

Stormwater Management Program (SWMP)

Revision: 1, 04-30-25



Town of Kiefer, Oklahoma

RECORD OF ANNUAL SWMP REVIEWS AND REVISIONS for the Town of Kiefer, Oklahoma

The Town of Kiefer has prepared this updated Stormwater Management Program (SWMP) document to address all new provisions in the 2021 OKR04 stormwater general permit. OKR04 **Part V.D.1** requires each permitted MS4 to “...conduct a review of your SWMP, at least annually, in conjunction with the preparation of the annual report required under Part VI(C).”

The SWMP cover page lists the revision number and date of the last revision made to this SWMP. The following tables record all dates of all reviews and revisions as well as a brief description of the types of changes made to the SWMP at each date, if any.

Table of SWMP Reviews:

SWMP Reviews:	Date Completed	SWMP Revisions Made? (yes / no)
2023 Update	05/25/23	
2024 Review	04/30/24	No
2025 Review	04/29/25	Yes
2026 Review		

Table of SWMP Revisions:

SWMP Revision	Date Completed	Brief Description of Changes Made
Revision 1	04/29/25	Updated BMP’s with suggestions from ODEQ
Revision 2		
Revision 3		
Revision 4		

SWMP PREAMBLE

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

Copies of this SWMP will be kept in-house for review by the public and DEQ upon request. OKR04 **Part V.A.1** requires the permittee “*to keep the SWMP document up to date during the term of the permit*”. **Part V.A.1** also requires that “*modifications and updates shall be reflected in your SWMP and implemented within two (2) years of the effective date of the permit, then as needed.*”

MCM-7: The Town of Kiefer has elected **not** to participate in the “*Optional Permit Requirements for Municipal Construction Activities*” (OKR04 **Part VIII**).

All six Minimum Control Measures (MCMs) have been addressed in this SWMP. In addition, this SWMP addresses the special requirements pertaining to 303(d) impaired waters, Total Maximum Daily Load (TMDL)s, Aquatic Resources of Concern (ARC) and Outstanding Resource Waters (ORW), as determined necessary by DEQ.

This SWMP presents a selection of Best Management Practices (BMPs) that address stormwater protection under each MCM. SWMP appendices describe the BMPs along with their Measurable Goals, activity descriptions and implementation schedules. In addition, the SWMP text provides implementation procedures for the BMPs along with referral citations to local Standard Operating Procedures (SOPs) and other local written procedural guidance as applicable.

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

To help implement certain aspects of the Phase II requirements, particularly regarding public education, participation, and training of city staff and crews, the Town of Kiefer will receive assistance from the Indian Nations Council of Governments (INCOG) as a member of INCOG’s Green Country Stormwater Alliance (GCSA). INCOG will provide regional services to GCSA members including stormwater education, employee training, and technical support. INCOG’s activities are described, where appropriate, in the SWMP and in the SWMP appendix of GCSA Services Agreement.

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EXECUTIVE SUMMARY

Stormwater Permitting Overview

In 1990, the U.S. Environmental Protection Agency (EPA) finalized regulations to develop water quality protection programs for 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 smaller cities (those under 100,000 population) and certain counties that contain Urbanized Area (UA) as defined by the US Bureau of Census. Phase II permits were also required for certain non-UA cities designated by the Oklahoma Department of Environmental Quality (DEQ). The DEQ has primary jurisdiction over permitting and enforcement of the Phase II Stormwater Program in Oklahoma. The Phase II stormwater permit (OKR04) is revised and reauthorized every 5 years.

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

1. *Public Education and Outreach on Stormwater Impacts*
2. *Public Involvement / Participation*
3. *Illicit Discharge Detection and Elimination*
4. *Construction Site Stormwater Runoff Control*
5. *Post Construction Stormwater Management in New Development and Redevelopment*
6. *Pollution Prevention / Good Housekeeping for Municipal Operations*

The latest version of OKR04 has an Effective Date of June 1, 2021. The new version of OKR04 combined EPA’s MCM 1 and 2 into a single MCM-1, and it creates a new MCM-2 for industrial activities applicable only to the 6 largest Phase II permittees in Oklahoma as of the time of permit approval. The 2021 OKR04 permit now has the following 6 MCMs:

1. *Public Education and Involvement*
2. *Industrial Stormwater Runoff Control*
3. *Illicit Discharge Detection and Elimination*
4. *Construction Site Stormwater Runoff Control*
5. *Post-Construction Management in New Development and Redevelopment*
6. *Pollution Prevention / Good Housekeeping for MS4 Operations*

The Town of Kiefer will participate in INCOG's Green Country Stormwater Alliance (GCSA), a regional coalition of stormwater permitted cities and counties in Oklahoma. Members of INCOG's GCSA will collectively fund, through annual membership dues, certain regional activities and technical assistance provided by INCOG that are described in this SWMP. INCOG's support services will include assistance in the following areas (see appendix of INCOG's GCSA Services Agreement):

- Public education and outreach support;
- Mapping assistance addressing MS4 features, 303(d) waterbodies, and TMDLs;
- Employee training on OKR04-required topics and technical, scientific, and legal issues;
- Training and assistance with field sampling, monitoring, and quality assurance;
- GCSA member staff education about water quality and permit requirements;
- Educating local councils, commissions, and management about OKR04 requirements;
- Assistance with development and updates of local codes and ordinances; and
- Assistance with data management, annual reports, document templates, and guidance.

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) that include implementation schedules and Measurable Goals for each BMP. Permittees must also implement additional requirements to address water quality within 303(d) and TMDL watersheds.

Regulatory Authority

The OKR04 permit provides the following summary of DEQ's legal authority for establishing the OKR04 stormwater permit program:

"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 252:606-1-3(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 DEQ with an effective date of June 1, 2021. The 2021 OKR04 permit will expire at midnight on May 31, 2026. Operators of Small MS4s (SMSRs) who submit a Notice of Intent (NOI) and associated documentation in accordance with OKR04 **Part III.A** will be authorized by DEQ to discharge stormwater from their MS4 system to

“Waters of the State” in accordance with the conditions and requirements set forth in the permit.

OKR04 further defines permittees in **Part II.A** (footnote 1): *“This 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 (\geq) 10,000 but less than or equal to (\leq) 100,000, and small MS4s located in UAs. Operators of small MS4s located outside of an UA may be designated as a regulated MS4.”*

To meet these regulatory requirements, this SWMP document specifies the actions that the Town of Kiefer will take to comply with DEQ’s stormwater regulations and address the six “Minimum Control Measures” required by EPA and OKR04 for a successful stormwater program.

Per OKR04 **Part V.D**, this SWMP will be reviewed at least annually by the Town of Kiefer and amended, as needed, to improve compliance strategies and meet any additional requirements that may be forthcoming under OKR04 or from other regulatory or DEQ administrative authority.

SWMP Document Overview

This SWMP document fulfills the OKR04 General Permit requirement to prepare a detailed plan of how the Town of Kiefer will address stormwater pollutant discharges within its permitted MS4 and Urbanized Area.

The Town of Kiefer will start working on a Standard Operating Procedures (SOP) document that contains detailed methods and procedures used to meet many of the SWMP requirements, including addressing Part IV.A 303(d) impairment after completing their SWMP. Specific SOPs will be cited in this SWMP as amendments where applicable. The SOP document will be reviewed at least annually and updated as needed.

GENERAL SWMP REQUIREMENTS

OKR04 Part II.B: Authorized Non-Stormwater Discharges

There are several passages in OKR04 that pertain to “Authorized Non-Stormwater Discharges”.

1. **Part II.B.2:** *(Types of Authorized Discharges)*
2. **Part V.C.3.a.viii:** *(Maintain and Annually Update a List of Incidental Non-stormwater Discharges)*
3. **Part II.B.2.r:** *(Authorized Discharges, Emergency Firefighting Activities)*
4. **Part II.B.3.b and c:** *(Non-stormwater Discharges Authorizing Conditions)*

5. **Part II.C.1.b:** *(Determining that non-stormwater discharges are not substantial contributors of pollutants)*

A “non-stormwater discharge” under OKR04 **Part II.B.2** can be considered an “illicit discharge” as defined in OKR04 **Part I.H** as “*any discharge to the municipal separate storm sewer that is not composed entirely of storm water*”. Certain non-stormwater discharges have been determined by DEQ and the MS4 to not cause or have the reasonable potential to cause significant water quality pollution problems.

Non-stormwater discharges that must be addressed in the SWMP (see OKR04 citations in the numbered items above) are addressed in the SWMP provisions below. Two separate OKR04 passages refer to developing a local list of authorized non-stormwater discharges: **Part II.B.2** and **Part V.C.3.a.viii**. These are addressed below and are listed in Table 1.

Part II.B.2 (Types of Authorized Discharges)

Part V.C.3.a.viii (Maintain and Annually Update List of Incidental Non-stormwater Discharges)

OKR04 **Part II.B** provides for local allowance of certain non-stormwater discharges which are specifically listed in OKR04 **Part II.B.2** (see Items a through r below of authorized non-stormwater discharges). OKR04 **Part II.C.1** sets the following conditions for local determination of allowable discharges mixed with non-stormwater:

1. *Discharges mixed with non-stormwater are unauthorized unless such discharges are*
 - a. *in compliance with a separate OPDES or NPDES permit, or*
 - b. *determined not to be a substantial contributor of pollutants to waters of the state in accordance with Part II(B)(2) of this permit.*

Part V.C.3.a.viii addresses MCM-3 IDDE requirements and requires that the list of authorized non-stormwater discharges must be maintained and annually updated as needed:

- viii. *Maintain and annually update a list of occasional incidental non-stormwater discharges or flows as allowed in Part II(B)(2) that will not be addressed as illicit discharges.*

List of Authorized Non-Stormwater Discharges for the Town of Kiefer:

Using the **Part II.C.1.b** assessment process in Table 3 below, the Town of Kiefer has determined that the following non-stormwater sources listed in Table 1 are not substantial contributors of pollutants to the MS4 and/or they result from activities to protect public health and safety and are therefore allowed:

Table 1: Town of Kiefer’s Authorized Non-Stormwater Discharges

a. diverted stream flows;
b. uncontaminated discharges from riparian areas and wetlands;
c. uncontaminated ground water or spring water;
d. residential building wash water that does not use detergents, solvents, and/or soaps;
e. uncontaminated pumped ground water;
f. uncontaminated ground water infiltration;
g. uncontaminated discharges from potable water sources, including water line flushing and fire hydrant flushing;
h. foundation drains;
i. air conditioning condensate;
j. water from crawl space pumps;
k. footing drains;
l. residential, non-commercial, and charity car washing;
m. landscape irrigation and lawn watering, provided all pesticides, herbicides, and fertilizers have been applied in accordance with the approved manufacturers’ instructions and/or labeling;
n. uncontaminated and dechlorinated swimming pool discharges;
o. 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;
p. discharges in compliance with a separate Oklahoma Pollutant Discharge Elimination System (OPDES) or National Pollutant Discharge Elimination System (NPDES) permit;
q. 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 dechlorinated); and
r. discharges or flows from emergency firefighting activities or training activities that are not taking place at a permanent facility, provided procedures 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. <ul style="list-style-type: none"> i. Measures must be taken to reduce any such pollutant releases to the MEP subject to all appropriate actions necessary to ensure public health and safety. ii. These procedures must be documented in your <u>SWMP</u>. iii. These discharges must be in compliance with Part IV.

Part II.B.2.r (Authorized Discharges, Emergency Firefighting Activities)

Part II.B.2.r requires the MS4 to assess impacts from firefighting activities. Subpart “r” states:

- r. discharges or flows from emergency firefighting activities or training activities that are not taking place at a permanent facility, provided procedures 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.*
 - i. Measures must be taken to reduce any such pollutant releases to the MEP subject to all appropriate actions necessary to ensure public health and safety.*
 - ii. These procedures must be documented in your SWMP.*
 - iii. These discharges must be in compliance with Part IV.*

Emergency Firefighting Pollutant Release Procedures:

The local Fire Chief or Incident Commander at the firefighting scene will report to the Town of Kiefer OKR04 Stormwater Manager and/or Town Administrator any observed releases of chemicals into the MS4 and/or waterbodies. If local remediation is necessary and possible, incident responders will be implement actions consisting of deploying absorbents, chemical neutralizers, and socks to contain, neutralize and/or remove the chemicals. If the release is beyond the capability of local resources to safely and effectively remediate, then the Town of Kiefer will contact an outside emergency response company for large-scale hazardous waste remediation.

Part II.B.3.b and c: (Non-stormwater discharge authorizing conditions)

OKR04 **Part II.B.3.b and c** both require adding provisions to the SWMP regarding limitations or local controls required by the MS4 for a non-stormwater discharge to be allowed:

- 3. Non-stormwater discharges are authorized only under the following conditions:*
 - a. Discharges are insignificant sources of pollutants to your small MS4 because of the nature of the discharges or because of the conditions you have established for allowing these discharges to occur (e.g., charity car washes with appropriate controls, proximity to sensitive waterbodies).*
 - b. Document in your SWMP any local controls or conditions placed on discharges.*
 - c. Include a provision in your SWMP prohibiting any individual non-stormwater discharge that is determined to be contributing significant amounts of pollutants to your MS4.*

Currently, the Town of Kiefer does not feel as though it is necessary to implement additional controls on authorized non-stormwater discharges to waters of the state within the Town boundaries. As required in subpart “b” and “c”, the Town of Kiefer will apply additional controls, conditions, or prohibitions and list them in Table 2 on the non-stormwater discharges in Table 1 above, as necessary:

Table 2: Non-Stormwater Discharge Controls, Conditions or Prohibitions

Allowable Non-Stormwater Discharge	Local Controls or Conditions That Will Be Applied	Prohibited Non-Stormwater Discharge	Reason For Discharge Being Prohibited
diverted stream flows;	None		
riparian area and wetland discharges;	None		
ground water or spring water;	None		
residential building wash water;	None		
pumped ground water;	None		
ground water infiltration;	None		
water line and fire hydrant flushing;	None		
foundation drains;	None		
air conditioning condensate;	None		
water from crawl space pumps;	None		
footing drains;	None		
residential and charity car washing;	None		
landscape irrigation and lawn watering;	None		
dechlorinated swimming pool discharges;	None		
street wash water;	Prohibited	Prohibited	Negative impact
OPDES or NPDES permitted discharges;	None		
gray water from municipal splash pads; and	None, must be permitted by ODEQ		
firefighting or training discharges	None		

Part II.C.1.b (Determining that non-stormwater discharges are not substantial contributors of pollutants)

Part II.C.1.b requires the MS4 to determine that authorized non-stormwater discharges are not substantial contributors of pollutants:

1. *Discharges mixed with non-stormwater are unauthorized unless such discharges are*
 - a. *in compliance with a separate OPDES or NPDES permit, or*
 - b. *determined not to be a substantial contributor of pollutants to waters of the state in accordance with Part II(B)(2) of this permit.*

The following matrix assessment process presented in Table 3 is applied to the list of authorized non-stormwater discharges in Table 1. The assessment presented in Table 3 will be periodically reviewed by the Town of Kiefer and updated, as needed, in this SWMP. Any local controls or discharge conditions required by the Town of Kiefer on any of these incidental discharges will also be placed in this SWMP in Table 2.

Table 3: Assessments of Authorized Non-Stormwater Discharges

ALLOWABLE DISCHARGE	SAFETY (1)	IMPACT (2)	NATURAL (3)	PERMIT (4)
a. diverted stream flows;			X	X
b. riparian area and wetland discharges;			X	
c. ground water or spring water;			X	
d. residential building wash water;		X		
e. pumped ground water;			X	
f. ground water infiltration;			X	
g. water line and fire hydrant flushing;	X	X		
h. foundation drains;		X		
i. air conditioning condensate;		X		
j. water from crawl space pumps;	X	X		
k. footing drains;	X	X		
l. residential and charity car washing;		X		
m. landscape irrigation and lawn watering;		X		
n. dechlorinated swimming pool discharges;		X		

ALLOWABLE DISCHARGE	SAFETY (1)	IMPACT (2)	NATURAL (3)	PERMIT (4)
o. street wash water;	X	X		
p. OPDES or NPDES permitted discharges;				X
q. gray water from municipal splash pads; and		X		X
r. firefighting or training discharges	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.*

OKR04 Part II.D: Historic Preservation

Part II.D states that: *“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 (NHPA). 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 O.S. §§ 1168.0-1168.6), as well as with any applicable local laws concerning the identification and protection of historic properties.*

Applicants and permittees who may receive federal funding or other federal assistance in the completion of their projects must be aware that compliance with section 106 of the NHPA may apply. 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, contact the following:”

State Historic Preservation Office: (contact information is listed in OKR04 **Part II.D**)

Oklahoma Archeological Survey: (contact information is listed in OKR04 **Part II.D**)

The Town of Kiefer 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 Town of Kiefer 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 Town of Kiefer under OKR04 do not require Section 106 review under the National Historic Preservation Act.

OKR04 Part II.E: Meeting Eligibility Criteria for Endangered Species

Part II.E The purpose of OKR04 **Part II.E** is to ensure that rare and endangered species and their critical habitat are not harmed by discharges from the MS4. The **Part II.E. subparts 1 and 2** passages that are relevant to this requirement are (underlines added for effect):

1. Eligibility Criteria

- a. *Activities authorized by this permit must avoid unacceptable effects to federal and state listed endangered or threatened (listed) species or designated critical habitats. Direct and indirect effects must be considered. Coverage under this permit is available only if your stormwater discharges, ... are not likely to
 - i. jeopardize the continued existence of any listed species or result in the adverse modification or destruction of critical habitat, or
 - ii. cause a prohibited “take” of endangered or threatened species, unless such “take” is authorized under sections 7 or 10 of the Endangered Species Act (ESA).*
- b. *Discharge-related activities authorized by this permit include activities which cause, contribute to, or result in stormwater point source pollutant discharges and measures to control stormwater discharges. These include the construction and operation of BMPs to control, reduce, or prevent stormwater pollution.*

2. Eligibility Certification

- a. *You must certify that you have met eligibility criteria for protection of threatened or endangered species and their critical habitat. Your signed NOI will constitute your certification of eligibility. This eligibility must be evaluated before the NOI is submitted.*
- b. *You must state on the NOI which of the criteria listed in Part II(E)(2)(c) you are relying upon for meeting the Endangered Species eligibility.*
- c. *You must meet one or more of the criteria below for the entire term of coverage under this permit. If you are located partially or wholly in an area described in Exhibit I, then you must meet criterion B, C, D, or E for the term of this permit. If you are not located in the shaded area or watersheds listed in Exhibit I, then you meet the terms of criterion A. The information used to make the eligibility determination must be documented and included as part of the SWMP.*

Only those MS4s that have at least some portion of OKR04’s Exhibit 1 Aquatic Resources of Concern (ARC) within their MS4 area must meet Criterion B, C, D or E as specified in OKR04 **Part II.E.2.c** cited above. MS4s that do not have any ARC within their MS4s meet Criterion A.

The Town of Kiefer has reviewed the eligibility criteria and requirements of OKR04’s **Part II.E** and has determined that no part of the Town of Kiefer’s MS4 contains areas of Aquatic Resources of

Concern (ARC) as described in OKR04 **Exhibit 1**, therefore Criterion A was selected in Item 5 of the Notice of Intent (NOI) Form.

OKR04 **Part II.E.2.c** requires that: *“The information used to make the eligibility determination must be documented and included as part of the SWMP.”* Appendix A provides the methods and documentation of the assessment used by the Town of Kiefer to select Criterion A.

OKR04 Exhibit III (NOI Form): Information About the MS4

The Notice of Intent (NOI) Form (OKR04’s **Exhibit III**) requires identification of important information about the MS4 features within the municipal boundaries. This information is also important for the SWMP document itself, so the NOI’s MS4 features are presented here.

NOI Item I (MS4 Information): There are two ways a city or county is identified as a Phase II permittee by DEQ:

1. If any portion of a city’s corporate limits or a county’s unincorporated area contains Urbanized Area (UA) as defined by the latest US Bureau of Census, or
2. If a non-UA city is designated as a Phase II permittee by DEQ based upon population, density, and certain water quality attributes (refer to DEQ’s OKR04 Fact Sheet for process).

Several counties in Oklahoma have been designated as Phase II permittees by DEQ based upon having unincorporated area that contains UA. For permitted cities, the “MS4 jurisdiction” area is defined on the NOI Form as: *“Your MS4 jurisdiction shall cover the entire area within the corporate boundaries of the municipality if your city is not located entirely within an Urbanized Area.”*

Appendix B contains a map of the Town of Kiefer’s MS4 area. More detailed maps are used by town personnel to show areas of special interest such as older sewer lines, concentrations of onsite septic systems, industrial and commercial areas, and areas of special concern. The following latitude-longitude coordinates are of the Town of Kiefer’s approximate MS4 center:

- Latitude: 35.9438
- Longitude: -96.053

The approximate size of MS4 jurisdictional area for the Town of Kiefer is 2.36 sq. mi. based upon estimated visual approximation from the MS4 map.

NOI Item II (MS4 Contact Information): The MS4 contact information is covered in Contact Information just before the SWMP Preamble in this SWMP.

NOI Item III (Co-Permittee Information): The Town of Kiefer is not a co-permittee with another stormwater permittee.

NOI Item IV (Receiving Water Information): The Town of Kiefer’s MS4 system discharges to the major receiving waters listed in Table 4, along with any 303(d) impairments or TMDL’s listed in the most recent integrated report (2022) for the waterbody at the time of SWMP review (2023).

Table 4: MS4 Receiving Waters Information (2022 Integrated Report)

Waterbody Name	WBID (1)	303(d) Parameters (2)	TMDL Parameters (3)	In Table IV-2 (Yes / No)
Childres Creek	OK120420020160_00	Chloride	None	No
Skull Creek	OK120420020170_00	None	None	No

- (1) WBID = Waterbody identification number; used by DEQ and other agencies in Oklahoma.
- (2) 303(d) = Waterbody is on the current 303(d) list of impaired waterbodies.
- (3) TMDL = All waterbodies with approved TMDLs, not just those listed in OKR04 Table IV-2.

Outstanding Resource Waters (ORW): Item IV of the NOI Form also asks if the MS4 “discharges into an Outstanding Resource Water” (ORW). Most MS4s in Oklahoma do not have discharges into any ORW, so they have no permit obligations to protect ORW. Any MS4 with OKR04-permitted stormwater discharges into any ORW must comply with OKR04 **Part IV.C** which is a simple paragraph that triggers very complex ORW protection strategies beyond the scope of the SWMP document itself. ORW protection strategies are worked out in negotiations with the MS4 and DEQ under a separate compliance program.

The Town of Kiefer does not have any MS4 discharges to any Outstanding Resource Water (ORW) in Oklahoma.

NOI Item V (Endangered Species Eligibility): Discussed in the SWMP section “Meeting Eligibility Criteria for Endangered Species – OKR04 Part II.E” above.

Based upon the assessment in Part II.E., Criterion A was selected in Item 5 of the Notice of Intent (NOI) Form. MS4s that do not have any ARC within their MS4s meet Criterion A. Appendix A provides the methods and documentation of the assessment used by the Town of Kiefer to select this criterion.

NOI Item VI (Optional MCM-7 Information): OKR04 **Part VIII**, “Optional Permit Requirements for Municipal Construction Activities” provision allows MS4s the option to select a different, and simpler, alternative to the OKR10 stormwater permit coverage for MS4-owned local construction projects.

The Town of Kiefer has elected to not use MCM-7 for municipal construction activities.

NOI Item VII (Required NOI Attachments): The map of the Town of Kiefer’s MS4 boundaries required under Item VII of the NOI Form is provided in Appendix B of the SWMP.

NOI Item VIII (Reporting Period for Annual Report): OKR04 Part VI.C, Annual Reports, allows MS4s to select to implement their SWMP program on a Fiscal Year (FY) or Calendar Year (CY) basis to best suit local circumstances.

The Town of Kiefer will implement its SWMP on a calendar year (January-December) basis. This choice will require each Annual Report to be submitted no later than April 30th.

**OKR04 Parts V.A.5 and VI.C.1.i:
Relying on Another Government Entity**

Part V.A.5 has a special provision to document if another government entity is implementing or sharing implementation of one or more MCMs with the MS4 provided that there is a written agreement. **Part V.A.5** further requires that the written agreement be maintained as part of the SWMP. The other government entity can agree to report on the MCM(s) it is implementing, but it must follow the reporting requirements contained in OKR04 **Part V.C** which covers all 6 MCMs and the Annual Report.

Part VI.C.1.i is an Annual Report requirement for the MS4 to provide notice to DEQ that it is relying on another government entity *“to satisfy some of its permit obligations”*, and to attach a copy of the written agreement with that entity to the Annual Report.

Table 5 lists the government entities that are providing assistance to the Town of Kiefer for certain MCM tasks and program assistance. The Town of Kiefer was contracting with INCOG to manage their OKR04 Stormwater Program with assistance from the Town of Kiefer personnel but the contract ended in 2025. The program is now managed by Jade Jones of Twin Rivers Environmental Consulting. A copy of the contract for services between the Town of Kiefer and Twin Rivers Environmental Consulting, LLC is available upon request.

Table 5: Implementation Tasks of Another Government Entity *

Government Entity	MCM Implementation Tasks Performed by Government Entity	Implement Entire BMP?	Implement Partial BMP?	Provide Technical Support?
INCOG	Co-host water quality and stormwater conferences		X	X
INCOG	Host employee training workshops and virtual meetings		X	X

Government Entity	MCM Implementation Tasks Performed by Government Entity	Implement Entire BMP?	Implement Partial BMP?	Provide Technical Support?
INCOG	Develop and update education outreach materials		X	
INCOG	Research and report on technical and legal stormwater issues			X
INCOG	Maintain regional GCSA website		X	
INCOG	Prepare guidance documents, templates and plans			X
INCOG	Prepare workbooks, fact sheets, news bulletins and other reports			X
INCOG	Provide individual local training and assistance upon request		X	
INCOG	Prepare MS4 systems maps, field forms and assist with inspections		X	X
INCOG	Assist preparing SWMPs, QAPPs, NOIs, Annual Reports, etc.		X	X

* Agreement copies are provided in Appendix C. BMPs and tasks listed in the table above are provided through GCSA as requested by GCSA members and circumstances allow.

OKR04 Part III.B: MS4 Category Assigned by DEQ

Part III.B divides Oklahoma’s Phase II Small MS4s into categories based upon population size in the latest US Bureau of Census. OKR04’s three MS4 Categories and their criteria are presented in Table 6. Many implementation requirements in OKR04 are Category-dependent. Therefore, specific actions taken by the Town of Kiefer and the frequency of implementation will conform to the Category-specific requirements stated in the OKR04 permit.

Table 6: DEQ Criteria for Assigning MS4 Categories

CATEGORY	MS4s HAVING UA	MS4s OUTSIDE OF A UA
1	Pop. < 10,000 within a UA	n/a
2	Pop. 10,000 to < 50,000 within a UA	Pop. 10,000 to 100,000 with pop. density of ≥ 1,000 / sq. mi.
3	Pop. ≥ 50,000 within a UA	n/a

Using these criteria, DEQ assigned each of the Phase II permittees in Oklahoma to one of three Categories. **The Town of Kiefer was designated by DEQ as Category 1.**

OKR04 Part III.D: Co-Permittees

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

ADDRESSING 303(d) IMPAIRED WATERS

OKR04 Part IV.A Discharges To 303(d) Impaired Waters

The following items are presented as background information to support the SWMP strategies for addressing 303(d) impairment as required by OKR04 **Part IV.A**.

Special Conditions: OKR04 **Part IV** (“Special Conditions and Compliance with Water Quality Standards”) is a significant part of the OKR04 permit that goes beyond merely addressing the 6 Minimum Control Measures (MCMs). OKR04 **Part IV** requires MS4 permittees to address three different “Special Conditions” of water quality:

Part IV.A: Discharges to 303(d) Impaired Waters

Part IV.B: Established Total Maximum Daily Load (TMDL) Allocations

Part IV.C: Discharges to Outstanding Resource Waters (ORW)

Because of the importance of Special Conditions in OKR04 permit implementation and compliance, this SWMP will address 303(d) impairments and TMDLs under separate sections in this SWMP document. Appendix B includes an MS4 map showing the location of all 303(d) and TMDL waterbodies that must be addressed by OKR04 **Part IV**.

ORW: For the 2021 OKR04 permit, DEQ only lists one Phase II permittee in Oklahoma that must comply with the ORW provisions in OKR04 **Part IV.C**. The Town of Kiefer **does not** discharge to Outstanding Resource Waters (ORW).

303(d): OKR04 **Part IV.A** requires for each MS4 permittee that: *“If you have discharges to receiving waters included in the latest section 303(d) list of impaired waters under the CWA, you must document in your SWMP how you will comply with the following requirements..”* OKR04 **Part IV.A.1** has seven sub-parts (Items **1.a – 1.h**) that must be addressed in the SWMP. The Town of Kiefer **does** discharge to one 303(d) listed stream, Childres Creek which is impaired for chloride.

SOPs: Most of OKR04’s 303(d) subparts require implementing very technical and detailed strategies that are too lengthy to include in this SWMP document. In such cases, the Town of Kiefer will use separate documents, locally prepared as written guidance or Standard Operating Procedures (SOPs). Such stand-alone documents will be cited in the SWMP subsections where appropriate. Each written guidance document and/or SOP will have revision numbers and dates

along with other document instructions, and they will be reviewed periodically and updated as needed.

Reasonable Potential: In addition to the OKR04 **Part IV.A** general requirement to document in the SWMP how 303(d) impairments will be addressed, OKR04 **Part IV.A.1** further requires the MS4 permittee to: *“Implement and maintain BMPs that will ensure that the 303(d) impairment caused by identified pollutants (e.g., nitrogen, phosphorus, bacteria) in your receiving waters will not cause, have the reasonable potential to cause, or contribute to an in-stream exceedance of water quality standards.”*

Discharges: DEQ recently clarified the definition of MS4 areas having “discharges into” a 303(d) waterbody. If any part of the MS4 has a discharge inside a 303(d) watershed and within one mile of the actual 303(d) waterbody, then the MS4 must address its impacts on the 303(d) waterbody. This is true even if the discharge first flows into an unlisted tributary of the 303(d) waterbody; if the discharge point is within one mile of the 303(d) waterbody, it must be addressed by the MS4.

POCs: It is also important to note that OKR04 **Part IV.A** requires that the MS4 address only the 303(d) listed “Pollutants of Concern” (POCs) in their SWMP 303(d) strategy; no other pollutants are required to be addressed by OKR04 **Part IV.A**. If a future 303(d) List changes the POCs of impairment, e.g., from E. coli to Dissolved Oxygen, then the SWMP’s 303(d) program must be updated to address the latest 303(d) listing.

BMPs: DEQ also requires the MS4 to continue implementing the same 303(d)-based BMPs and pollutant reduction strategies for the old 303(d) listing even if the waterbody is no longer impaired for the old targeted POC. This is because it is assumed that the BMPs and strategies were effective in controlling impairment, so the practices must continue to be implemented.

OKR04 Part IV.A.1.a: Plan To Address 303(d) Impairments

OKR04 **Part IV.A.1.a** states: *“You must develop a plan which lists the BMPs you have implemented or will implement to reduce the pollutants of concern. The plan must describe how you expect the selected controls to reduce the pollutants of concern.”*

SOPs: The OKR04 permit does not require specific BMPs or specific actions to be taken to comply with this provision; instead DEQ expects each MS4 to develop a 303(d) Plan that best suits the MS4’s local circumstances and resources. The Town of Kiefer has prepared a Standard Operating Procedures (SOP) document that contains detailed methods and procedures used to meet many of the SWMP requirements, including addressing Part IV.A 303(d) impairment. Specific SOPs are cited in this SWMP where applicable.

List of 303(d) Waterbodies:

Table 7 lists all waterbodies that are in DEQ’s latest Integrated Report Appendix C for 303(d) impairment and into which the Town of Kiefer’s MS4 discharges. The most current 303(d) List at the time of preparing the latest revision of this SWMP is 2022.

Table 7: Latest List of 303(d) Waterbodies Receiving MS4 Discharges

Waterbody Name	WBID	303(d) List Parameters	303(d) Category *
Childres Creek	OK120420020160_00	Chloride (Cl ⁻)	5b

**5b – A review of the Water Quality Standards will be conducted before a TMDL is scheduled.*

BMPs Addressing 303(d) Impairments:

OKR04 Part IV.A.1.a requires that BMPs be implemented to address the 303(d) impairments for each 303(d) waterbody. Appendix E lists all BMPs that are to be implemented by the Town of Kiefer under this SWMP, including those targeted at 303(d) POCs. The BMPs in Appendix E that specifically address 303(d) impairments are also identified in the appendix as well as in Table 8 below for each POC impairment parameter.

All 303(d) focused BMPs have been selected and will be implemented to ensure that stormwater discharges from the MS4 will not cause, have the reasonable potential to cause, or contribute unnecessarily to an in-stream exceedance of water quality standards.

Table 8: 303(d) BMPs and Pollutant Reduction Expectations *

303(d) Waterbody	303(d) Pollutant	BMP ID and Description	Pollutant Reduction Expectations
Childres Creek	Chloride (Cl ⁻)	All known well sites will be inspected twice per year.	The Town of Kiefer is not believed to be a significant contributor to the Cl ⁻ impairment in Childres Creek and this BMP will enable the Town to quickly respond to any spill that may impact this creek.
Childres Creek	Chloride (Cl ⁻)	The Town will refrain from using Cl ⁻ based salts and deicers whenever possible.	By not using Cl ⁻ based salts and deicers on roadways the Town will minimize the likelihood of contributing to the impairment of Childres Creek.

** These 303(d) specific BMPs are also included in Appendix E of all SWMP program BMPs.*

OKR04 Part IV.A.1.b: Education Outreach Targets

Part IV.A.1.b states: *“Your outreach programs must be directed toward targeted groups of commercial, industrial and institutional entities likely to have significant stormwater impacts on your impaired waters.”*

OKR04 **Part IV.A.1.b** does not require additional outreach specifically. Rather, it requires the MS4 to assess its existing education outreach under MCM-1 and other MCMs and identify audience targets likely to have significant 303(d) pollutants in their discharges.

BMPs and Targets:

The Town of Kiefer has selected its public education and outreach BMPs and activities based upon the types of residential, industrial, commercial and institutional pollutant sources that are known or anticipated to exist within the MS4 and also have the greatest potential to discharge 303(d) pollutants in their stormwater runoff. By focusing the types of education materials on 303(d) high priority target audiences, the Town of Kiefer will have greater success in reducing 303(d) pollution through its education outreach program.

Table 9 is a comprehensive list of high priority education outreach targets that apply to the 303(d) Pollutants of Concern (POCs) within the MS4 area. The 303(d) education outreach BMPs listed in Table 8 and in Appendix E will be used at the implementation frequencies and schedules specified in Appendix E for the outreach targets associated with each 303(d) pollutant in Table 7.

Table 9: 303(d) Pollutant Education Outreach Targets *

303(d) Pollutant	Education Outreach Targets
Chlorides	<u>Homeowners</u> : use and disposal of deicing agents <u>Industrial</u> : on-site storage and disposal of chemicals <u>Commercial</u> : proper storage and disposal of chemicals <u>Municipal</u> : streets chemical application for ice control

* The 303(d) education outreach BMPs are included in Table 8 and Appendix E and will be used at the implementation frequencies and schedules specified in Appendix E.

OKR04 Part IV.A.1.c: Non-Stormwater Discharges of POCs

Part IV.A.1.c states: *“You must identify any non-stormwater discharges that contribute significant pollutants to your impaired waters.”*

POC Sources:

Non-stormwater discharges refer to discharges of rainfall runoff and snowmelt from the MS4 collection system that are *“not composed entirely of storm water”*. Non-stormwater discharges have materials dissolved or suspended in the stormwater runoff that are potential pollutants. If

these materials are 303(d) POCs and if their discharges are considered significant, then OKR04 **Part IV.A.1.c** requires the MS4 to identify the sources.

Source identification will be an ongoing process with frequent updates and changes as the body of knowledge about pollutant sources within the MS4 grows. For example, new construction sites are often potential significant sediment sources that affect turbidity and sedimentation/siltation in local streams. New residential subdivisions can become significant new sources of nutrients and bacteria. Changes in commercial and industrial development can also result in increased potential sources of nutrients, pesticides, heavy metals and other 303(d) POCs.

The only 303(d) impaired stream that the Town of Kiefer discharges to is Childres Creek and it is impaired for chloride only. In this case the chloride impairment is thought to be directly related to prior oil field activities primarily outside of the town’s city limits, but within the Childres Creek watershed.

List of Significant 303(d) Pollutant Sources:

In order to comply with OKR04 **Part IV.A.1.c**, the Town of Kiefer has made an initial assessment of potential non-stormwater discharges within its MS4 that could contribute significant pollutants to each of the 303(d) impaired waters identified in Table 7. These sources are listed in Table 10 below for each 303(d) waterbody and for each POC identified in Table 7.

The potential significant sources listed in Table 10 will be reassessed annually along with the annual SWMP review as a way to keep all significant POC sources updated.

Table 10: List of Potential Significant 303(d) Pollutant Sources *

303(d) Waterbody	303(d) Pollutant	POC Source Type	Source Location / Description
Childres Creek OK120420020160_00	Chloride (Cl ⁻)	Presumed to be an artifact of prior oil field work in the Glenpool Oil Formation	Watershed wide seepage of chlorides from the soil after many years of oil production dating back many years
Childres Creek OK120420020160_00	Chloride (Cl ⁻)	Potential ongoing sources are current oil and gas production activities	There are a number of active oil/gas wells within Kiefer’s city limits
Childres Creek OK120420020160_00	Chloride (Cl ⁻)	Use of deicing salts and materials during the winter	The Town of Kiefer tries to avoid using chloride deicing materials, but homeowners and commercial businesses still use these products

* Sources for each 303(d) waterbody and POC will be annually reassessed and updated as needed.

OKR04 Part IV.A.1.d: Locate and Inspect Areas With POCs

Part IV.A.1.d states: “You must locate those areas likely to have illicit discharges and conduct inspections based on the priority areas in the watershed of your 303(d) listed waterbodies.”

There are three related requirements in OKR04 **Part IV.A.1.d**:

- 1) Locate areas likely to have illicit discharges of 303(d) POCs,
- 2) Conduct inspections of the areas of potential 303(d) illicit discharges, and
- 3) Establish inspection high priority areas within each 303(d) watershed’s MS4 area.

Source Locating and Inspections in Priority Areas:

OKR04 **Part V.C.3.a** (covering the 3rd Minimum Control Measure, MCM-3) has specific requirements for implementing a comprehensive inspection program to address MCM-3 Illicit Discharge Detection and Elimination (IDDE). These MCM-3 requirements include conducting both Dry Weather Field Screening (DWFS) and source-tracking inspections. OKR04 **Part V.C.3.a** also requires using priority areas for increased DWFS inspection frequencies.

The SWMP procedures to address OKR04’s MCM-3 requirements in **Part V.C.3.a** will also be used to satisfy the 303(d) requirements in OKR04 **Part IV.A.1.d**. These MCM-3 DWFS and IDDE source-tracking inspection procedures will include increased frequency within 303(d) watersheds for POC sources in 303(d) priority areas as required in OKR04 **Part IV.A.1.d**. Rather than duplicating written inspection procedures in the SWMP, refer to the SWMP section covering MCM-3 inspections which will include enhanced inspections and use of priority areas for 303(d) to address **Part IV.A.1.d** requirements.

OKR04 Part IV.A.1.e: O&M For Stormwater Controls

Part IV.A.1.e states: “You must include any operation and maintenance procedures for structural and non-structural stormwater controls to reduce pollutants discharged into your impaired water.”

Determining What Is Needed:

This OKR04 provision requires the MS4 to perform operation and maintenance (O&M) of structural and non-structural stormwater controls to reduce 303(d) pollutant discharges to 303(d) waters. This OKR04 requirement only applies to 303(d), not to all stormwater controls in all parts of the MS4 area.

Part IV.A.1.e is a complicated permit requirement. It requires MS4s to develop strategies for several types of technical issues:

- 1) Defining “*structural*” and “*non-structural*” stormwater controls to which **Part IV.A.1.e** applies,

- 2) Defining what “*operation and maintenance (O&M) procedures*” and criteria are needed for both structural and non-structural controls, and
- 3) Defining the strategies and criteria of reducing “*pollutants discharged into your impaired water*”.

Defining Structural and Non-Structural Stormwater Controls:

To meet **Part IV.A.1.e** requirements, it is first necessary to define what is meant by “*structural and non-structural stormwater controls*” for stormwater discharges. It is also important to distinguish between structural controls owned by the MS4 and those owned privately by individuals, businesses or organizations.

Structural Controls: The Town of Kiefer defines “structural controls” to mean some type of physical device that is located in a manner that captures or affects flowing stormwater runoff. Most existing structural controls were designed specifically to reduce the impacts of stormwater runoff volume for flood control and not for improving water quality. Often, existing structural controls can add to pollutant loads in discharges, such as by adding increased bacteria caused by an over-abundance of wildlife attracted to ponded water within a basin structure.

Many types of structural controls can be designed and/or retrofitted to improve the water quality of the water being discharged from the structure. Examples of existing structural controls commonly found within MS4 areas include detention basins, rain gardens, and bioswales. The Town of Kiefer does not own any structural controls of this nature. O&M of physical structures is the responsibility of private entities like industries and homeowner associations. They are responsible for ensuring the physical integrity and function of the devices constructed on their premises.

Oil wells within the Town of Kiefer generally have fenced properties and the operating companies are responsible for ensuring that any releases from their operations are contained and cleaned up before contaminating adjoining properties or waters of the state. To help ensure prompt cleanup when necessary, town personnel inspect these properties twice per year.

Non-structural Controls: These represent a very broad category of policies and activities implemented locally that aren’t physical structures. As a result, non-structural BMPs are more difficult to define. Some examples include, but are not limited to:

- Provisions in local codes to mandate green spaces
- Policies that encourage or require the increased use of pervious surfaces
- Building codes that reduce the amount of clearance at construction site lots
- Local policies or ordinances to control stormwater pollution
- Inspection procedures for and enforcement of local code requirements
- Developing municipal comprehensive development plans

- Employee training and outreach on stormwater pollution control
- Developing local guidance and policies for stormwater pollution control
- Preparing and implementing stormwater pollution control tasks and priorities

The Town of Kiefer has a policy directing personnel to use only sand to address icy or snowy road conditions unless necessary for the safety of its residents. As a result, the Town of Kiefer rarely uses chloride-based deicers preferring to use sand alone. The town may use chloride-based deicers on walkways or in parking areas at municipally owned properties where elderly or mobility impaired individuals may need to access safely.

Defining O&M Procedures For Stormwater Controls:

In order to comply with OKR04 **Part IV.A.1.e**, the Town of Kiefer divided O&M procedures into three sub-parts. The first two cover structural (both MS4-owned and private), and the last covers non-structural (MS4-owned). It is assumed that non-structural controls concern only MS4-implemented activities with no implementation by private owners. These 3 subparts are:

1. Structural Stormwater Controls:
 - a. MS4-owned,
 - b. Privately-owned
2. MS4-implemented non-structural stormwater controls.

It is important to remember that OKR04 **Part IV.A.1.e** applies only to 303(d) pollutants of concern (POCs) and only within the MS4 areas in 303(d) watersheds. The Town of Kiefer has developed the following O&M procedures to address the 3 subparts of both structural and non-structural stormwater controls of 303(d) pollutants as required in OKR04 **Part IV.A.1.e**.

Types of MS4-Owned Structural Stormwater Controls:

The Town of Kiefer will consider this to mean any physical structure within a 303(d) watershed that is designed for managing stormwater flow and direction and is owned and maintained by the Town of Kiefer, including:

- Wet and dry retention and detention basins and ponds,
- Low Impact Development (LID) structures, such as rain gardens and green roofs,
- Large culverts and open channels owned by or within MS4 easements or rights-of-way,
- Gutters, buried pipes, inlets and outlets of MS4-owned stormwater collection systems,
- Any other MS4-owned stormwater conveyance system that the Town of Kiefer has an obligation under city ordinance and OKR04 to maintain.

The Town of Kiefer does not own rain gardens, have structures with green roofs, pervious pavements, or maintain retention and/or detention basins or ponds. The town does have an MS4 system that could transport chloride-based compounds following winter storms, but all reasonable efforts are made to avoid the use of chloride compounds.

O&M Procedures for MS4-Owned Structural Stormwater Controls:

The following table summarizes the O&M program for MS4-owned structures. The Town of Kiefer is preparing a Standard Operating Procedures (SOP) Manual which will contain detailed procedures addressing the activities summarized in Table 11 below. This SOP Manual will be reviewed annually and updated as necessary.

Table 11: Summary of O&M Procedures for MS4-Owned Structures

Structural Control	O&M Procedures	Frequency	Notes
The Town of Kiefer does not currently own any structural controls relevant to the Cl ⁻ issue.	If the town acquires structural controls, they will be inspected on a regular basis.	Inspection frequency will be determined based upon the type and function of the structure.	Repairs and/or replacement will be conducted as needed. (1)
Open Large Culverts and Channels	Visual inspection of culverts and channels and testing for the presence of Cl ⁻ when flow or standing water is present.	Cl ⁻ testing is performed during dry weather field screening and at other times as deemed necessary.	If high Cl ⁻ readings indicate a potential problem, the site will be monitored at increased frequency.

(1) Maintenance will consist of clearing debris and sediment buildup, mowing and brush removal, repairs to concrete and rock structures, re-establishing slopes with erosion protection, and other maintenance needed to return the structure to its designed use. The decision to repair or replace a structure will depend upon cost, age, future effectiveness of structure, and availability of materials and resources.

(2) Large culverts are defined as being 36" or larger in diameter or width. Large channels are those with hard surface lining, at least 5' bottom width and either vertical or sloped sides.

Types of Privately-Owned Structural Stormwater Controls:

The Town of Kiefer defines privately-owned structural stormwater controls to mean any physical stormwater control structure not owned and maintained by the Town of Kiefer, but instead being owned and maintained by a private interest, such as a business, institution, organization, individual, or Homeowners Association (HOA).

Types of privately owned stormwater structures to which these O&M provisions apply are limited to structures for which the owner or association has an obligation under city ordinance or other regulatory mechanism to maintain. These include:

- Privately owned wet and dry retention and detention basins and ponds;
- Privately owned large culverts and open channels; and
- Other privately owned physical stormwater structures designed for managing stormwater flow and volume.

O&M Procedures for Privately Owned Structural Stormwater Controls:

Only privately owned stormwater control structures for which the owner or association has an obligation under city ordinance or other regulatory mechanism to maintain are subject to O&M requirements under the Town of Kiefer’s OKR04 permit program.

Table 12 summarizes the O&M program for qualifying privately-owned structures. The Town of Kiefer will offer to assist the private owners with development of written procedures of the general goals outlined in Table 12. Once developed, these procedures will be included or referenced in this SWMP, and the procedures will be kept with the SWMP document as well as with the owner.

Table 12: Summary of O&M Procedures for Privately-Owned Structures

Structural Control	O&M Procedures	Frequency	Notes
Detention / Retention Ponds	Visual inspection by owner with city staff assistance, as needed. Maintenance depending on factors (1).	Annual visual inspections with Town of Kiefer staff if requested and maintenance suggestions as needed. (1)	High priority given to structures that are new with a projected long life and greater usefulness. Owner must abide by all local codes and ordinances.
Large Culverts and Channels (2)	Visual inspection by owner with city staff assistance, as needed. Maintenance depending on factors (1).	Annual visual inspections with Town of Kiefer staff if requested and maintenance suggestions as needed. (1)	Modifications to structure will need to be coordinated with the city regarding how the project will impact the MS4’s flood basin plans.
Privately owned structures discovered or installed at future dates.	Visual inspection by owner with city staff assistance, as needed. Maintenance depending on factors (1).	Annual visual inspections with Town of Kiefer staff if requested and maintenance suggestions as needed. (1)	Guidance, assistance, recommendations, etc. will be offered depending upon the type of structure.

(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.

(2) Large culverts are defined as being 36” or larger in diameter. Large channels are those with hard surface lining, at least 5’ bottom width and either vertical or sloped sides.

Types of MS4-Implemented Non-Structural Controls:

The Town of Kiefer defines MS4-implemented non-structural stormwater controls to mean stormwater-related programs, policies or local code requirements implemented by the Town of Kiefer, that:

- Support preservation of open green space;
- Expand disconnections of impervious surfaces;
- Expand growth of vegetation and natural buffer systems;
- Encourage grass swales and other types of natural, vegetated infiltration areas;
- Encourage protection and expansion of riparian stream buffers; and
- Encourage implementation of other types of stormwater protection strategies.

O&M Procedures for MS4-Implemented Non-Structural Stormwater Controls:

Because non-structural stormwater controls are mainly policies and standards for building and community development, O&M procedures for the Town of Kiefer will involve periodic evaluation of local codes to identify barriers to water quality protection of new development and redevelopment, including zoning and capital improvement planning. Identification and removal of barriers to LID are required in OKR04 **Part V.C.5.a.iii**. This MCM-5 requirement will satisfy much of the requirement of MS4 implemented non-structural controls under **Part IV.A.1.e**.

Table 13 summarizes the O&M program for MS4-implemented non-structural controls. The Town of Kiefer may in the future develop written Standard Operating Procedures (SOPs) or other types of guidance addressing the steps summarized in Table 13. Once developed, these procedures will be referenced in this SWMP, and the procedures will be kept with the SWMP document.

Table 13: Summary of O&M Procedures for MS4 Non-Structural Controls

Non-Structural Controls	O&M Procedures	Frequency	Notes
Encourages the preservation of open spaces, infiltration areas, use of pervious surfaces, and rain gardens.	Review policies and codes with respect to OKR04 requirements and MS4’s planning goals.	Annual review of policies and codes; update as needed.	High priority given to new growth and development with a high potential for water quality protection.
Policies and codes protecting riparian areas and the use of buffers.	Review policies and codes with respect to OKR04 requirements and MS4’s planning goals.	Annual review of policies and codes; update as needed.	High priority given to new growth and development with a high potential for water quality protection.

Non-Structural Controls on Private Property:

The Town of Kiefer does not consider privately owned non-structural stormwater controls to be significant contributors or causes of 303(d) pollutant discharges. Therefore, the Town of Kiefer will not impose specific O&M requirements of non-structural controls on private property. Instead, the Town of Kiefer will encourage and provide education about LID and other post-construction programs as private development expands within the Town of Kiefer. This will include implementing the requirements under the 5th MCM, Post-Construction Management In New Development and Redevelopment.

OKR04 Part IV.A.1.f: Assessing New and Existing Flood Management Projects

Part IV.A.1.f states: “You must ensure that new flood management projects assess the impacts on water quality and examine existing projects to determine if incorporating additional water quality protection devices and practices are necessary.” Per OKR04 **Part IV.A.1**, this passage applies only to 303(d) pollutants within 303(d) watersheds.

This OKR04 subpart “f” passage contains 2 separate requirements which will be addressed separately below. These are: 1) assessing “*new flood management projects*”, and 2) examining “*existing projects*”. To meet **Part IV.A.1.f** requirements, MS4s must define locally the term “*flood management projects*” and the procedures used to “*ensure*” that water quality impacts are assessed for new projects. These concepts and implementation strategies are presented below.

Assess Water Quality Impacts from New Flood Management Projects:

The phrase in OKR04 **Part IV.A.1.f**, “You must ensure that new flood management projects assess the impacts on water quality” applies to qualifying new flood management projects that will be located within 303(d) watersheds, and it requires the MS4 to address the 303(d) pollutants of concern (POCs) in the most current 303(d) List. To meet this requirement, the Town of Kiefer has prepared the assessment procedures summarized below.

Additional, more detailed, written procedures may be produced in the future as guidance or Standard Operating Procedures (SOPs). Once developed, the additional guidance or SOPs will be kept with the SWMP, and the SWMP text will be updated to provide a reference to the written procedures.

Administrative Procedures For New Flood Management Projects:

Certain administrative procedures must be developed and implemented to ensure that developers understand all conditions the Town of Kiefer will impose upon their new flood management projects. These will include education materials and procedural guidance that will be provided to building permit applicants prior to issuance of local building permits and other construction approvals.

The Town of Kiefer will implement the following administrative assessment strategy:

1. Assessments of new flood management projects must be completed prior to issuance of local building permits, preferably before project designs are completed.
2. Education materials and/or consultation regarding water quality protections for new flood management projects will be made available to applicants of building permits so that they have time to prepare their plans and specifications to meet all requirements of the Town of Kiefer.
3. Guidance will be provided to all building applicants as necessary and as part of the education and outreach effort.
4. The Town of Kiefer will meet with the developer and their representatives to discuss all OKR04-related provisions pertaining to water quality of new flood management projects if a meeting is requested or the town deems it necessary.

Defining Qualifying New Flood Management Projects:

The Town of Kiefer has determined that not every new flood management project qualifies for **Part IV.A.1.f** compliance. Only those that meet the following criteria will be used to define the types of new flood management projects that will be assessed per **Part IV.A.1.f**:

1. The project is planned to be constructed within the Town of Kiefer's MS4 area.
2. The project will be located within a 303(d) watershed and will be expected to discharge runoff within 1 mile of the 303(d) listed waterbody and potentially contribute pollutants the waterbody is listed for.
3. The project is in the pre-design and/or pre-construction phase.
4. The project will be or will have significant physical structures.
5. The project will be designed to have an inlet structure for collecting runoff from an upstream watershed and an outlet structure for discharging collected runoff; and
6. The project will be designed to collect stormwater runoff from 5 or more acres.

Assessing New Flood Management Projects:

The Town of Kiefer will implement the **Part IV.A.1.f** assessment requirement for all new flood management projects that meet the qualifying criteria defined above. The following methods will be used by the Town of Kiefer for making **Part IV.A.1.f** water quality impact assessments of qualifying new flood management projects:

1. Identify the locations within the MS4 of all the current 303(d) impairment watersheds, and identify the current pollutants of concern (POCs) for each 303(d) watershed.
2. Verify that each proposed new flood management project meets the requirements specified above for defining **Part IV.A.1.f** qualifying projects.
3. For each new flood management project that will be assessed, review documentation available through DEQ, EPA, and other sources on the potential for that type of project to reduce, have no effect on, or possibly increase the 303(d) pollutant(s) in runoff.

4. For each project, examine the location of the project and determine its potential for contributing significant 303(d) POCs in the runoff from the project's outlet into the 303(d) impaired waterbody. The assessment will include consideration of the following:
 - a. Projects located over 1 mile from the 303(d) impaired waterbody are not considered to be significant contributors of pollutants that cause 303(d) impairment;
 - b. Projects within 1 mile of the 303(d) waterbody will be more likely to contribute significant pollutants in stormwater runoff; and
 - c. Does the project located within 1 mile of the 303(d) waterbody have the potential to discharge significant amounts of the 303(d) POCs?
5. For projects considered to have potential significant discharges of 303(d) POCs based upon the criteria above, the Town of Kiefer will assess the new project's design and determine if there are any features that could be modified during design or construction to reduce 303(d) pollutants in runoff. A few examples are, but not limited to:
 - a. Can an LID structure or feature be added at or downstream of the project outlet that results in a reduction in pollutant concentration or load in the outlet discharge?
 - b. Can the project be altered to provide greater pervious surface area within the project boundaries reducing the discharge volume by increasing infiltration and absorption?
 - c. Can the outlet flow be diverted immediately downstream to a pervious area for absorption of flow?
6. The Town of Kiefer will submit its assessment findings to the building applicant in a timely manner so that any design changes can be made without unduly affecting project deadlines or schedules if design specifications are submitted to the Town of Kiefer within acceptable time frames.

Examine Existing Projects for Necessity of Incorporating Additional Controls:

OKR04 **Part IV.A.1.f** contains the following provision for existing flood management projects in 303(d) watersheds: *"You must examine existing projects to determine if incorporating additional water quality protection devices and practices are necessary."*

The second part of OKR04 **Part IV.A.1.f** requires the "examination" of existing flood management projects in 303(d) watersheds to determine if additional water quality protection devices and practices "are necessary" to reduce the 303(d) pollutants of concern (POCs).

Selection Criteria for Existing Flood Management Projects:

Not all existing flood management projects will fall under this OKR04 requirement. The Town of Kiefer will use the following criteria to select which existing local projects will need to be examined as required by **Part IV.A.1.f**:

- i. The project is either publicly owned by the MS4, or it is privately owned with the owners being able to provide sufficient resources to make recommended modifications.

- ii. The project is a physical structure with definable inlet and outlet features.
- iii. The project receives runoff from five or more acres upstream of the inlet.
- iv. The project has at least 10 years of projected functional life remaining either as is or once brought back to an acceptable functional level.
- v. The project has physical features that can be realistically modified to significantly reduce applicable 303(d) POCs,
- vi. The outlet discharge of the project is located within 1 mile of the 303(d) waterbody, and
- vii. The project has an acceptable benefit to cost ratio to justify making modifications.

Criteria For Rejecting Candidate Existing Projects:

The Town of Kiefer will use the following criteria for rejecting any further action on making improvements to existing projects that were initially identified as potential candidates using the selection criteria above:

- a. The project has old structures and/or features that are in poor condition with no realistic means of upgrading to improve water quality.
- b. The project will have little to no potential WQ benefit even after structural upgrades are made.
- c. The project has poor benefit to cost ratio of the proposed modifications needed making the project not cost effective.
- d. The project is or likely will be scheduled for either demolition or significant upgrades in the near future.
- e. The project has no known ownership who can take legal and financial responsibility for making project upgrades, or
- f. The project is privately owned, and the MS4 has no clear legal authority to require the owner to make water quality improvements to their private structures.

It is important to note that the “examination” of existing projects in **Part IV.A.1.f** of OKR04 does not actually require that modifications be made once a project examination has been completed. **Part IV.A.1.f** only requires that the examination be made. However, OKR04 does require that each permitted MS4 take all actions “to the Maximum Extent Practicable” (MEP) to protect 303(d) impaired waterbodies from further degradation and protect water quality. Therefore, the Town of Kiefer will utilize the procedures outlined above for making modifications to existing projects where feasible.

OKR04 Part IV.A.1.g: Selecting BMPs

Part IV.A.1.g, which applies to selecting 303(d)-related BMPs, states that “*You must choose BMPs from EPA’s menu or select others that can be used for managing the identified pollutants (e.g., nitrogen, phosphorus, bacteria) in your discharges. The details of the BMPs can be viewed on the following EPA website: <https://www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#edu>”*

The Town of Kiefer will rely upon several sources for selecting 303(d) related BMPs, including:

- 1) The EPA database found in the link above;
- 2) Recommendations from agencies such as DEQ and INCOG;
- 3) Recommendations from other stormwater permittees; and
- 4) A local assessment of feasibility based upon BMP reliability, affordability, and suitability to local conditions.

OKR04 Part IV.A.1.h: BMPs for Bacteria Impairment

Part IV.A.1.h states: “*If the POC is bacteria, you must include a list of identified BMPs addressing the areas below, as applicable, in the SWMP and implement as appropriate. You must include these BMPs under each associated minimum control measure under Part V(C).*”

Applicability Limitations of OKR04 Part IV.A.1.h:

The OKR04 **Part IV.A.1.h** applies only to those MS4s that have bacteria 303(d) impairment as listed in the current 303(d) List. If an MS4 does not presently have bacteria 303(d) impairment of any waterbody within its MS4 area, then they do not have to comply with **Part IV.A.1.h**. However, 303(d) POCs change every 2 years, so this SWMP section addressing OKR04 **Part IV.A.1.h** will be reviewed annually and updated when needed. **Currently (5-25-23) the Town of Kiefer does not discharge to a waterbody with a bacterial 303(d) impairment.**

This section is included in this SWMP and will be implemented in the future if conditions change and the Town of Kiefer has a requirement to comply.

OKR04 Part IV.A.2: Exceedance of Water Quality Standards

Part IV.A.2 states: “*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 you. You must 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. If an exceedance remains or recurs, the coverage under this permit may be terminated by DEQ, and DEQ may require an application for coverage under an alternative general permit or an individual permit.”*

Part IV.A.2 applies to an MS4 program whenever any OKR04 authorized stormwater discharge is determined to cause an in-stream exceedance of a water quality standard (WQS). In such cases, DEQ will notify the MS4 that they must *“take all necessary actions”* to correct the problem. The MS4 *“must document these actions in the SWMP”*. Three keys to **Part IV.A.2** are:

1. While this provision is in OKR04 **Part IV.A** that addresses 303(d) impairment, it applies to any discharge within the MS4 area, not just within 303(d) watersheds.
2. This **Part IV.A.2** provision does not preclude any other actions required to protect any waterbody, 303(d) or otherwise, under authority of DEQ and the Clean Water Act.
3. The trigger for **Part IV.A.2** is when DEQ notifies the MS4 of a WQS exceedance.

Currently (4-29-25) the Town of Kiefer has not been notified by DEQ of a WQS exceedance necessitating action in this section.

Once notified by DEQ that a waterbody has exceeded a water quality standard the Town of Kiefer will take the following steps to address exceedance:

1. Request DEQ assistance in determining the source of pollution.
2. Using DWFS and Source Tracking methods determine the source of pollution.
3. Once the source is identified, notify the owner of the property of the pollution and establish a deadline for the cessation and/cleanup of the pollution source.
4. If the owner of the property is uncooperative contact the Kiefer Code Enforcement, Town Attorney and DEQ.
5. Once the Cleanup has been accomplished the water should be tested to determine if it meets pre-incident standards.

[Section break]

ADDRESSING ESTABLISHED TMDLS

OKR04 Part IV.B Established TMDL Allocations

The Town of Kiefer's Total Maximum Daily Load (TMDL) Obligations:

Only those stormwater permitted MS4's specifically listed in OKR04 Table IV-2 must comply with TMDLs; the remaining stormwater permittees have no TMDL obligations at this time.

The Town of Kiefer is not listed in OKR04 Table IV-2 and does not currently (4-29-25) have an obligation under this section (IV.B) and will not be participating in the Optional Baseline Monitoring Plan.

Appendix E of the SWMP contains a list of all BMPs that will be implemented by the Town of Kiefer. Each BMP is identified in the Appendix tables by its corresponding MCM(s) and if the BMP will also apply to 303(d) and (Kiefer does not have TMDL requirements) pollution reduction. The Measurable Goals and implementation schedules (Kiefer does not have TMDL requirements) of related BMPs have been increased to reflect the goal of reducing POC discharges to the Town of Kiefer's MS4 within 303(d) (Kiefer does not have TMDL requirements) watersheds.

OUTSTANDING RESOURCE WATERS (ORW)

OKR04 Part IV.C Discharges To Outstanding Resource Waters

OKR04 **Part IV.C** states: *"Except for discharges of stormwater from temporary construction activities, new discharges located within the watershed of any waterbody designated Outstanding Resource Water (ORW) in Oklahoma's Water Quality Standards are not allowed and are not authorized by this permit. Discharges to ORW waters from MS4s existing as of June 25, 1992, are allowed but such stormwater discharges are prohibited from increased load of any pollutant. If any part of your MS4 discharges to an ORW waterbody, you must document in your SWMP how you will comply with this prohibition."*

Outstanding Resource Waters (ORW) in Oklahoma are water resources that are so valued and of such high quality as to require special protection status under the Oklahoma Water Quality Standards (WQS). For the present OKR04 permit cycle, there is only one Phase II permittee in Oklahoma that must meet ORW requirements under OKR04 **Part IV.C**, no other Phase II permittee in Oklahoma has any obligations under OKR04 **Part IV.C** at this time.

STORMWATER MANAGEMENT PROGRAM (SWMP)

OKR04 Part V.A and V.B: This portion of the SWMP document describes all OKR04 **Part V.A** and **Part V.B** requirements for preparing and implementing the Town of Kiefer’s SWMP document.

OKR04 **Part V.A** describes the general requirements for preparing the SWMP for 1) renewal permittees, 2) newly regulated small MS4s, or 3) small MS4s newly designated after the date of permit issuance. Of these 3 permittee types, for purposes of SWMP implementation, the Town of Kiefer is a:

- Renewal Permittee**
- Newly Regulated Small MS4**
- Newly Designated MS4 After Date of Permit Issuance**

OKR04 Part V.A SWMP Requirements

Renewal Permittees (OKR04 Part V.A.1):

For Renewal Permittees, **Part V.A.1** states: *“Renewal Permittees must review your SWMP and, if necessary, revise and update existing, and/or develop new, BMPs and measurable goals in your SWMP to meet the requirements of this permit or as required by the Director to ensure compliance with the CWA. Modifications and updates shall be reflected in your SWMP and implemented within two (2) years of the effective date of this permit and then as needed. You are required to keep the SWMP document up to date during the term of the permit. Compliance deadlines are not extended for small MS4s required to have obtained coverage under the 2015 OKR04 permit.”*

As a renewal permittee, the Town of Kiefer will implement the appropriate **Part V.A** SWMP requirements per the OKR04 citations cited above. Renewal Permittees must review their existing SWMP document and make any needed revisions and updates to their BMPs and measurable goals and develop new BMPs as needed to meet the new OKR04 permit requirements. All SWMP document changes must be made within two years of the OKR04 permit’s effective date of June 1, 2021, and all revised and new BMPs and activities in the updated SWMP must be implemented within this time period.

The Town of Kiefer’s SWMP has been prepared and is being implemented in a manner to meet these **Part V.A.1** or **Part V.A.2** requirements.

Defining BMPs and Measurable Goals (OKR04 Part V.A.4):

OKR04 **Part V.A.4** states: *“You must list and define measurable goals⁷ for BMPs that you, or another entity, will be implementing for each of the stormwater MCMs listed in Part V(C) and provide an explanation for how and why you selected each BMP and measurable goal for your SWMP. For each BMP, you must*

- a. include measurable goals,*

- b. *identify the target audience(s) or participant(s),*
- c. *include the months and years in which you will undertake required actions including interim milestones and the frequencies of the actions, and*
- d. *identify who will be responsible for implementing or coordinating the BMPs for your SWMP.*

Appendix E of this SWMP provide lists and tables of all BMPs that the Town of Kiefer will implement, including the implementation schedules and measurable goals for each BMP. In addition, there are numerous passages within this SWMP that describe in greater detail the methods and implementation criteria that the Town of Kiefer will use to implement each of the BMPs.

Sharing With Another Government Entity (OKR04 Part V.A.5):

OKR04 **Part V.A.5** states: *“Implementation of one or more of your stormwater MCMs may be shared with another government entity or may be fully implemented by another government entity, but only if there is a written agreement that they will implement the MCM on your behalf. This written agreement must be maintained as part of your SWMP. If the other government entity agrees to report on an MCM, you must supply the other government entity with the reporting requirements contained in Part V(C). If the other government entity fails to implement the MCM on your behalf, then you remain responsible for compliance with permit obligations. You must modify your SWMP within one (1) year to address how you will implement the control measure and comply with permit requirements.”*

Table 5 of this SWMP lists the government entities that are assisting the Town of Kiefer with implementation of certain aspects of the SWMP program including the individual areas of assistance that are being provided. No outside governmental entity is implementing any MCM in its entirety. Appendix C of this SWMP contains copies of all agreements of services being rendered by the governmental entities listed in Table 5.

OKR04 Part V.B Required SWMP Updates

OKR04 **Part V.B** lists the specific procedures that will be implemented by DEQ and MS4s for making changes to the SWMP document when required by the DEQ Director. This part of OKR04 is different and in addition to the requirements under OKR04 **Part V.D** for when MS4s revise, change or replace existing BMPs whenever deemed necessary by the MS4 permittee.

The Town of Kiefer will follow the OKR04 **Part V.B** requirements copied verbatim below as well as any specific requirements imposed by DEQ in their written notification of the need to amend this SWMP document:

1. *As determined by the Director, DEQ may require changes to be made to your SWMP to meet permit requirements. Such changes may be necessary to:*

- a. *Address additional information related to receiving waters that have been adversely impacted by discharges from your MS4, or to discharges that have caused or contributed to or may have the reasonable potential to cause or contribute to a violation of a water quality standard.*
 - b. *Include more stringent requirements necessary to comply with new federal statutory or regulatory requirements.*
 - c. *Include other conditions to comply with the goals and requirements of the CWA, including TMDL requirements.*
 - d. *Include requirements based on information obtained by DEQ during routine MS4 evaluations, annual report review, or as otherwise determined by the Director.*
2. *Changes requested by the Director will be made in writing by DEQ, set forth a schedule for you to develop the changes, and offer you the opportunity to propose alternative SWMP changes to meet the objective of the requested modification. Within the schedule provided by DEQ, you must submit a copy of the revisions made to the SWMP.*

PART V.C MINIMUM CONTROL MEASURES (MCMs)

OKR04 Part V.C Overview:

This portion of the SWMP document describes how the Town of Kiefer will implement all six of the OKR04 **Part V.C** Minimum Control Measures (MCMs). This portion of the SWMP document reflects the following key changes that were made by DEQ in the 2021 OKR04 permit's Part V.C:

1. Combined the original MCM-1 (public education) and MCM-2 (public participation) into a single MCM-1 (Public Education and Involvement).
2. Filled the vacated MCM-2 slot with a new MCM-2 for industrial activities.
3. Added MCM implementation strategies based upon the new MS4 Categories described in OKR04 **Part III.B** which are presented in SWMP Table 6.
4. The newly created MCM-2 (industrial activities) requirements only apply to Category 3 MCMs; all others have no permit obligations under MCM-2.
5. Added many types of specific requirements to satisfy EPA's "Remand Rule" so that program details are now more thoroughly defined in the SWMP document and the public has greater access to the details and more opportunity for involvement in the permitting process.
6. Linked the required and suggested education MCM-1 outreach activities to all of the other MCMs' education outreach requirements.
7. Added new requirements to address Low Impact Development (LID), and added other strategies under MCM-5 post-construction.
8. Added new provisions under MCM-2 (industrial activities) and MCM-4 (construction) to ensure that the MS4's local "*program requirements shall be consistent with the OKR05 [and OKR10] General Permit*".

SWMPs For Existing permittees: OKR04 **Part V.A.1** requires that, *“Modifications and updates shall be reflected in your SWMP and implemented within two (2) years of the effective date of this Permit and then as needed.”* In addition, all replacements of BMPs must follow the requirements of **Part V.D.**

The Town of Kiefer is a renewal permittee. As such, for each of the following Minimum Control Measures (MCMs) in the SWMP, the Town of Kiefer will implement new and/or continue implementing existing BMPs, develop implementation schedules, and establish Measurable Goals for each BMP. Per OKR04 **Part VI.C**, an Annual Report will be submitted to DEQ that documents implementation and BMP effectiveness under each of the six MCMs. Appendix E of the SWMP contain tables of the BMPs with assigned Measurable Goals, implementation schedules, and other BMP-related information.

OKR04 **Part V.C** requires that: *“Each MCM must comply with the items included in the “Permit Requirements” section. You are encouraged to consider incorporating the “Permit Recommendations” into your program, but they are not mandatory.”* The six MCMs are addressed separately below.

Each BMP will include an implementation schedule and frequency, an activity description, the responsible staff person, and procedures and other information concerning BMP implementation.

OKR04 Part V.C.1 (MCM-1) Public Education and Involvement

MCM-1 Permit Requirements:

OKR04 **Part V.C.1** requires MS4s to develop and implement a public education and involvement program *“to distribute information and educational materials to the community and MS4 staff, or conduct equivalent outreach activities to promote behavior changes to reduce pollutants in stormwater runoff and eliminate illicit discharges. The activities shall be tailored using a mix of locally appropriate strategies to target specific audiences and communities.”*

i. Include education and involvement efforts for target audiences.

(1) Traditional municipalities such as cities, counties, etc., must address the general public being served by the MS4.

ii. Public education and involvement activities may include those listed in [OKR04] Table V-1. At a minimum, public education and involvement activities shall be conducted as outlined in [OKR04] Table V-2.

Public education outreach is a part of all MCMs except MCM-6 which applies only to MS4-owned operations, so no MCM-6 public outreach is needed. To reflect the over-arching extent of public outreach across all MCMs, MCM-1 has been rewritten in the 2021 OKR04 permit to show the links to all other MCMs. In effect, all public outreach requirements under all MCMs are now listed under MCM-1. In addition to public education outreach, MCM-1 now includes MS4 employee staff training requirements under each MCM (no staff training is required under MCM-5).

SWMP Table 24 is a copy of OKR04 Table V-2. It shows the relationship of MCM-1 required public education and involvement activities as well as staff training requirements for each of the other MCMs. Table 24 also breaks down the minimum annual implementation frequencies for each of the three MS4 Categories that are defined in OKR04 **Part III.B** and presented in SWMP Table 6.

Per OKR04 **Part III.B** (MS4 Categories), the Town of Kiefer has been designated by DEQ as a Category 1 MS4 (<10,000 within an UA). As such, the Town of Kiefer has ensured that the MCM-1 BMP implementation schedules to meet all six MCMs described in SWMP Appendix E are at least as frequent as the minimum requirements in Table 24.

Table 24: Minimum Public Outreach and Staff Training Activities Per Year *

Coordinating MCM And Description		Category 1	Category 2	Category 3
1	public education	2 activities per year	4 activities per year	4 activities per year
	public involvement	1 activity per year	2 activities per year	2 activities per year
2	outreach or educational activity	--	--	once every two years
	staff training	--	--	once every two years
3	outreach or educational activity	once every two years	once per year	once per year
	staff training	once every two years	one per year	once per year
4	outreach or educational activity	once every two years	once per year	once per year
	staff training	once every two years	one per year	once per year
5	public education for post-construction runoff	once every two years	once per year	once per year
6	staff training	once every two years	one per year	once per year

* This is a verbatim copy of OKR04 Table V-2.

MCM-1 Implementation Strategy:

Note that as a Category 1 MS4, the Town of Kiefer does not have to implement MCM-2 for industrial activities. The following describes the Town of Kiefer’s employee training program, including both the specific topics required by OKR04 and the many additional staff training topics frequently available as ad hoc offerings by third parties such as INCOG for GCSA.

OKR04 Required MS4 Staff Training: The OKR04 **Part V.C.1** (MCM-1) lists specific required employee training topics. These are presented in SWMP Table 25, including the OKR04 citations to which each MCM training requirement applies.

The minimum frequencies of employee training for each MS4 Category are specified in OKR04 Table V-2 and presented in SWMP Table 24. Appendix E list all program BMPs, including those for all OKR04 required employee training. Appendix E also include the training frequency for each training BMP.

Table 25: OKR04 Required Employee Training Topics For Each MCM *

MCM	OKR04 Required Employee Training Topics	OKR04 Citations
1	<i>No specific MS4 staff training required under MCM-1.</i>	<i>n/a</i>
3	Make staff aware of hazards associated with illegal discharges and improper disposal of waste and how to identify and report illicit discharges.	V.C.1.a.ii(2)(a) V.C.1.a.ii(2)(c)
4	Address requirements for inspection and enforcement of erosion and sediment control measures once construction begins.	V.C.1.a.ii(3)(c)
5	<i>No specific MS4 staff training required under MCM-5.</i>	<i>n/a</i>
6	Address preventing and reducing stormwater pollution from MS4 activities.	V.C.1.a.ii(5)

* Frequency of each Town of Kiefer’s employee training BMP is presented in Appendix E and F.

The previous (2015) OKR04 permit included the 2021 OKR04 permit passage to conduct staff training “to prevent and reduce stormwater pollution from MS4 activities.” However, the 2015 OKR04 permit also included a list of specific MCM-6 staff training topics: “...to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.”

These specific 2015 OKR04 staff training requirements are not in the 2021 OKR04 permit. However, all of these topics represent the types of MS4 Good Housekeeping activities that a typical MS4 will use in their MCM-6 programs. Because the Town of Kiefer already has employee training materials that cover all of these 2015 topics, it is assumed that continuing to focus staff training on these specific topics satisfies the common 2015 and 2021 OKR04 permit phrase to conduct staff training *“to prevent and reduce stormwater pollution from MS4 activities”*.

Additional Ad Hoc MS4 Staff Training: The topics listed in Table 25 are all of the OKR04 permit required MS4 staff training topics along with the OKR04 text passages indicated under “OKR04 Citations”. These represent the minimum list of staff training topics required by OKR04 for all six MCMs. However, the Town of Kiefer’s staff training program also includes many training topics that are not specifically required by OKR04 but considered essential by the Town of Kiefer.

Non-required (additional) staff training is usually conducted on an ad hoc basis whenever stormwater related training opportunities become available to the Town of Kiefer. Venues for these ad hoc training sessions include internet webinars, online internet courses, DEQ public meetings, internal staff meetings and training sessions, and third party training sessions such as those conducted by INCOG for GCSA members.

Records of all staff training are kept not only for the topics listed in Table 25 but for all other ad hoc training. Staff training records include the following information:

1. Titles and descriptions (if available) of training topics.
2. Venue type, date and training duration in hours.
3. Handouts and other e-file and/or written materials.
4. Names of staff person(s) attending.
5. Copies of certificates of training, attendance and Professional Development Hours (PDH).
6. Records of DEQ approved training for 4 hours of DEQ operator license renewal.

Ad Hoc Staff Training Options: Table 26 lists a variety of training topics that the Town of Kiefer has recently attended on an ad hoc basis and expects to continue. The table includes anticipated provider(s) and venue options that are expected to continue to be offered. Ad hoc means that these non-OKR04 required staff training topics are offered by third parties and attended as needed and when made available to Town of Kiefer staff.

Most ad hoc training sessions provide certificates of training and PDH forms as well as handouts. Many also include workbooks of text with images of the PowerPoint slides, and some provide PowerPoints with annotation (i.e., with slide notes) and/or with voice narration.

The Oklahoma Floodplain Manager’s Association (OFMA) co-hosts an annual one-day workshop with INCOG, COSWA and DEQ on a variety of stormwater permit topics, many of which are reflected in Table 26.

Table 26: Ad Hoc Staff Training Attended As Needed And When Available

General Ad Hoc Training Topics	Recent Provider(s)	Zoom Mtgs	Workshops, Conferences	Self-Teaching Modules
303(d), TMDLs and ARC	DEQ, GCSA	x	x	x
Quality assurance and QAPPs	GCSA	x	x	x
Sampling and lab methods	GCSA	x	x	x
Stormwater 101 OKR04 Permit Basics	DEQ, GCSA	x	x	x
MCM-5 LID and post construction	GCSA	x	x	x
Written procedures and SOPs	GCSA	x	x	x
Chemistry basics	GCSA	x	x	x
Dry weather field screening (DWFS)	GCSA	x	x	x
Source tracking inspections	GCSA	x	x	x
WBIDs and stormwater mapping	DEQ, GCSA	x	x	x
Assessing SWMP programs and BMPs	GCSA	x	x	x
Bacteria pollution and TMDLs	GCSA	x	x	x
Stormwater permit compliance	DEQ, GCSA, OFMA	x	x	x
Construction site BMPs	DEQ, GCSA, OFMA	x	x	x

All ad hoc topics, as well as their providers, frequency and presentation venues, vary each year. The information in Table 26 reflects the expected availability of these ad hoc training options over the coming years. While most ad hoc staff training sessions are not specifically listed as BMPs in Appendix E because of their intermittent availability, they are, as a whole, an important part of the Town of Kiefer’s overall staff training program.

MCM-1 Best Management Practices (BMPs):

In order to address all MCM-1 requirements in OKR04 **Part V.C.1.a**, the Town of Kiefer will implement the MCM-1 BMPs listed in Appendix E. **Part V.C.1.a** states: *“Implement a program to distribute information and educational materials to the community and MS4 staff, or conduct equivalent outreach activities to promote behavior changes to reduce pollutants in stormwater runoff and eliminate illicit discharges. The activities shall be tailored using a mix of locally appropriate strategies to target specific audiences and communities.”*

Target Audiences: The OKR04 Part V.C.1.a passage is followed by detailed education and involvement requirements for specific target audiences which are summarized in Table 27 along with their OKR04 citations.

Table 27: MCM-1 OKR04 Education and Involvement Target Audiences

MCM	OKR04 Required Target Audiences	OKR04 Citation
1	Municipal MS4s: General public being served by the MS4	V.C.1.a.i(1)
3	Public employees, businesses, general public and MS4 staff	V.C.1.a.ii(2)(a)&(c)
4	Local developers and MS4 staff	V.C.1.a.ii(3)(a)&(c)
5	Developers and the public	V.C.1.a.ii(4)
6	MS4 staff	V.C.1.a.ii(5)
303(d)	Commercial, industrial and institutions likely to have significant impacts on 303(d) impaired waters.	V.C.1.a.vi

Required Outreach Topics: OKR04 Part V.C.1.a also lists many specific types of public education and involvement topics that must be addressed under MCM-1. Table 28 lists these outreach topics according to MCM, and it includes the specific OKR04 citation. The Town of Kiefer will implement the MCM-1 outreach topics identified in Table 28 by implementing all MCM-1 BMPs identified in Appendix E.

Table 28: MCM-1 Education and Involvement OKR04 Required Topics *

MCM	OKR04 Required Outreach Topics and Goals	OKR04 Citation
1	MS4s may implement OKR04 Table V-1 activities or choose others. All activities must meet Table V-2 schedules.	V.C.1.a.ii
3	Make aware of hazards associated with illegal discharges and improper disposal of waste. Promote, publicize and facilitate the reporting of illicit discharges, and how to identify and report illicit discharges.	V.C.1.a.ii(2)(a)-(c)
4	Address requirements for inspection and enforcement of erosion and sediment control measures once construction begins.	V.C.1.a.ii(3)(c)
5	Make developers and the public aware of project designs that minimize water quality impacts, including LID strategies.	V.C.1.a.ii(4)
6	How to prevent and reduce stormwater pollution from MS4 activities.	V.C.1.a.ii(5)

MCM	OKR04 Required Outreach Topics and Goals	OKR04 Citation
303(d)	OKR04 does not list specific training topics but does require these target audiences: commercial, industrial and institutions likely to have significant impacts on 303(d) impaired waters.	V.C.1.a.vi

* *Training topics included in Table 28 include the MS4 staff training topics from Table 25.*

Receiving Public Comments: OKR04 Part V.C.1.a.iii states “ Include a process by which public comments on the SWMP are received and reviewed by the person(s) responsible for the SWMP.” The Town of Kiefer addresses this requirement in the following actions:

1. During the time of OKR04 permit renewal, DEQ issued public notifications about the availability to the public of the draft and final permit versions, including a Fact Sheet of all OKR04 MS4 permittees. This DEQ notice served to inform the general public, agencies and organizations of the availability of OKR04 permit and the preparation of all required documents by the MS4s, including the SWMP document.
2. The Town of Kiefer has a copy of their SWMP in the town office which is available for public review by citizens and any other parties of interest.

In addition, the Town of Kiefer directs all SWMP inquiries from citizens, agencies and organizations to the staff person responsible for the implementation of the SWMP. Any substantive communications that lead to the need to resolve technical issues or to the need to make additional SWMP revisions are summarized in writing and placed in the Town of Kiefer’s SWMP files.

Public Notice Requirements: OKR04 Part V.C.1.a.iv states “Comply with state and local public notice requirements when implementing your program.” The Town of Kiefer addresses this requirement in the following actions:

1. The Town of Kiefer complies with all state and federal statutory requirements regarding open records, including making available to the public any documents and files covered by such statutes.
2. The Town of Kiefer complies with all local ordinance and state statutory requirements regarding posting of agendas and announcements of all public meetings, including those that have discussion items on the SWMP and other OKR04-related topics.
3. The Town of Kiefer posts regular office hours on all appropriate media for the general public, including town supported social media sites, and in general kiosk bulletin boards at the main municipal offices and doorways.
4. The Town of Kiefer has designated the MS4 Program Manager as the chief spokesperson for addressing citizen’s questions on routine program status and operations. Management decision level communications are handled by MS4 management and chief elected officials, as needed.

Public Records: OKR04 Part V.C.1.a.v states *"You must make your records, including the NOI and SWMP, available to the public."* In addition to the actions taken under the Public Comments and Public Notice passages above, the Town of Kiefer addresses this Part V.C.1.a.v requirement by taking the following actions:

1. All records that are covered by state and federal open records statutes are made available to citizens and organizations requesting such documents. Reasonable and customary fees for document search and copying are assessed when necessary and according to local policies.

Directing Program For 303(d): OKR04 Part V.C.1.a.vi states *"If you discharge to waters identified on the latest 303(d) list of impaired waters, your program must be directed toward targeted groups of commercial, industrial and institutional entities likely to have significant stormwater impacts on your impaired waters."*

The Town of Kiefer addresses this 303(d) related MCM-1 education outreach requirement as noted in SWMP Tables 27 and 28 above as well as by implementing the appropriate BMPs listed in Appendix E.

MCM-1 Target Pollutant Sources:

The following items expand the SWMP discussion for targeting specific stormwater pollutant sources in the Town of Kiefer MCM-1 education and outreach program.

Residential: An important source of urban pollution is from residential neighborhoods. For many years, studies by EPA and other organizations continue to demonstrate that homes can be significant contributors of toxic and pathogenic materials in stormwater runoff. Therefore, the Town of Kiefer has made education of homeowners as a key permit compliance strategy.

The Town of Kiefer MCM-1 residential pollution control and education program will primarily address pollutants from residential neighborhoods by educating individual homeowners on the proper disposal of such household chemicals as:

- Pesticides and fertilizers
- Detergents and solvents
- Motor oil and 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. Appendices E and F list and provide details of all education outreach BMPs that target residential pollution sources.

Commercial and Industrial: Another significant source of stormwater pollution comes from commercial and industrial sites within the MS4 area. These include restaurants, retail stores and most types of industrial businesses. The Town of Kiefer's education program will target the proper storage, use and disposal of chemicals by local commercial and industrial businesses. Pollutants of primary concern include:

- Fats, oils, and grease from restaurants
- Leaking organic liquids and solid wastes from dumpsters
- Improperly stored chemicals, including automotive fuels, antifreeze, and other fluids
- Spills of chemicals and materials that are left exposed to stormwater

Construction: The Town of Kiefer will implement a variety of education outreach to the construction industry regarding construction site controls of pollution. These are addressed under OKR04 **Part V.C.1.a.ii(3)** for MCM-4 construction education outreach. The Town of Kiefer will target the following construction site pollution issues in its education program for builders and developers:

- Compliance with OKR10 permit and SWP3 requirements
- Sediment and erosion control BMP installation and maintenance
- Control of off-site sediment via track-out on vehicles
- Controls of trash and chemicals on site
- Protection of 303(d) and TMDL waterbodies
- Encouragement of use of Low Impact Development (LID) and Green Infrastructure

MCM-1 Education Outreach Strategy:

The Town of Kiefer's MCM-1 education program will employ the following general strategies. Appendices E and F provide lists and detailed descriptions of all MCM-1 education BMPs.

- Homeowners will be educated on how to properly use and disposal of fertilizers and other household chemicals as well as proper septic system maintenance.
- Citizens will be informed on how to get involved in stream cleanups, restoration activities and other local conservation efforts that may periodically be conducted within the Town of Kiefer.
- The Town of Kiefer will promote citizen participation in area-wide stream and city cleanup events, use of recycling centers in the vicinity
- 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.

- The Town of Kiefer’s education program will distribute written materials that target commercial and industrial enterprises that have business activities that may negatively impact the stormwater quality of the MS4.
- Builders and developers will be initially advised and given written education materials about construction pollution during the building permit review process, and as needed during active construction phase.
- MCM-4 and MCM-5 construction education will cover construction site pollution controls as well as educating builder and developer permit applicants about the Town of Kiefer’s latest policies and requirements for implementing Low Impact Development (LID) and Green Infrastructure.
- MCM-6 education outreach to staff will cover the employee training requirements of OKR04 Part V.C.6.a addressing pollution reduction from MS4 operations.

OKR04 Part V.C.2 (MCM-2) Industrial Stormwater Runoff

MCM-2 Permit Requirements:

OKR04 **Part V.C.2** only requires **Part III.B** designated Category 3 MS4s to develop a special program to prevent stormwater pollution from industrial activities that discharge into the MS4. Category 1 and 2 MS4s do not have to comply with any MCM-2 requirements. **Kiefer is a Category 1 permittee and does not have obligations under MCM-2.**

OKR04 Part V.C.3 (MCM-3) Illicit Discharge Detection and Elimination (IDDE)

MCM-3 Permit Requirements:

OKR04 **Part V.C.3.a** has the following permit requirements: *“Implement and enforce a program to detect and eliminate illicit discharges, including illegal dumping and on-site sewage disposal systems, into your small MS4. Your program must include dry weather field screening (DWFS), identify non-stormwater flows, and new elements should be developed and implemented as necessary. At a minimum, your program must adopt the following procedures”*

This passage is followed in OKR04 by eight subparts of specific requirements that are briefly summarized here and expanded upon in the SWMP MCM-3 Implementation Strategy below:

- i. Identify priority areas having a likelihood of illicit discharges
- ii. Trace or investigate illicit discharge sources
- iii. Remove illicit discharge sources
- iv. Use visual indicators and simple field test kits for investigations
- v. Conduct DWFS inspections at the frequency specified in OKR04 Table V-4
- vi. Adopt an ordinance or other mechanism to prohibit illicit discharges

- vii. Maintain a storm sewer system map showing outfalls and receiving waters
- viii. Maintain a list of OKR04 **Part II.B.2** incidental non-stormwater discharges

MCM-3 Implementation Strategy:

The Town of Kiefer’s program will rely upon the methods presented below to address **Part V.C.3.a** pollutant detection and elimination requirements. The eight subparts under OKR04 **Part V.C.3.a** contain a blend of DWFS and IDDE requirements.

As the MCM-3 program matures, the Town of Kiefer will develop and maintain various types of written guidance and/or Standard Operating Procedures (SOPs) that provide consistent and detailed instructions for performing specific tasks, such as DWFS inspections and use of field test kits. These guidance documents will be kept together in both paper and computer file formats and stored with the OKR04 programs Quality Assurance files along with this SWMP.

Pollution and Illicit Discharge Concepts:

Unfortunately, “pollution events” are not all created equal. The OKR04 permittee will experience several types of pollution events, each having to be addressed differently. These differences depend upon whether or not a Principal Responsible Party (PRP) can be determined through source tracking, and whether or not the polluted site and type of pollutant requires specialized cleanup procedures and equipment.

The SWMP provides procedures for each of the following types of pollution circumstances:

- Pollution having a traceable source, usually via a discharge pipe or channel
- Pollution from an untraceable source, usually as an illegal dumping of material
- Pollution that does not require specialized cleanup equipment and procedures
- Pollution that requires specialized equipment and procedures for proper cleanup

Types of Pollutant Sources: There are two types of pollutant sources that will be addressed by the Town of Kiefer in different ways:

1. **Traceable:** Chronic or frequent discharges with a potentially traceable source, and
2. **Untraceable:** Episodic incident (e.g., illegal dumping) with no traceable source.

Traceable Sources: These are pollutant sources that result from discharges from pipes or small channels. They occur frequently or continuously, and they are traceable in the waterbody or in the MS4 system using one or more methods of visual inspections, use of simple chemical field test kits and/or formal chemical sampling via laboratory analysis.

Pollutants from these sources will be dispersed downstream as a detectable odor, visual color, increased turbidity, excessive algae growth, or changes in water chemistry (e.g. pH or conductivity), especially when compared to uncontaminated water elsewhere in the stream or

MS4 (such as what is found upstream of the suspected discharge entry point). Initial detection leads to pollution confirmation and characterization, followed by source tracking to locate the source(s).

Untraceable Sources: Many stormwater pollutants are introduced into the MS4 from illegal dumping activities at a discrete point of entry in which the Principal Responsible Party (PRP) is unknown and not traceable. Examples of untraceable sources include dumping of yard waste, motor oil, antifreeze, leaking barrels, or trash in a creek or storm drain. Discovery of these types of pollution will be from incident reports from citizens, city crews, police and fire crews, businesses, and State and Federal agency staff.

Prevention of future untraceable pollution incidents will rely upon implementation of the MCM-1 Public Education and Participation programs as described in this SWMP. Often, illegally dumped pollutants are unknown chemicals. In such cases, the Town of Kiefer will rely upon chemical characterization and disposal expertise from local Fire Departments, HazMat and DEQ resources. For known pollutants, such as trash and yard waste, MS4 crews will remove and dispose of the materials.

Traceable Source Procedures Overview: DWFS detections or reports of potential pollution from citizens or MS4 staff (discovery) trigger (lead to) the next step: confirmation and characterization of stormwater pollution and the identification of pollution sources. The discovery (whether by DWFS or as reported) and confirmation of pollution sources, in turn, triggers (leads to) enforcement actions to be taken by the Town of Kiefer to eliminate the pollutant sources and, if necessary, ensuring that the Principal Responsible Party (PRP) takes all actions necessary to effectively clean up polluted sites and prevent future illicit discharge episodes. A final verification is needed to ensure that the PRP has effectively eliminated the illicit discharge and that the illegal traceable pollutants are removed from the MS4 area.

Untraceable Source Procedures Overview: For “Untraceable Sources”, such as pollution from illegal dumping, the responsibility for cleanup of the site will fall to either the Town of Kiefer’s local resources (e.g., public works crews, Fire Department and/or HazMat unit) for cleanup of minor pollution and site restoration, or to DEQ and/or other agencies if the pollution event requires a more complex cleanup strategy. Site cleanup strategies will be unique to each pollution event and site, therefore the SWMP can only address responses generally. Final verification of cleanup will be performed by the MS4 regardless of if local or third-party resources are used.

MCM-3 Implementation Sequence: The sequence of actions summarized in the “Overviews” above form the basis of the Town of Kiefer’s MCM-3 implementation strategy for both traceable and untraceable pollution sources. These are simplified as:

- Discovery
- Confirmation

- Characterization
- Source identification
- Enforcement
- Cleanup
- Verification

DWFS and IDDE Strategy Overview:

OKR04 **Part V.C.3.a** blends DWFS inspections with IDDE investigations and enforcement because they are two parts of the same goal: to detect and eliminate pollutant discharges to the MS4 system. DWFS can be thought of as a subset of the overall IDDE program. Both have the following components and limitations:

- DWFS is a pollutant discovery and characterization process. It is not used for confirmation of pollution, nor is DWFS used for source-tracking activities.
- IDDE covers not only DWFS as an integral component but adds source-tracking and enforcement activities. It also involves final verification of pollutant removal.

Discovery of Illicit Discharges: There are several ways the Town of Kiefer expects to learn about potential illicit discharges of stormwater pollution, including:

- DWFS inspections detect potential pollutants or sources (e.g., discharge pipes)
- MS4 crews or staff observe potential pollutants or sources
- Citizens or local property owners report observations of potential pollutants or sources
- Agencies or organizations report observations or data on potential pollutants or sources
- GIS or compiled data reports that present locations of potential pollution sources

Relating SWMP MCM-3 Strategy TO OKR04: OKR04 **Part V.C.3.a.ii** uses the general phrase to “investigate” pollution sources, whereas **Part V.C.3.a.iv** addresses certain investigation procedures (“using visual indicators and simple field test kits”), and **Part V.C.3.a.v** specifically sets minimum DWFS frequencies. All three of these subpart items (ii, iv and v) essentially are the OKR04 permit requirements that are used in the first three elements of the Town of Kiefer’s SWMP MCM-3 implementation sequence above (discovery, confirmation and characterization).

The SWMP’s OKR04 **Part V.C.3.a** MCM-3 Implementation provisions described below note which of the seven elements of the MCM-3 implementation sequence are being addressed by the SWMP.

MCM-3 Identify Priority Areas (Part V.C.3.a.i):

OKR04 **Part V.C.3.a.i** states: “i. 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 areas that discharge to ARCs or ORWs). Update this priority area list to reflect changing priorities annually.”

Criteria For Priority Areas: The purpose of establishing priority areas for MCM-3 implementation is to identify those portions of the MS4 area that are most likely to contain illicit discharges. The OKR04 permit provides several examples of criteria that can be used to define and delineate priority areas. The following OKR04 criteria will be used by the Town of Kiefer in defining MCM-3 priority areas:

- areas with older sanitary sewer lines
- areas with a history of sewer overflows or cross-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
- Areas that discharge or contribute POCs to 303(d) and TMDL waterbodies

Procedures For Defining Priority Areas: Using the OKR04 criteria above, the Town of Kiefer will assess the data in the following manner:

- Examine existing maps of the MS4 area to locate sites with high potential for pollutant discharges.
- Delineate MS4 areas within the 303(d) watershed and identify high priority areas that have sources most likely to cause or have the reasonable potential to contribute the 303(d) pollutants of concern (POCs) to each listed waterbody.
- Collect data on pollutant spills that have occurred within the MS4 within the past 5 years.
- Identify areas in which there have been sewer system bypasses within the past 5 years.
- Identify areas having the oldest sewer system lines and appurtenances.
- Identify industrial, commercial and residential areas that have a history of discharging pollutants.
- Consider these data collectively and generate GIS map layers and descriptions of areas within the MS4 having the greatest potential to discharge pollutants.
- Of the overall MS4 high priority areas, identify those high priority areas that are specifically associated with the 303(d) waterbody.

Procedures For Priority Area Use: The Town of Kiefer will identify Priority Areas within the MS4 area using the criteria above and delineate the areas as polygons drawn as separate GIS shapefiles (GIS layers). Descriptive information will be associated with each GIS layer as metadata, including:

- Layer title, version and projection
- Date of initial creation and dates of revisions
- Purpose and description of layer
- Computer folders where layer files are located

To orient the Priority Areas within the MS4 area, additional GIS map layers may also be created and/or used, such as:

- Land uses (e.g., parcels, zoning, suspected POC sources, etc.)
- Receiving waterbodies, including ARC, ORW, 303(d) and TMDLs
- MS4 stormwater collection system
- MS4 corporate boundaries
- Elevation contours and drainage patterns
- MS4 owned facilities, such as buildings, parks, airports, etc.
- Industrial, commercial and residential locations and densities

In addition to mapping MCM-3 Priority Areas, the Town of Kiefer will maintain and annually update the lists of potential POC sources within each Priority Area as required by OKR04 **Part V.C.3.a.i**. OKR04 **Part V.C.3.a.v** requires DWFS to be conducted more frequently in high Priority Areas with minimum DWFS frequencies specified in OKR04 Table V-4. The Town of Kiefer will apply the OKR04 Table V-4 DWFS frequencies that are also copied verbatim in SWMP Table 30 below.

Table 30: MCM-3 Minimum Frequency of Dry Weather Field Screening

	Category 1	Category 2	Category 3
DWFS At All Identified Outfalls	20% per year ¹	40% per year ¹	40% per year ¹
DWFS At High Priority Areas	Once per year	Once per year	Once per year

¹ The number of outfalls screened shall be rounded up to the nearest integer

MCM-3 Trace or Investigate the Source (Part V.C.3.a.ii):

OKR04 **Part V.C.3.a.ii** states: *“ii. Trace or investigate the source of an illicit discharge. The investigation shall take place within 72 hours of the receipt of any complaints, reports or monitoring information that indicates a potential illicit discharge.”*

Confirmation, Characterization and Source Identification

Source Tracking Overview: Implementing **Part V.C.3.a.ii** (tracing pollution sources) begins

once initial pollution discovery has been completed. Discovery can come from DWFS results or from reports from third parties. Such discoveries are assumed to be tentative initial indications of the possibility of the presence of pollution from an illicit discharges which need to be confirmed.

Per **Part V.C.3.a.ii**, the Town of Kiefer will investigate any discovered or reported illicit discharge source within 72 hours. The initial visit to a pollution discovery or report site will be to confirm that there exists some type of illicit pollutant discharge. Once confirmed, then a pollution characterization will be performed to determine the geographic extent of pollutant coverage and any visually evident environmental impacts. Characterization will also include the identification (if possible) of the pollutants and their approximate concentrations and/or volumes.

Once the confirmation and characterization steps are completed, the MS4 will proceed to source identification which involves field work and examining map features and land uses to ultimately identify the source of the pollutant discharge. This “source tracking” work will involve mostly visual inspections in the field for possible discharges including the use of simple field test kits. Sources that are found will be advanced to the enforcement phase under OKR04 **Part V.C.3.a.vi**.

Source Tracking Procedures: The Town of Kiefer will implement the following OKR04 **Part V.C.3.a.ii** source tracking procedures which will involve three steps:

1. **Confirmation:** verify that an OKR04-defined illicit discharge exists and that it falls under the Town of Kiefer’s OKR04 permit requirements and local codes.
2. **Characterization:** determine the geographic extent of the pollution, the type(s) of pollutants discharged, their approximate concentrations and volumes, and any obvious environmental impacts caused by the discharge.
3. **Source Identification:** Once confirmation and characterization are complete, begin a visual site inspection, including the use of field test kits as needed, to determine all possible entry points for the observed illicit discharge. Review of GIS maps and interviews with adjacent property owners may enhance the field investigations.

Step 1 Confirmation Procedures: The purpose of the confirmation step is to verify that an illicit discharge actually exists in the location initially discovered during a DWFS or as reported by a third party. The Town of Kiefer maintains written guidance and/or Standard Operating Procedures (SOPs) on the use of field test kits and for the procedures for conducting visual inspections for DWFS and source-tracking. Appendix H has copies of the DWFS and IDDE Field Forms to be used along with instructions for entering visual observations on the forms.

The initial confirmation field work will involve:

1. MS4 trained staff visiting the site and conducting an initial visual inspection of the general area. This may involve wading or walking in the storm drain system or creek channels upstream and downstream of the reported site.

2. If there are signs of pollution (an illicit discharge), a thorough visual inspection will be conducted and observations noted on the field form following the Town of Kiefer's written guidance and Appendix H forms.
3. If possible, one or more field test kits will be used to measure parameters considered important to what is observed. These may include but are not limited to:
 - a. pH
 - b. Conductivity
 - c. Temperature
 - d. Chlorine Residual
 - e. Chloride
4. In addition to visual observations and test kit measurements, a confirmed site should also have photographs of the general area and of the discharge, as well as GPS coordinates and general site description including adjacent land uses. This information will also be added to the field forms and incident report.
5. If there are no signs of an illicit discharge or any release of pollutants at the reported site, then this will be noted on the field form and the investigation closed for lack of confirmation.
6. If an illicit discharge is confirmed, then the investigation proceeds to Step 2, Characterization.

It is important to note that many initial discoveries of potential illicit discharges observed during DWFS or reported as illicit discharges by third parties are in fact not pollutants after all, or they are discharges that are allowed under existing discharge permits held by the source owners. In such cases, OKR04 coverage does not apply, and the **Part V.C.3.a.ii** investigation is closed out with no further action needed.

DEQ may need to be contacted to confirm pollutant coverage under OKR04 or to determine if the pollutant source is allowed under another type of discharge permit.

Step 2 Characterization Procedures: Characterization is performed once an illicit discharge has been confirmed. The purpose of the characterization step is to determine the extent of the pollution event (illicit discharge) and to assess obvious visual environmental impacts that are likely caused by the pollutant(s).

***Environmental Harm:** If there is visual evidence that the illicit discharge may have the potential to cause harm to human health and safety or to the environment, then the Town of Kiefer will immediately contact DEQ's Environmental Complaints and Local Services (ECLS) or the appropriate agency to report what is observed. If deemed necessary and in coordination with DEQ, the Town of Kiefer will also contact local police and/or fire departments and HazMat for a professional assessment of the nature and extent of*

potential harm and to manage the cleanup of the pollution and impacted area.

Once a reported or discovered illicit discharge has been confirmed, the following criteria will be used by the Town of Kiefer to characterize a confirmed illicit discharge:

TYPES OF POLLUTANTS

- Identified by physical appearance of the material or its source
- Identified by container labels
- Identified by verbal statements from the PRP
- Identified from written descriptions (e.g., MSDS) or other pertinent documents

VOLUMES AND CONCENTRATIONS

- Solids: approximate physical dimensions of containers or piles of spilled material
- Liquids: approximate volumes of containers or volumes in gallons spilled
- Chemical Concentrations: from labels or other documentation, or from test results

AERIAL EXTENT

- Estimated square feet of ground covered by discharged material
- If more than one spill, estimated aerial coverage of each spill site
- If transported in flowing water, estimate length of contaminated water course

VISIBLE ENVIRONMENTAL DAMAGE

- Dead or dying vegetation (grass, shrubs, trees, water plants, attached algae)
- Soil stains or discolorations
- Dead or dying animals (fish, land animals, insects)
- Chemical or sewage odors in area
- Growth of “noxious” fungi, algae or water plants (e.g., sewage fungus, green slime)

Exposure Safety: OKR04 program managers and staff must NEVER contact or breathe fumes from chemical spills or illicit discharge sites without proper training and safety equipment. This includes never entering OSHA-defined confined spaces without proper training and safety equipment. Sites with unknown chemicals or posing potential dangers must be investigated by properly trained and equipped crews, such as local Fire Departments, HazMat and DEQ. When in doubt, OKR04 program staff should exit the incident vicinity, secure it from public access and contact if necessary, and immediately contact DEQ and the local Fire Department and/or HazMat.

Step 3 Source Identification Procedures: Source tracking is required by OKR04 Part

V.C.3.a.ii. Once the safety of the general public and OKR04 staff have been accomplished, OKR04 staff may proceed with the task of identifying the source of the illicit discharge. This will generally involve visual inspections and use of field test kits.

There are several types of discharges that affect the source-tracking investigation:

- Discharges of liquids via pipes or open trenches
- Dumping or spills of solid materials into piles
- Dumping of containers of liquids or solids
- Sheet flows across the ground surface
- Seeps from underground broken pipes or buried containers

Most discovered or reported illicit discharges will be based upon visible evidence, such as discoloration of water, odors, fish kills or dumped materials or containers on the ground. However, finding the actual Principal Responsible party (PRP) that was responsible for the illegal dumping or illicit discharge will often be more difficult than finding the pollution site itself.

PIPES AND TRENCHES:

Most often, a buried pipe with just the end protruding into a creek or MS4 channel will be positioned in a straight line to its source. Source tracking is often accomplished by following the general direction of the pipe looking for a home, business or industry that may have laid the pipe, perhaps years ago.

The present owner of the source property may not even be aware of the pipe. Often, pipes discharging to local creeks are for floor drains from years ago. The present owner may think that the drain is connected to the sanitary sewer. These become points for discussion with the owner, including possible enforcement, using your local codes. Tracer dye put into a floor drain can reveal the location of the drain pipe's outfall, whether into a manhole, creek or MS4 channel.

SPILLED OR DUMPED SOLID MATERIALS:

Spilled materials are often associated with truck or railroad car loading and unloading activities. Solids may be swept or wind-blown towards the end of a property where they eventually end up in local creeks or MS4 channels. In such cases, property owners are easy to identify for cleanup and/or enforcement action. However, sometimes loose solid materials may be discovered in fields or channels that were dumped by unknown persons.

If identification of a PRP cannot be determined, then the Town of Kiefer will use local crews or contract responders for site cleanup and proper disposal of materials. DEQ will be notified if the spilled material is determined to have the potential to cause environmental health impacts or if cleanup of the impacted area is beyond local resources.

DISCARDED CONTAINERS:

Most often, containers have some type of identification labels or markings that indicate the contents, name of manufacturer, and possibly information about the last owner of the container. Once public and MS4 crew safety issues have been addressed, the container can be examined for ownership information. If found, then the Town of Kiefer will report the illegally dumped material to the owner for cleanup at owner's expense and take any enforcement actions under local codes as necessary.

If ownership of discarded containers cannot be determined, then the Town of Kiefer will contact HazMat and the local Fire Department, if necessary, and use the companies listed in Table 31 for spill cleanup and disposal and site cleanup. However, if the pollutants are unknown and considered to have the potential to harm human health or the environment, or if the aerial extent of contamination is beyond what local resources can adequately address, the Town of Kiefer will contact DEQ to begin a third party cleanup of the site under DEQ or other agency management.

SHEET FLOWS AND SUBSURFACE FLOWS:

These types of entries of liquid pollutants are most often visible as water emerging from soils or creek banks. They often have foul odors or unusual colors, or there may be crystallized solids near the seeps from evaporation that leave chemical residues. It is often difficult to locate sources of such pollutant discharges as there are no pipes or written markings to identify ownership.

The best discovery approach is to walk the site in an expanding circle to look for evidence of an underground pipe, valves or industrial or sewage source such as a broken pipe or manhole. For sewage seeps or sheet flows, visual indicators are best. Look for sewage fungus, gray water and sewage odors. Confirmation tests for optical brighteners can also be used to confirm sewage flows.

MCM-3 Enforcement, Cleanup and Verification (Part V.C.3.a.iii and vi):

OKR04 **Part V.C.3.a.iii** states: "*iii. Remove the source of the illicit discharge.*"

OKR04 **Part V.C.3.a.vi** states: "*vi Implement and enforce an ordinance, or other regulatory mechanism, to the extent allowable under state or local law, to effectively prohibit illicit discharges into your small MS4 and implement appropriate enforcement procedures and actions.* If you lack legal authority for direct enforcement action, you must include procedures to notify DEQ when a party fails to comply with the requirements. If your ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with your illicit discharge detection and elimination program."

Enforcement, Cleanup and Verification

Enforcement, Cleanup and Verification Overview: Once the illicit discharge discovery, confirmation, characterization and source tracking have been completed, it is time to take actions to clean up the illicit discharge. If the Principal Responsible Party (PRP) is known, the final steps will involve negotiations with the PRP, local enforcement as needed, and making a final verification inspection to ensure that all cleanup actions were taken and were successful.

Town of Kiefer personnel will do their best to identify the source. If the source cannot be located, the site will be cleaned up and the location will be monitored in an attempt to identify the source if it should occur in the future. DEQ will be notified if necessary.

The final 3 sequence steps of enforcement, cleanup and verification are required under OKR04 **Part V.C.3.a.iii** (remove the source) and **Part V.C.3.a.vi** (enforce an ordinance to effectively prohibit illicit discharges). As required by OKR04 **Part V.C.3.a.vi**, Appendix I contains a copy of the Town of Kiefer's ordinance's "*relevant sections*" regarding enforcement of effectively prohibiting illicit discharges.

There are three types of illicit discharges that require different approaches to cleanup and disposal of pollutants:

1. Those with an identified PRP and pollutant source
2. Those without a PRP or identified source but can be cleaned up with local resources
3. Those without a PRP or identified source and require DEQ and other third party cleanup

For identified PRPs, the Town of Kiefer will negotiate with and take enforcement action under local codes as needed to ensure that the PRP is responsible for all spill cleanup, pollutant disposal, and site restoration. For unidentified PRPs and pollutant sources, the Town of Kiefer will either clean up the site using local resources if possible, or turn over to DEQ or other agency the responsibility for spill cleanup and pollutant disposal as well as site restoration if needed.

PRP, Enforcement and Cleanup Procedures: For identified PRPs, the Town of Kiefer will make an initial contact either in writing or by personal visit with the owner or manager of the property from which the illicit discharge originates. This initial contact will:

- Identify what illicit discharge(s) were found and where
- Describe the results of the pollution characterization assessment
- Provide citations of the Town of Kiefer's code violations and potential penalties for failure to stop the illicit discharge
- Include any requirements for discharge cleanup and site restoration, if needed
- Provide a time limit for the PRP to accomplish all prevention and cleanup tasks

If the PRP agrees to accomplish all illicit discharge prevention and site cleanup tasks specified in the initial contact, then the Town of Kiefer will monitor progress until all tasks have been completed. Verification will be performed as described below and the incident report will be closed.

Enforcement and Legal Actions: If the PRP refuses to comply with local codes for discharge prevention and site cleanup, then the Town of Kiefer will take enforcement actions against the PRP as specified under local codes which are copied in Appendix I. For continued refusals, the

Town of Kiefer will contact DEQ for assistance with local enforcement efforts or for DEQ taking over the pollution event and site cleanup. Communications with DEQ will be in the form of written letters, emails and/or phone calls as necessary and/or required by DEQ. Records of all DEQ communications will be kept in the Town of Kiefer's incident project files.

If a recalcitrant PRP hires legal counsel to represent them in any matter concerning the pollution event, then Town of Kiefer will immediately cease all verbal and written communications with the PRP. At that time, the Town of Kiefer's legal counsel, such as the City Attorney, will be consulted regarding the appropriate legally defensible course of actions that the Town of Kiefer should take to ensure that all illicit discharges from the PRP property are stopped and all needed site cleanup and restoration actions are completed by the PRP. Said legal counsel will also advise the Town of Kiefer's staff and management regarding the proper handling of all future communications with and records of all actions taken regarding the incident and PRP.

For any illicit discharge incident where the PRP uses legal counsel regarding the pollution incident, written summaries of all personal conversations, site and office visits, and phone calls with the PRP, DEQ and/or other agencies and third parties regarding the pollution event may be required to be kept by the Town of Kiefer per the instructions of the Town of Kiefer's legal counsel. All such records will be of sufficient detail, accuracy and quality to be used in Oklahoma civil and criminal courts as evidence if deemed necessary by the Town of Kiefer's legal counsel.

No PRP, Local Cleanup Procedures: In the event that no PRP can be detected in the source tracking phase, the Town of Kiefer will evaluate its options for using its own local resources to address pollution cleanup and site restoration or determine that resolving the incident is beyond the capabilities of its own resources. In such cases, third parties will be contacted if necessary.

For cleanup and site restoration using local resources, the Town of Kiefer will first contact their local Fire Department and HazMat resources. If these resources determine that they will need additional resources to complete all pollution cleanup and site restoration, the Town of Kiefer will contract with an appropriate company if necessary.

Command of Pollution Site: It must be kept in mind that even a single discharge pipe or unmarked bag or container in a creek or MS4 channel may contain very toxic and dangerous materials. The Town of Kiefer's OKR04 program staff do not have the training, experience or equipment to handle potentially dangerous materials. Therefore, in such cases of unknown substances being discharged or found abandoned or illegally dumped, the OKR04 program staff will contact their local Fire Department and/or HazMat and let these resources take command of the cleanup and site restoration as they deem necessary.

This hierarchical command and control approach requires that the OKR04 program management and staff maintain a thorough working relationship with these resources. To do this, the Town of Kiefer periodically consults with local Fire Department and HazMat management on the scope of

actions that are needed when local cleanup and site restoration is achievable.

Aerial Extent of Pollution Event: Some discarded materials in creek or MS4 channels are an illicit discharge due mainly to their physical presence. Examples include bags or piles of lawn clippings and landscaping trimmings, or piles of dirt and other construction debris. In such cases, public works crews can usually remove the materials for proper disposal along with other MS4 generated discards.

However, unidentified substances, such as dumped sludge or flowing water having unnatural odors or colors must be addressed more carefully as the substances may be toxic. In such cases, HazMat resources can determine the types of materials and make recommendations for and even manage cleanup and site restoration.

Because flowing water can carry pollutants downstream rapidly, the area of impact from even a single pollutant dump site or discharge pipe can cover hundreds of feet downstream. In some cases, a tributary's pollutant load can flow into a larger stream or river which could affect drinking water supplies, water intakes for crop irrigation or cattle watering, or recreational areas.

To minimize such downstream impacts, the Town of Kiefer maintains a GIS map of its MS4 system that includes locations of all waterbodies and their major tributaries. Directions of flow are easily determined from these map features as well as the locations of land uses and enterprises that depend upon the use or direct contact with the waterbodies.

No PRP, DEQ or Agency Cleanup Procedures: If the illicit discharge event involves a potentially toxic substance over which local resources cannot control, or the coverage of the impacted area is beyond what can be successfully contained and restored using local resources, then the Town of Kiefer will contact Creek County Emergency Management, DEQ or other appropriate agency to request spill response assistance or total management of the incident.

Cleanup Verification Procedures: Because the initial discovery and confirmation of the illicit discharge incident is based upon mostly visual indicators, verification that the pollution event and resulting environmental impacts, if any, have been adequately addressed will also rely upon mostly visual indicators, however chemical analysis may be used if necessary.

For PRP managed or non-PRP sites under local control, the Town of Kiefer will rely upon its OKR04 program staff to field verify that the illicit discharges have been stopped and that the discharge site has no visually discernable impacts. In addition, for PRP incidents, the Town of Kiefer will contact the PRP owner or manager for verbal or written confirmation.

For non-PRP incidents that were managed by DEQ and other third parties, the Town of Kiefer will accept their written reports of all actions taken as confirmation that the illicit discharge was stopped and all impacted areas restored. In addition, OKR04 program staff will visit the discharge site to visually confirm that the illicit discharge has been removed and the site restored.

Written records of all verification will be kept with each Illicit Discharge Incident file.

MCM-3 DWFS and IDDE Monitoring (Part V.C.3.a.iv and v):

OKR04 **Part V.C.3.a.iv** states: *“iv. Identify problems using visual indicators and simple field test kits. Laboratory methods can be reserved for situations where you have identified a problem and need to enforce on a suspected illicit discharger.”*

OKR04 **Part V.C.3.a.v** states: *“v. At a minimum, DWFS shall be conducted at the frequency outlined in Table V-4 below.”* [OKR04 Table V-4 is presented as SWMP Table 30]

The Town of Kiefer maintains written guidance and/or Standard Operating Procedures (SOPs) for conducting DWFS inspections and for use of field test kits. Field forms used for DWFS and other IDDE pollution inspections are in Appendix H.

Summary of DWFS and IDDE Inspections: The SOPs for DWFS and IDDE inspections include methods conducting visual inspections performed by MS4 crews as well as use of field test kits for parameters that address the most likely type of stormwater pollution that is suspected (e.g. chlorine residual, pH, dissolved oxygen, conductivity, etc.). Each test kit has its own written guidance and/or SOP, including methods for instrument maintenance, calibration and storage.

Visual inspections describe and attempt to quantify the visual extent of pollution (e.g. as amount and area covered by floatables (trash and debris), excess algae growth, dead or stressed stream vegetation and organisms, color of water, odors, sediment buildup, stream bank erosion, etc.). The DWFS SOP includes special actions to address high priority areas identified in 303(d) watersheds, mainly as increased frequency of inspections and increasing inspections of potential sources of the 303(d) Pollutants of Concern (POCs).

If any IDDE source tracking field inspections might require scientifically defensible data for possible litigation and/or enforcement action, then the Town of Kiefer conduct enhanced sampling and information gathering to locate sources and characterize pollution events. Enhancements will involve greater use of 40 CFR Part 136 laboratory analytical procedures and Part 136 procedures for sample collection, transport, preservation and holding times.

Paper field forms and/or electronic field data recording devices (e.g. laptops, GPS or Tablet PCs) will be used to make data collection systematic. Data will be entered and/or downloaded into computer files for data analysis, sharing and reporting. As needed, field data will be linked to GIS map attributes. If requested to do so by DEQ, certain monitoring data will be reported to DEQ on DEQ’s Discharge Monitoring Report (DMR) forms.

MCM-3 IDDE Ordinance (Part V.C.3.a.vi):

OKR04 **Part V.C.3.a.vi** states: *“vi. Implement and enforce an ordinance, or other regulatory mechanism, to the extent allowable under state or local law, to effectively prohibit illicit*

discharges into your small MS4 and implement appropriate enforcement procedures and actions. If you lack legal authority for direct enforcement action, you must include procedures to notify DEQ when a party fails to comply with the requirements. If your ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with your illicit discharge detection and elimination program.”

- Appendix I contains a copy of the Town of Kiefer’s ordinance prohibiting illicit discharges to the MS4. This ordinance will be evaluated annually and updated as needed. The ordinance review and revision process will involve: Making modifications to local codes and ordinance reflecting DEQ’s recommendations;
- Ensuring that the ordinance and local codes adequately address the DWFS and IDDE program requirements, including enforcement;

The Town of Kiefer will therefore implement the following procedures for taking enforcement action against illicit dischargers in cooperation with DEQ:

- Within 24 hours of finding a discharge that requires DEQ assistance as a potential violation, the Town of Kiefer will contact DEQ Enforcement Division by telephone and/or email.
- Data and information requested by DEQ will be collected and promptly submitted to DEQ.
- Assist DEQ with site visits and/or pollution inspections upon request.
- Assist DEQ with administrative tasks needed by DEQ upon request, including arranging meetings and processing reports.
- Document all actions taken by DEQ and county staff for each incident and report all incidents in the Town of Kiefer’s Annual Report.

MCM-3 Storm Sewer System Map (Part V.C.3.a.vii):

OKR04 **Part V.C.3.a.vii** states: “*vii. Maintain and annually update a storm sewer system map showing the locations of all outfalls and the names and locations of all waters of the state that receive discharges from those outfalls.*”

The MS4 map required by OKR04 Part **V.C.3.a.vii** only specifies three map features: the storm sewer system, the location of MS4 outfalls, and the location of all MS4 discharge receiving waters. The Town of Kiefer presently maintains a GIS map of the MS4 system showing major drainage system features, major outfalls and prominent receiving streams. Periodic updates of map data from substate planning agencies and State and Federal agencies are used to make revisions to the MS4 map as needed. Map features are also amended as more system inspections are performed by MS4 staff.

Updated map information, such as outfall locations and site descriptions, are reviewed annually by MS4 staff as part of the map revision process. The revision process involves the following:

- Collecting new and updated map data from agencies and organizations
- Collecting field data during inspections by city crews to verify locations and descriptions of MS4 spatial map attributes
- Updating 303(d) and TMDL map features based upon DEQ's latest Integrated Reports
- Periodic review of MS4 system maps by city personnel
- Using Global Positioning System (GPS) to provide coordinate data for map features in the MS4 system, such as facility locations and sampling sites
- Other location and GPS coordinate data are developed using aerials and GIS map layers that show structures and sites
- Digital and paper aerial photography, and USGS 7.5 Minute Quadrangle maps may also be used to assist with locating outfalls and updating their positions

MCM-3 Incidental Non-Stormwater [Allowed] Discharges (Part V.C.3.a.viii):

OKR04 **Part V.C.3.a.viii** states: *"viii. Maintain and annually update a list of occasional incidental non-stormwater discharges or flows as allowed in Part II(B)(2) that will not be addressed as illicit discharges."*

The Town of Kiefer's list of allowable non-stormwater discharges is presented at the beginning of the SWMP in Table 1. The Town of Kiefer reviews this list annually at the time of preparing the Annual Report, and revisions are made, if needed, annually.

OKR04 Part V.C.4 (MCM-4) Construction Site Stormwater Runoff Control

MCM-4 Permit Requirements:

OKR04 **Part V.C.4.a** has the following permit requirements: *"Implement and enforce a program to reduce pollutants in any stormwater runoff to your MS4 from construction activities. At a minimum, the program requirements shall be consistent with the OKR10 General Permit for Stormwater Discharges from Construction Activities (OKR10)."*

This passage is followed in OKR04 by three subparts of broadly defined requirements that are briefly summarized here and expanded in further SWMP MCM-4 subparts below:

- Implement and enforce an ordinance to require erosion and sediment controls including sanctions for noncompliance,
- Implement and enforce procedures for site plan review which address water quality impacts, including sediment and erosion controls and other wastes,

- iii. Implement and enforce procedures for site inspection and enforcement of control measures including enforcement escalation procedures for recalcitrant or repeat offenders.

MCM-4 Implementation Strategy:

The Town of Kiefer's program will rely upon the methods presented below to address **Part V.C.4.a** construction site pollution requirements. The three subparts under OKR04 **Part V.C.4.a** rely upon implementing local ordinance provisions that require builders to utilize pollution control BMPs, and for the MS4 to inspect for and enforce against failures to control wastes, including sediment and erosion control measures.

The Town of Kiefer maintains written guidance and/or Standard Operating Procedures (SOPs) with detailed instructions for performing site plan reviews and site inspections. Appendix J contains copies of the MCM-4 construction site inspection forms used by the Town of Kiefer.

MCM-4 Construction Ordinance (Part V.C.4.a.i):

OKR04 **Part V.C.4.a.i** states: *"i. 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. Review and revise your existing ordinance to meet the permit requirements. If you lack legal authority for direct enforcement action, you must include procedures to notify DEQ if a construction site operator fails to comply with your construction site stormwater runoff control program. You may rely on DEQ for assistance in enforcement of this provision of the permit in these cases."*

Appendix K contains a copy of the Town of Kiefer's construction ordinance that requires sediment and erosion and other waste controls at all construction sites located within the MS4 that disturb ≥ 1 acre or are part of a Common Plan of Development (CPOD) as defined in DEQ's OKR10 permit. This ordinance will be evaluated annually and updated as needed. The ordinance review and revision process will involve:

- Making modifications to local codes and ordinance reflecting DEQ's recommendations;
- Ensuring that the ordinance and local construction codes adequately address sediment and erosion and other waste control requirements, including enforcement.

MCM-4 Site Plan Review (Part V.C.4.a.ii):

OKR04 **Part V.C.4.a.ii** states: *"ii. 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."*

OKR10 Disturbance Size: The Town of Kiefer issues local Building Permits prior to any construction activity. The OKR10 permit, as well as the Town of Kiefer's MCM-4 requirements

address pollution from construction sites that disturb ≥ 1 acre or from smaller disturbance areas if they are part of a Common Plan of Development (CPOD) as defined in DEQ’s OKR10 permit.

The Town of Kiefer’s MCM-4 Site Plan review process will apply to all construction projects that qualify for OKR10 permit coverage. Site Plan reviews are conducted by Town of Kiefer staff during the pre-construction project approval process for issuing Building Permits. The following administrative procedures are used by the Town of Kiefer when conducting Site Plan reviews:

- Initial construction proposal and application packet is received by City Hall.
- Proposed construction plans, along with a Site Plan, are distributed to Stormwater, Floodplain and Building Inspection/Code enforcement for review.
- OKR04 program staff review Site Plans and Building Permit applications to determine if the proposed project must have an OKR10 permit.
- The construction plans are either approved or comments and/or requests for additional information are submitted to the applicant within 14 business days.
- Revised construction and Site Plans are re-submitted for final review and approval.
- The Building Permit is issued based upon approvals of staff and elected officials.

The criteria for ensuring the protection of water quality during the Site Plan review process will be based upon the same protection criteria required for construction sites in the OKR10 permit. OKR10 water quality protection provisions that will be included in the Town of Kiefer’s Site Plan review are summarized in Table 32.

The purpose of the Site Plan review is not to confirm that the proposed project will comply with all OKR10 permit requirements. Rather, the purpose is to ensure that the water quality protection concerns covered by OKR10 will be addressed by the project owner.

Table 32: Site Plan Review Criteria Based on OKR10 Water Quality Protection

OKR10 Part	WQ Protection Criteria	Site Plan Review Strategy
1.2.1.A	Project qualify for OKR10 coverage?	Verify that project must be covered by OKR10.
1.2.1.B	Project has OKR10 covered support activities?	Verify if project has any OKR10 covered support activities.
1.2.1.C	Project has OKR10 allowable non-stormwater discharges?	Verify if project has any OKR10 covered allowable non-stormwater discharges.
1.2.2.B	Project has OKR10 authorized discharges mixed with other non-stormwater?	Verify that OKR10 authorized discharges will not be mixed with other non-stormwater discharges.
1.2.2.D	Project discharges are determined by DEQ to cause or have the	Verify that DEQ has not made this type of determination.

OKR10 Part	WQ Protection Criteria	Site Plan Review Strategy
	reasonable potential to cause a violation of WQS?	
1.2.2.E	Project has certified that it meets OKR10 criteria to protect listed endangered species	Verify that one of the five OKR10 species protection criteria has been met.
1.3	Project has obtained OKR10 coverage?	Verify that project has received OKR10 authorization to discharge
1.3	Project has an SWP3 document required by OKR10?	Verify that project has a completed SWP3 document.
3.3.1	Project has erosion and sediment controls?	OKR10 control requirements include: minimizing site disturbance, meeting stabilization deadlines, and controls are in project design.
3.3.1.A	Project will use vegetated areas and buffers for erosion and sediment control.	Controls include vegetated areas, natural buffers and energy dissipation devices.
3.3.1.B	Project will use buffers to maintain minimum distances from nearby Waters of the State.	Natural buffers or alternative equivalents are maintained at OKR10 required distances.
3.3.1.C	Project will use perimeter controls.	OKR10 perimeter controls will be used downslope of disturbed areas and maintained.
3.3.1.D	Project will use BMPs to minimize sediment track-out.	OKR10's track-out BMPs will be installed and maintained along with cleanup of tracked-out sediment.
3.3.1.E	Project will protect erosion from stockpiled materials.	OKR10 required controls include location of stockpiles, use of cover or stabilization, and erosion cleanup.
3.3.1.F	Project will use dust controls.	Minimize dust using water or other dust suppression measures.
3.3.1.G	Project will minimize erosion of steep slopes (40% or greater slope).	BMPs can include avoidance of disturbance, stormwater flow diversion, or various OKR10 soil stabilization methods.
3.3.1.H	Project will preserve native topsoil.	Unless infeasible, stockpile and reuse native topsoil in areas of vegetative stabilization.
3.3.1.I	Project will minimize soil compaction in vegetative stabilization areas.	To protect infiltration, OKR10 requires restricting vehicle and equipment use or use soil amendments in compacted areas.
3.3.1.J	Project will protect storm drain inlets.	For direct flows to storm drains, OKR10 requires use and maintenance of sediment removal inlet protection.

OKR10 Part	WQ Protection Criteria	Site Plan Review Strategy
3.3.1.K	Project's constructed stormwater channels will protect against erosion.	OKR10 requires protections to include avoiding unstabilized areas and to use energy dissipation and other erosion control BMPs.
3.3.1.L	Project's sediment basins will meet minimum OKR10 requirements.	OKR10 requirements include minimum runoff volume storage, basin discharges that minimize pollutants, stabilization controls of inlets and outlets, basin location criteria, and basin maintenance.
3.3.1.M	Project's dewatering discharges will minimize pollution and erosion.	OKR10 prohibits discharges of contaminated water from dewatering without first passing through pollution and erosion control BMPs.
3.3.2.A	Project's stabilization practices meet OKR10 deadlines.	OKR10 requires stabilization no later than 14 days from initiating (7 days for 303(d), ORW and ARC areas).
3.3.2.B	Project's stabilization criteria meet OKR10 requirements.	Meet OKR10 criteria for both vegetative and non-vegetative stabilization.
3.3.3.A	Project's pollution prevention measures for prohibited discharges.	Meet OKR10 requirements for listed types of "prohibited discharges" pollution.
3.3.3.B	Maintenance of project's pollution controls.	OKR10 requires that all pollution controls be maintained, including storage, handling and disposal of chemicals.
3.3.3.C	Emergency spill response and notification.	OKR10 prohibits discharges of toxic or hazardous substances, and it requires specific notification procedures for certain chemicals.
3.3.3.D	Minimize discharges of nitrogen and phosphorus fertilizers.	OKR10 sets limits on fertilizer applications.
3.4	Effluent limits of asphalt batch plants.	OKR10 Addendum F sets limits on discharges from asphalt batch plants.
3.5.1	Discharges within 1 mile of sediment or turbidity 303(d) impaired waters.	OKR10 has requirements for location of impaired waterbodies, site inspections, corrective actions, and site stabilization.
3.5.2	Discharges to ORW waters or within ARC areas.	OKR10 has requirements for site inspections, corrective actions, and site stabilization including use of buffers and sediment basins.
4.0	Stormwater Pollution Prevention Plan (SWP3).	OKR10 requires an SWP3 document with specific contents and availability.

MCM-4 Inspection and Enforcement (Part V.C.4.a.iii):

OKR04 Part V.C.4.a.iii states: “iii. 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. At a minimum, site inspections shall be conducted at the frequencies outlined in Table V-5 below.” Table 33 is a copy of Table V-5.

Table 33: Minimum Frequency of Construction Site Inspections

Site	Category 1	Category 2	Category 3
Sites that are greater than 40 acres	once per quarter	once per month	once per month
Sites that discharge to a waterbody identified as impaired ¹	once per quarter	once per month	once per month
Sites that discharge to a waterbody with an established TMDL	once per quarter	once per month	once per month
Sites that have been identified as a threat to water quality (e.g. sites with recalcitrant or repeat offenders)	once per quarter	once per month	once per month
All other sites	at least once during active construction	once per quarter ²	once per quarter ²

1. Sites that discharge within 1 stream mile of a waterbody that is impaired for sediment or turbidity.
2. You may develop and implement procedures and criteria for reducing the inspection frequency. However, at a minimum, sites shall be inspected at least once during active construction. Such procedures and criteria shall be documented in your SWMP

Construction Site Inspection Procedures: Appendix J includes copies of the Town of Kiefer’s construction site inspection forms and inspection instructions. The content of the forms and the inspection procedures are updated whenever deficiencies are found or it is determined that additional types of information are needed.

Inspection Form: Inspections are conducted at a minimum frequency of once during active construction as specified in SWMP Table 33 and in OKR04 Table V-5 or more frequently depending upon the projects potential to impact water quality and site compliance status. The construction inspection form and procedures include:

- Name of project and owner / operator contact information
- OKR10 permit number and location of SWP3 document
- Inspector name and contact information
- Date and location of inspection

- Weather and antecedent rainfall and runoff conditions
- Stabilization area descriptions and types of stabilization used
- Types of sediment / erosion barrier BMPs used and condition of BMPs
- Types of inlet protection BMPs used and condition of BMPs
- Types of vegetative buffer BMPs used and condition of BMPs
- Types of vegetated swale BMPs used and condition of BMPs
- Types of sediment basin BMPs used and condition of BMPs
- Types of concrete washout BMPs used and condition of BMPs
- Types of dust control BMPs used and condition of BMPs
- Types of blowing trash control BMPs used and condition of BMPs
- Types of site exit track-out BMPs used and condition of BMPs
- Types of chemical container shelter and containment BMPs used and condition of BMPs
- Materials storage and waste receptacle BMPs used and condition of BMPs
- Materials stockpiles runoff control BMPs used and condition of BMPs
- Presence of equipment / vehicle fluid leaks / spills and effective use of cleanup

Construction Ordinance Enforcement: After an initial site inspection of the construction site for items cited above, any deficiencies discovered are processed by the following actions:

- Deficiencies discovered during the inspection are immediately discussed with the construction site owner or operator if present at the time of inspection.
- Deadlines for correcting each deficiency are given verbally by the Town of Kiefer's inspector to the owner/operator if present. The responsible party will be contacted via phone or email if not present at time of inspection.
- If the owner / operator agrees to correct the deficiencies discussed, then the inspector will note this on the inspection form.
- Soon after the deadline of each deficiency, the inspector will return to the construction site to verify that corrections have been made.
- If any deficiencies still remain, then the inspector will process a written Notice of Violation (NOV) as required and described in the Town of Kiefer's construction ordinance (found in SWMP Appendix K).
- Additional and more severe enforcement steps will be taken according to the construction ordinance for continued failure of the construction site owner / operator to correct deficiencies.

Once all deficiencies are corrected and all dispute issues are resolved, the Town of Kiefer inspector will complete all records of the incident and store all enforcement data in local files. The town of Kiefer will take the following actions to meet the “*shall be consistent with the OKR10 General Permit*” requirements in **Part V.C.4.a**:

- “Construction Site Inspection Procedures” and “Construction Ordinance Enforcement” list the actions that will be taken under the local MCM-4 construction inspection and enforcement program as required in OKR04 **Part V.C.4.a.iii**.
- Appendix K contains a copy of the construction ordinance.
- Appendix J contains a copy of the construction inspection form. The Town of Kiefer also maintains written guidance and/or SOPs for conducting its MCM-4 construction site inspections.

OKR04 Part V.C.5 (MCM-5) Post-Construction in New Development and Redevelopment

MCM-5 Permit Requirements:

OKR04 **Part V.C.5.a** has the following permit requirements: *“Implement and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one (1) acre, including projects less than one (1) acre that are part of a larger common plan of development or sale, that discharge into your small MS4. Your program must maintain pre-development runoff conditions and ensure that controls are in place that would prevent or minimize water quality impacts.”*

This passage is followed in OKR04 by four subparts of broadly defined requirements that are briefly summarized here and expanded in further SWMP MCM-5 subparts below:

- i. Implement and enforce an ordinance to require the use of BMPs with the highest preference given to LID methods and practices,
- ii. Implement and enforce procedures such as ordinances 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,
- iii. Review local ordinances, regulations, and engineering plans or specifications to identify regulatory barriers to LID and opportunities to promote LID and remove the barriers and implement the opportunities or justify why not,
- iv. Assess street designs, parking lot guidelines, and other requirements that affect impervious cover and implement guidelines or design standards to support LID design options, and justify any that are not implemented.

MCM-5 Implementation Strategy:

The Town of Kiefer's program will rely upon the methods presented below to address OKR04 **Part V.C.5.a** post-construction requirements. The four **Part V.C.5.a** subparts described above are preceded in OKR04 by three additional post-construction conditions that apply to MCM-5:

1. The MCM-5 program applies *"to stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one (1) acre"*,
2. The MCM-5 program *"must maintain pre-development runoff conditions"*, and
3. The MCM-5 program must *"ensure that controls are in place that would prevent or minimize water quality impacts."*

These three MCM-5 implementation conditions will be addressed by the Town of Kiefer as:

1. Size of Disturbance Condition: All MCM-5 program implementation will apply to new development and redevelopment sites that disturb one acre or more during active construction. Sites that disturb less than one acre will not be addressed by the Town of Kiefer's MCM-5 program.
2. Pre-Development Runoff Condition: The Town of Kiefer will address this MCM-5 implementation condition under the local Floodplain Ordinance and policies pertaining to local flood control. EPA defines "pre-development" as the circumstances and site conditions that exist just prior to commencement of the project, not to the original site conditions prior to any man-made activity. The Town of Kiefer's Floodplain Ordinance number is: SECTION 8-103.
3. Controls To Minimize Water Quality Impacts Condition: This is a general conditional requirement to protect impacts on water quality from post-construction stormwater runoff pollution. The MCM-5 concept of "controls" refers to structural BMPs, including Low Impact Development (LID) and Green Infrastructure (GI). The Cit Town of Kiefer's MCM-5 implementation program as a whole is designed to minimize water quality impacts by implementing both post-construction structural BMPs and nonstructural controls. These are described below in the remaining MCM-5 SWMP passages.

MCM-5 Post-Construction Ordinance for BMPs (Part V.C.5.a.i):

OKR04 **Part V.C.5.a.i** states: *"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."*

Post-Construction Ordinance – BMP Selection: The SWMP Appendix L contains a copy of the Town of Kiefer's post-construction ordinance that requires implementing post-construction BMPs for new development and redevelopment construction projects that disturb ≥ 1 acre. There are many different types of structural BMPs that can be used for a project. Site conditions will also affect BMP selection.

Because of this, the Town of Kiefer's post-construction ordinance does not dictate specific BMPs. Rather, the ordinance allows for the owner/operator to choose the types of BMPs they consider to be most appropriate to the project and site conditions that will meet the water quality protection goals.

Post-Construction Ordinance Criteria: This local ordinance flexibility on BMP selection will be written into the post-construction ordinance as MCM-5 implementation conditions and procedures, including:

- **DISTURBANCE SIZE:** Only new development and redevelopment projects that disturb one acre or more during construction must comply with the BMP requirements.
- **RESIDENTIAL EXEMPTION:** Developments for primary owners of individual residential properties are excluded from post-construction ordinance coverage.
- **PRIVATE OWNERSHIP:** The post-construction ordinance conditions apply only to private ownership of the property and facility being built. MS4-owned projects are addressed in this SWMP and in written guidance and SOPs.
- **WATER QUALITY:** BMP's must be designed and constructed to meet the OKR04 **Part V.C.5.a** goal to "*prevent or minimize water quality impacts*" of the project.
- **DESIGN STANDARDS:** BMP's must be designed and constructed according to acceptable engineering design standards.
- **PLAN REVIEWS:** BMP designs and plans must be submitted to the Town of Kiefer along with all other documents when applying for building permits, earth change permits, floodplain permits and other local construction authorizations.
- **PLAN APPROVALS:** BMP designs and plans must be approved by the Town of Kiefer staff to ensure adequacy of long-term protection of the project's impacts on water quality.
- **DESIGN EFFICACY:** BMP's should be selected that have documented efficacy in water quality protection and can be successfully maintained by the property owner.

Post-Construction Ordinance Review: The Town of Kiefer's post-construction ordinance will be evaluated annually and updated as needed. The ordinance review and revision process will involve:

- Making modifications to local codes and ordinance reflecting DEQ's recommendations;
- Assessing if the ordinance's post-construction BMP selection process and criteria adequately protect post-construction water quality. This will require that the post-construction BMPs are designed, constructed and maintained according to applicable engineering design standards and practices for post-construction BMPs.

MCM-5 BMP Maintenance Procedures / Ordinance (Part V.C.5.a.ii):

OKR04 **Part V.C.5.a.ii** states: "*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.."

Post-Construction Procedures – Facility Owners: OKR04 Part **V.C.5.a.ii** requires the MS4 to implement long-term post-construction BMP maintenance “*procedures, such as ordinances or other regulatory mechanisms*”. **Part V.C.5.a.ii** defines who should conduct maintenance under several categories of ownership. These are:

- By the MS4
- Owner / operator is the party with control over operation and maintenance of the BMP(s).
- These include homeowner associations (HOAs) and commercial or industrial entities.
- Primary owners of individual residential properties “*may be excluded*”.

Grandfathered BMPs: Some MS4s discover that they have existing post-construction BMPs within their MS4 area that were constructed prior to their having to meet OKR04 MCM-5 permit requirements. Many of these existing pre-OKR04 BMPs are not adequately maintained, and often the present owner is unaware of the BMP and/or has no resources for proper maintenance.

In the case of such grandfathered BMPs, the Town of Kiefer will not apply OKR04 MCM-5 local ordinance enforcement of BMP maintenance. Enforcement will be reserved for BMPs constructed after the date when the OKR04 permit's MCM-5 requirements first applied to the Town of Kiefer (“post-OKR04”). This OKR04 coverage start date is May 31, 2023.

The Town of Kiefer will work with the private owner to encourage voluntary repair and maintenance of grandfathered BMPs. The remaining SWMP passages under **Part V.C.5.a.ii** BMP Maintenance pertain to all MS4-owned BMPs and to privately owned BMPs constructed after the date when the OKR04 permit's MCM-5 requirements first applied to the Town of Kiefer (see date cited above).

Post-Construction Ordinance – BMP Maintenance: Appendix L contains a copy of the Town of Kiefer's post-construction ordinance that was developed under OKR04 **Part V.C.5.a.i** to require post-construction BMPs for new development and redevelopment construction projects that disturb ≥ 1 acre. The ordinance's BMP maintenance requirements apply to privately owned BMPs that were constructed after the Town of Kiefer's first OKR04 permit date cited above (post-OKR04). Maintenance requirements for MS4-owned post-construction BMPs are summarized in this SWMP and described in greater detail in the Town of Kiefer's written guidance and SOPs.

As public entities permitted MS4's cannot expend public funds for making improvements on private property unless the work is performed within a dedicated easement or right-of-way specifically for such purposes, and only if the actual structural BMP itself is the property of the MS4. Therefore, ensuring maintenance of post-construction BMP's owned privately and on private property must be accomplished via enforcement of local post-construction ordinances or other regulatory mechanisms. Such provisions are in the Town of Kiefer's post-construction ordinance located in SWMP Appendix L.

Structural BMP Inspection and Maintenance: The Town of Kiefer will implement an inspection program for both MS4-owned and post-OKR04 privately owned structural BMPs in order to ensure that BMPs are being adequately maintained. The following guidelines will be used to develop more detailed written procedures or SOPs for conducting BMP inspections:

BMP BASIC DATA: Obtain basic information about each BMP structure, including:

- Contact information of property owner and responsible party for maintenance.
- Location and type of structure, including street address and GPS coordinates.
- Purpose of structure and any associated land uses served by the structure (e.g., subdivision or commercial center).
- Watershed in which structure is located, including status of listings as 303(d), TMDLs, ARC and ORW.
- Age and present estimated condition of structure.

BMP INSPECTION SCHEDULING: Prepare inspection schedules based upon priority of importance:

- For protecting water quality.
- Response to reported BMP structural failure and/or damage to the MS4 system.
- Concern for public safety or environmental protection.

CONDUCT VISUAL INSPECTIONS: Conduct visual inspections of BMP structures for the following:

- Mowing and weeding.
- Sediment buildup and erosion.
- Fencing, pathways, signage.
- Public injury and safety.
- Evidence of vandalism.
- Structural integrity.
- Vegetation health and ground cover.
- Rock and concrete surfaces.
- Inlet and outlet damage, blockage, condition.

- Debris, tree limbs, trash buildup.
- Function of pervious surfaces.

Field Forms And Data Management: Written inspection forms will be used by the town for MS4-owned BMPs and updated as needed. Inspection data will be entered into the MS4's computer files for analysis and reporting purposes. SWMP Appendix M contains copies of the inspection forms to be used for MCM-5 MS4-owned BMPs.

The Town of Kiefer will assist post-OKR04 private owners in making their own inspections using the Appendix M forms or similar. Alternatively, for those privately owned BMP's whose owners refuse to or are unable to conduct their own inspections, the Town of Kiefer will perform the inspections and report results to the owner along with the maintenance required under local ordinance.

Maintenance Of MS4-Owned BMPs: Deficiencies found during inspections of MS4-owned post-construction BMPs will be reported to the Kiefer Public Works department. The report will indicate the following:

- BMP location information and date of inspection.
- Description of the structural deficiencies or failures found.
- Suggested steps needed to return the BMP to operational design efficiency.
- Status of urgency (e.g., public safety or environmental impact concerns).
- Dates and contact information of persons notified about BMP maintenance issues.

A follow-up inspection will be conducted to confirm that all repairs were made to the MS4-owned structure. If needed, the OKR04 program staff will approach management about the need to ensure that BMP maintenance is achieved.

Maintenance Of Privately-Owned BMPs: Deficiencies found during inspections of post-OKR04 privately-owned BMP's will be reported to the property owner / operator of the BMP. The report will indicate the following:

- BMP location information and date of inspection.
- Description of the structural deficiencies or failures found.
- Suggested steps needed to return the BMP to operational design efficiency.
- Status of urgency (e.g., public safety or environmental impact concerns).
- Dates and contact information of persons notified about BMP maintenance issues.
- A timeframe or deadline for making improvements consistent with local ordinance.
- A copy of the local post-construction ordinance's passages granting the Town of Kiefer the authority to inspect and enforce adequate care and maintenance of the BMP.

A follow-up inspection will be conducted to confirm that all repairs were made to the privately-owned structure. If needed, the Town of Kiefer's will take enforcement actions under the post-construction ordinance to ensure that post-OKR04 privately owned BMP's are adequately maintained.

Inability To Maintain Privately-Owned BMPs: It is not uncommon to find post-OKR04 privately owned post-construction BMPs that require repair and/or maintenance but the owners are unable to perform the required maintenance. Common examples are older BMPs such as rain gardens or bioswales installed on private property years ago by previous owners. The present owner may not even be aware that the feature is a post-construction BMP for which they are now responsible.

Maintenance Factors: Factors affecting a private owner's ability to maintain post-OKR04 post-construction BMPs are:

- The owner is unaware that they own the BMP because they were not informed at time of purchase that the BMP was present and that it must be maintained at owner's expense.
- The owner knows of the BMP, but the cost and/or level of maintenance that is required is beyond the resources of the present owner.

Enforcement Considerations: In many cases, mostly when the present owner does not know of the post-OKR04 BMP on their property, the BMP itself may be too far altered or neglected to bring it back to design standards. In such cases, the Town of Kiefer will take the following into consideration when deciding upon enforcement:

- Date of BMP Installation: Was the BMP constructed prior to when the OKR04 permit required the Town of Kiefer to implement post-construction BMP maintenance?
- Transfer of Ownership: Did the previous owner inform the present owner of the responsibility of maintaining the BMP at present owner's expense?
- Adequate Resources: Does the present owner have sufficient funds and other resources to adequately maintain the BMP?
- Condition of BMP: Can the BMP be repaired and restored to original design function with a reasonable and affordable level of cost and resource utilization?
- Purpose of BMP: Was the original purpose of the BMP to be a critical element in water quality protection and/or flood control for the area location?

Restoration Need Criteria: Given these consideration factors, the Town of Kiefer will evaluate the need for restoration of the BMP on a case-by-case basis. The following will apply:

- Non-critical BMPs: Presently non-functional or functionally impaired BMPs that were originally constructed as mostly decorative features or constructed as demonstration

projects but were not intended to serve a critical protection function for water quality or flood control can be allowed to remain in disrepair as the owner desires.

- **Critical BMPs:** Presently non-functional or functionally impaired BMPs that were originally constructed to improve water quality and/or were installed to be part of area flood control must be evaluated further:
 - **Present need:** Is there a continuing need to have the BMP function as originally intended to protect water quality and/or for flood control?
 - **Severity of need:** If so, can the original intended purposes be met without the restoration of the BMP, or will the loss of the BMP negatively impact the water quality and/or flood control protections provided by the BMP?
 - **Alternatives to the BMP:** Are there effective alternatives to restoring the BMP that are less costly or otherwise easier to implement that will substitute for the loss of the BMP if left unrepaired?

The Town of Kiefer will make these determinations on a case-by-case basis. If any presently non-functional or functionally impaired post-OKR04 private BMP is found to be of critical need for water quality protection and/or flood control, and there is no effective and less costly alternative, then the owner of the BMP will be notified of this determination.

The Town of Kiefer will work with the owner to seek a resolution of how to return the BMP to its intended design function. In the event that the owner refuses to negotiate solutions for BMP repair and long-term maintenance, then enforcement actions will be taken under the Town of Kiefer's post-construction ordinance. OKR04 program management staff may have to work with their municipal management and legal counsel, such as the City Attorney, to identify the most appropriate legal enforcement options to take.

Post-Construction Ordinance – Enforcement: Upon notification from the private owner that they refuse to make repairs to and provide long-term maintenance for the critically needed post-OKR04 BMP, the Town of Kiefer will initiate enforcement actions under the local post-construction ordinance. A copy of the ordinance is found in Appendix L). The Town of Kiefer's enforcement strategy is outlined below.

Additional inspections may be needed to ensure that privately owned BMPs are repaired and maintained. The OKR04 program staff may have to approach MS4 management and/or municipal legal counsel (e.g., City Attorney) about recalcitrant property owners who refuse to ensure that BMP maintenance is achieved.

Enforcement procedures: The Town of Kiefer will implement the following enforcement procedures to ensure that post-OKR04 privately owned post-construction BMPs that are of critical need are repaired and maintained to acceptable design standards:

- Prepare and deliver a Notice of Violation (NOV) to the BMP owner describing the location and types of repair / maintenance problems that exist and are expected to be resolved by the owner.
- The NOV will include all applicable timelines and deadlines set by the local ordinance.
- The NOV will cite the appropriate ordinance passages and provide all other information to support the issuance of the NOV.
- Negotiate with the owner during the time period, as needed, to assist with understanding the NOV requirements.
- Grant time extensions as needed and as allowed by ordinance.
- Perform final inspections upon completion of the BMP repair and maintenance.
- If owner refuses to abide by NOV and ordinance specifications, set fines allowed by ordinance and process fines with owner.
- If owner employs legal counsel or services, cease all communications with owner and seek legal instructions from the Town of Kiefer's own legal counsel, such as the City Attorney.
- While under advisement of MS4's legal counsel, document all information and take all administrative actions requested by MS4 legal counsel.

MCM-5 Code Reviews for LID Barriers and LID Opportunities (Part V.C.5.a.iii):

OKR04 **Part V.C.5.a.iii** states: *“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/2014-04/documents/water-quality-scorecard.pdf> .”*

OKR04 **Part V.C.5.a.iii** lists seven actions (Tasks) that must be taken by the MS4. These are:

- Task 1: Review local ordinances, regulations, engineering plans and specifications.
- Task 2: From the review, identify legal and regulatory barriers to LID.
- Task 3: From the review, identify opportunities to promote LID.
- Task 4: Develop a schedule to remove the identified LID barriers.
- Task 5: Develop a schedule to implement identified LID opportunities.
- Task 6: Provide justifications for those LID barriers not removed.
- Task 7: Provide justifications for those LID opportunities not implemented.

The following SWMP sections will address each of the seven OKR04 **Part V.C.5.a.iii** tasks.

Task 1: Review Local Ordinances and Plans: OKR04 **Part V.C.5.a.iii** gives several examples of the types of local codes and documents that must be searched for LID barriers and LID opportunities (“*local ordinances, regulations, and engineering plans or specifications*”).

Code and Document Types: The Town of Kiefer performed an initial review of local codes and ordinances for barriers to LID. The Town of Kiefer will continue to identify the local codes and plans for LID barriers and LID opportunities under TOKR04 **Part V.C.5.a.iii**. Possible code and document types will include:

- Building and development codes
- Engineering and Design standards and codes
- Fire prevention and public safety codes
- Zoning codes
- Subdivision codes
- Floodplain Management codes
- Nuisance abatement codes
- Public Works codes (streets, water, sewer, parks, etc.)
- Stormwater management codes

Code and Document Search Terms: The review process will be coordinated by MS4 staff and will involve staff from planning, engineering and public works. Examples of the types of words and phrases, including variations of these, that will be used to identify LID in the searched/reviewed documents include:

- Curb and gutter / borrow ditch / drainage channel
- Stabilization, runoff, soil, erosion, sediment, controls, velocity
- Detention, basin, retention, settling, collection, pond, channel
- Green roof, rain garden, rain barrel, downspout, trees
- Swales, bioswales, biofilters, stream bank, slope, vegetated
- Water quality, stream, pollutant, pollution, wetland, resource
- Infiltration, percolation, pervious, permeable, pave, drain
- Riparian, greenway, open space, landscape, pre-development
- Mixed-use, conservation, integrated, LID, green, setbacks
- Sidewalk, street, width, parking, infill, development

As the code review process unfolds, the Town of Kiefer will keep a running list of results to be reviewed and amended, including the code title and sub-section, page number, paragraph numbering, etc.

Task 2: Identify Barriers to LID:

Initial LID Barrier Determination: Once Task 1 has been completed, each reference to LID will be evaluated to determine if it is a barrier to LID. This initial identification process does not involve making a removal determination, it is only for determining whether or not each code provision is a barrier to LID. Some passages may require consulting with other departments within the MS4 for their perspective including, police, fire, and public works.

Each LID-related passage identified in Task 1 will have an LID barrier assessment. Documentation of LID-related code passages with identified barriers will be submitted to MS4 staff in public safety, public works and management for review and input on if the identified LID barrier can be removed or modified.

Task 3: Identify Opportunities To Promote LID: The OKR04 **Part V.C.5.a.iii** provision to identify opportunities to promote LID as part of the local code review process is a new OKR04 permit requirement. The concept is not defined in OKR04, and there is little, if any, guidance available on how to meet the requirements under the “opportunity” Tasks 3, 5 and 7 cited above.

The Town of Kiefer will apply the following concepts and strategies to identify:

- The OKR04 **Part V.C.5.a.iii** reference to “*identify opportunities to promote LID*” is a general requirement to consider practical options, not address the full range of all LID.
- LID opportunities will be assessed concurrently during the MCM-5 OKR04 **Part V.C.5.a.iii** code search for LID barriers.
- Text passages reflecting positive support for LID (as opposed to barriers to LID) in existing codes will be noted.
- The MS4 code search will also identify passages where practical application of LID might be advantageous, affordable, and achievable. Such passages will also be noted in the search records.

Task 4: Schedule Removal of LID Barriers: Task 4 requires that the MS4 make a determination, for each code and plan passage identified as an LID barrier in Task 2, of whether or not the LID barrier code or plan provision can be removed and which provisions must be kept. Task 4 also requires that the MS4 establish a schedule for removing the selected LID barriers.

Pre-Existing Conditions: The process of deciding to remove code and plan passages deemed to be barriers to LID must take into account several pre-existing conditions:

- **Duplicates:** Are there any LID barrier passages that are the same, but found in more than one code or plan?

- Obsolete: Are any LID barrier passages outdated, irrelevant to the MS4, or obviously needing removal for any reason? (*e.g., all residential streets must be 30 feet in width*).
- Contradictions: Are there any passage conflicts in meaning or purpose? (*e.g., one code requires new developments to have sidewalks, while another makes sidewalks optional*).
- In Progress: Are any LID barriers already scheduled for change or deletion?

Decision-making procedures: Prior to beginning the LID barrier removal assessment, the OKR04 program staff need to establish a decision-making structure that involves all affected municipal departments and management. Factors to consider are:

- Input Diversity: Even if only one MS4 staff person does all the administrative work, input will be required from all affected MS4 departments, staff and management on removing LID barriers from local codes and plans.
- Management pre-approval: The overall LID barrier removal decision-making strategy (with purpose, goals, schedules and potential outcomes) must receive approval from all affected supervisors and managers.
- Criteria: All justifications and decision-making criteria for removing or keeping LID barriers in the local codes and plans (the decision-making part) should be agreed upon by management and documented in writing.
- Governing body: Making changes to local codes and plans likely will require review and approvals from the governing body. Prior to this, MS4 management must agree with what is presented to elected officials.
- Scheduling: Make sure that the schedule of all activities is buffered to compensate for unforeseen stumbling blocks. Give plenty of time for each step in the process, from initial LID barrier removal consideration to final approvals of all code and plan changes.
- Documentation: Know in advance how all procedures, findings and recommendations will be documented, what types of reports will be prepared, and for whom. All written records of the LID barrier removal process and final results should be kept in MS4 files for future reference.

Inadequate Codes and Plans: At least some OKR04 permitted MS4s will find that their local codes and plans have few, if any, relevant LID-related passages, either in support of or as barriers to LID. Such cases indicate that it is time to review the MCM-5 post-construction ordinance to ensure that it meets present OKR04 requirements. Likewise, taking the actions required under **Part V.C.5.a.iii** regarding opportunities to promote LID (Tasks 5 and 7 above). Completing Tasks 5 and 7 will result in new LID-related passages in local codes and plans.

Concepts Affecting Decision Criteria: **Part V.C.5.a.iii** has (mostly) new permit requirements. For MS4 permit staff inexperienced with LID concepts, these requirements can be difficult.

- The term “LID” (Low Impact Development) is a concept, not one specific action or type of physical structure.
- LID applies to a wide spectrum of pollutant control strategies and BMPs (both structural and non-structural).
- It may be difficult to recognize LID-related passages in local codes and plans. (*e.g., wide street width, mandatory sidewalks, mandatory curbs and gutters, narrow setbacks of buildings from creeks, large parking lot sizes, not allowing curb cuts such as for drainage to rain gardens*)
- Often, local codes and plans will have few, if any, LID-related passages. (*e.g., no mention of pervious surfaces or use of swales and rain gardens in subdivisions, either pro or con*)
- The **Part V.C.5.a.iii** concept of “barriers” refers to impediments to the use of LID. Since LID is such a broad concept, local perspectives must be used to assess code and plan passages as being LID barriers or not.
- LID covers both structural and nonstructural practices. Structural LID refers to physical BMPs, such as rain gardens. Nonstructural LID is usually policy, such as requiring the use of open space in developments.
- Nonstructural LID practices will often be difficult to recognize in codes and plans, and impediments to nonstructural practices may not be identified easily as LID barriers. (*e.g., local building codes that require sidewalks in all new development do not refer to “LID” or “water quality”, and mandatory sidewalks is considered to be an LID barrier*)

Another problem in defining LID practices in local codes and plans is the ambiguity of some LID concepts. Some common examples of LID concepts that will require local definition as LID barriers include:

- A code requiring standard street widths in subdivisions.
- A code requiring curbs and gutters in all new arterial streets.
- A code restricting the use of rain gardens or roof gardens.
- A code to direct rooftop downspouts onto driveways or other hard surfaces.
- A code requiring all commercial construction sites to have large capacity parking lots.
- A code not allowing landscaping at business street entrances.

When these (and many other) types of ambiguous terminology and/or LID concepts are found during implementing Tasks 2, 4 and 6, the Town of Kiefer will decide whether or not each ambiguous concept is or is not an LID barrier after consulting with the appropriate MS4 municipal departments to which each code or plan passage applies. MS4 management must also approve of the locally developed definitions and concepts.

Task 5: Schedule Implementation of LID Opportunities: The Part V.C.5.a.iii provision to schedule implementation of identified opportunities to promote LID is a new OKR04 permit requirement. The concept is not defined in OKR04, and there is little, if any, guidance available on how to meet the requirements under the “opportunity” Tasks 3, 5 and 7 cited above.

DEQ was consulted about how MS4s should meet these “opportunity” requirements. Based upon DEQ’s input, the Town of Kiefer will develop concepts and strategies on how to schedule implementation of LID opportunities. This task will be accomplished after completion of the code search described above. The Town of Kiefer will:

- Compile all search findings of LID opportunities into a written assessment of the potential to add additional LID strategies to local planning and development.
- Educate builders and developers on the benefits of LID.
- Encourage through education outreach to builders and developers the inclusion of LID in new development and redevelopment projects.
- Update local development codes to require specific types of LID whenever feasible, affordable and achievable.

Task 6: Justify Why LID Barriers Were Not Removed: Task 1 requires a review of local codes and plans to locate all passages relating to LID. Task 2 requires that each of the LID passages be identified as a potential barrier to LID. Task 4 requires that the MS4 make a determination, for each code and plan passage identified as an LID barrier in Task 2, of whether or not the LID barrier code or plan provision will be removed and which provisions must be kept. Task 6 requires the MS4 to provide a justification as to why each LID barrier was not removed.

The LID barriers removal Tasks 1, 2, 4 and 6 are not new provisions to the OKR04 permit; they were first introduced into the 2015 OKR04 permit. However, no guidance on how to accomplish the Tasks has been provided. DEQ has stated in previous communications that justifications for keeping an LID barrier can include financial considerations, and that the justifications should be in writing and kept with the OKR04 program files.

OKR04 does not require that written justifications be incorporated into the SWMP, nor even kept with it as an attachment or Appendix. The Town of Kiefer has elected to maintain all files regarding code review (Task 1), LID barrier identification (Task 2), LID barrier removal (Task 4) and written justifications for all barriers not removed (Task 6) in separate municipal files. These will be in both written and computer file formats.

Justification Recordkeeping: For each retained LID barrier in local codes and plans, the following information will be kept:

- Date of code or plan search, contact information of staff person performing the search
- Code or Plan document title, document number and last date of revision

- Page number and paragraph number (if available)
- Title of code or plan sub-section heading, or description of LID passage
- LID passage quote, paraphrase or description of LID passage not removed
- Intended purpose of LID passage and which municipal activities it affects
- Citations of other codes or plans in which the same LID barrier passage is found (if any)
- Reason(s) for not removing the LID barrier passage(s)

Task 7: Justify Why LID Opportunities Were Not Implemented: The **Part V.C.5.a.iii** provision to justify why certain opportunities to promote LID were not implemented is a new OKR04 permit requirement. The concept is not defined in OKR04, and there is little, if any, guidance available on how to meet the requirements under the “opportunity” Tasks 3, 5 and 7 cited above.

DEQ was consulted about how MS4s should meet these “opportunity” requirements. Based upon DEQ’s input, the Town of Kiefer developed concepts and strategies on how to justify why LID opportunities were not implemented. This task will be accomplished after completion of the code search and assessment process described above. The Town of Kiefer will:

- Compile the search results of all LID opportunities considered by the Town of Kiefer, and create a subset of those considered to be not feasible, affordable or achievable.
- For each LID opportunity on the list not pursued, include a brief reason for why. Justifications can include:
 - Cost to benefit is too high.
 - LID type is not physically compatible for MS4 system or geographic conditions.
 - LID location is impractical (inaccessible or owner refuses to cooperate).
 - Public safety concerns outweigh LID benefits.

The Town of Kiefer recognizes that evaluating and consideration of LID opportunities is an ever-changing task. This will require frequent reappraisal of these three LID opportunity tasks.

MCM-5 Assess Design Standards for LID Design Options (Part V.C.5.a.iv):

OKR04 **Part V.C.5.a.iv** states: “*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.”*

Assumptions and Implementation Strategy: The Town of Kiefer interprets the scope of **Part V.C.5.a.iv** to apply to and include the following:

- Applies to street and parking lot designs, standards and guidelines used by the Town of Kiefer.
- Concerns how existing design standards define, incorporate or prohibit uses of impervious cover and/or other LID design options for street and parking lot designs.
- Concerns what changes to existing design standards can be made to support uses of impervious cover or other LID design options relating to street and parking lot designs.
- Preparing justifications for any additional potential LID design options that were considered but not used for adding additional LID design options to street and parking lot designs.

Design Standards and Guidance Search: OKR04 **Part V.C.5.a.iv** concerns street and parking lot designs only, and it is mostly focused on the impervious surface LID strategies regarding streets and parking lots. However, the much broader local code and plan searches performed under the previous SWMP section addressing **Part V.C.5.a.iii** will include the code searches for this impervious surface requirement as well.

The Town of Kiefer will rely upon the **Part V.C.5.a.iii** code and plan searches to identify all existing local codes, design standards and guidance that address street and parking lot designs with respect to impervious surfaces. The information obtained from the more comprehensive **Part V.C.5.a.iii** searches will satisfy the requirement to search the same documents for **Part V.C.5.a.iv** compliance.

All code and guidance passages relating to street and parking lot designs and guidance found during the search of various documents will be identified as such and the same information about each code passage will be kept in a separate filing system for **Part V.C.5.a.iv** street and parking lot designs.

Justify Why LID Designs Were Not Implemented: Upon completion of the comprehensive search of local codes, plans and design standards, the Town of Kiefer will review all passages that relate to street and parking lot designs. Any references to LID by way of requirements, encouragement or prohibition will be noted in a Street and Parking Lot LID Summary Report and/or separate files.

A review of literature will be conducted to identify several additional types of LID applicable to impervious surfaces and/or other types of LID features specifically useful for streets and parking lots. The Town of Kiefer will assess whether or not each of these street and parking lot LID features can be adopted into the existing local design standards for future use. Any that are rejected will be so noted in the **Part V.C.5.a.iv** project files.

OKR04 Part V.C.6 (MCM-6)

Pollution Prevention / Good Housekeeping for MS4 Operations

MCM-6 Permit Requirements:

OKR04 **Part V.C.6.a** has the following permit requirements: *“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.”*

This passage is followed in OKR04 by six subparts of requirements that are briefly summarized here and expanded in further SWMP MCM-6 subparts below:

- i. Maintain an inventory of all MS4 operations impacted by MCM-6 requirements,
- ii. Maintain a list of MS4-owned or operated industrial facilities that are permitted under OKR05 or other OPDES or NPDES permits having industrial discharges to the MS4,
- iii. Implement procedures and BMPs for controlling pollutant discharges from routine and emergency system repairs and maintenance and vehicle washing,
- iv. Ensure that MS4-owned new flood management projects are assessed for water quality impacts,
- v. Ensure that all contractors hired to perform MS4 system maintenance comply with all MCM-6 requirements, and
- vi. Implement inspection and maintenance procedures of structural and nonstructural BMPs at MS4 facilities to control pollutant discharges to the MS4, with inspection frequencies stated in OKR04 Table V-6.

MCM-6 Implementation Strategy:

In past OKR04 permit cycles, the scope and applicability of MCM-6 was thought to address only physical buildings owned by the MS4, such as a vehicle maintenance building or public works building with a storage yard. However, in recent years DEQ has clarified that MCM-6 also applies to operation and maintenance of the MS4 system, including the stormwater collection system and other municipal infrastructure.

Defining MS4 Operations: The 2021 OKR04 **Part V.C.6.a** requires controlling “...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.” The Town of Kiefer has developed a comprehensive MCM-6 program described below to address the six subparts outlined above. The MCM-6 program will follow closely the terms, concepts and definitions stated in OKR04 **Part V.C.6**.

MCM-6 Inventory of All MS4 Operations (Part V.C.6.a.i):

OKR04 **Part V.C.6.a.i** states: *“Maintain and annually update an inventory of all your MS4 operations that are impacted by this program.”* The Town of Kiefer will rely upon the definition of “MS4 operations” copied above from OKR04 **Part V.C.6.a** to create and maintain the inventory.

The Town of Kiefer has prepared a list of all “MS4 Operations” structures to which MCM-6 requirements apply. These structures are listed in SWMP Table 34. Some structures, such as “streets and roads” are too numerous to identify individually, so they are identified as the collection of all within the MS4 area.

The Town of Kiefer does not have stormwater pollution control authority over any highways or turnpikes within its MS4, so “highways” are not considered part of the MS4 Operations. Pollution discharges from highways and turnpikes within the MS4 area are addressed by DEQ’s individual or OKR04 permitting of the Oklahoma Department of Transportation (ODOT) and Oklahoma Turnpike Authority (OTA).

It is common for a single MS4-owned property defined as an “MS4 Operation” to serve multiple functions that are each specified separately in **Part V.C.6.a**. For example, the municipal property for a vehicle maintenance building might also have a salt/sand storage area, fueling area and/or waste transfer station. SWMP Table 34 is constructed to identify all of the **Part V.C.6.a** elements included in the definition of MS4 Operations.

Table 34: Inventory of All MCM-6 MS4 Operations

MS4 Operation Name or Type	Location
City Hall Parking Lot	401 Indiana Avenue Kiefer, OK 74041
Equipment Maintenance and Storage Yard	233 N A St. Kiefer, OK 74041
Kiefer Park	201 Indiana Avenue Kiefer, OK 74041
Police Department Parking Lot	416 Indiana Avenue Kiefer, OK 74041
Fire Department Parking Lot	315 Indiana Avenue Kiefer, OK 74041
Kiefer WWTP lagoons	35.9512693506, -96.0623256858
Animal Shelter	35.9512693506, -96.0623256858

MCM-6 Inventory of MS4 Owned Industrial facilities (Part V.C.6.a.ii):

OKR04 **Part V.C.6.a.ii** states: *“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.”*

Industrial facilities defined in **Part V.C.6.a.ii** must meet all of the following conditions to be listed:

1. The facility must be owned or operated by the MS4,
2. The facility must be permitted under OKR05 or an individual OPDES or NPDES permit for industrial stormwater discharges, and
3. The facility must “ultimately” discharge stormwater to the “small MS4”.

The Town of Kiefer does not own any facilities that are permitted under OKR05 or individual OPDES or NPDES stormwater discharge permits.

MCM-6 Procedures and BMPs for MS4 Pollution Control (Part V.C.6.a.iii):

OKR04 **Part V.C.6.a.iii** states: “*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.⁹*
- (2) *Ensure that vehicle wash waters are not discharged into the MS4 or waters of the state..”*

This OKR04 **Part V.C.6.a.iii** passage has two footnotes:

⁸ *Ensure appropriate actions are taken that may be necessary to ensure public health and safety.*

⁹ *Complete the installation of stabilization measures as soon as practicable, but no later than 14 calendar days after stabilization measures have been initiated or 7 calendar days if you discharge to an impaired waterbody, ORW or ARC.*

Applicable MS4 Activities: The range of applicability of **Part V.C.6.a.iii** is not well defined in OKR04. The MCM-6 introductory paragraph, **Part V.C.6.a**, broadly requires that the MS4 “*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...*” which continues with examples of a wide range of “MS4 Operations” structures to which MCM-6 applies overall.

The examples given in **Part V.C.6.a.iii** itself suggest that this passage may be limited to controlling stormwater pollution from routine maintenance of, and making emergency repairs to, MS4-owned infrastructure, such as repairs of water line breaks. However, the first sentence under **Part V.C.6.a.iii** (“*Implement and enforce procedures for controlling, reducing or eliminating the discharge of pollutants.*”) is as broad as the MCM-6 introductory paragraph in **Part V.C.6.a**. That is, it appears to also be a blanket requirement to control stormwater pollution from all MS4-owned facilities and activities.

Interpretation of Part V.C.6.a.iii:

The clear intent of MCM-6 overall is to address stormwater pollution from all MS4-owned facilities and activities.

- Only Item iii of the 6 sub-topics under **Part V.C.6.a** (i.e., Items i through vi) directs the MS4 to control pollution from MS4 facilities and activities. The other 5 Items address procedures to follow when implementing MCM-6.
- **Part V.C.6.a.iii** is therefore interpreted to apply broadly to controlling pollution from all MS4-owned facilities and activities, not just to maintenance and repair of certain types of infrastructure.

Implementing MCM-6 BMPs and Strategies: Appendix E provides summary tables of all BMPs to be implemented by the Town of Kiefer for all MCMs, including MCM-6. Appendix E includes implementation schedules and Measurable goals for each BMP. The employee training required under MCM-6 is covered under MCM-1 of this SWMP with BMP education and training details provided in Appendix E.

BMP O&M Activities: The following structures and facilities are addressed under the Town of Kiefer's MCM-6 operation and maintenance (O&M) BMPs:

- Municipal structures and facilities, including:
 - Vehicle and heavy equipment cleaning, maintenance and repair
 - Vehicle parking areas and large equipment storage areas
 - Stockpile areas for sand, salt, soil and other loose materials
 - Storage areas for containers of liquid and solid chemicals and fuels
 - WWTP Lagoons
 - Animal Shelter
- Street maintenance and repairs
- Drainage system open channel cleaning, maintenance and repairs
- Drainage system drop inlet and buried pipe cleaning, maintenance and repairs
- Public works infrastructure maintenance and repairs

General O&M Strategy: The Town of Kiefer's MCM-6 BMPs in Appendices E and F include detailed pollution control actions to be taken for the MS4 facilities defined above, including spill cleanup and proper disposal of waste materials and chemicals generated at the facilities. The following items are a general overview of the approaches detailed in the MCM-6 BMPs:

- Prevent Rainfall Contact: Where possible, all exposed materials will be moved under removable covers (e.g., tarps) or inside a building to prevent or minimize contact with rainfall.

- Spill Control: Liquid spills and solid deposits of any type of pollutant onto the ground or in areas likely to come into contact with rainfall will be cleaned and the collected materials disposed of properly.
- Runoff BMPs: 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.
- Annual BMP Inspections: At least once a year, an inspection of the BMP and area will be made to ensure that the BMPs and storage controls are deployed properly and working.
- Public Education: The MCM-1 public education program is expected to reduce the amount of trash and chemical pollutants placed on city streets and in storm drains. This program will include educating citizens about not disposing of chemicals and yard waste into the streets and drop inlets.
- Roadside Trash Pickup: City crews and citizen volunteers will be used for trash pickups along MS4 streets when necessary.
- Reporting Pollution: KPWA staff will be trained to report observed pollution problems and/or trash buildup on streets and stormwater collection system. When reported, KPWA staff will remove debris and trash from streets and the MS4 system as necessary.
- Disposal of Material: Removed debris and waste materials will be disposed of by transporting to a local landfill for disposal or by depositing certain clean and beneficial materials (such as sediment) onto MS4-owned properties.

MCM-6 Assessing New Flood Management Projects (Part V.C.6.a.iv):

OKR04 **Part V.C.6.a.iv** states: *“iv. Implement and comply with procedures to ensure that new flood management projects are assessed for impacts on water quality.”*

Flood Management Project Types: This MCM-6 requirement applies to MS4-owned flood management projects. OKR04 does not define “flood management projects”, and the stormwater literature uses the term broadly, including but not limited to:

- Retention and detention basins (wet or dry)
- Bioswales, vegetated swales
- Riparian areas, buffers, buffer zones
- Pocket wetlands, constructed wetlands
- Rain gardens, roof gardens, green roofs
- Levees, berms, dykes

- Drainage channels and ditches, flood control channels

Project Assessment Considerations: Part V.C.6.a.iv restricts applicability to only MS4-owned and new flood management projects. It is the policy of the Town of Kiefer to address stormwater pollution controls for such projects when they are in the planning and design phase. The OKR04 requirement is to “assess” each new project for impacts on water quality.

Assessment Feasibility Criteria: The Town of Kiefer will take the following steps to consider adopting water quality improvements into new project designs when feasible. Feasibility criteria will include:

- Is the proposed project design too far into completion to affordably be altered to incorporate water quality protections?
- Are the water quality protections noted during the plan and design review cost effective?
- Are there additional funds available to add water quality protections?
- Will adding water quality protections unacceptably delay project completion?
- How significant and/or beneficial are the water quality protections?
- How sensitive are the water quality concerns of the receiving waters?
- Are there other equally valuable water quality protections available?

Project Assessment Process: The Town of Kiefer will assess each new MS4-owned flood management project with respect to the assessment considerations stated above. Generally accepted engineering design standards and criteria for water quality protection will be used in the design assessment. The following criteria and procedures will be used for making final decisions regarding water quality protection of new flood management projects:

- Will there be stormwater discharges from the project that may affect water quality?
- Does the project design have water quality protection included?
- Are the designs adequate to protect water quality of the receiving waters?
- Are there any changes to project design that can be made to protect water quality?
- Are the project design changes cost effective?
- Will long-term maintenance of water quality protections be needed?
- Will long-term maintenance be affordable and achievable?

MCM-6 Contractor Compliance With MCM-6 (Part V.C.6.a.v):

OKR04 Part V.C.6.a.v states: “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.”

This **Part V.C.6.a.v** applies to independent third party contractors that the Town of Kiefer will hire from time to time to conduct maintenance to the MS4 system and facilities. Because the contractor is conducting work as a representative of the Town of Kiefer, all OKR04 MCM-6 provisions that would apply if the MS4 performed the work must also apply to contractors performing the same work under contract.

Table 36 contains a list of specific MCM-6 requirements that will be provided to each contractor at time of initial bidding and at time of negotiations of final work scope and total project costs. The specific actions under each topic will be included in the contractor bid documents or attached as an addendum. These requirements will be discussed in the bid packet as mandatory requirements to be met by the contractor if awarded the MS4 system maintenance contract. This list will be amended as needed in the future.

The Town of Kiefer will also address these MCM-6 contractor obligations prior to project initiation. If no formal bidding process is used to select a contractor, the Town of Kiefer will ensure that all MCM-6 facility maintenance work performed by contractors will adhere to the same OKR04-required specifications.

Periodically during the contractor’s work, the Town of Kiefer will inspect the work site for MCM-6 good housekeeping compliance. After completion of the contract project, the Town of Kiefer will make a final inspection for MCM-6 compliance. In both instances, if any noncompliance is found, the contractor will be required to correct the deficiencies as soon as possible

Table 36: Good Housekeeping Requirements for Contractors

Maintenance Activity	Contractor BMP Requirements
Pavement cleaning	<ul style="list-style-type: none"> • Sweep parking lots and other paved areas periodically to remove debris. Dispose of debris in waste containers. • If outdoor pavement cleaning with detergent is required, collect wash water and dispose in indoor sinks or sanitary sewer drains, or contact MS4 for other waste collection and disposal options.
Sediment and erosion control	<ul style="list-style-type: none"> • Track-out control devices are properly constructed at all locations where equipment enters / exits the construction site to a paved surface. • All materials tracked onto paved surfaces is removed daily, or as required by local MS4 requirements. • Stockpiles of aggregates and other materials are protected with sediment barriers such as compacted berms or dikes or silt fences.

	<ul style="list-style-type: none"> • All disturbed soil and stockpiles of materials is removed and the area swept daily or as needed to prevent entry into storm drains.
Litter control	<ul style="list-style-type: none"> • Provide an adequate number of trash receptacles for customers and employees. Empty to keep trash from overflowing the receptacles. • Pick up litter and other wastes daily from outside areas including storm drain inlet grates. • Provide adequate number of covered trash receptacles in or near the contractor's work area. • Collect all litter daily from work areas within the project limits and place in covered receptacles.
Waste disposal	<ul style="list-style-type: none"> • Inspect dumpsters and other waste containers periodically. • Repair or replace leaky dumpsters and containers as needed. • Cover dumpsters and other waste containers. • Never dispose of waste products in storm drain inlets. • Recycle wastes or dispose of properly. • Hazardous materials must comply with hazardous materials storage and disposal requirements.
Material storage	<ul style="list-style-type: none"> • Store materials such as grease, paints, detergents, metals, and raw materials in appropriate, labeled containers. • Make sure all outdoor storage containers have lids, and that the lids are adequately closed. • Store stockpiled materials inside a building, under a roof, or covered with a tarp to prevent contact with rain. • Store materials in their original containers and/or secondary containers, both with clearly legible labels. • Do not store or dump waste materials and debris in any wash, channel or ditch. • Hazardous materials must comply with hazardous materials storage and disposal requirements.
Spill control and cleanup	<ul style="list-style-type: none"> • Secure Portable Toilets per manufacturer’s recommendations or per the SWP3 requirements. • For on-site fueling and fluid maintenance of vehicles and equipment, use drip-pans or absorbent pads unless performed over an impermeable surface in a dedicated fueling area. • Keep clean-up materials and kits in designated fueling areas and materials delivery and storage areas, and carried on all portable fueling equipment.

	<ul style="list-style-type: none"> • Temporary storage containment facilities for liquids and petroleum products should have a spill containment volume greater than the volume of all containers within.
Cement handling	<ul style="list-style-type: none"> • Slurries and residues from milling or sawing operations which contain cement or concrete should be collected, contained, and disposed of properly. • All cement concrete waste products should be placed in compacted impoundment areas either below grade or in bermed areas above grade.
Training	<ul style="list-style-type: none"> • Train employees on MCM-6 good housekeeping practices. • Assign a person to be responsible for effective implementation of all BMPs.
Equipment / vehicle cleaning	<ul style="list-style-type: none"> • Maintain equipment and vehicles regularly. Check for and fix leaks. • Use drip pans to collect leaks or spills during maintenance activities. • Wash equipment/vehicles in a designated and/or covered area where the wash water is collected for recycling or for discharge to the sanitary sewer. Contact your local MS4 for disposal options. • Contain wastes resulting from on-site vehicle and equipment cleaning. Collected and dispose of the waste per local MS4.

MCM-6 Inspect and Maintain Structural and Nonstructural BMPs (Part V.C.6.a.vi):

OKR04 **Part V.C.6.a.vi** states: *“vi. Any 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 frequencies outlined in Table V-6 below.”*

What Is Covered By Part V.C.6.a.vi: OKR04 **Part V.C.6.a.vi** requires the MS4 to inspect and maintain good housekeeping BMPs and procedures, both structural and nonstructural.

OKR04 applies all MCM-6 “good housekeeping” activities to “MS4 Operations” which are described in OKR04 **Part V.C.6.a** as: *“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.”* These are examples of the many types of municipally owned facilities and structures to which MCM-6 applies.

Inspection and Maintenance List Criteria: The wording of OKR04 MCM-6 requires several types of actions to be taken under **Part V.C.6.a.vi** regarding BMPs that are implemented to control pollution from MS4 Operations:

1. A list of MS4 Operations must be defined.
2. A list of BMPs used at each MS4 Operation must be defined.
3. The BMPs to be addressed must include both structural and nonstructural.
4. BMPs must be inspected at the minimum frequency specified in OKR04 Table V-6.
5. BMPs must be maintained on a schedule.
6. BMP pollution controls must address *“floatables and other pollutants”*.

Lists of MS4 Operations and BMPs: Part V.C.6.a.i requires the MS4 to maintain a list of MS4 Operations. This list is found in SWMP Table 34 along with a discussion of the **Part V.C.6.a.i** list development. Table 37 below will contain all structural BMP after KPWA assessment is complete in summer 2023.

Table 37: List of BMPs For All MCM-6 MS4 Operations ¹

MS4 Operation Type ¹	BMP Name	BMP Description
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¹ Refer to SWMP Table 34 for inventory list of MS4 Operations used in this table.

MCM-6 BMP Inspection and Maintenance: Part V.C.6.a.vi requires MS4s to implement *“...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 frequencies outlined in Table V-6 below.”*

This OKR04 passage requires several considerations:

- Procedures for BMP inspections: including long term inspection procedures for pollutant controls at the minimum frequencies in Table V-6.
- Procedures for BMP maintenance: including maintenance activities and schedules.
- Inspect and maintain: both structural and nonstructural BMPs.

There are two difficult aspects of **Part V.C.6.a.vi** that must be addressed by an MS4 in preparing an SWMP document:

1. The diversity of BMP types, each with its own set of inspection criteria and maintenance procedures which can be very different from each other, and
2. How to define *“nonstructural”* BMPs in a manner that applies to the *“inspection and maintenance”* requirements for BMPs.

Diversity of BMP Types: The BMPs listed in SWMP Table 37 reflect a wide variety of pollution control BMP types, each having its own physical structure and design purpose. Rather than placing all of the detailed inspection and maintenance procedures for each BMP in the SWMP, the Town of Kiefer will use the general strategy summarized below. Formal inspection field forms and written guidance or SOPs will be used that describe the details of how BMP inspections are performed for the many different types of BMPs used for all MS4 Operations.

Defining Nonstructural BMPs: The Town of Kiefer defines “nonstructural BMPs” as administrative policies, procedures and/or local code provisions affecting MS4 operations, including local ordinance and code passages that encourage and/or require the use of structural controls, such as LID, at MS4-owned MCM-6 facilities. The OKR04 requirement to inspect and maintain nonstructural BMPs is therefore restricted to assessing the adequacy of the local codes, policies and procedures (“inspections”) and making revisions to them as necessary (“maintenance”).

Assessing Nonstructural BMPs: The Town of Kiefer will include MCM-6 nonstructural policy and code assessments (“inspections”) and making revisions to the policies and codes (“maintenance”) as part of implementing the MCM-5 **Part V.C.5.a.iii** requirement: “*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*”. These **Part V.C.5.a.iii** implementation activities are described in the MCM-5 section of this SWMP.

The Town of Kiefer includes all MCM-6 nonstructural BMPs within the scope of MCM-5 code and plan reviews which will include a review of MCM-6 nonstructural codes and policies.

Inspections of MCM-6 Structural BMPs: The Town of Kiefer interprets the **Part V.C.6.a.vi** inspection requirement (“...procedures for inspection and maintenance of structural and non-structural BMPs”) to refer exclusively to inspections of structural BMPs. Inspections of nonstructural BMPs are discussed in the “Assessing Nonstructural BMPs” SWMP section above. In general, structural BMP inspections will include visually inspecting each BMP to assess its overall design effectiveness and structural condition issues that may affect BMP performance. Visual inspection goals and criteria are stated below.

Structural BMP Inspection Criteria: The Town of Kiefer will implement an inspection program for MS4-owned MCM-6 structural BMPs in order to ensure that the BMPs are being adequately maintained. The following guidelines and criteria will be used to develop more detailed written procedures or SOPs for conducting BMP inspections:

BMP BASIC DATA: Obtain basic information about each BMP structure, including:

- Contact information of responsible party for maintenance.
- Location and type of BMP structure, including street address, geo-location description and/or GPS coordinates.

- Purpose of structure and any associated land uses served by the structure (e.g., city hall parking lot or sand stockpile staging area).
- Watershed in which BMP structure is located, including status of listings as 303(d), TMDLs, ARC and ORW.
- Age and present estimated condition of BMP structure.

BMP INSPECTION SCHEDULING: Prepare inspection schedules based upon the following:

- Priority of importance for protecting water quality.
- Response to reported BMP structural failure and/or damage to the MS4 system.
- Concern for public safety or environmental protection.
- To meet OKR04 Table V-6 minimum inspection frequencies (see SWMP Table 38).

CONDUCT VISUAL INSPECTIONS: Conduct visual inspections of BMP structures for the following:

- Mowing and weeding.
- Sediment buildup and erosion.
- Fencing, pathways, signage.
- Public injury and safety.
- Evidence of vandalism.
- Structural integrity.
- Vegetation health and ground cover.
- Rock and concrete surfaces.
- Inlet and outlet damage, blockage, condition.
- Debris, tree limbs, trash buildup.
- Function of pervious surfaces.

OKR04 Table V-6 is copied verbatim below as SWMP Table 38. This BMP inspection schedule will be used by the Town of Kiefer as minimum inspection frequencies for both OKR05 and other OPDES permitted facilities and for all other MS4 facilities subject to MCM-6 requirements.

Table 38: Minimum Frequency of Inspections of MCM-6 Facilities

<i>[From OKR04 Table V-6]</i>	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
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Field Forms And Data Management: Written inspection forms will be used by the Town of Kiefer for MS4-owned MCM-6 BMPs and updated as needed. Inspection data will be entered into the MS4’s computer files for analysis and reporting purposes. SWMP Appendix N contains copies of the inspection forms to be used for MCM-6 MS4-owned BMPs.

Maintenance of MCM-6 Structural BMPs: The Town of Kiefer interprets the **Part V.C.6.a.vi** maintenance requirement passage (“...procedures for inspection and maintenance of structural and non-structural BMPs”) to refer to inspections of structural BMPs. Deficiencies found during inspections of MS4-owned MCM-6 structural BMPs will be reported to the appropriate MS4 municipal department. The report will indicate the following:

- BMP location information and date of inspection.
- Description of the structural deficiencies or failures found.
- Suggested steps needed to return the BMP to operational design efficiency.
- Status of urgency (e.g., public safety or environmental impact concerns).
- Dates and contact information of persons notified about BMP maintenance issues.

A follow-up inspection will be conducted to confirm that all repairs were made to the MS4-owned structure. If needed, the OKR04 program staff will approach management about the need to ensure that BMP maintenance is achieved.

Restoration Need Criteria: For each MCM-6 structural BMP found to be deficient, the Town of Kiefer will evaluate the need for restoration of the BMP on a case-by-case basis. The following will apply:

- Non-critical BMPs: Presently non-functional or functionally impaired BMPs that were originally constructed as mostly decorative features or constructed as demonstration projects but were not intended to serve a critical protection function for water quality or flood control can be allowed to remain in disrepair as the MS4 desires.
- Critical BMPs: Presently non-functional or functionally impaired BMPs that were originally constructed to improve water quality and/or were installed to be part of area flood control must be evaluated further:
 - Present need: Is there a continuing need to have the BMP function as originally intended to protect water quality and/or for flood control?
 - Severity of need: If so, can the original intended purposes be met without the restoration of the BMP, or will the loss of the BMP negatively impact the water quality and/or flood control protections provided by the BMP?

- Alternatives to the BMP: Are there effective alternatives to restoring the BMP that are less costly or otherwise easier to implement that will substitute for the loss of the BMP if left unrepaired?

Maintenance Scheduling: The Town of Kiefer will make these determinations on a case-by-case basis. If any presently non-functional or functionally impaired MCM-6 structural BMP is found to be of critical need for water quality protection and/or flood control, and there is no effective and less costly alternative, then the BMP will be scheduled for maintenance or replacement as needed. The Town of Kiefer will work with the affected municipal department to seek a resolution of how to return the BMP to its intended design function or replace it with another of equal value.

OKR04 Part V.D Reviewing and Updating The SWMP

OKR04 **Part V.D** lists the specific procedures that must be followed by the MS4 for reviewing the SWMP document and for making SWMP changes. **Part V.D** provides conditions for reviewing and updating both SWMPs and BMPs in the SWMP. **Part V.D** states:

1. *You must conduct a review of your **SWMP**, at least annually, in conjunction with the preparation of the annual report required under Part VI(C).*
2. *Your **SWMP** shall be modified as needed during the life of this permit. Under the following circumstances, your modifications must provide the following additional information in your SWMP.*
 - a. ***SWMP** changes are required to comply with new requirements of this permit.*
 - b. ***BMP(s)** determined to be ineffective or infeasible must be replaced with one or more alternative **BMP(s)**. Your modifications shall provide the following analysis of why the **BMP(s)** is/are technically or economically ineffective or infeasible:*
 - i. *Provide a description of your 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.*

Item 1 and Item 2.a refer to reviewing the SWMP and general information about making SWMP changes. Item 2.b specifically refers to procedures for making changes to any of the BMPs in the SWMP. The following procedures will be used by the Town of Kiefer to comply with **Part V.D**:

- The SWMP will be reviewed annually at time of preparation of the Annual Report.
- Changes to the SWMP will be so noted in the “Table of SWMP Reviews” and “Table of SWMP Revisions” located in the “Record of Annual SWMP Reviews and Revisions” SWMP section that follows the SWMP signature page.
- An updated “SWMP Revision Number” will be noted on the SWMP cover page.
- The BMP Replacement Form in Appendix O will be used to document the BMP replacement analysis required by **Part V.D.2.b** for each BMP that is replaced.
- No existing BMPs will be dropped without being replaced per **Part V.D.2.b**.
- New BMPs may be added at any time. Such actions will be documented in this SWMP as an SWMP revision, and these actions will be discussed in the next scheduled Annual Report.

OKR04 Part V.E

Transfer of Ownership or Operational Authority

OKR04 **Part V.E** applies whenever an MS4 annexes or by other means acquires new areas within its MS4 over which the MS4 is responsible for stormwater controls. **Part V.E** states: *“The entity responsible for SWMP implementation must implement the SWMP for all new areas added to your portion of the MS4 (or for which you become responsible for implementation of stormwater quality controls) as soon as possible, but not later than one year from 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, you must have a plan for implementing your SWMP on all affected areas. The plan may include schedules for implementation. Information on all new annexed areas and any resulting updates required to the SWMP must be included in the annual report.”

Based upon the requirements in **Part V.E**, the Town of Kiefer will take the following actions:

- Extend SWMP coverage to all new areas no later than one year of the acquisition.
- Implement SWMP coverage in phases over the year allowed if controls cannot be implemented immediately.
- Develop a plan for SWMP implementation over the new areas within 90 days of transfer of ownership or acquisition of SWMP authority over the new areas.
- The 90 day SWMP implementation plan may include implementation schedules.
- The Annual Report will include information on all new annexed areas and a description of any SWMP updates made to accommodate the new areas.

[Section break]

PART VI: MONITORING, RECORDKEEPING AND REPORTING

Part VI of OKR04 has only a few general references to SWMPs, and none require adding content to the SWMP document itself. The **Part VI** SWMP references are:

- **Part VI.A.1** states *"You must design your monitoring program to evaluate **SWMP** compliance, the appropriateness of identified BMPs, and progress toward achieving identified measurable goals. If you discharge to a water of the state for which a TMDL has been approved, you may have additional monitoring requirements under Part IV of this permit."*
- **Part VI.B.2** states *" You must retain the **SWMP** required by this permit (including a copy of the permit language) at a location accessible to the Director. You must make your records, including the NOI and **SWMP**, available to the public."*
- **Part VI.C** (Annual Reports) sets deadlines for submitting Annual Reports for both Calendar Year (CY) and Fiscal Year (FY) based programs. These submittal deadlines are:
 - **CY Programs:** submit no later than April 30.
 - **FY Programs:** submit no later than October 31.

The remaining few references to SWMPs in **Part VI** are in **Part VI.C** and address requirements for compiling and submitting MS4 program compliance information in the Annual Reports. DEQ is developing an Annual Report Template with guidance on how to submit all **Part VI.C** information on OKR04 permit compliance. Therefore, this SWMP will defer to DEQ instructions and the DEQ Annual Report Template for preparing and submitting Annual Reports.

Addressing Part VI In The SWMP:

Considering the few SWMP-related actionable items in **Part VI** as stated above, the Town of Kiefer will address each subpart under **Part VI** as described below. The Town of Kiefer stormwater program staff have begun formal training in Quality Assurance (QA), monitoring, data management, and many other technical aspects of making program assessments. The level of training will be increased as project needs arise.

In addition, the Town of Kiefer will prepare several types of documents for keeping records of acquired data and the procedures used for data collections. These include written instructions, Standard Operating Procedures (SOPs), QA methods, and Quality Assurance Project Plans (QAPPs), the latter being prepared as needed for TMDLs.

Part VI.A (Monitoring): OKR04 **Part VI.A** requires the use of several important data quality QA practices that must be taken when conducting "monitoring". Because OKR04 does not provide instructions or details on how to conduct monitoring, the Town of Kiefer interprets **Part VI.A** to refer to all types of OKR04 required monitoring that will be designed and conducted from time to time in the future.

While it is not possible to specify in this SWMP any future QA details for monitoring, the following will be taken into account when designing QA aspects of future monitoring programs.

Part VI.A.1 (evaluating SWMP compliance): This OKR04 subpart concerns designing “...your *monitoring program* to *evaluate SWMP compliance, the appropriateness of identified BMPs, and progress toward achieving identified measurable goals.*”. The OKR04 permit itself does not specify how any of these types of evaluations must be done, or what types of monitoring are required to meet these requirements.

OKR04 has very similar requirements for Annual Reports under **Part VI.C.1.a – c** that also require annual assessments of:

- a. The overall MS4 program’s progress of reducing the discharge of pollutants.
- b. For each BMP, the progress of achieving each Measurable Goal and BMP appropriateness.
- c. The SWMP success overall at reducing the discharge of pollutants.

The Town of Kiefer assumes that these **Part VI.C.1.a – c** Annual Report requirements are the most common purpose of the **Part VI.A.1** requirements to “*evaluate SWMP compliance, the appropriateness of identified BMPs, and progress toward achieving identified measurable goals.*”. As such, the Town of Kiefer defers to DEQ’s Annual Report Template and guidance in setting the scope and procedures for making these assessments.

Part VI.A.2 (representativeness and Part 136): This OKR04 subpart requires that “...*samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.*”, and that laboratory sample analysis “...*must be conducted according to test procedures approved under 40 CFR §136.1 et seq.*”.

The concept of “representativeness” is a cornerstone of good QA and is an integral component of EPA’s Quality Assurance Project Plan (QAPP) development and project execution. QA training has begun for MS4s in Oklahoma, including the procedures for satisfying representativeness in sampling site selection and sampling methods. The Town of Kiefer will continue staff training on such QA issues and ensure that representativeness of sampling programs will meet EPA requirements for QA overall and any QAPPs developed for any particular sampling projects.

In this same regard, the Town of Kiefer has begun staff training on the definitions and concepts of using 40 CFR part 136 laboratory methods that also include detailed sample collection and handling QA practices. The Town of Kiefer will continue staff training on all aspects of monitoring QA, including use of Part 136 methods and their applicable sample collection and handling requirements.

To ensure that OKR04 Part VI.A.2 QA requirements are being met, the Town of Kiefer will prepare written QA guidance for its OKR04 required sampling programs, including TMDL compliance. The

Town of Kiefer will also prepare formal QAPP documents for specific monitoring programs, as needed, and may partner with other MS4s and/or agencies and organizations, if available, to work under a jointly prepared QA program or QAPP. Such QA oversight will ensure that representativeness of monitoring activities and reliance upon Part 136 methods is assured.

Part VI.A.3 (monitoring records): This OKR04 subpart requires and that all OKR04 required monitoring records include a variety of QA information, including:

- a. *date, exact place, and time of sampling or measurements;*
- b. *name(s) of the individual(s) who performed the sampling or measurements;*
- c. *date(s) analysis was/were performed;*
- d. *name(s) of the individual(s) who performed the analysis;*
- e. *analytical techniques or methods used; and*
- f. *results or observations of such analysis*

The Town of Kiefer has begun staff training on preparing and maintaining QA monitoring records, and additional staff training in these topics will be obtained in the near future. In addition, the QA documentation will be maintained in computer software files and/or paper files, as needed, for each project. These Part VI.A.3 monitoring record requirements will also be described in the Town of Kiefer's project QA guidance and QAPPs.

Part VI.A.4 (eDMR submittals): This OKR04 subpart requires that *"The reporting of monitoring results may be required by the Director to be submitted electronically on an Electronic Discharge Monitoring Report (e-DMR)."* At present time, DEQ is working with EPA to develop final procedures for submitting Discharge Monitoring Reports (DMRs) electronically. In addition, at present time, DEQ does not require any OKR04 monitoring data to be submitted on DMRs.

In the event that DMR submittals are required by DEQ in the future, the Town of Kiefer will use the DMR electronic filing (eDMR) system in place by DEQ at that time.

Part VI.B (Record Keeping): OKR04 **Part VI.B** requires that all original and copies of records relating to the MS4 monitoring program be kept for at least 3 years, and that the SWMP document and OKR04 permit be made available to DEQ and the public.

Part VI.B.1 (retaining records): This OKR04 subpart requires the MS4 to *"Retain records of all monitoring information and include all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, copies of e-DMRs, a copy of the OPDES permit, and records of all data used to complete the NOI for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application, or for the term of this permit, whichever is longer. This period may be extended by request of the Director at any time."*

The Town of Kiefer will comply with these **Part VI.B.1** records retention requirements as an integral part of the QA procedures and documentation described above, including use of computer and paper files, written QA guidance and QAPPs, as needed.

Part VI.B.2 (SWMP availability): This OKR04 subpart requires the MS4 to “retain the SWMP required by this permit (including a copy of the permit language) at a location accessible to the Director. You must make your records, including the NOI and SWMP, available to the public.”.

To comply with **Part VI.B.2**, the Town of Kiefer keeps a copy of this SWMP in the following locations, and it is promptly made available to the public and to DEQ upon request:

Type of SWMP Document File	Location Description
Electronic	townofkiefer.org
Paper	City Hall

Part VI.C (Annual Report): OKR04 **Part VI.C** lists the contents and requirements for submittal of Annual Reports. DEQ is developing an Annual Report Template and guidance, therefore the Town of Kiefer will defer to these documents for specific procedures for preparing and submitting the Annual Report.

Part VI.C allows MS4s to implement their SWMP program on a Fiscal Year (FY) or Calendar Year (CY) basis. Either choice is decided by the MS4 to best suit local circumstances.

The Town of Kiefer will implement its SWMP on a fiscal year calendar year basis. This choice will require each Annual Report to be submitted no later than October 31 (fiscal year) April 30 (calendar year) for the Town of Kiefer.

Part VI.C.1.a – c (assessing program elements): This OKR04 subpart requires the MS4 to make annual assessments of:

- a. The overall MS4 program’s progress of reducing the discharge of pollutants.
- b. For each BMP, the progress of achieving each Measurable Goal and BMP appropriateness.
- c. The SWMP success overall at reducing the discharge of pollutants.

Because these three assessment elements are integral components of the Annual Report, the Town of Kiefer defers to DEQ’s Annual Report Template and guidance in setting the scope and procedures for making these assessments. In addition, all other requirements under Part VI.C will be addressed by DEQ’s Annual Report Template and guidance once finalized, therefore, no procedures are required to be placed in this SWMP.

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PART VII: STANDARD PERMIT CONDITIONS

Part VII of OKR04 has only a few references and requirements for SWMPs. The following subpart describes the SWMP actions to be taken by the Town of Kiefer under **Part VII**.

Part VII.H (Signatory Requirements): Many documents and forms required in OKR04 must be formally signed with a specific certification statement. The signatory requirements in **Part VII.H** are complicated, so a description of each OKR04 passage is necessary. The following OKR04 **Part VII.H** text citations cover municipal entities (cities and counties):

1. *All **NOIs** must be signed and certified.*
 - a. *For a corporation.... [deleted; does not apply to municipalities]*
 - b. *For a partnership or sole proprietorship.... [deleted; does not apply to municipalities].*
 - c. *For a municipality, state, federal, or other public agency, the NOI must be signed and certified by either a principal executive officer or ranking elected official. For purposes of the NOI, a principal executive officer of a federal agency is*
 - i. *the chief executive officer of the agency, or*
 - ii. *a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).*
2. *All **NOTs, SWMPs, SWP3s, reports, certifications or other information required by this permit, and other information requested by the Director**, shall be signed by a person described in Part VII(H)(1) or by a duly authorized representative of that person.¹² A person is a duly authorized representative if the authorization*
 - a. *is made in writing by a person described in Part VII(H)(1) and submitted to the Director, or*
 - b. *specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility for environmental matters for the regulated entity.*
3. *If an authorization is no longer accurate because a different operator has the responsibility or the overall operation of the MS4, a new authorization satisfying the requirement of Part VII(H)(2) above must be submitted to the Director prior to or together with any reports, information, or notices of termination to be signed by an authorized representative.*
4. *Any person signing documents under terms of this permit shall make the following certification:*

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

inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Footnote 12: Signed and dated written authorization must be included in your SWMP.

Which Documents Require Signatures: The Town of Kiefer will sign and certify the following types of documents, reports and forms per OKR04 **Part VII.H**:

1. Notice of Intent (**NOI**)
2. Notice of Termination (**NOT**)
3. Stormwater Management Program (**SWMP**) document
4. Stormwater Pollution Prevention Plan (**SWP3**)
5. Permit-required “**reports, certifications or other information**”
6. “**Other information requested by the Director**” [DEQ]

Who Can Sign Documents For Cities and Counties: OKR04 **Part VII.H** has very specific requirements for who can sign the various forms and documents listed above. OKR04 **Part VII.H.1.c** specifies that the following municipal officials are authorized to sign and certify the Notice of Intent (NOI) and the other documents and reports that are cited in **Part VII.H.2**:

1. Principal Executive Officer, or
2. Ranking Elected Official.

OKR04 **Part VII.H.2** requires that these documents be signed by one of these two persons listed above or by a “duly authorized representative of that person”.

Designating a “Duly Authorized Representative”: The Duly Authorized Representative is a “*person or position*” formally authorized by the Principal Executive Officer or Ranking Elected Official to be a signatory on their behalf. The authorization process must follow **Part VI.H.2.a and b**, including adding the signed and dated written authorization to the SWMP (see OKR04 permit Footnote 12 above) and submitting a copy of the authorization to the Director (see **Part VII.H.2.a**). The Town of Kiefer will use the form, or a similar version, located in SWMP Appendix P to declare a “Duly Authorized Representative”.

Changing a “Duly Authorized Representative”: **Part VII.H.3** states that if the existing written authorization for the “Duly Authorized Representative” “*is no longer accurate because a different operator has the responsibility for the overall operation of the MS4*”, then a new written authorization must be submitted to the Director either before or with the submittal of a signed document. The Town of Kiefer will use the form in Appendix P or one similar to document the

change of Duly Authorized Representative whenever such change in status occurs. A copy of the latest version of the signed designation form will be kept in Appendix P and in the Town of Kiefer's stormwater program administration files.

Certification Statement: OKR04 **Part VII.H.4** requires that *“Any person signing documents under terms of this Permit shall make the following certification”*. The Town of Kiefer will use the same OKR04 text for each certification with each signed document. The certification statement will either be included on the signature page of each document, or it will precede the signature line in a form or letter.

[Section break]

PART VIII: OPTIONAL PERMIT REQUIREMENTS FOR MUNICIPAL CONSTRUCTION ACTIVITIES

OKR04 **Part VIII** is an optional requirement in OKR04 for those MS4s having local construction projects that qualify for coverage under DEQ's OKR10 construction general permit.

Part VIII MCM-7 Permit Requirements:

"Small MS4s that choose to develop this option will be authorized by this permit to discharge stormwater and certain non-stormwater from construction activities where the small MS4s are the "construction site operators." For small MS4s that choose to develop this measure, it shall be part of the SWMP submitted with the initial NOI.

The Town of Kiefer will not be participating in MCM-7.

APPENDIX A

Threatened or Endangered Species Criteria Selection Documentation

PROCESS: Appendix A provides justification for selecting which of the 5 criteria was selected by the MS4 under OKR04 **Part II.E**. There are two steps to this process:

1. Determine if there are any Aquatic Resources of Concern (ARC) areas within any portion of the MS4 area. If not, then the MS4 selects Criterion A.
2. If ARC areas are within the MS4 area, then the MS4 must select which of the other 4 criteria apply as the means the MS4 will use to protect threatened or endangered species per **Part II.E**.

CRITERIA SELECTION:

Affirming ARC: The Town of Kiefer has reviewed the eligibility criteria and requirements of OKR04's **Part II.E.2.c** and has determined that no part of the Town of Kiefer's MS4 contains areas of Aquatic Resources of Concern (ARC) as described in OKR04 **Exhibit 1**, therefore Criterion A applies to the MS4's stormwater discharges and was so noted by the MS4 in Item 5 of the Notice of Intent (NOI) Form.

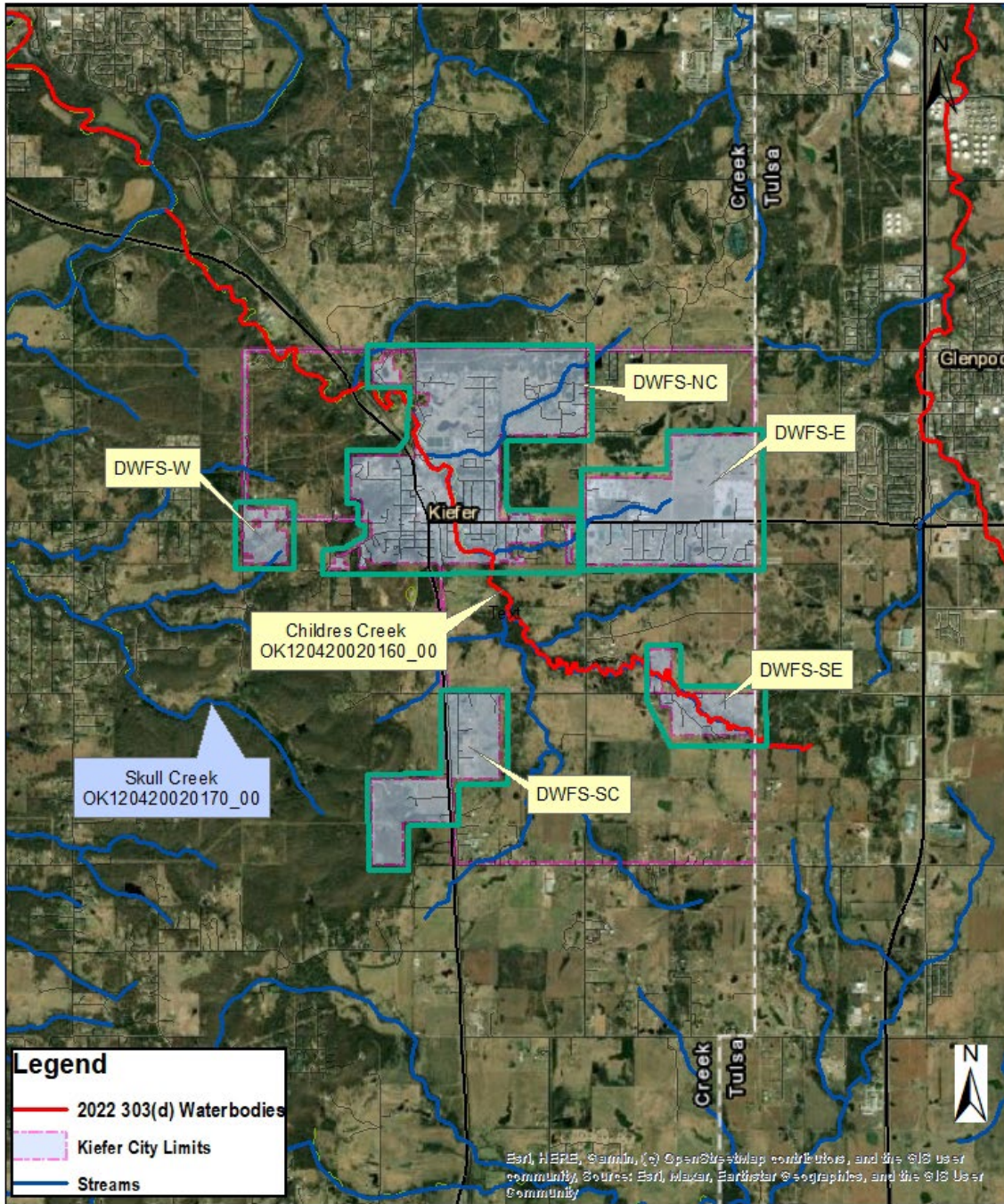
Affirming Protection: The Town of Kiefer has selected Criteria A and herein affirms that they have a fully and successfully implemented SWMP and stormwater management program, and that they have no outstanding deficiencies or permit violations that might possibly adversely affect protected species within any of the ARC areas identified above.

CRITERIA B, C or E SELECTION INFORMATION:

The Town of Kiefer has selected Criteria A and not B, C, or E.

[Section Break]

Town of Kiefer Stormwater Management Map



Map Created by INCOG, 5-25-23

APPENDIX C

Agreement With Another Governmental Entity



Regional Partners — Regional Solutions

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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.

Clinton Johnson, Director
INCOG Office of Energy and Environmental Sustainability

_____ Date

TABLE E-1: List of Education Outreach Materials (Brochures, Fact Sheets, etc.)

Education Materials Used By the Town of Kiefer *
General Public and Community:
EPA: After the Storm
EPA: Protecting Water Quality from Urban Runoff
EPA: The Solution to Pollution
GCSA: Oil, Grease and Fat
GCSA: How to Protect Your Local Watershed
Residential and Homeowner:
EPA: Greenscaping Your Lawn & Garden
EPA: A Homeowner's Guide to Septic Systems
GCSA: Community Car Wash Events Fact Sheet
GCSA: A Homeowner's Guide to Protecting Our Water
GCSA: A Pet Owner's Guide to Protecting Our Water
Municipal Employee and City Officials:
GCSA: Handling and Disposal of Chemicals at Municipal Sites
GCSA: Municipal Best Management Practices that Protect Our Water
Local Retailers and Businesses:
GCSA: A Retailers Guide to Pesticide Basics
GCSA: A Food Service Guide to Waste Disposal
Construction Industry:
GCSA: Final Stabilization at Construction Sites: OKR10 Requirements
GCSA: A Homebuilder's Guide to Erosion Control
OSU: Using Vegetation for Erosion Control on Construction Sites

** New materials for additional topics will be produced periodically.*

TABLE E-2: GCSA Employee Training Topics

GCSA Training Topics Given for the Town of Kiefer Employees & Officials
Urban water quality, pollution and stormwater permit requirements
Data quality and data management
Conducting inspections and monitoring; field safety
Test kits and environmental chemistry basics
Stormwater 101 for new employees and city officials
BMPs, low impact development (LID), and post-construction
TMDLs and 303(d) impaired waterbodies
Construction permit requirements and changes to OKR10
Municipal parks and open space maintenance pollution control
Storage and disposal of chemicals at city facilities
Pollution control at municipal fleet maintenance
Pollution control for municipal land disturbance activities

Pollution control for MS4 maintenance (streets and drainage)
Looking for and reporting local pollution episodes by city crew and staff

TABLE E-3: Types of Pollution Signs Used at City Work Areas

Pollution Prevention Sign Topics Used by the Town of Kiefer
Keep Dumpster Lids Closed
Do Not Dispose of Waste – Drains to Creek
Dispose of Chemicals Properly
Clean Up Spills Immediately
Do Not Wash Chemicals Into Floor Inlets

TABLE E-4: SWMP References to Minimum BMP Implementation Frequencies

BMP or Program Activity Having Minimum Frequency Requirements in OKR04 and SWMP	MCM or Special Condition Addressed	SWMP Table
Minimum public education and staff training for all MCMs	MCMs 1-6	24
Minimum frequency of MCM-2 industrial inspections	MCM-2	29
Minimum frequency of DWFS inspections	MCM-3	30
Minimum frequency of construction site inspections	MCM-4	33
Minimum frequency of MCM-6 facility inspections	MCM-6	38

[Section Break]

Table E-5. Town of Kiefer Best Management Practices

MCM	BMP ID	OKR04 requirements with citation	BMP	Target Implementation	Annual Measurable Goal
1	1.1	Conduct public involvement efforts for a target audience (Part V.C.1.a.i).	Assist with Kiefer Clean-Up Day	2023	1/yr
1	1.2	Conduct public involvement efforts for a target audience (Part V.C.1.a.i)	Give presentation at board meeting and invite the public for their input when major updates are made to SWMP	2025	1/permit cycle
1	1.3	Conduct public involvement efforts for a target audience (Part V.C.1.a.i).	Update brochure materials in City Hall lobby with materials from EPA's stormwater smart program or GCSA	2023	Update 2 handouts a year
1, 3	1.4	In coordination with MCM 3, implement an education program to involve public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste (Part V.C.1.a.ii.2.a).	Distribute letters to local businesses with information on stormwater protection	2023	Every Other Year
1,3	1.5	In coordination with MCM 3, implement an education program to involve public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste (Part V.C.1.a.ii.2.a).	Distribute brochures from City Hall lobby on IDDE	2023	15/yr
1,3	1.6	In coordination with MCM 3, implement an education program to involve public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste (Part V.C.1.a.ii.2.a).	Distribute a fact sheet to residents who utilize the Kiefer free dump day	2024	Distribute 50 fliers
1,3	1.7	In coordination with MCM 3, promote, publicize, and facilitate the reporting of illicit discharges (Part V.C.1.a.ii.2.b).	Post flier in City Hall lobby on how to report illicit discharges	2023	1/yr
1,3	1.8	In coordination with MCM 3, promote, publicize, and facilitate the reporting of illicit discharges (Part V.C.1.a.ii.2.b).	Add link on Kiefer website to report illicit discharges to stormwater manager and DEQ	2024	1/yr
1,3	1.9	In coordination with MCM 3, promote, publicize, and facilitate the reporting of illicit discharges (Part V.C.1.a.ii.2.b).	Provide information to residents in utility mail out	2024	Every Other Year

1,3	1.10	In coordination with MCM 3, conduct staff training to identify and report stormwater illicit discharges (Part V.C.1.a.ii.2.c).	Provide KPWA full and part time staff with training video	2024	Every Other Year
1,4	1.11	In coordination with MCM 4, implement an education program to involve local developers (Part V.C.1.a.ii.3.a).	Distribute packet with educational materials alongside building permit application	2023	1/yr
1,4	1.12	In coordination with MCM 4, implement and enforce procedures for receipt and consideration of information submitted by the public (Part V.C.1.a.ii.3.b).	Keep log of citizen comments and complaints and date of follow up in city hall that all employees can access	2023	1/yr
1,4	1.13	In coordination with MCM 4, conduct staff training to address requirements for inspection and enforcement of erosion and sediment control measures (Part V.C.1.a.ii.3.c).	Require KPWA staff to watch erosion and sediment control training video	2024	Every Other Year
1,5	1.14	In coordination with MCM 5, implement an education and outreach program for developers and the public about project designs that minimize water quality impacts, including LID strategies (Part V.C.1.a.ii.4).	Distribute brochures from City Hall lobby on LID	2023	15/yr
1,5	1.15	In coordination with MCM 5, implement an education and outreach program for developers and the public about project designs that minimize water quality impacts, including LID strategies (Part V.C.1.a.ii.4).	Provide informational handout in building application with links to funding opportunities and examples of LID	2024	1/yr
1,6	1.16	In coordination with MCM 6, conduct staff training to prevent and reduce stormwater pollution from MS4 activities (Part V.C.1.a.ii.5).	Provide training to full and part time KPWA staff on how to reduce stormwater pollution from routine maintenance projects	2023	1/yr

1	1.17	Include a process by which public comments on the SWMP are received and reviewed by the person(s) responsible for the SWMP (Part V.C.1.a.iii).	Post link to SWMP with email to provide comments on Kiefer website	2024	Update annually with SWMP revisions
1	1.18	Comply with State and local public notice requirements (Part V.C.1.a.iv).	Comply with State and local public notice requirements	2023	1/yr
1	1.19	Make your records, including the NOI and SWMP, available to the public (Part V.C.1.a.v).	Provide contact information in city hall and on website for public to request records from stormwater manager	2023	1/yr
3	3.1	Implement procedures to identify priority areas (Part V.C.3.a.i).	Inspect oil and gas facilities within MS4 for signs of spills	2023	2/yr
3	3.2	Annually update the list of priority areas. Please include the date it was last updated in the comments (Part V.C.3.a.i).	Annually update the list of priority areas. Date last updated in the notes	2023	1/yr
3	3.3	Implement procedures to trace or investigate the source of an illicit discharge (Part V.C.3.a.ii).	Review and update procedure to track and trace illicit discharges outlined in Kiefer IDDE SOP	2024	Every 3 years after SOP is finalized
3	3.4	Implement procedures to remove the source of an illicit discharge (Part V.C.3.a.iii).	Keep records of any illicit discharge and follow the appropriate procedure outlined in Kiefer IDDE SOP	2024	Investigate and record all IDDE events
3	3.5	Implement procedures to identify problems using visual indicators and simple field test kits (Part V.C.3.a.iv).	Create and update SOPs for Town of Kiefer field test kits currently used or purchased in future	2024	Every 3 years after SOP is finalized
3	3.6	Implement procedures to identify problems using visual indicators and simple field test kits (Part V.C.3.a.iv).	Create SOP with example pictures and flowchart for KPWA staff to easily identify visual indicators of stormwater pollution	2024	Every 3 years after SOP is finalized

3	3.7	Implement ordinances, or other regulatory mechanisms, to prohibit illicit discharges (Part V.C.3.a.vi).	Review ordinances and codes as illicit discharge incidents in town bring up opportunities for improvement	2024	Annually
3	3.8	If you lack legal authority, develop and implement procedures to notify DEQ if a facility fails to comply with your program (Part V.C.3.a.2).	Notify ODEQ if a facility fails to comply with your program and keep a log of incidents	2023	Log and report as needed
3	3.9	Develop a storm sewer system map (Part V.C.3.a.vii).	Create Stormwater Infrastructure Map in GIS	2024	Create GIS Layer
3	3.10	Annually update the storm sewer system map. (Part V.C.3.a.vii).	Annually update the storm sewer system map.	2025	1/Yr
3	3.11	Develop a list of occasional incidental non-stormwater discharges or flows (Part V.C.3.a.viii).	Create a list of occasional incidental non-stormwater discharges or flows	2023	Create Table
3	3.12	Annually update your list of occasional incidental non-stormwater discharges or flows. (Part V.C.3.a.viii).	Annually update your list of occasional incidental non-stormwater discharges or flows.	2023	Yes
3	3.13	Conduct DWFS at all identified outfalls (Part V.C.3.a.v).	Conduct DWFS at all identified outfalls	2023	20%/yr
3	3.14	Conduct DWFS at high priority areas (Part V.C.3.a.v).	Conduct DWFS at high priority areas	2023	1/yr
4	4.1	Implement and enforce ordinances, or other regulatory mechanisms, to require BMPs (Part V.C.4.a.i).	Clearly outline enforcement actions on fact sheet within building permit application and keep count of enforcement actions	2024	Annually
4	4.2	Review and/or revise ordinances, or other regulatory mechanisms, that require BMPs (Part V.C.4.a.i).	Review and/or revise ordinances, or other regulatory mechanisms, that require BMPs for construction activities	2024	1/permit cycle
4		If you lack legal authority, develop and implement procedures to notify DEQ if a facility fails to comply with your program (Part V.C.4.a.i).	Notify ODEQ if a facility fails to comply with your program and keep a log of incidents		

4	4.3	Implement and enforce procedures for site plan review (Part V.C.4.a.ii).	Review and update process for site plan review and create flow chart for contractors, stormwater, floodplain and other Town of Kiefer staff provide training to office staff on review process.	2023	1/yr
4	4.4	Implement and enforce procedures for site inspection and enforcement of control measures (Part V.C.4.a.iii).	Create SOP for inspections and enforcement, review annually	2024	Annually
4	4.5	Conduct construction site inspections (Part V.C.4.a.iii).	Conduct construction site inspections at sites subject to OKR10 and report number in AR	2023	Annually
4	4.6	Conduct construction site inspections (Part V.C.4.a.iii).	Conduct construction site inspections at other sites and report number in AR	2023	Annually
5	5.1	Implement and enforce ordinances, or other regulatory mechanisms, to require BMPs (Part V.C.5.a.i).	Review ordinances or other regulatory mechanisms, to require BMPs post-construction	2024	Annually
5	5.2	Implement and enforce procedures, such as ordinances or other regulatory mechanisms, to ensure long-term operation and maintenance of BMPs (Part V.C.4.a.ii).	Review ordinances or other regulatory mechanisms, to require long term maintenance of post-construction BMPs and implement program	2025	Annually
5	5.3	Review local ordinances, regulations, and engineering plans or specifications to identify any legal/regulatory barriers to LID (Part V.C.4.a.iii).	Review local ordinances, regulations, and engineering plans or specifications to identify any legal/regulatory barriers to LID	2023	1/permit cycle
5	5.4	Develop a schedule to remove any barriers identified. Provide a justification if a barrier is not removed (Part V.C.4.a.iii).	Develop a schedule to remove any barriers identified for LID	2023	1/permit cycle
5	5.5	Review local ordinances, regulations, and engineering plans or specifications to identify any opportunities to promote LID (Part V.C.4.a.iii).	Review local ordinances, regulations, and engineering plans or specifications to identify any opportunities to promote LID	2024	1/permit cycle

5	5.6	Develop a schedule to implement any opportunities identified. Provide a justification if an opportunity is not implemented (Part V.C.4.a.iii).	Develop a schedule to implement any opportunities to promote LID	2024	1/permit cycle
5	5.7	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 (Part V.C.4.a.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.	2024	1/permit cycle
6	6.1	Develop a list of all MS4 facilities impacted by this program (Part V.C.5.a.i).	Develop a list of all MS4 facilities impacted by OKR04	2023	1/permit cycle
6	6.2	Annually update the list of all MS4 facilities impacted by this program. (Part V.C.5.a.i).	Annually update the list of all MS4 facilities impacted by this program	2023	1/year
6	6.3	Develop a list of all MS4 facilities subject to an OKR05 or individual OPDES/NPDES permit (Part V.C.5.a.ii).	Develop a list of all MS4 facilities subject to an OKR05 or individual OPDES/NPDES permit	2023	1/permit cycle
6	6.4	Annually update the list of all MS4 facilities subject to an OKR05 or individual OPDES/NPDES permit. Please include the date it was last updated in the comments (Part V.C.5.a.ii).	Annually update the list of all MS4 facilities subject to an OKR05 or individual OPDES/NPDES permit.	2023	1/year
6	6.5	Implement and enforce procedures for controlling, reducing or eliminating the discharge of pollutants (Part V.C.5.a.iii).	Create SOP for controlling, reducing or eliminating the discharge of pollutants in MS4	2024	Every 3 years after SOP is finalized
6	6.6	Implement and comply with procedures to ensure that new flood management projects are assessed for impacts on water quality (Part V.C.5.a.iv.).	Work with KPWA to create more efficient tracking and communication process for floodplain improvement projects that could impact stormwater, report in AR	2024	1/yr

6	6.7	Provide oversight and ensure contractors are contractually required to comply with any stormwater control measures, good housekeeping practices, or facility-specific procedures (Part V.C.5.a.v).	Require pre-project meeting with any external contractor doing work for the MS4 to discuss any stormwater control measures, good housekeeping practices, or facility-specific procedures	2024	Log and report all meetings
6	6.8	Implement and enforce procedures for inspection and maintenance of BMPs (Part V.C.5.a.vi).	Adapt procedure for inspection and maintenance from the Construction Site Inspection Form.	2024	Every other year
6	6.9	Conduct MS4 facility inspections (Part V.C.5.a.vi).	Conduct MS4 facility inspections annually	2023	1/yr

APPENDIX G

Ordinances

MCM-3 IDDE Ordinance

The Town of Kiefer has adopted an MCM-3 Illicit Discharge Detection and Elimination (IDDE) ordinance as required by OKR04 **Part V.C.3.a.vi**. In lieu of copying the entire ordinance verbatim, the Town of Kiefer provides the following information for public access to the most current version of the ordinance:

Ordinance number	Section 8-708
Internet link to ordinance copy	https://townofkiefer.org/codes/
MS4 staff contact to request copy	Jade Jones

MCM-4 Construction Ordinance

The Town of Kiefer has adopted an MCM-4 Construction ordinance as required by OKR04 **Part V.C.4.a.i**. In lieu of copying the entire ordinance verbatim, the Town of Kiefer provides the following information for public access to the most current version of the ordinance:

Ordinance number	Section 8-711
Internet link to ordinance copy	https://townofkiefer.org/codes/
MS4 staff contact to request copy	Jade Jones

MCM-5 Post-Construction Ordinance

The Town of Kiefer has adopted an MCM-5 Post-Construction ordinance as required by OKR04 **Part V.C.5.a.i**. In lieu of copying the entire ordinance verbatim, the Town of Kiefer provides the following information for public access to the most current version of the ordinance:

Ordinance number	Section 8-712
Internet link to ordinance copy	https://townofkiefer.org/codes/
MS4 staff contact to request copy	Jade Jones

APPENDIX H

Inspection Form

APPENDIX O

SWMP BMP Replacement Analysis Form

The SWMP section covering OKR04 Part V.D (SWMP Updates) refers to use of a form to document SWMP BMP changes. OKR04 **Part V.D.2.b** states:

- b. *BMP(s) determined to be ineffective or infeasible must be replaced with one or more alternative BMP(s). Your modifications shall provide the following analysis of why the BMP(s) is/are technically or economically ineffective or infeasible:*
 - i. *Provide a description of your 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.*

This Appendix O form will be used to document the BMP replacement analysis required by OKR04 **Part V.D.2.b** for each BMP that is replaced. This form's contents and/or formatting may be changed from time to time.

Table O-1: BMP Replacement Justification Form

Original BMP Number and Title	
Original BMP Purpose	
Reasons Original BMP is Ineffective or Infeasible	
Replacement BMP Title	
Anticipated Effectiveness of the Replacement BMP	
Why the Replacement BMP Will Achieve the Goals of the Original BMP	

[Section Break]

APPENDIX P

SWMP Duly Authorized Representative Form

Template below will be added to Town of Kiefer header. Minor modifications of text or formatting may be made from time to time.

Date

Director or Authorized Representative
Oklahoma Department of Environmental Quality
Water Quality Division
PO Box 1677
Oklahoma City, OK 73101-1677

RE: OKR04 Permit Signatory Declaration for the Town of Kiefer

Per OKR04 permit Part VII.H.2, the Town of Kiefer hereby authorizes the following person / position to be the “Duly Authorized Representative” for signing all documents, reports, certifications, or other information required by the OKR04 stormwater permit or requested by the DEQ Director:

Duly authorized representative:

Name *(print)*

Position Title

Signature of Representative

Authority is hereby granted and made effective on this date from the Town of Kiefer’s Principal Executive Officer or Ranking Elected Official.

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

Name *(print)*

Position Title

Signature



TOWN OF KIEFER

P.O. Box 369, Kiefer, OK 74041-0369

918-321-5925

May 25, 2023

Director or Authorized Representative
Oklahoma Department of Environmental Quality
Water Quality Division
PO Box 1677
Oklahoma City, OK 73101-1677

RE: OKR04 Permit Signatory Declaration for the Town of Kiefer

Per OKR04 permit Part VII.H.2, the Town of Kiefer hereby authorizes the following person / position to be the "Duly Authorized Representative" for signing all documents, reports, certifications, or other information required by the OKR04 stormwater permit or requested by the DEQ Director:

Duly authorized representative:

Jade Jones
Name (print)

Stormwater Manager
Position Title

Jade Jones
Signature of Representative

Authority is hereby granted and made effective on this date from the Town of Kiefer's Principal Executive Officer or Ranking Elected Official.

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.

Melanie Grove
Name (print)

Town Administrator
Position Title

Melanie Grove
Signature

APPENDIX Q

Acronyms Used in SWMP

The following acronyms are used within the SWMP text or in documents referenced in the SWMP.

Term	Meaning or Definition
303(d)	Section 303(d) of the Clean Water Act requiring biannual assessment of beneficial uses.
BMP	Best Management Practice, particularly regarding pollution controls.
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.
DMR	Discharge Monitoring Report; DEQ's form for filing sampling results.
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/DEQ rules.
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System; also used to designate a stormwater permittee.
NOI	Notice of Intent; application form and process to apply for stormwater permit coverage.
NPDES	National Pollutant Discharge Elimination System; federal discharge permit program.
OAC	Oklahoma Administrative Code
OCC	Oklahoma Conservation Commission.
DEQ	Oklahoma Department of Environmental Quality.
OKR04	DEQ's stormwater general permit for small MS4s.
OKR05	DEQ's stormwater general permit for industrial activities.
OKR10	DEQ's stormwater general permit for construction activities.
OPDES	Oklahoma Pollutant Discharge Elimination System; the state discharge permit program.
OWRB	Oklahoma Water Resources Board.

Term	Meaning or Definition
POTW	Publicly Owned Treatment Works (see WWTP)
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.
SWMP	Stormwater Management Program document required by stormwater permits.
SWP3	Stormwater Pollution Prevention Plan; required by construction stormwater permit.
TMDL	Total Maximum Daily Load; study accounting for all point and nonpoint sources.
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.
WLA_MS4	A permitted stormwater MS4's assigned WLA in the TMDL.
WQS	Water quality standards.
WWTP	Wastewater treatment plant; also referred to as POTW.