

OKR04 Requirements for: Quality Assurance Inspections, Monitoring Recordkeeping

GCSA Employee Training

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Pollutants in Urban Stormwater

- Sediment
- Nutrients
- Oxygen-Demanding Substances
- Pathogens
- Trash
- Road Salts
- Oil and Grease
- Heavy Metals
- Heat
- Petroleum
- Pesticides
- Other organics



Clip Art

303(d) Impairment

A stream or lake can be listed for any combination of parameters:

Dissolved oxygen, nutrients

Toxics (metals, organics, pesticides, “unknown”)

Sediment, suspended solids, turbidity

Pathogens (bacteria)

Biological (fish, macroinvertebrates)

pH

Oil & grease

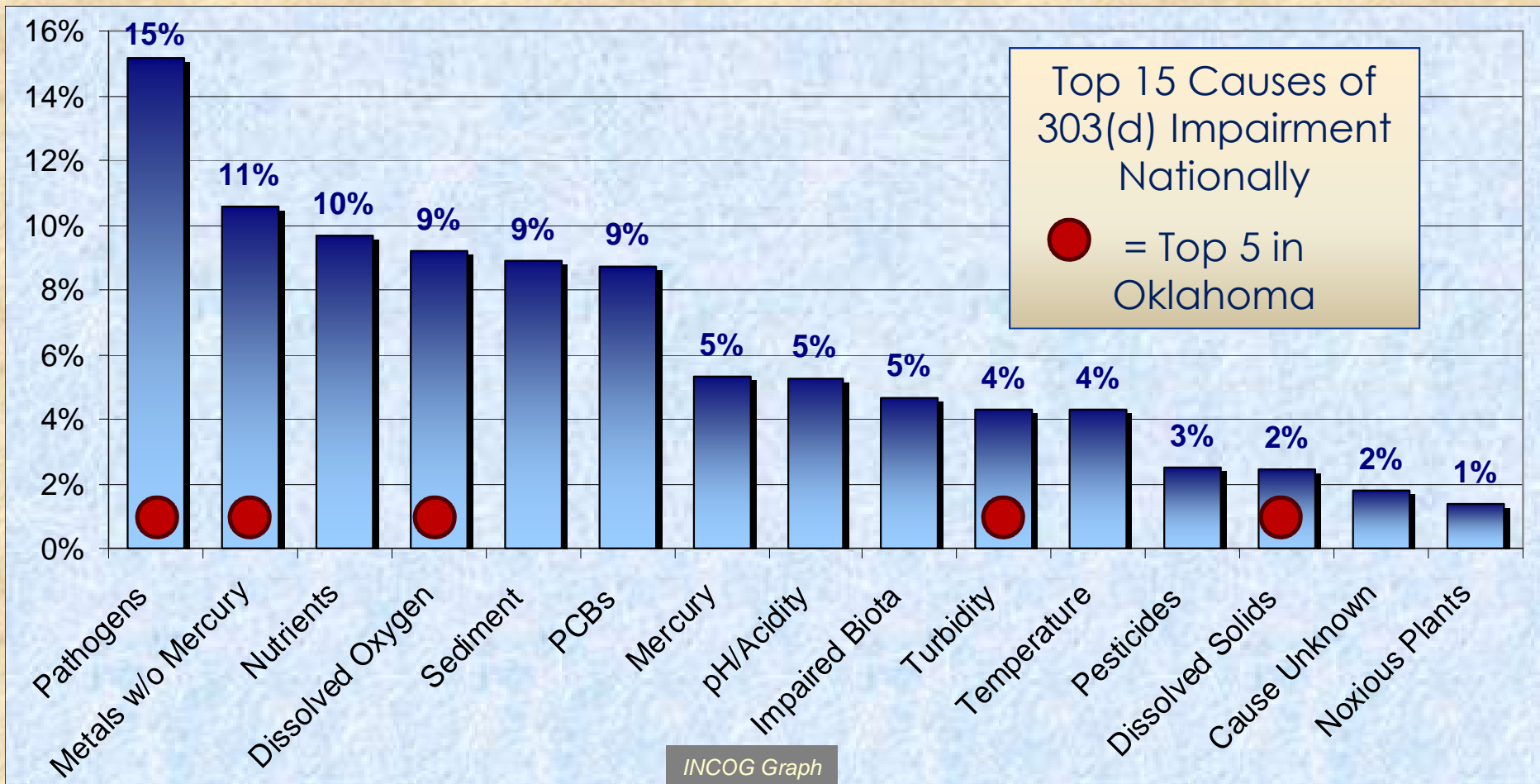
Chloride, sulfate, TDS



303(d) Category 5, the “TMDL List”

- Biennial “Oklahoma Integrated Water Quality Assessment Report” (2010 and 2012)
- Listed segments require a TMDL.
- Latest changes reflect new trends in water quality concerns:
 - *Beyond dissolved oxygen in streams.*
 - *Now bacteria, specific metals, dissolved solids (salts), turbidity / suspended solids.*
 - *Future TMDLs for nutrients? Fish / M.I.?*

National 303(d) Statistics



Created from data on EPA website: http://iaspub.epa.gov/waters10/attains_nation_cy.control?p_report_type=T

What is a TMDL ?

“Total Maximum Daily Load”

Calculates the maximum allowable pollutant loading for a waterbody.

All point source loads (**WLAs**) + all nonpoint source loads (**LAs**) + a margin of safety (**MOS**).

Special WLA just for stormwater permittees: “**WLA_MS4**”

$$\text{TMDL} = \Sigma \text{WLA} + \Sigma \text{LA} + \text{Background} + \text{MOS}$$

TMDL Appendix F for Stormwater

“Compliance with the following provisions will constitute compliance with the requirements of this TMDL”.

- 1. Develop A Bacteria Reduction Plan*
- 2. Develop Or Participate In A Bacteria Monitoring Program*
- 3. Annual Reporting*

Some TMDLs do not have Stormwater Permit requirements (e.g., Turbidity TMDLs)

Illicit Discharge Definition

FROM EPA REGULATIONS:

Part 122.26(b)(2) Illicit discharge means any discharge to a municipal separate storm sewer that is not composed entirely of storm water

except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

Municipal Separate Storm Sewer System (MS4)

According to 40 CFR 122.26(b)(8), “municipal separate storm sewer” means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains)...

**Present Text in OKR04
(from draft sent to EPA)**

OKR04 Inspection / Monitoring Concepts

DEFINITIONS AND CONCEPTS RELATING TO OKR04:

Monitoring - refers to the collection of samples for analysis for the purpose of assessing an environmental condition. This includes making field measurements, using field test kits, and collecting samples for laboratory analysis.

Sampling – the process of collecting substances (water, soil, pollutants, etc.) for chemical analysis or measurements.

Inspections – refers to making visual observations of waterbodies, facility structures or storage areas to assess conditions, or reviewing written records of facilities to assess condition or compliance with codes and permits.

Developed by INCOG; not taken from any written sources.

OKR04: “Part 136” & “Representative”

PART V: MONITORING, RECORD KEEPING, AND REPORTING

V. A Monitoring

Both are very important concepts !

1. **Designing Your Monitoring Program**: You must evaluate program compliance ... appropriateness [of BMPs] ... and progress toward achieving identified measurable goals. If ... a TMDL has been approved, you may have additional monitoring requirements under Part III of this Permit.
2. **Conducting Monitoring**: If you plan to conduct monitoring, you are required to comply with the following:
 - a. **Representative monitoring**: Samples and measurements taken for the purpose of monitoring shall be **representative** of the monitored activity.
 - b. **Laboratory Methods**: If laboratory analysis is conducted it must be conducted according to **test procedures** approved under **40 CFR part 136**.

Is Any Sample Representative Here ?

Does shade
make a
difference ?

Dry channel ?

Any flow in pools ?

Should you
sample the
pool ?

What are your
sampling goals?

In “QA Lingo” =
Data Quality
Objectives.

OKR04: “Quality Assurance”

PART VI: STANDARD PERMIT CONDITIONS

VI. J Proper Operation and Maintenance

You must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by you to achieve compliance with the conditions of this Permit and with the conditions of your stormwater management program. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by you only when the operation is necessary to achieve compliance with the conditions of the permit.

This is OKR04’s only reference to “QA”, but it covers O&M of all city facilities and systems used to comply with OKR04.

OKR04: “Inspections”

PART III: SPECIAL CONDITIONS

III. A Compliance with Water Quality Standards

... If you have discharges to receiving waters included on the latest CWA §303(d) list of impaired waters, you must document in your SWMP how you will comply with the following requirements:

1. If you discharge to waters identified on the latest CWA § 303(d) list of impaired waters, ... You must consider the following in developing or revising your SWMP:

...

c. 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 water bodies.

OKR04 does not define further how these inspections are to be conducted.

OKR04: “Inspections” (cont.)

PART IV.C: MINIMUM CONTROL MEASURES

4. Construction Site Stormwater Runoff Control

Requirements:

“Implement procedures for [site inspections](#)...”

“Document [inspection findings](#)...”

OKR04 does not define further how these inspections are to be conducted.

Recommendations:

“Conduct a [staff training](#) to address requirements for [inspection and enforcement](#)...”

“Expand your procedures for ... [site inspection](#) and enforcement to [smaller sites](#).”

OKR04: “Inspections” (cont.)

PART IV.C: MINIMUM CONTROL MEASURES

5. Post-Construction Management in New Development and Redevelopment

O&M is EPA’s Major Concern...

Requirements:

“Implement procedures to ensure adequate long-term **operation and maintenance of BMPs** that are put in place after the completion of a construction project, including [inspections](#) of each BMP.”

Recommendations:

“Develop a long-term **operation and maintenance (O&M) program** for your selected BMPs, including pre-construction review of BMP designs, [inspection during construction](#) to verify BMPs are built as designed, [post-construction inspection](#) and maintenance of BMPs...”

OKR04 does not define how these inspections are to be done.

OKR04: “Inspections” (cont.)

PART IV.C: MINIMUM CONTROL MEASURES

6. Pollution Prevention/Good Housekeeping for MS4 Operations

Requirements:

“Implement [inspection/maintenance](#) for 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;...”

Recommendations:

“Establish procedures for [catch basin inspections](#), cleaning and repairs, and sweeping streets, sidewalks, and permittee-owned parking lots within your small MS4.”

OKR04 does not define how these inspections are to be done.

OKR04: “Inspections” (cont.)

PART VIII: OPTIONAL PERMIT REQUIREMENTS FOR MUNICIPAL CONSTRUCTION ACTIVITIES (“7th MCM”)

There are numerous requirements for conducting inspections of construction sites owned / operated by the Phase II permittee, including reporting and documentation.

These only apply if the permittee selected the “7th MCM” option.

All requirements are taken verbatim from the 2012 OKR10 (ODEQ’s general permit for construction activities).

OKR04: “Monitoring”

PART V: MONITORING, RECORD KEEPING, AND REPORTING

V. A Monitoring

1. **Designing Your Monitoring Program:** You must evaluate program compliance, the appropriateness of [BMPs] identified best management practices, 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 III of this Permit.

The slide on PART 5 about Part 136 methods and Representativeness has the other major references to “monitoring” in OKR04.

Mostly, “monitoring” in OKR04 refers to “if you plan to conduct monitoring”, or “may have additional monitoring” for TMDLs.

OKR04: “Record Keeping”

PART V: MONITORING, RECORD KEEPING, AND REPORTING

V. B Record Keeping

1. **Retain Records of All Monitoring Information:** 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 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.

2. **Submit Your Records:** Mail your completed DMR reports, if required, to DEQ along with your annual report. You must retain a description of 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 the description of the SWMP, available to the public.

OKR04's most important recordkeeping requirement. Also see Annual Report.

Thank you.

Any Questions ?



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