line breaks, emergency repairs, and routine maintenance have been completed. Stabilization measures shall be implemented within fourteen (14) calendar days of completion.

(2) Ensure that vehicle wash waters are not discharged into the MS4 or waters of the state.

iv. Implement and comply with procedures to ensure that new flood management projects are assessed for impacts on water quality.

v. Any contractors hired to perform maintenance activities on MS4 facilities must be contractually required to comply with all of your stormwater control measures, good housekeeping practices and facility-specific stormwater management operating procedures. The MS4 shall provide oversight to ensure these contractual obligations are met.

vi. Implement and enforce procedures for inspection and maintenance of structural and non-structural BMPs, including maintenance activities, maintenance schedules and long-term inspection procedures for controls to reduce floatables and other pollutants discharged to your small MS4. At a minimum, inspections shall be conducted at the Category 2 frequencies outlined in Table V-6 of the OKR04 Permit and shown below.

vii. Implement a Good Housekeeping Education Program: Annually conduct staff training to prevent and reduce stormwater pollution from MS4 activities.

**Table V-6 Minimum Frequency of Inspections at Facilities Subject to MCM 6**

| | Category 1 | Category 2 | Category 3 |
|---|---|---|---|
| Site inspections at MS4 facilities subject to the OKR05 or individual OPDES or NPDES permit | once per quarter | once per quarter | once per quarter |
| Site inspections at other MS4 facilities impacted by this program | once per year | once per year | once per year |

## 3.6.1 Best Management Practices for Good Housekeeping

Appendix A contains a list of all BMPs that will be performed for this MCM. Each BMP includes a measurable goal, target audience, and person responsible for its execution.

All City Employees that work out in the field receive annual training on Municipal Operations Good Housekeeping Practices to prevent and reduce stormwater pollution from MS4 activities.

MS4 Facility Site Inspections: once per year *(once per quarter if OKR05 permitted)*

## 3.6.2 List of Industrial Permitted Facilities

The following facilities are owned and operated by the City of Bartlesville that are subject to the ODEQ Multi-Sector General Permit for Industrial Activities (OKR05) or individual OPDES or NPDES permits for discharges of stormwater associated with industrial activity that ultimately discharge to the MS4:

- Municipal Operations Center (1710 SW Adams Blvd.) Auth. No. OKR040027
- Golf Maintenance Facility (5801 Tuxedo Blvd) Auth. No. OKR040027

**MUNICIPAL OKR04**

- Bartlesville Municipal Airport (401 Wiley Post Rd) Auth. No. OKR053963

**INDUSTRIAL OKR05**

- Waste Water Treatment Plant (300 N. Chickasaw) Auth. No. WQNEC04915
- Water Treatment Plant (235 W Hudson Lake Rd) Auth. No. WQNEC04889

**NO EXPOSURE CERTIFICATIONS**

The City of Bartlesville will review the status of each permitted municipal facility annually and update the SWMP information as needed.

### 3.6.3 Controlling Pollutants from MS4 Systems and Facilities

The City's goal is to perform municipal activities in a careful and proper manner that prevents and/or reduces pollutant runoff. To comply with this OKR04 requirement, the City of Bartlesville will implement a program to control, reduce or eliminate pollutants discharged from the MS4. The following areas will be addressed:

- City streets and roads;
- Municipal parking lots;
- City maintenance and storage yards;
- City operated waste transfer stations;
- City fleet maintenance shops with outdoor storage areas;
- municipal salt/sand storage locations; and
- snow disposal areas.

**Procedures for Controlling Pollutants:**
The City of Bartlesville will take the following actions to reduce or eliminate pollutants from these systems and areas.

**Municipal Facilities**:

a. The City of Bartlesville will perform an initial inspection of its facilities to determine potential pollutant sources via stormwater into the MS4;

b. Where possible, all exposed materials will be moved under removable covers (e.g., tarps) or inside a building to prevent contact with stormwater runoff.

c. For those materials that cannot be sheltered, such as salt piles for snow removal, structural BMPs will be used where feasible to control contaminated runoff from the storage areas. These will include use of silt fencing, grassy swales, sediment ponds and/or other measures as deemed appropriate.

d. At least once a year, an inspection of these areas will be made to ensure that the BMPs and storage controls are deployed properly and working.

**MS4 System**:

a. BMPs, including sediment and erosion controls, will be implemented during the following types of work:
    a. routine maintenance,

b. water line breaks and emergency repairs, and
c. after line breaks, emergency repairs, and routine maintenance have been completed. Stabilization measures shall be implemented within fourteen (14) calendar days of completion.

b. Vehicle Wash waters will not be allowed to discharge into the MS4 or waters of the state.
c. Misdemeanant labor will be assigned by local courts to work with MS4 crews picking up trash along streets when necessary.
d. The City of Bartlesville owns street sweeping equipment that will be used at least 4 times per year to remove floatables, trash and sediment from streets.
e. MS4 Public Works crews will be trained to report observed pollution problems and/or trash buildup on city streets and in the City's stormwater collection system. When reported, MS4 crews will remove debris and trash from streets and the MS4 system as necessary.
f. The City will store sand and salt in areas that have sufficient berms and other flow control structures to prevent excess runoff of salt into local streams.
g. Removed debris and waste materials will be disposed of by transporting the material to a local landfill for disposal. The material to be disposed of includes street sweeper collections, dredged material from drainage systems and creeks, sediment cleanups from streets and lots, floatables removed from culverts and streams, materials from drop inlet cleanouts, and other types of debris removed from the MS4 system.

### 3.6.4 New Flood Management Projects

The City will implement and comply with the following procedures to ensure that new flood management projects are assessed for impacts on water quality.

a. The City of Bartlesville will ensure all new flood management projects are assessed for incorporation of adequate BMPs.
b. The City's Floodplain Administrator and Public Works staff will ensure that potential water quality impacts from new construction and new development projects are considered during administrative reviews of new floodplain management project plans.
c. New projects will be evaluated during the site plan review process, while existing structures will be evaluated on a case-by-case basis when a water quality problem is documented and the structure is suspected of being a contributor.
d. If it is feasible and cost effective to add water quality protection features to the project design, a recommendation will be made to incorporate the features before final plans are developed.

### 3.6.5 Contractors hired to perform MS4 Maintenance Activities

Any contractors hired to perform maintenance activities on MS4 facilities will be contractually required to comply with stormwater control measures, good housekeeping practices, and facility-specific stormwater management operating procedures. The MS4 shall provide oversight to ensure these contractual obligations are met.

### 3.6.6 Inspection and Maintenance of BMPs

The City will implement and enforce the following procedures for inspection and maintenance of structural and non-structural BMPs in order to reduce floatables and other pollutants discharged to the MS4

- Maintenance activities,
- Maintenance schedules, and
- Long-term inspection procedures for controls

Site inspections for MS4 Facilities subject to the OKR05 or individual OPDES or NPDES permit will be conducted once per quarter. Site Inspections at all other MS4 Facilities will be conducted once per year.

Structural BMPs at municipal facilities include sediment basins, various types of containers for disposal of wastes and fluids, constructed swales and shallow depressions designed to collect runoff and allow infiltration, wet and dry detention basins having inlet and outlet structures, and various types of pervious surfaces used in parking lots and storage areas that allow infiltration of runoff.

Non-structural BMPs at municipal facilities include stormwater-related programs implemented by the City of Bartlesville, including: preservation of open space; expanding disconnections of impervious surfaces; expansion of vegetation and natural systems; natural grass swales and other types of unconstructed, vegetated infiltration areas; and protection and expansion of riparian stream buffers.

**BMP Maintenance**: Structural BMP maintenance will be according to need and availability of funds and resources. High maintenance priority will be given to structures that have the greatest potential to improve water quality and have a high feasibility of success using available funds. Maintenance will be scheduled upon acquisition of funds and materials, and when manpower and necessary permits are obtained. Projects that have a low chance of improving water quality after maintenance will be considered for replacement or decommissioned. The City of Bartlesville will make every effort to address maintenance issues identified in the BMP inspection program. Non-structural BMP maintenance, such as assessing ordinance effectiveness, will be made annually.

**BMP Inspections**: The City of Bartlesville will inspect structural BMPs annually or after a report of a stormwater contamination problem at a municipal facility. Inspections of structural BMPs will rely upon visual indicators, such as accumulation of trash and debris, breaks and cracks, misalignments of headwalls and inflow and outflow devices, excessive accumulation of sediment, excessive erosion of slopes, failure of fencing and other public safety features, etc. Inspections of non-structural BMPs will consist of annual reviews of stormwater programs and the corresponding codes and ordinances, and annual inspections of natural features within the MS4 such as riparian areas along creeks and natural swales and infiltration areas.

Results of all inspections and maintenance will be reported to the stormwater staff and recorded in computer and paper files. The Annual Report will include a summary of these activities.

### 3.6.7 Evaluating Program Effectiveness

The City will evaluate the appropriateness of the identified BMPs for this MCM. The evaluation will verify compliance with permit requirements and document that efforts have been made towards achieving the identified measurable goals and reducing the impacts of stormwater runoff from the small MS4. The City of Bartlesville will employ the following strategy to assess program effectiveness in the Annual Report:

**Measurable Goals** have been established for each Good Housekeeping BMP. These are listed in Appendix A. Each BMP includes applicable MCMs, measurable goal, target audience, person responsible, and schedule. BMPs were selected by the City of Bartlesville to accommodate local resources with the intent of establishing BMPs efficiently and cost effectively. Sufficient time was built into the implementation schedules to allow for corrective actions to be taken to have an improved program by the end of the permit cycle.

**BMP Effectiveness** will be demonstrated by keeping records of feedback from individuals and stakeholders in the general public and from agencies and organizations involved with the construction site control program. Feedback from the public, agencies and organizations (email, phone call, fax, letter or personal visit) including outputs and outcomes of education events will be recorded in writing. BMP effectiveness will be demonstrated by compiling and evaluating data from city administrative staff. If pollution sources are abated as a result of the inspection and enforcement program, then the abatement action will be logged as a BMP success. Changes in types of issues reported by the general public and businesses over several years of BMP implementation should demonstrate effectiveness of this MCM.

# 4.0 Reviewing and Updating the SWMP

1. The SWMP will be reviewed annually in conjunction with the preparation of the annual report to determine the plan's effectiveness and efficiency.
2. If required, the SWMP will be revised by the City during the term of the permit in accordance with the approved permit procedures. Modifications to BMPs will provide the following analysis of why the BMP(s) was technically or economically ineffective or infeasible:
    i. Provide a description of the expectations for the effectiveness of the replacement BMP.
    ii. Provide an analysis of why the replacement BMP is expected to achieve the goals of the BMP(s) to be replaced.

**BMP Modifications Summary**

1. **BMP #19** – Promotional Items was replaced with Public Input Program because promotional items are no longer being distributed by GCSA. Replacing the promotional items with the Public Input Program will enable the City to visually assess, track, identify, and target potential problem areas for future stormwater improvement projects to reduce and eliminate pollutants entering the MS4 system and Waters of the State.
2. **BMP #34 thru #37 & #40** - added to identify items already being done that specifically target bacteria pollutant elimination.
3. **BMP #38 & #39** – Added to ensure the following occur annually: Spill Response Staff Training, SOP Reviewed, and Supplies Replenished.

# 5.0 Transfer of Ownership or Operational Authority

The SWMP will be implemented by the City of Bartlesville for all new areas added into the City's MS4 area as soon as possible, but not later than one year from the addition of the new areas. Implementation may be accomplished in a phased manner to allow additional time for controls that cannot be implemented immediately.

Within 90 days of a transfer of ownership, operational authority, or responsibility for SWMP implementation, the City will create a plan for implementing the SWMP on all affected areas.

## APPENDIX A: Best Management Practices and Measurable Goals for the Six MCMs

| BMP | MCM Type(s) | Annual Measurable Goal / Target Audience | Who Will Implement | Schedule |
|---|---|---|---|---|
| 1. **Educational Brochures/Flyers** | 1,3,4,6 | Distribute 100 educational brochures / targeting Citizens (40), Ranchers (5), Owners of Pets (45), Septic Systems (5), & Ponds (5) | Shelley | Annually |
| 2. **Staff Training / Continuing Education** | 1,3,4,5,6 | Training for IDDE, Good Housekeeping, Construction Inspections, Stormwater Management / City Staff | James & Shelley | Annually |
| 3. **MS4 Mapping** | 1,3,4,5,6 | Update Maps / City Staff & Area Citizens | Shelley & GCSA | Annually |
| 4. **Ordinance** | 3,4,5 | Review, Revise as needed, & enforce / area developers & contractors | Shelley & Micah | Annually |
| 5. **Public 2-Way Communication** | 1,3,4,5 | Maintain 2-way communication network / targeting the general public | Shelley | All Year |
| 6. **Site Plan Reviews** | 3,4,5 | Utilize checklist for all site plan reviews & review checklist annually / developers | Micah | Annually |
| 7. **Water Quality Conference** | 1,3,4,5,6 | Attend 1 conference in person or online equivalent / stormwater staff | Shelley | Annually |
| 8. **Public Meetings** | 1,3,4,5,6 | 1 Public Meeting (min) / general public | James/Shelley | Annually |
| 9. **Pollution Data** | 1,3,4,5,6 | Gather, Log, & Review Blue Thumb Testing Data done in MS4 and log all drainage complaints / stormwater manager | Shelley | All Year |
| 10. **Stormwater Website** | 1,3,4,5,6 | Maintain & Update City Stormwater Website / general public, contractors, & developers | Shelley | Annually |
| 11. **Stormwater Display** | 1,3,6 | Maintain one educational stormwater display at City Hall or Library / general public | Shelley | Annually |
| 12. **Contractor, Developer, & Local Business Education** | 1,3,4,5,6 | Distribute applicable brochures to 5 contractors, 5 developers and 3 local businesses / Contractors, Developers and Businesses | James | Annually |
| 13. **School Age Education** | 1,3 | Distribute 50 Children's Coloring Books and Update Educational Opportunities on Website / area children | Shelley | Annually |
| 14. **Adopt-A-Stream Program** | 1,3 | Update & Promote Program Information on Website / area citizens and groups | Shelley | Annually |
| 15. **Storm Drain Marking** | 1,3 | Mark 10 area storm drain inlets and promote volunteer storm drain marking program / area citizens and groups | James | Annually |
| 16. **Stream Cleanup** | 1,3 | Review and update website information and promote volunteer stream cleanups / area citizens and groups | Shelley | Annually |
| 17. **Pollutant Collection** | 1,3,6 | Participate in Annual Clean House Collection Event / area citizens | Micah | Annually |
| 18. **Recycling** | 1,3,6 | Promote Recycling on Social Media (5x min) / area citizens | Shelley | Annually |
| 19. **Public Input Program** | 1,4 | Record, research, & follow up on all stormwater related public input received from hotline and complaint forms / General Public | Shelley | Annually |

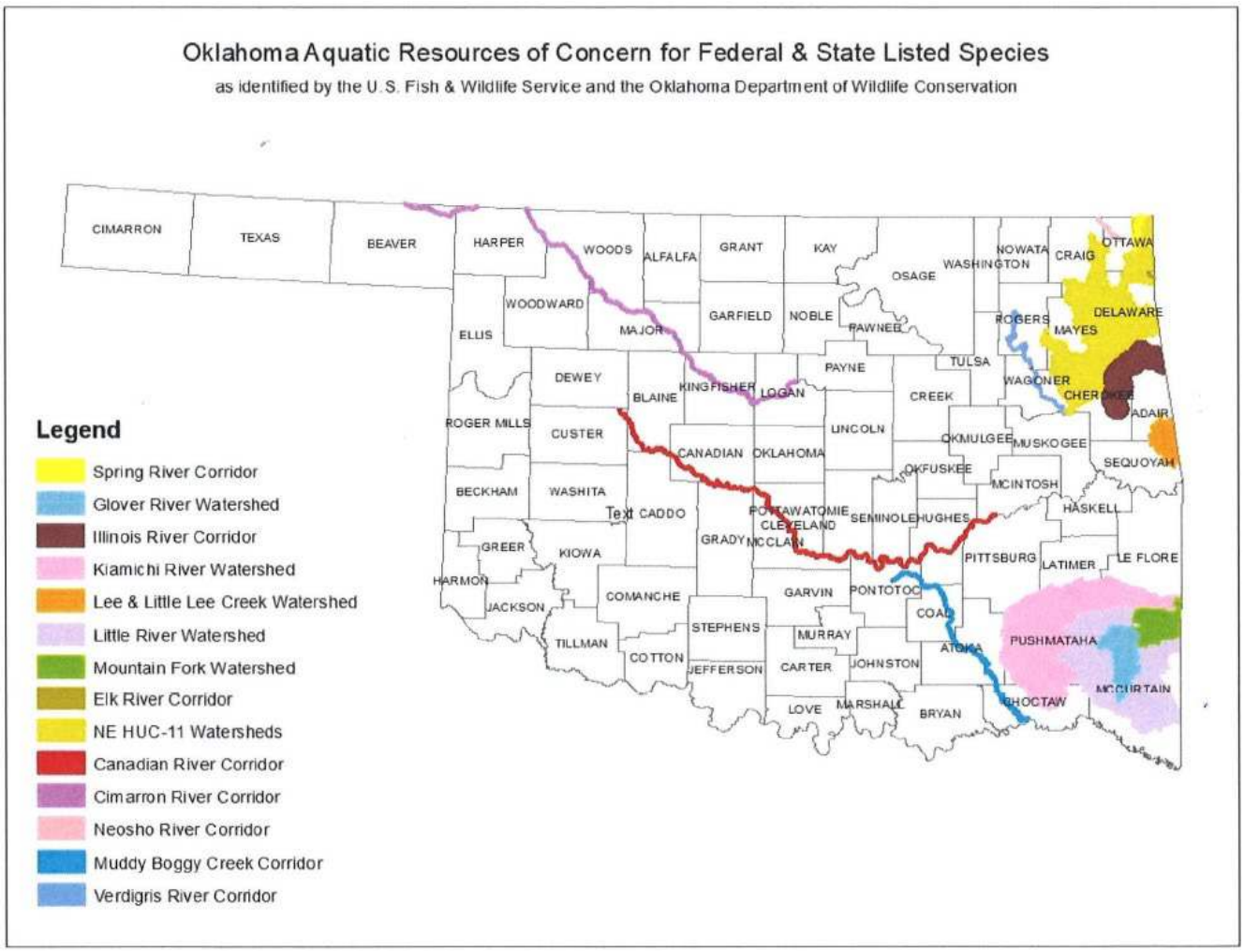
| BMP | MCM Type(s) | Annual Measurable Goal / Target Audience | Who Will Implement | Schedule |
|---|---|---|---|---|
| 20. **Post-Construction BMP Inspections** | 3,5,6 | Review and Update Post-Construction BMP Map and Perform Annual Post-Construction Inspections / Stormwater Mgr and Inspector | James/Shelley | 4th Quarter Annually |
| 21. **Construction Site Inspections** | 4,5 | Inspect & enforce municipal, state, & federal requirements – maintain records of all OKR10 site inspections / stormwater inspector | James | All Year |
| 22. **City MS4 Facility Inspection** | 3,6 | 1 Operations Yard & 1 Golf Course Maintenance Facility Inspection per yr / municipal operations staff | James | 4th Quarter Annually |
| 23. **Public Media Articles** | 1,3 | Stormwater quality ads on Social Media / general public | Shelley | Annually |
| 24. **Green Program (Arbor Day trees & plants)** | 1,3,6 | Promote Low Impact Development and Conduct (1 min) Green Event promoting trees & plants / general public | Shelley/ Bobby | Annually |
| 25. **Poster** | 1,3 | Update Stormwater Awareness Poster at Library / library patrons | Shelley | Annually |
| 26. **Digital Newsletter Ads** | 1,3 | Place stormwater awareness ad in City Newsletter (2x min) / general public | Shelley/Kelli | 2X/Year (min) |
| 27. **Public Service Announcement** | 1 | City Council Meetings, Radio, and/or Cable TV Announcements (2x min) / general public | Micah | Annually |
| 28. **Street Sweeping** | 6 | Sanitation Dept. to use two trucks daily and cover entire City 6 times a year / field staff | Keith | Annually |
| 29. **Floodplain Management** | 3,4,6 | Review floodplain program and mail out one floodplain brochure in utility bills / area homeowners and renters | Micah | Annually |
| 30. **Ditch Cleaning** | 6 | Clean 5 ditches / Street Dept | Street Dept Mgr | Annually |
| 31. **Dry Weather Field Screenings (DWFS)** | 3,6 | Inspect 20 outfalls focusing on high priority areas / stormwater inspector | James | Annually |
| 32. **Pet Waste Stations** | 1,6 | Maintain Existing Pet Stations / area pet owners | Bobby | All Year |
| 33. **Storm Drain Maintenance** | 3,6 | Clean area inlets after major rain events / street dept | Street Dept Mgr | All Year |
| 34. **San Swr System Inspections** | 3,6 | Inspect 500 lf sanitary sewer lines / WW Dept | WW Mntc Mgr | Annually |
| 35. **San Swr System Repairs** | 3,6 | Make repairs covered by annual budget as discovered/ WW Dept | WW Mntc Mgr | Annually |
| 36. **Lift Station Inspections** | 3,6 | Inspect Lift Stations in Bacteria 303(d) watersheds / WW Dept | WW Mntc Mgr | Annually |
| 37. **Lift Station Maintenance** | 3,6 | Perform basic maintenance & evaluate for larger project/ WW Dept | WW Mntc Mgr | Annually |
| 38. **Spill Response SOP Review** | 3,6 | Review SOP & replenish supplies / WW Dept | Keith | Annually |
| 39. **Spill Response Training** | 3,6 | Staff Training on Spill Response SOP / Public Works Staff | Keith | Annually |
| 40. **On-Site San Sewer Facilities (OSSF) Inspections** | 3,6 | Identify & Inspect (5) OSSFs / OSSF Owners | Terry | Annually |

## APPENDIX B: Documentation of Selection Criteria for Protected Species

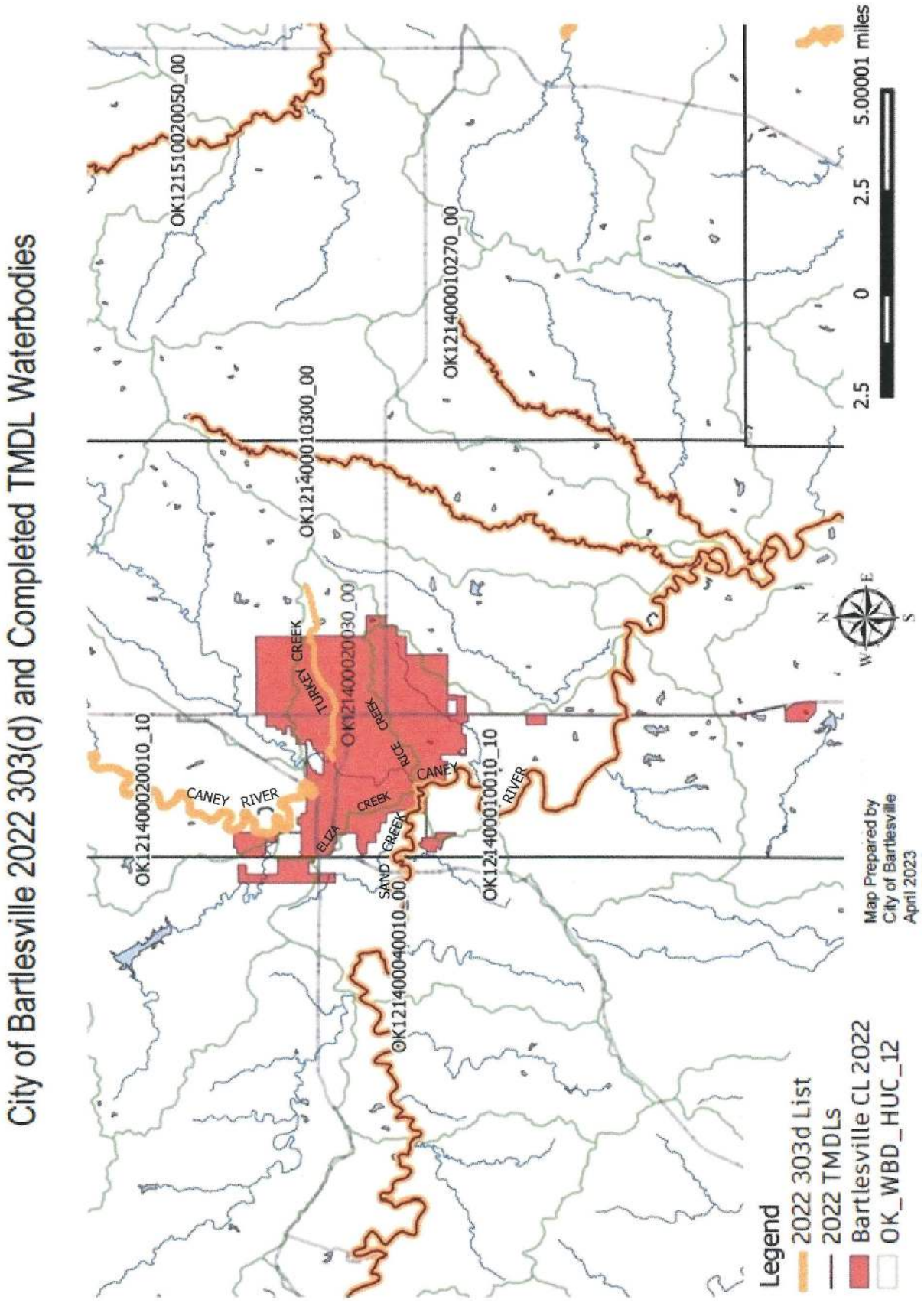
**Procedures for and Documentation of the Selection of Criteria to Meet Eligibility for Protection of Endangered Species per OKR04 Permit**

After comparing ARC delineations in Exhibit 1 with the MS4 boundary, it was determined that no part of the MS4 lies within any portion of an ARC. Therefore, this MS4 has no stormwater discharge that will likely affect endangered species or critical habitat.

**Exhibit 1**



## APPENDIX C: Map of MS4 and Water Features



## APPENDIX D: Written Agreement(s) By Another Governmental Entity

INCOG Regional Partners — Regional Solutions

2 West Second Street Suite 800 | Tulsa, OK 74103 | 918.584.7526 | www.INCOG.org

November 17, 2020

### INCOG Services To Green Country Stormwater Alliance (GCSA) Members

The following is a summary of INCOG services performed annually on behalf of its GCSA Members. The table identifies services as either general program support activities or Best Management Practices (BMPs) falling under one or more of OKR04's Minimum Control Measures (MCMs). This letter fulfills OKR04's Annual Report requirement in Part VI.C.1.i to provide a "*written agreement*" with "*another government entity*" if the permittee is relying on them "*to satisfy some of your permit obligations*". A copy of this agreement must also be kept with the MS4's SWMP per OKR04 Part V.A.5.

| INCOG Activity | BMP or Support | Support Service Description |
|---|---|---|
| Co-host water quality and stormwater conferences | Support | Work with other agencies as co-host. Assist with conference planning, and give presentations on stormwater topics. |
| Employee training workshops and virtual meetings | BMP | Organize and hold workshops and online virtual training on OKR04-required training topics and MS4 technical priorities. |
| Education materials | Support | Develop, acquire and make available to GCSA members. Post downloadable files on GCSA website. |
| Technical assistance | Support | Research technical and permit issues important to GCSA members. Report results via fact sheets, news bulletins and in workshops. |
| GCSA website | BMP | Annual updates of website materials on priority issues. |
| Guidance, Templates, Plans | Support | Prepare technical guidance and templates for member support. Research and develop TMDL-related Plans and guidance. |
| Education outreach documents | Support | Prepare Workbooks, News Bulletins, Announcements, Fact Sheets, White Papers, and Newsletters on important stormwater topics. |
| Individual MS4 assistance | Support | Upon request, meet with MS4 staff, city councils, county commissions and committees on OKR04 and local issues. |
| Mapping and field inspections | Support | Prepare regional and MS4 maps and forms, train members on equipment use and sampling procedures, assist with inspections. |
| OKR04 permit compliance | Support | Assist MS4s with SWMPs, NOIs, SOPs, Annual Reports, QA, permit requirements, DEQ Audits and enforcement issues. |

OKR04 Part VII.H.4 Required Certification Statement:

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.

INCOG Executive Director

11/17/2020

Date

Oklahoma Conservation Commission
Blue Thumb Water Quality Education Program
2800 N. Lincoln Blvd, Suite 200
Oklahoma City, Oklahoma 73105
405-522-4735
http://www.bluethumbok.com

March 2, 2023

Municipalities with OKR04 Permit Requirements

To Whom It May Concern:

The Oklahoma Conservation Commission's Blue Thumb Program has two primary responsibilities: 1) to support Blue Thumb volunteers who monitor local streams; and 2) to educate Oklahomans about the management of non-point source pollution. The Blue Thumb program can offer the following services to support your program:

1. Provide education about water quality and stormwater management.
2. Assist in the development of educational materials.
3. Provide educational information, instructional videos and a calendar of events through our website.
4. Train city employees and local volunteers to perform stream monitoring.
5. Help organize local volunteers to do a storm drain marking campaign. (We do not provide materials).
6. Provide tools, materials, and staff to engage in educational outreach to schools and other groups or organizations in your community.

We hope these services can help you meet requirements for your OKR04 permit and we look forward to working with you.

Sincerely,

Rebecca Bond
Blue Thumb Coordinator
Oklahoma Conservation Commission

## APPENDIX E: ACRONYMS AND DEFINITIONS

Refer to 2021 OKR04 Part I for a list of definitions of terms used in the OKR04 stormwater permit program. The following list of acronyms was compiled by INCOG. These pertain to contents of this SWMP and include terms involved with specific activities, such as assessing laboratory data and technical reports from other agencies.

| | |
|---|---|
| **%Sat** | Percent saturation of dissolved oxygen in a water sample. |
| **303(d)** | Section 303(d) of the Clean Water Act requiring biannual assessment of beneficial uses. |
| **BMP** | Best Management Practice, particularly regarding pollution controls. |
| **BOD** | Biochemical oxygen demand; a test of potential for a water sample to use up oxygen. |
| **BUMP** | Beneficial Use Monitoring Program; OWRB's sampling program to support USAP. |
| **°C** | Degrees centigrade or Celsius; the most common unit of measure for temperature. |
| **CBOD5** | Carbonaceous BOD, incubated 5 days; common NPDES permit requirement for WWTPs. |
| **CBOD20** | CBOD incubated 20 days; equivalent to "ultimate" (maximum) CBOD in a water sample. |
| **COE** | US Army Corps of Engineers. |
| **col/100mL** | Colonies per 100 milliliters of water sample; a unit of quantification for bacteria samples. |
| **COSWA** | Central Oklahoma Storm Water Alliance. |
| **CPP** | Continuing Planning Process; a standards and procedures summary document. |
| **CWA** | Clean Water Act; more formally the Federal Water Pollution Control Act. |
| **Diurnal** | 24-hour cycle, particularly related to how DO changes over a 24 hour period. |
| **DMR** | Discharge Monitoring Report; ODEQ's form for filing sampling results. |
| **DO** | Dissolved oxygen. |
| **EA / EIS** | Environmental Assessment / Environmental Impact Statement. |
| **EPA** | US Environmental Protection Agency. |
| **FWS** | US Fish and Wildlife Service. |
| **GCSA** | Green Country Stormwater Alliance; INCOG's coalition of stormwater permittees. |
| **GIS** | Geographic Information System; computer system that relates map features to data. |
| **GPS** | Global Positioning System; measuring x and y coordinates (location) from satellites. |
| **HUC** | Hydrologic Unit Code, used to classify watershed sizes. |
| **INCOG** | Indian Nations Council of Governments; 5-county Tulsa area sub-state planning agency. |
| **LA** | Load Allocation; nonpoint source numerical discharge quantity in a TMDL. |
| **MCM** | Minimum Control Measure; six categories of permit actions under EPA/ODEQ rules. |
| **mg/L** | Milligrams per liter; approximately equivalent to parts per million. |

| | |
|---|---|
| **MS4** | Municipal Separate Storm Sewer System; also used to designate a stormwater permittee. |
| **NH3-N** | Ammonia nitrogen; amount of nitrogen as ammonia. |
| **NO2-N** | Nitrite nitrogen; amount of nitrogen as nitrite. |
| **NO3-N** | Nitrate nitrogen; amount of nitrogen as nitrate. |
| **NOI** | Notice of Intent; application form and process to apply for stormwater permit coverage. |
| **NPDES** | National Pollutant Discharge Elimination System; federal discharge permit program. |
| **NWI** | National Wetlands Inventory by the US Fish and Wildlife Service |
| **OAC** | Oklahoma Administrative Code |
| **OCC** | Oklahoma Conservation Commission. |
| **ODEQ** | Oklahoma Department of Environmental Quality. |
| **OKR04** | ODEQ's stormwater general permit for small MS4s. |
| **OKR05** | ODEQ's stormwater general permit for industrial activities. |
| **OKR10** | ODEQ's stormwater general permit for construction activities. |
| **OPDES** | Oklahoma Pollutant Discharge Elimination System; the state discharge permit program. |
| **OWRB** | Oklahoma Water Resources Board. |
| **QAPP** | Quality Assurance Project Plan; formal documentation about ensuring data integrity. |
| **RCRA** | Resource Conservation and Recovery Act; for control of hazardous substances. |
| **SOP** | Standard Operating Procedure; description of repetitive tasks such as inspections. |
| **s.u.** | Standard Unit for pH measurements. |
| **SWMP** | Stormwater Management Program document required by stormwater permits. |
| **SWP3** | Stormwater Pollution Prevention Plan; required by construction stormwater permit. |
| **TDS** | Total dissolved solids; reflects on presence of salts and conductivity in a water sample. |
| **TKN** | Total Kjeldahl Nitrogen; amount of organic nitrogen plus ammonia in a water sample. |
| **TMDL** | Total Maximum Daily Load; study accounting for all point and nonpoint sources. |
| **TP** | Total phosphorus. |
| **TRI** | Toxics Release Inventory; national database of releases of over 650 chemical types. |
| **ug/L** | Micrograms per liter; approximately equivalent to parts per billion. |
| **USAP** | Use Support Assessment Protocol; methods used in 303(d) assessments. |
| **USGS** | United States Geological Survey. |
| **WBID** | Waterbody Identification; Oklahoma's system of classifying streams. |
| **WLA** | Wasteload allocation; point source numerical quantity in a TMDL and discharge permits. |

| | |
|---|---|
| **WQS** | Water quality standards. |
| **WWTP** | Wastewater treatment plant; also referred to as POTW (publicly owned treatment works). |

All definitions contained in Section 502 of the Act and 40 CFR §122 shall apply to this permit and are incorporated herein by reference. For convenience, simplified explanations of some regulatory/statutory definitions have been provided, but in the even of a conflict, the definition found in the Statute or Regulation takes precedence.

**Best Management Practices (BMPs)** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**Construction Site Operator** means the party or parties that meet one or more of the following descriptions:

(1) Has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications or;

(2) Has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a Storm Water Pollution Prevention Plan for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).

**Control Measure** as used in this permit, refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the State.

**CWA or The Act** means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et.seq.

**Director** means the Executive Director or chief administrator of the Department of Environmental Quality or an authorized representative.

**Discharge**, when used without a qualifier, refers to “discharge of a pollutant” as defined at 40 CFR §122.2.

**Illicit Connection** means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

**Illicit Discharge** is defined at 40 CFR §122.26(b)(2) and refers to any discharge to a municipal separate storm sewer that is not entirely composed of storm water, except discharges authorized under an OPDES or NPDES permit (other than the OPDES permit for discharges from the MS4) and discharges resulting from firefighting activities.

**MEP** is an acronym for "Maximum Extent Practicable," the technology-based discharge standard for Municipal Separate Storm Sewer Systems to reduce pollutants in storm water discharges that was established by CWA §402(p). A discussion of MEP as it applies to MS4s is found at 40 CFR § 122.34.

**MS4** is an acronym for "Municipal Separate Storm Sewer System" and is used to refer to either a Large, Medium, or Small Municipal Separate Storm Sewer System. The term is used to refer to either the system operated by a single entity or a group of systems within an area that are operated by multiple entities (e.g., the Oklahoma City MS4 includes MS4s operated by Oklahoma City, the Oklahoma Department of Transportation, and others).

**Municipal Separate Storm Sewer System** is defined at 40 CFR § 122.26(b)(8) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

**NOI** is an acronym for "Notice of Intent" to be covered by this permit and is the mechanism used to "register" for coverage under a general permit.

**Small Municipal Separate Storm Sewer System** is defined at 40 CFR §122.26(b)(16) and refers to all separate storm sewers that are owned or operated by the United States, a state, city, town, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the State, but is not defined as "large"' or "medium" municipal separate storm sewer system. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

**Storm Water** is defined at 40 CFR §122.26(b)(13) and means storm water runoff, snow melt runoff, and surface runoff and drainage.

**Storm Water Management Program (SWMP)** refers to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system.

**SWMP** is an acronym for "Storm Water Management Program."

## APPENDIX F: ILLICIT DISCHARGE ORDINANCE

ORDINANCE NO. 3184 Published in the Bartlesville Examine Enterprise on Dec. 4, 2005

AN ORDINANCE CONCERNING THE OBSTRUCTION OF DRAINAGEWAYS.

WHEREAS, materials dumped or deposited in drainageways and certain construction can create obstructions to storm drainage and flood flows; and

WHEREAS, it is in the best interest of the entire community to maintain clear and open drainageways.

NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF BARTLESVILLE, OKLAHOMA:

Section 1. Regulation. It shall be unlawful for any person, firm, or corporation, in person or by his agent or employee to dump, deposit, place or otherwise cause to be placed any trash, landscape debris, construction materials, earthen fill, or other materials or debris of any kind whatsoever into stormwater facilities or within or along the banks of any natural or man-made stream, creek, channel, watercourse, drainageway or retention/detention basin or in adjacent floodplain areas which may wash into streams and/or stormwater facilities or to cause any construction which obstructs the flow of water. Provided that this section shall not apply to any construction or deposition of material under a permit authorized by any ordinance of the city.

Section 2. Enforcement. The Code Enforcement Officer and other duly authorized employees of the city of Bartlesville shall be permitted to enter upon all properties for the purpose of investigation, inspection, observation, and taking enforcement action in accordance with the provision of this ordinance.

Section 3. Penalty.

a. Any person, firm, or corporation agent or employee found to be violating the provision of this ordinance shall immediately and at his expense remove all such material upon written notice by the city. The offender shall, within the period of time stated in such notice, permanently abate and cease all violations.

b. Any person, firm, or corporation agent or employee who shall violate the provision of this ordinance shall be deemed guilty of a misdemeanor punishable as provided in Section 1-18 for violations of the provisions of this Code.

PASSED BY THE CITY COUNCIL AND APPROVED BY THE MAYOR OF THE CITY OF BARTLESVILLE, OKLAHOMA, THIS 21ST DAY OF November, 2005.

Julie Daniels

Julie Daniels, Mayor

VOTE:

| | | |
|---|---|---|
| MR. MASON | aye | no |
| MRS. DALRYMPLE | aye | no |
| MR. MILLER | aye | no |
| VICE MAYOR DUNLAP | aye | no |
| MAYOR DANIELS | aye | no |

ATTEST: Hazel Jones

City Clerk

(SEAL)

CITY OF BARTLESVILLE OFFICIAL SEAL OKLAHOMA

Published in the Bartlesville Examiner Enterprise on January 11, 2023

ORDINANCE NO. 3565

**AN ORDINANCE AMENDING SECTION 7.4.9 OF THE ZONING REGULATIONS FOR THE BARTLESVILLE CITY PLANNING AREA, PERTAINING TO THE GENERAL DEVELOPMENT STANDARDS, SOIL EROSION AND SEDIMENT CONTROL.**

WHEREAS, the Bartlesville City Planning Commission (CPC) held a public hearing on December 13, 2022, to consider proposed amendments to the Zoning Regulations of the Bartlesville-Washington County Metropolitan Planning Area; and

WHEREAS, the City Council reviewed the Planning Commission's recommendation and, after conducting a second public hearing on January 3, 2023, concluded the proposed amendments to be appropriate.

NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF BARTLESVILLE, OKLAHOMA:

Section 1. That Section 7.4.9, Soil Erosion and Sediment Control, of the Zoning Regulations of the Bartlesville City Planning Area (aka: Appendix A, Sec 7.4.10, Soil Erosion and Sediment Control, of the Bartlesville City Municipal Code) is hereby amended as shown on the annotated copy attached hereto as Exhibit A.

PASSED by the City Council and APPROVED by the Mayor of the City of Bartlesville, Oklahoma this 3rd day of January, 2023.

Dale Copeland, Mayor

City of Bartlesville
401 S Johnstone Ave.
Bartlesville, OK 74003

ATTEST:

Jason Muninger, City Clerk
(SEAL)

CITY OF BARTLESVILLE OFFICIAL SEAL OKLAHOMA

| VOTE: | | |
|---|---|---|
| MR. ROSZEL | aye | no |
| MR. DORSEY | aye | no |
| MS. ROANE | aye | no |
| VICE MAYOR CURD | aye | no |
| MAYOR COPELAND | aye | no |

EXHIBIT A

7.4.9 *Soil Erosion and Sediment Control* ~~Soil erosion and sediment control-related measures are required for any regulated land disturbance activity, in accordance with the standards of this Section. All temporary measures and permanent erosion control and sediment control shall be maintained continuously in an effective working condition.~~

**Soil erosion and sediment control-related measures are required during any construction activities causing land disturbance. Persons conducting any land disturbing construction activity must provide, implement, and maintain adequate structural and/or nonstructural Best Management Practices (BMPs) to control erosion and prevent the discharge of pollutants to the area waterways and municipal stormwater drainage system. All temporary construction site stormwater runoff control BMPs and post-construction stormwater runoff BMPs shall comply with the current City of Bartlesville Construction Standards and all ODEQ stormwater discharge requirements.**

**Additionally, any project with construction activities resulting in a total land disturbance of greater than or equal to one (1) acre or a disturbance of less than one (1) acre if the construction site is part of a larger common plan of development or sale that totals at least one (1) acre, must obtain a Stormwater General Permit for Construction Activities within the State of Oklahoma (OKR10) through the state of Oklahoma's Department of Environmental Quality (ODEQ). The required 'Sediment and Erosion Control Plan' and 'Stormwater Pollution Prevention Plan (SWP3)' must both be prepared following permit requirements and submitted to the City, as part of the construction plans submittal for review. Both the plans must comply with good engineering practices and meet all provisions of the OKR10 permit and follow City Stormwater Design Requirements. Proof of authorized state permit may be required in a form acceptable to the Environmental Administrator prior to the allowing of any construction activities to begin.**

A. *General*

1. Soil disturbance shall be conducted in such a manner as to minimize erosion. Soil stabilization shall consider the time of year, site conditions, and the use of temporary and permanent measures.
2. Properties and channels located downstream from development sites shall be protected from erosion and sedimentation. At points where concentrated flow leaves a site, stable downstream facilities are required.
3. Soil erosion and sediment control features shall be constructed prior to the commencement of upland disturbance.
4. If de-watering devices are used, adjacent properties shall be protected. Discharges shall enter an effective sediment and erosion control measure.
5. For detached single-family residential development occurring one lot at a time, alternatives to the standards of this Section may be approved by the City Engineer.

B. *Soil Stabilization*

1. Temporary soil stabilization ~~shall be applied to disturbed areas within 14 days of the end of soil disturbance to all areas that will not be final graded and stabilized within 45 days.~~ **must be initiated immediately on any disturbed areas where construction activities have permanently ceased on any portion of the site or will be temporarily inactive for 14 or more calendar days on any portion of the site. In the context of this provision, "immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased.**
2. Permanent stabilization shall be ~~done within 14 days~~ **completed as soon as practicable, but no later than 14 calendar days after stabilization measures have been initiated, or 7 calendar days if discharging to an impaired water, or ORW, or ARC as defined and required in ODEQ's OKR10 Permit.** Permanent soil stabilization measures shall be applied to channels (including bed and banks) within 14 days of the end of primary disturbance of the channel.
3. Permanent or temporary vegetation shall not be considered established until sufficient ground cover is mature enough to control erosion.
4. Earthen embankments shall be constructed with side slopes with a vertical to horizontal ratio no steeper than 1:3.

**(END OF REVISIONS - REMAINDER OF SECTION 7.4.9 WILL REMAIN UNCHANGED)**

## Enforcement and Penalties – Construction Site Stormwater Runoff Control

11.1 - Enforcement .

It shall be the duty of the Community Development Director or his designees to enforce the provisions of these regulations. If the Director or his designees shall find that any of the provisions of these regulations are being violated, he shall notify in writing the persons responsible for such violations, indicating the nature of the violation and ordering the action necessary to connect it, and shall take such action to ensure compliance with or to prevent violation of its provisions as is authorized by law. All departments, officials and employees of the City of Bartlesville or Washington County vested with the duty or authority to issue permits or licenses shall comply with the provisions of these regulations, and shall issue no permits or licenses for any use, purpose, excavation, construction, structure, building, or sign in conflict with the provisions of these regulations.

11.2 - Violation and Penalty.

A violation of these regulations shall be deemed a misdemeanor and shall be punishable by fine or by imprisonment or both, as now provided by law for misdemeanors . Each day that a violation is permitted to exist shall constitute a separate offense. Nothing herein contained shall prevent the City of Bartlesville, Washington County, or its authorized officials from taking other action, authorized by law, to remedy violation.

**Letter regarding City Enforcement of Soil Erosion and Sediment Control Regulations**

THE CITY OF BARTLESVILLE
401 South Johnstone Avenue
Bartlesville, Oklahoma 74003

www.cityofbartlesville.org

Enforcement of Soil Erosion and Sediment Control Zoning Regulations

The EPA through its national Pollutant Discharge Elimination System regulations are requiring all municipalities, including Bartlesville, with municipal separate storm sewer systems to enforce a Soil Erosion and Sediment Control (SESC) ordinance.

The city will be enforcing the enclosed zoning regulations as the cities storm water program is confirmed by the Oklahoma Department of Environmental Quality. Proper construction of silt fencing and other erosion and sediment controls as shown by the enclosed Best Management Practice (BMP) instructions will be strictly enforced.

Pollution through storm runoff is intensified at construction sites due to the removal of the natural ground cover of the site as well as the introduction of hazardous chemicals and wastes to the area. Measures are required both during construction and after the completion of construction to prevent erosion or to intercept sediment prior to it leaving the site. This can be accomplished through the use of ground cover mulching, paving, silt fences, and sediment basins along with construction methods to reduce the disturbed areas of construction.

Housing lots are included if they are a part of a larger new subdivision

For more information contact Ken Robinson, Environmental Technician, Engineering Services, (918) 338-4258, karobinson@cityofbartlesville.org.

Regards,

Ken Robinson
Environmental Technician

## Soil Erosion and Sediment Control City Standard Details For OKR10 Projects (page 1 of 2)

NOTES:

1) THE SILT FENCE SHALL BE A WOVEN, POLYPROPYLENE, POLYESTER, OR POLYAMIDE MATERIAL, THAT SHALL BE RESISTANT TO ULTRAVIOLET DEGRADATION AND ROT. THE EDGES OF WOVEN FABRIC SHALL BE SEALED OR SELVAGED TO PREVENT RAVELING. THE FABRIC SHALL EXHIBIT THE FOLLOWING PHYSICAL PROPERTIES WHEN SAMPLED AND TESTED USING THE SPECIFIED METHODS.

| PROPERTY | TEST METHODS | VALUES | PROPERTY | TEST METHODS | VALUES |
|---|---|---|---|---|---|
| Grab Tensile | ASTM D-4632 | 100 Lb. (Min.) | UV Resistance | ASTM D-4355 | 80% (Min.) |
| Elongation @ Yield | ASTM D-4632 | 10-40% (Max.) | Apparent Opening Size | ASTM D-4751 | 20-50 US Sieve |
| Trapezoid Tear | ASTM D-4533 | 50 Lb. (Min.) | Permittivity 1/sec | ASTM D-4491 | 0.1 (Min.) |

PREFABRICATED FENCE SYSTEMS MAY BE USED, PROVIDED THEY MEET ALL THE MATERIAL REQUIREMENTS.

2) EROSION CONTROL MEASURES SHALL REMAIN UNTIL 70% STAND OF GRASS IS ESTABLISHED.

3) ALTERNATE EROSION CONTROL DEVICES AND MEASURES MAY BE USED AS LONG AS THEY ARE IN ACCORDANCE WITH DEVICES AND MEASURES APPROVED BY THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY.

INSPECTIONS

(DOCUMENTATION OF INSPECTIONS IS REQUIRED AS WELL AS ON-SITE RETENTION OF ALL INSPECTION RECORDS)

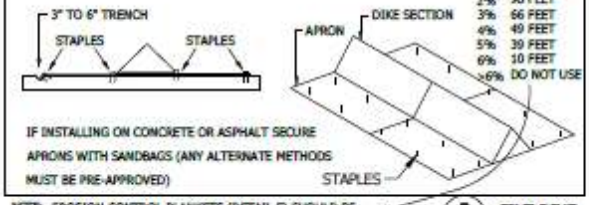
- PERFORMED EVERY SEVEN DAYS OR AFTER ANY 1/2 INCH RAIN.
- MAJOR OBSERVATIONS TO BE MADE DURING INSPECTIONS:
  - LOCATIONS OF DISCHARGE OF SEDIMENT OR OTHER POLLUTANTS.
  - LOCATIONS OF BMP'S THAT ARE NEEDING MAINTENANCE.
  - LOCATIONS OF BMP'S THAT ARE NOT PERFORMING, FAILING TO OPERATE, OR ARE INADEQUATE.
  - LOCATIONS WHERE ADDITIONAL BMP'S ARE NEEDED.

TEMPORARY SILT DIKES

SHALL BE TRIANGULAR-SHAPED, HAVING A HEIGHT OF AT LEAST EIGHT TO TEN INCHES (8" - 10") IN THE CENTER WITH EQUAL SIDES AND A SIXTEEN TO TWENTY INCH (16" - 20") BASE. TRIANGULAR-SHAPED INNER MATERIAL SHALL BE URETHANE FOAM. OUTER COVER SHALL BE WOVEN GEOTEXTILE FABRIC PLACED AROUND INNER MATERIAL AND ALLOWED TO EXTEND BEYOND BOTH SIDES OF TRIANGLE TWO TO THREE (2" - 3") FEET. STANDARD LENGTH OF EACH DIKE WILL BE SEVEN FEET (7') UNLESS OTHERWISE INDICATED ON PLANS. DIKES SHALL BE ATTACHED TO GROUND WITH WIRE STAPLES. STAPLES SHALL BE NO. 11 GAUGE WIRE AND BE AT LEAST SIX TO EIGHT (6" - 8") INCHES LONG. STAPLES SHALL BE PLACED AS INDICATED ON INSTALLATION DETAIL. DIKES SHALL BE USED AS A CONTINUOUS LINE BARRIER AT THE TOE OF SLOPE OR R/W LINE TO CONTAIN SEDIMENT OR AS A DITCH BARRIER PLACED PERPENDICULAR TO THE FLOW OF WATER IN A DEFINED DRAINAGE DITCH TO MINIMIZE EROSION AND CONTAIN SEDIMENT. THESE DIKES SHALL BE INSTALLED AND LOCATED AS SOON AS CONSTRUCTION WILL ALLOW OR AS DIRECTED BY THE ENGINEER. ANY DEFICIENCIES OR DAMAGE FOUND DURING INSPECTIONS SHALL BE REPAIRED BY THE CONTRACTOR IMMEDIATELY.

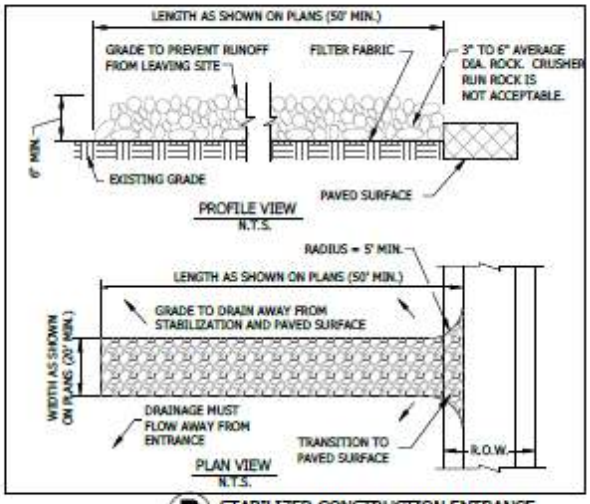
SPACING

| | |
|---|---|
| 1% | 200 FEET |
| 2% | 98 FEET |
| 3% | 66 FEET |
| 4% | 49 FEET |
| 5% | 39 FEET |
| 6% | 10 FEET |
| >6% | DO NOT USE |

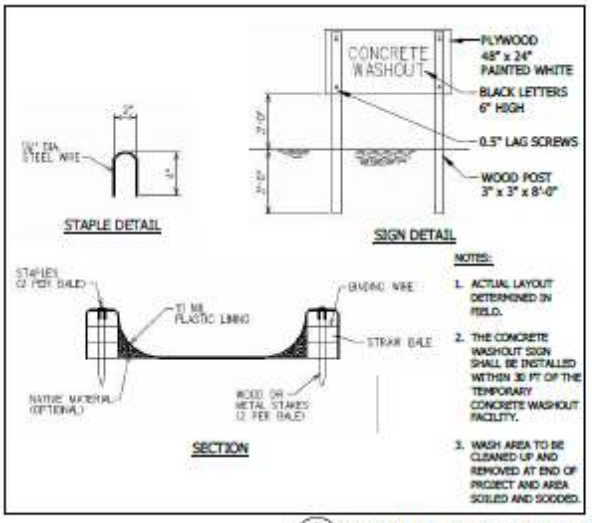



NOTE: EROSION-CONTROL BLANKETS (DETAIL F) SHOULD BE USED IN AREAS OF HIGH FLOW AND/OR STEEP SLOPES (>6%) WHERE EROSION WILL OCCUR BEFORE GRASS GROWTH OR WHERE NORMAL GRASS GROWTH WILL BE HINDERED BY POOR SOIL QUALITY.

**A** SILT DIKE



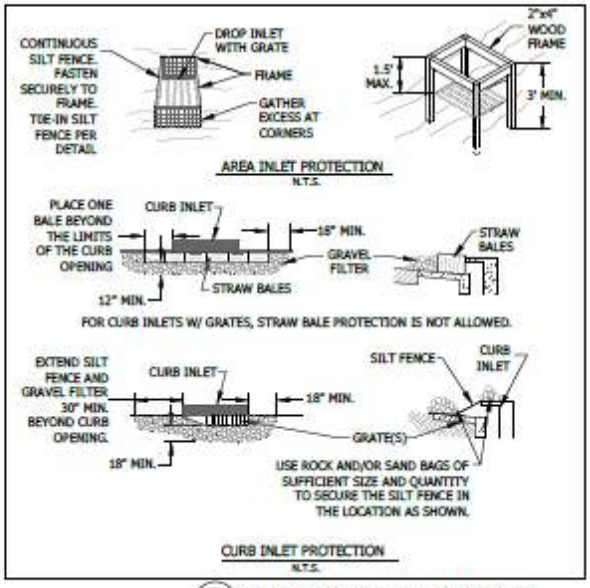

**B** STABILIZED CONSTRUCTION ENTRANCE



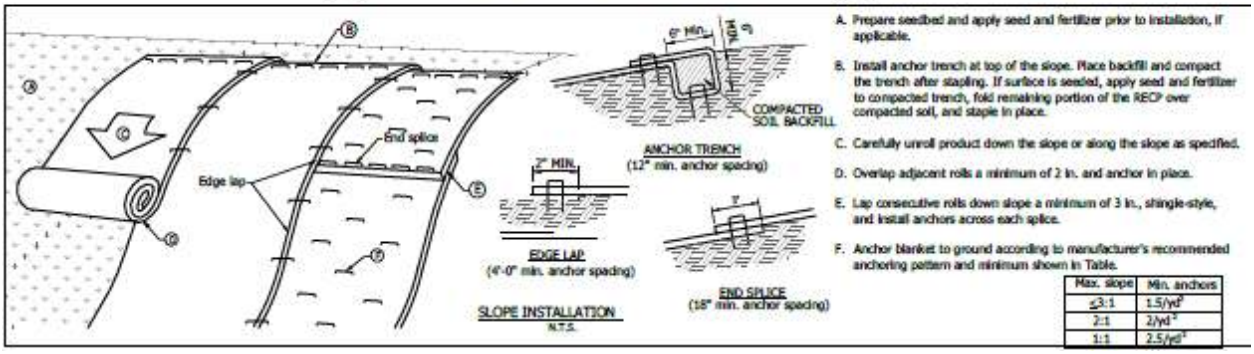

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. WASH AREA TO BE CLEANED UP AND REMOVED AT END OF PROJECT AND AREA SOILED AND SODDED.

**C** CONCRETE TRUCK WASH AREA




**D** INLET PROTECTION FILTER BARRIER




A. Prepare seedbed and apply seed and fertilizer prior to installation, if applicable.

B. Install anchor trench at top of the slope. Place backfill and compact the trench after stapling. If surface is seeded, apply seed and fertilizer to compacted trench, fold remaining portion of the RECP over compacted soil, and staple in place.

C. Carefully unroll product down the slope or along the slope as specified.

D. Overlap adjacent rolls a minimum of 2 in. and anchor in place.

E. Lap consecutive rolls down slope a minimum of 3 in., shingle-style, and install anchors across each splice.

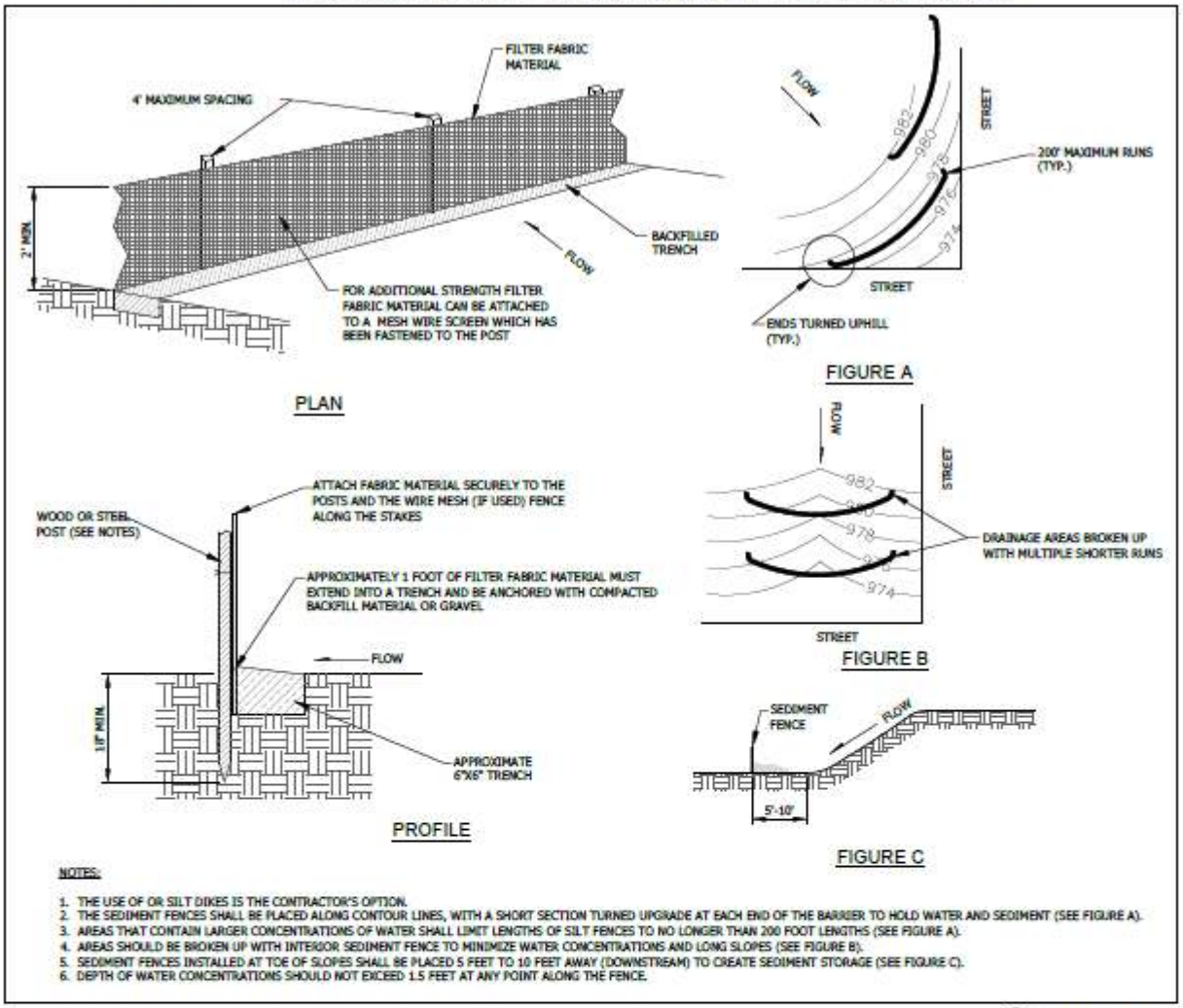
F. Anchor blanket to ground according to manufacturer's recommended anchoring pattern and minimum shown in Table.

| Max. slope | Min. anchors |
|---|---|
| ≤3:1 | 1.5/yd² |
| 2:1 | 2/yd² |
| 1:1 | 2.5/yd² |

## BEST MANAGEMENT PRACTICES (BMPs)

POLLUTION THROUGH STORM RUNOFF IS INTENSIFIED AT CONSTRUCTION SITES DUE TO THE REMOVAL OF THE NATURAL GROUND COVER OF THE SITE, AS WELL AS THE INTRODUCTION OF HAZARDOUS CHEMICALS AND WASTES TO THE AREA. MEASURES ARE REQUIRED, BOTH DURING CONSTRUCTION AND AFTER THE COMPLETION OF CONSTRUCTION, TO STABILIZE THE SITE. STABILIZATION OF THE SITE DURING CONSTRUCTION ACTIVITIES CONSISTS OF THE INSTALLATION OF TEMPORARY OR PERMANENT MEASURES TO PREVENT EROSION, OR TO INTERCEPT SEDIMENT PRIOR TO IT LEAVING THE SITE. THIS CAN BE ACCOMPLISHED THROUGH THE USE OF GROUND COVER MULCHING, PAVING, SILT FENCES, AND SEDIMENT BASINS, ALONG WITH CONSTRUCTION METHODS, TO REDUCE THE DISTURBED AREAS OF CONSTRUCTION.

ALL WORK CONSISTS OF FURNISHING, INSTALLING, MAINTAINING, AND, WHEN REQUIRED, REMOVING EROSION CONTROL DEVICES.

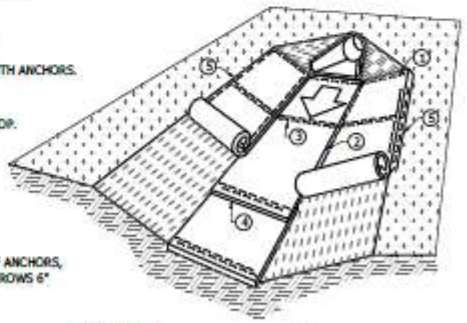



NOTES:

1. THE USE OF OR SILT DIKES IS THE CONTRACTOR'S OPTION.
2. THE SEDIMENT FENCES SHALL BE PLACED ALONG CONTOUR LINES, WITH A SHORT SECTION TURNED UPGRADE AT EACH END OF THE BARRIER TO HOLD WATER AND SEDIMENT (SEE FIGURE A).
3. AREAS THAT CONTAIN LARGER CONCENTRATIONS OF WATER SHALL LIMIT LENGTHS OF SILT FENCES TO NO LONGER THAN 200 FOOT LENGTHS (SEE FIGURE A).
4. AREAS SHOULD BE BROKEN UP WITH INTERIOR SEDIMENT FENCE TO MINIMIZE WATER CONCENTRATIONS AND LONG SLOPES (SEE FIGURE B).
5. SEDIMENT FENCES INSTALLED AT TOE OF SLOPES SHALL BE PLACED 5 FEET TO 10 FEET AWAY (DOWNSTREAM) TO CREATE SEDIMENT STORAGE (SEE FIGURE C).
6. DEPTH OF WATER CONCENTRATIONS SHOULD NOT EXCEED 1.5 FEET AT ANY POINT ALONG THE FENCE.

**E** SILT FENCE

1. PLACE END OF FIRST ROLL IN THE ANCHOR SLOT AT THE CENTER OF THE UPSTREAM CHANNEL AND SECURE WITH ANCHORS.
2. POSITION ADJACENT ROLLS IN THE ANCHOR SLOT, OVERLAPPING ADJACENT ROLLS A MINIMUM OF 12 IN.
3. PLACE BACKFILL IN ANCHOR SLOT AND COMPACT. UNROLL RECP OVER COMPACTED SLOT AND SECURE WITH ANCHORS.
4. UNROLL RECP DOWNSTREAM. MAINTAIN A MINIMUM 12 IN. OVERLAP BETWEEN ADJACENT ROLLS. SECURE EDGE LAP WITH ANCHORS.
5. INSTALL INTERMITTENT STAPLE CHECK SLOTS EVERY 30 FT.
6. CONSTRUCT END LAP AT END OF ROLL AND BEGINNING OF NEW ROLL. OVERLAP ROLL ENDS WITH UPSTREAM RECP ON TOP.
7. EXCAVATE LONGITUDINAL TRENCH ALONG BOTH SIDES OF THE CHANNEL AT THE OUTSIDE EDGES OF INSTALLATION. PLACE OUTER EDGES OF RECP INTO LONGITUDINAL SLOT. INSTALL ANCHORS, PLACE BACKFILL, AND COMPACT.
8. TERMINATE INSTALLATION AT DOWNSTREAM END WITH STAPLE CHECK.
9. INSTALL ANCHORS IN A REGULAR PATTERN OVER ENTIRE AREA COVERED ACCORDING TO MANUFACTURER'S PUBLISHED RECOMMENDATIONS (MINIMUM 3 ANCHORS PER SY).

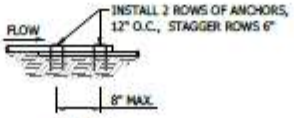



① ANCHOR SLOT
② EDGE LAP
③ STAPLE CHECK
④ END LAP
⑤ LONGITUDINAL SLOT

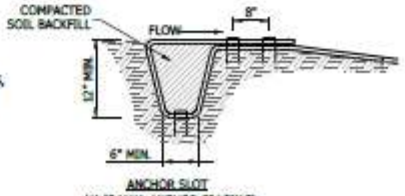
EDGE LAP
(4'-0" MAX. ANCHOR SPACING)

STAPLE CHECK

LONGITUDINAL SLOT
(3'-0" MAX. ANCHOR SPACING)



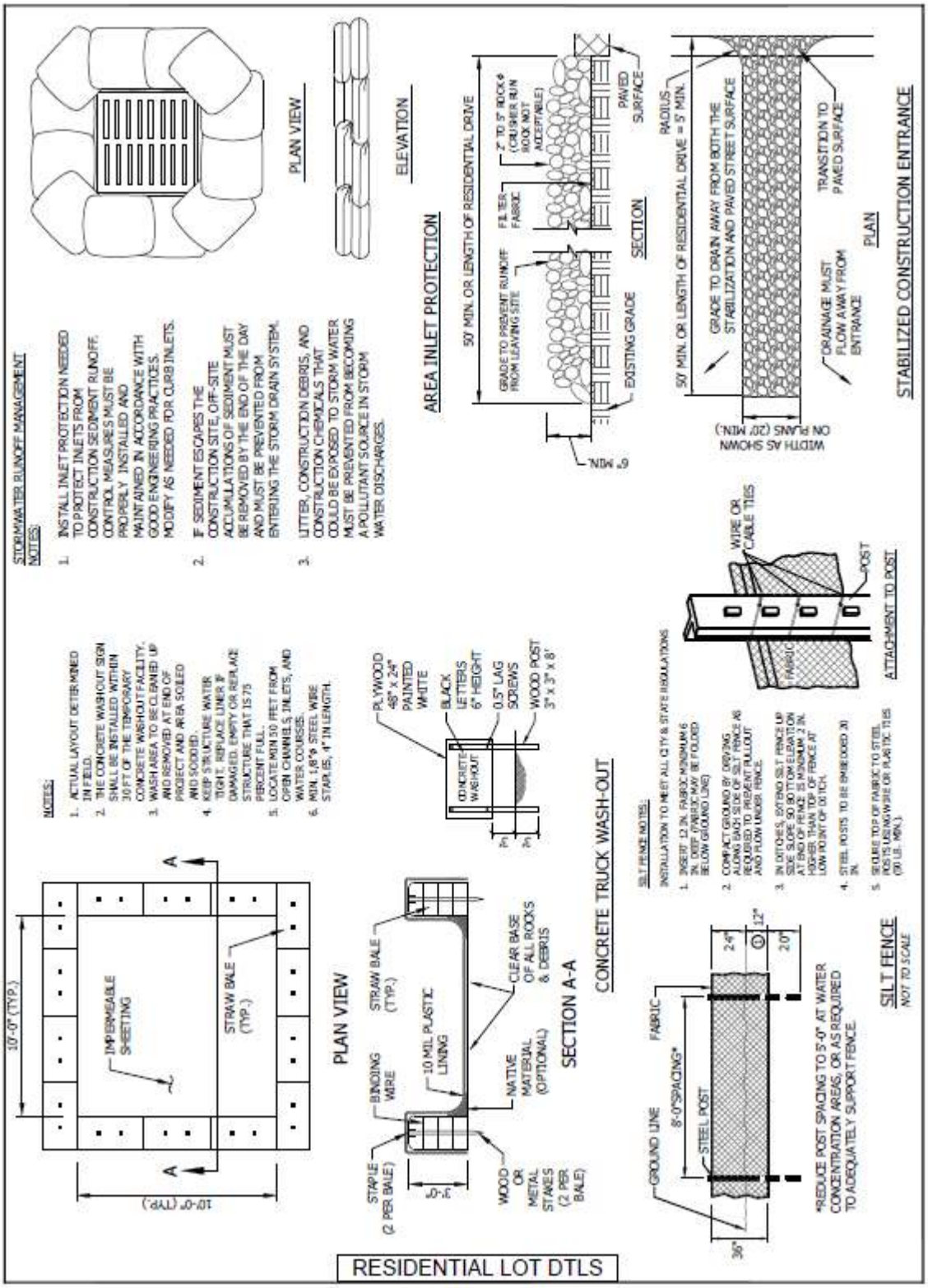

END LAP




ANCHOR SLOT
(1'-0" MAX. ANCHOR SPACING)

TRENCH INSTALLTION
N.T.S.

**F** EROSION CONTROL BLANKETS


STORMWATER RUNOFF MANAGEMENT
NOTES:
1. INSTALL INLET PROTECTION NEEDED TO PROTECT INLETS FROM CONSTRUCTION SEDIMENT RUNOFF. CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES. MODIFY AS NEEDED FOR CURB INLETS.
2. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED BY THE END OF THE DAY AND MUST BE PREVENTED FROM ENTERING THE STORM DRAIN SYSTEM.
3. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
PLAN VIEW
ELEVATION
AREA INLET PROTECTION
50' MIN. OR LENGTH OF RESIDENTIAL DRIVE
GRADE TO PREVENT RUNOFF FROM LEAVING SITE
FILTER FABRIC
2" TO 5" ROCK (CRUSHER RUN ROCK NOT ACCEPTABLE)
PAVED SURFACE
EXISTING GRADE
SECTION
6" MIN.
RADIUS
50' MIN. OR LENGTH OF RESIDENTIAL DRIVE = 5' MIN.
GRADE TO DRAIN AWAY FROM BOTH THE STABILIZATION AND PAVED STREET SURFACE
TRANSITION TO PAVED SURFACE
DRAINAGE MUST FLOW AWAY FROM ENTRANCE
WIDTH AS SHOWN ON PLANS (20' MIN.)
PLAN
STABILIZED CONSTRUCTION ENTRANCE
NOTES:
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. WASH AREA TO BE CLEANED UP AND REMOVED AT END OF PROJECT AND AREA SOILED AND SODDED.
4. KEEP STRUCTURE WATER TIGHT. REPLACE LINER IF DAMAGED. EMPTY OR REPLACE STRUCTURE THAT IS 75 PERCENT FULL.
5. LOCATE MIN 50 FEET FROM OPEN CHANNELS, INLETS, AND WATER COURSES.
6. MIN. 1.85 # STEEL WIRE STAPLES, 4" IN LENGTH.
10'-0" (TYP.)
IMPERMEABLE SHEETING
STRAW BALE (TYP.)
A
A
10'-0" (TYP.)
PLAN VIEW
STRAW BALE (TYP.)
BINDING WIRE
10 MIL PLASTIC LINING
CLEAR BASE OF ALL ROCKS & DEBRIS
NATIVE MATERIAL (OPTIONAL)
STAPLE (2 PER BALE)
WOOD OR METAL STAKES (2 PER BALE)
SECTION A-A
CONCRETE WASHOUT
PLYWOOD 48" x 24" PAINTED WHITE
BLACK LETTERS 6" HEIGHT
0.5" LAG SCREWS
WOOD POST 3" x 3" x 8'
CONCRETE TRUCK WASH-OUT
SILT FENCE NOTES:
INSTALLATION TO MEET ALL CITY & STATE REGULATIONS
1. INSERT 12 IN. FABRIC MINIMUM 6 IN. DEEP. (FABRIC MAY BE FOLDED BELOW GROUND LINE)
2. COMPACT GROUND BY DRIVING ALONG BACK SIDE OF SILT FENCE AS REQUIRED TO PREVENT FALLOUT AND FLOW UNDER FENCE.
3. IN DITCHES, EXTEND SILT FENCE UP SIDE SLOPE SO BOTTOM ELEVATION AT END OF FENCE IS MINIMUM 2 IN. HIGHER THAN TOP OF FENCE AT LOW POINT OF DITCH.
4. STEEL POSTS TO BE EMBEDDED 20 IN.
5. SECURE TOP OF FABRIC TO STEEL POSTS USING WIRE OR PLASTIC TIES (20 LB. MIN.)
WIRE OR CABLE TIES
POST
FABRIC
ATTACHMENT TO POST
GROUND LINE
FABRIC
8'-0" SPACING*
STEEL POST
2'-0"
12"
2'-0"
36"
*REDUCE POST SPACING TO 5'-0" AT WATER CONCENTRATION AREAS, OR AS REQUIRED TO ADEQUATELY SUPPORT FENCE.
SILT FENCE
NOT TO SCALE
RESIDENTIAL LOT DTLS

## Construction Site Stormwater Inspection Report

**Project Name:** _____

**Inspection Date:** _____ **Inspected By:** _____

**Reason for Inspection:** ☐ Begin Project ☐ Rain Event ☐ Monthly ☐ Complaint ☐ Project End (stabilized with 70% veg cover)

| | |
|---|---|
| **OKR10 Onsite Documents:** | ☐ Signage Posted ☐ SWP3 Onsite ☐ SWP3 Up-to-date |
| **(CHECK THESE EVERY TIME)** | ☐ Contractor's Inspection & Maintenance Records up-to-date |

**Construction Entrance Installed:** Yes No NA

Comments: _____

**Adjacent Pavement Protected and Kept Free of Tracked Dirt and Mud:** Yes No NA

Comments: _____

**Site free of trash and debris:** Yes No NA

Comments: _____

**Trash receptacles covered at night and during all rain events:** Yes No NA

Comments: _____

**Area Stormwater Inlets protected:** Yes No NA

Comments: _____

**Port-A-Potties anchored and located away from channels, gutters, and inlets:** Yes No NA

Comments: _____

**Area Ditches and Waterways protected:** Yes No NA

Comments: _____

**Chemicals & Materials properly stored and protected:** Yes No NA

Comments: _____

**Perimeter Controls in place:** Yes No NA

Comments: _____

**BMPs installed properly and functioning properly:** Yes No NA

Comments: _____

_____

_____

**Concrete Washout Onsite:** Yes No NA **If no - discussed?** Yes No NA

Comments: _____

**Dust Controlled:** Yes No NA **Soil stockpiles:** Yes No NA

Comments: _____

**Notes / Actions:** ☐ Verbal Instruction ☐ Written Warning ☐ $500/Day Fine ☐ ODOT Notified ☐ Follow-Up Inspection Needed Code Sec 1-18(a)

_____

_____

_____

# Written Notice of Non-Compliance with Soil Erosion and Sediment Control Requirements

All work being conducted on _____ (Project) at _____ address is hereby notified to come into compliance with the Soil Erosion and Sediment Control Requirements within _____ days or by _____ date.

Date of Inspection: _____

---

On behalf of (Contractor Company Name) _____ ,

I, _____ (Contractor Foreman / Superintendent), do hereby acknowledge receipt of this notice.

_____ _____

(Signature) (Date)

---

_____ _____

(City Stormwater Inspector or Stormwater Manager Signature) (Date)

city of bartlesville
CONNECTED / CREATIVE / VIBRANT

**Engineering Services Division**

City of Bartlesville
401 S Johnstone Ave
Bartlesville, OK 74003

Stormwater Manager:
918-338-4254
Stormwater Inspector:
918-331-8876

stormwater@cityofbartlesville.org

# STOP WORK ORDER

## For extended non-compliance with Soil Erosion and Sediment Control Requirements

All work being conducted at _____ (Address/Location)

on _____ (Project Name or Description)

Must come to an IMMEDIATE AND COMPLETE HALT.

No additional work shall be permitted on any part of the project until:

1. All Stormwater Requirements have been met.
2. The Site has been reinspected by City Stormwater Personnel.
3. A **Work Continuance Release Form** has been signed by the Stormwater Manager or Stormwater Inspector and issued to the Contractor.

---

On behalf of (Contractor Company Name) _____,

I, _____ (Contractor Foreman / Superintendent), do hereby acknowledge receipt of this notice.

_____ _____

(Signature) (Date)

---

_____ _____

(City Stormwater Inspector or Stormwater Manager Signature) (Date)

city of bartlesville
CONNECTED / CREATIVE / VIBRANT

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stormwater@cityofbartlesville.org

# WORK CONTINUANCE
# RELEASE FORM

_____ (Project Name or Type)

located at _____ (Project Address / Location)

was inspected by _____ (City Stormwater Inspector)

On _____ (Date of Inspection), and found the Project to be in compliance with all construction stormwater regulations. Therefore, upon receipt of this document, signed below by the City Stormwater Manager or City Stormwater Inspector, the Contractor may immediately resume work on the Project.

---

**ACKNOWLEDGEMENT OF RECEIPT**

On behalf of _____ (Contractor Company Name),

I _____ (Contractor Foreman / Superintendent), do hereby acknowledge receipt of this notice.

(Signature) _____ (Date) _____

**RELEASE APPROVAL:**

_____ _____

(City Stormwater Inspector or Stormwater Manager) (Date)

city of bartlesville
CONNECTED / CREATIVE / VIBRANT

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401 S Johnstone Ave
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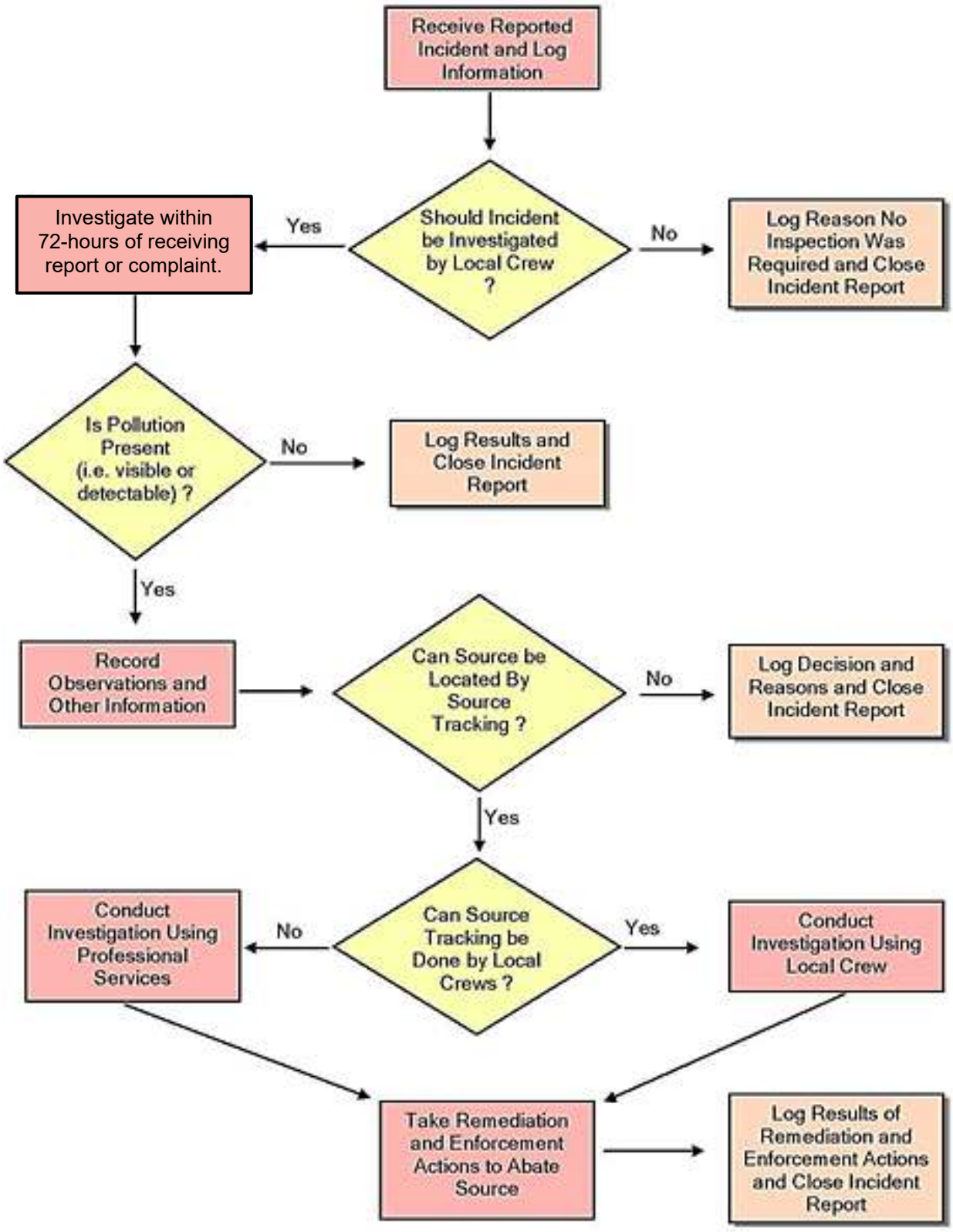
## APPENDIX H: FLOW CHART FOR INVESTIGATIONS OF STORMWATER POLLUTION INCIDENTS



Published in the Bartlesville Examiner Enterprise on January 11, 2015

ORDINANCE NO. 3143

**AN ORDINANCE AMENDING SECTIONS 7.4, 7.10, AND 7.11 OF THE ZONING REGULATIONS FOR THE BARTLESVILLE-WASHINGTON COUNTY METROPOLITAN PLANNING AREA, PERTAINING TO THE GENERAL DEVELOPMENT STANDARDS, LANDSCAPING REQUIREMENTS, AND SIGNS AND SIGN STRUCTURES.**

**WHEREAS**, the Metropolitan Area Planning Commission (MAPC) held a public hearing on December 16, 2014, to consider proposed amendments to the Zoning Regulations of the Bartlesville-Washington County Metropolitan Planning Area; and

**WHEREAS,** the City Council reviewed the recommendation of the MAPC and after conducting a second public hearing on January 5, 2015, concluded the proposed amendments to be appropriate.

**NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF BARTLESVILLE, OKLAHOMA:**

Section 1. That the Section 7.4, General Development Standards, of the Zoning Regulations of the Bartlesville-Washington County Metropolitan Planning Area are hereby amended as shown in the annotated copy and information attached hereto as Exhibit A.

Section 2. That the Section 7.11, Signs and Sign Structures, of the Zoning Regulations of the Bartlesville-Washington County Metropolitan Planning Area are hereby amended as shown in the annotated copy and information attached hereto as Exhibit B.

Section 3. That the Section 7.10.3(G). Development Design Standards, Signage Requirements for the Highway 75 Overlay District, of the Zoning Regulations of the Bartlesville-Washington County Metropolitan Planning Area is hereby amended in its entirety to read as follows:

G. Signage Requirements. Signage within the Highway 75 Overlay District shall comply with the provisions set forth in Section 7.11 of these Regulations, however, pole signs, billboards, and roof-mounted signs are expressly prohibited.

**PASSED** by the City Council and **APPROVED** by the Mayor of the City of Bartlesville, Oklahoma this 5th day of January 2015.

CITY OF BARTLESVILLE OFFICIAL SEAL OKLAHOMA

Tom Gorman, Mayor
City of Bartlesville
401 S. Johnstone Ave.
Bartlesville, OK 74006

ATTEST:

Mike Bailey, City Clerk
(SEAL)

Published in the Bartlesville Examiner Enterprise on January 11, 2023

*7.4.3.2 Minimum Size Requirements and Point system*

A. The developer may use any combination of plantings to obtain the necessary number of points required for the development. Different lots and landscapes will lend themselves to different types of plantings. These regulations attempt to encourage creativity and diversity and landscaping.
B. Different types and sizes of plants are worth different point values as set forth in the following table.

| Plant Type | Minimum Size at Time of Planting | Minimum Mature Size | Point Value |
|---|---|---|---|
| | | | |
| **Tree Classifications** | | | |
| **Large Tree** | 2-inch caliper and 8-feet in height | 30-feet in height | 12 |
| **Small Tree** | 1.5-inch caliper and 6-feet in height | 15-feet in height | 8 |
| **Note: 2 additional points for trees that are evergreen** | | | |
| | | | |
| **Shrub Classifications** | | | |
| **Large Shrubs** | 3-feet in height | 8-feet in height | 3 |
| **Medium Shrubs** | 2-feet in height | 5-feet in height | 2 |
| **Small Shrubs** | 18-inches in spread or height | 3-feet in height | 1 |
| **Note: 1 additional point for shrubs that are evergreen** | | | |
| | | | |
| **Ground Cover Classifications (excluding turf grass)** | | | |
| **Flowering Perennials** | 100 ft² | | 6 |
| **Green Perennials** | 100 ft² | | 4 |
| **Ornamental Grasses** | 100 ft² | | 6 |

C. The required number of points for any one area may be reduced by 40% if the total planting area is designed as a contiguous green space, serving as an approved vegetated low impact development storm water management area, to include but not limited to, vegetated infiltration soils, cascade pools, rain gardens, or bioswales.
D. The caliper of the tree trunk shall be measured at twelve inches (12") above the ground level.
E. Existing healthy vegetation may be counted toward the required landscaping, subject to approval and plant type classification for point valuation by the Community Development Director.
F. The use of hard scape materials and other non-living landscape materials, including but not limited to rock, stone, structural or decorative features such as fountains, reflecting pools, artwork, benches, gesturing and walkways, bicycle parking, and recreation facilities, may be proposed with final approval to be granted by the Community Development Director. However, in no case shall such hard scape or non-living landscape materials be approved which would exceed 25% of the total required landscaped area.

(Remainder of page intentionally left blank.)

## APPENDIX J: LID ORDINANCE – BARRIER REMOVED

Published in the Bartlesville Examiner Enterprise on SEPT. 14, 2022

**ORDINANCE NO. 3560**

**AN ORDINANCE AMENDING CHAPTER 11 OF THE BARTLESVILLE MUNICIPAL CODE AS IT PERTAINS TO NUISANCES AND PROPERTY ENHANCEMENT FOR THE PURPOSES OF ALLOWING AND REGULATING MANAGED NATURAL LANDSCAPE AREAS.**

**WHEREAS**, the City Council wishes to amend definitions contained in Chapter 11 of the Bartlesville Municipal Code to allow and regulate Managed natural landscape areas; and

**NOW, THEREFORE, BE IT ORDAINED, BY THE CITY COUNCIL OF THE CITY OF BARTLESVILLE, OKLAHOMA, that:**

Section 11-3 be amended to add the following new terms:

*Garden* means a cultivated area dedicated to growing vegetables, fruits, annual and perennial plants, ornamental grasses, or groundcovers, vines, shrubs, or trees in a location within a defined edge or border.

*Managed natural landscaping area* means any planned, intentionally cultivated, and maintained planting area which occupies all or most of a yard and which may include, without limitation, trees, shrubs, native plants, and other permitted plants that require little or no irrigation and where turf grass has been completely eliminated. Managed natural landscaping areas shall not include turf-grass lawns left unattended for the purpose of returning to a natural state or landscape areas that do not occupy most or all of a yard regardless of the types of plants.

*Native plants* mean those grasses (including prairie grasses), sedges (solid, triangular-stemmed plants resembling grasses), forbs (flowering broadleaf plants), vines, shrubs, groundcovers, and trees that are native and naturalized to the State of Oklahoma. For purposes of this Chapter, native plants shall not include noxious weeds or noxious grasses as defined herein.

*Noxious Weed* means any plant identified by the State of Oklahoma, Federal Government, or any State or Federal Agency as being noxious or invasive.

*Turf grass* shall mean those types of grasses that spread naturally to form a dense continuous sod mat. Such grasses are customarily grown for regularly cut lawn areas and managed grass spaces and present a finished, maintained appearance with proper maintenance and care. Such grasses may include, but are not limited to, Bahia, bent, Bermuda, Kentucky bluegrass, fescue, carpet, centipede, rye, St. Augustine, and zoysia grass.

*Unmanaged Vegetation Growth* means an unmaintained area in which any grass, turf grass, hay, weeds, brush or other vegetation has grown to a height exceeding twelve (12) inches as a result of the absence of active cutting, mowing, or other maintenance. This definition shall not include:

1. Gardens,
2. Vegetation located on agricultural land provided a minimum 50-foot buffer area is mowed and maintained along any adjacent property line abutting a public right-of-way or any developed lot, plot, or tract of land. For purposes of measuring the 50-foot buffer, any public right-of-way adjacent to a road that is mowed by a public agency may be included. When including publicly mowed rights-of-way, the total mowed area must extend 50-feet from the road edge.
3. Managed natural landscaping areas, provided that any such Managed natural landscape area which is visible from any public way, street, sidewalk or alley meets the following requirements:
    a. Where turf grass has been completely eliminated;
    b. Is clearly defined by a solid, impermeable barrier such as a landscape border, edging, rock, brick, fence or similar material;
    c. Maintains a transition area of ten feet (10') from the edge of roadway, or five feet (5') from the inside edge of public sidewalk if existing, whichever is greater, which is comprised of turf grass or plantings no taller than twelve inches (12") in height. For the purposes of this ordinance, a corner lot shall be deemed to have two front yards;
    d. Maintains a transition area of five feet (5') from the side and rear lot lines which is comprised of turf grass or plantings not exceeding twelve inches (12") in height. This 12" maximum height restriction may be waived if there is a fully opaque fence at least six feet (6') in height along the shared side or rear property line, or if the adjacent property is a natural landscape area, wetland, pond, lake, stream, or natural wooded area;
    e. Any natural landscape area exceeding twelve inches (12") in height may occupy no more than fifty percent (50%) of the existing yard area visible from the public right-of-way;
    f. Any planting exceeding four feet (4') in height, other than trees and shrubs, shall be located within fifteen feet (15') of a building or fence;
    g. Is cut at least annually to a height no greater than twelve inches (12") to remove dead or unmaintained growth;
    h. Contains only those plants which are identified as "Oklahoma Proven" or other plants identified as appropriate for Oklahoma by the Oklahoma State University Extension Office (https://extension.okstate.edu/fact-sheets/oklahoma-proven-plant-selections-for-oklahoma.html).
    i. Community Development Director shall have authority to make exceptions to this section based on unique aspects of the yard including but not limited to:
        i. Time allowed for yards to be brought into compliance

ii. Nonconforming, preexisting yards or areas with no history of code enforcement complaints
iii. Unusual sidewalk locations
iv. Other unique features not contemplated by this section

j. Community Development Director may also make exceptions to the list of plants identified in subsection (h) above if applicant is able provide authoritative guidance that the proposed plant meets the intent of this section.

*Weeds* shall include, but is not limited to, any of the following:

1. Any plant that exceeds twelve inches (12") in height, other than healthy trees, shrubs, or produce for human consumption grown in a tended and cultivated garden unless such trees and shrubbery by their density or location constitute a detriment to the health, benefit, and welfare of the public and community or a hazard to traffic or create a fire hazard to the property or otherwise interfere with the mowing of said weeds,
2. Regardless of height, harbors, conceals, or invites deposits or accumulation of refuse or trash,
3. Harbors rodents or vermin,
4. Gives off unpleasant or noxious odors,
5. Constitutes a fire or traffic hazard,
6. Is dead or diseased.
7. Any plant that poses a major threat to agriculture and/or natural ecosystems within the United States;
8. Sorghum halepense, commonly known as Johnson grass;
9. Any noxious weed.

Section 11-3 be amended to remove the following term:

*Slum-like* means a building, structure or premises characterized by deterioration or other similar conditions regardless of the condition of other properties in the neighborhood.

Section 11-4 B. shall be amended to read as follows:

B. Vegetation.

1. Any tree, bush, shrub, grass, or plant that constitutes a fire or traffic hazard, that interferes with, obstructs, tends to obstruct, or renders dangerous the free passage, use or vision in the customary manner of any sidewalk, street or highway in the city.
2. Any unmanaged vegetation growth as defined herein.
3. Failure to install or maintain landscaping as required by the zoning regulations or other applicable city codes.