

Overview of Monitoring & QA Requirements in OKR04

GCSA Employee Training

Nienhuis Park Community Center

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Monitoring, Sampling, Inspections

- **Monitoring** - making measurements or collecting samples for analysis for the purpose of assessing an environmental condition. Includes using field test kits and collecting samples for laboratory analysis.
- **Sampling** - the process of collecting substances (water, soil, pollutants, etc.) for chemical analysis or for making measurements.
- **Inspections** - making visual observations, such as of waterbodies, facility structures or storage areas to assess conditions. Inspections include the process of reviewing written records of facilities to assess condition or compliance with codes and permits.

Monitoring, Sampling, Inspections

- These terms are often used interchangeably.
- They are not formally defined in OKR04 Part VII.
- There are some general descriptions in OKR04 text.
- None of the references to “sampling” or “monitoring” in OKR04 actually require permittees to conduct any specific types of sampling or monitoring for any purpose. All “sampling” and “monitoring” passages in OKR04 refer to recommended actions or refer to what might be required for TMDL compliance.
- Demonstrating program effectiveness?

Perform “Sampling” by MS4 in OKR04

Part IV.C.3.a.2.a: (relates to locating priority areas in the Illicit Discharge MCM)

(a) Procedures for locating priority areas within your MS4 likely to have illicit discharges (e.g., areas with older sanitary sewer lines), or ambient **sampling** to locate impacted reaches;

Perform “Sampling” by MS4 in OKR04

Part V: (Monitoring, Recordkeeping and Reporting)

Part V has two references to “**samples**” and two references to types of information needed when “**sampling**”. However, Part V does not itself require sampling or monitoring; it only requires protocols to be followed in the event the permittee does collect samples or performs monitoring.

Perform “Monitoring” by MS4 in OKR04

Part III.B.1 and 2: (Established TMDL Allocations)

1. If a TMDL or watershed plan in lieu of a TMDL is established for any waterbody into which a MS4 discharges... the MS4's discharges must meet any limitations, conditions, or other requirements of the implementation plan associated with that ... TMDL. ... **Monitoring** and reporting of the discharges may also be required ... to ensure compliance.

This monitoring requirement is also in Part III.B Item 2 which covers TMDLs that are approved after NOI submittal.

Perform “Monitoring” by MS4 in OKR04

Part V: (Monitoring, Recordkeeping and Reporting)

Part V has many references to “**monitoring**”. However, Part V does not itself require sampling or monitoring; it only requires protocols to be followed in the event the permittee does collect samples or performs monitoring.

Perform “Monitoring” by MS4 in OKR04

Part V.C (Annual Reports)

b. Results of information collected and analyzed, if any, during the reporting period, including **monitoring** data used to assess the success of the SWMP at reducing the discharge of pollutants to the MEP;

e. Description and schedule for implementation of any additional BMPs or **monitoring** that may be necessary to reduce/eliminate the discharges of the pollutant of concern into impaired waters on the 303(d) list;

f. Description and schedule for implementation of any additional BMPs or **monitoring** that may be necessary to ensure compliance with any applicable TMDL or watershed plan in lieu of a TMDL;

Perform “Inspections” by MS4

Part III.A.1 (Compliance with Water Quality Standards – 303(d) Discharges)

d. *[Must]* 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.

Perform “Inspections” by MS4

Part IV.C.4. (Construction MCM)

a(6) *[Must]* Develop (if necessary), 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;

Perform “Inspections” by MS4

Part IV.C.4. (Construction MCM)

b(3) *[Recommendation]* Conduct a **staff training** to address requirements for **inspection** and enforcement of erosion and sediment control measures once construction begins.

b(5) *[Recommendation]* Expand your procedures for site plan review, site **inspection** and enforcement to smaller sites.

Perform “Inspections” by MS4

Part IV.C.5. (Post-Construction MCM)

a(4) *[Must]* Develop (if necessary), implement and enforce procedures 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, including inspections of each BMP;

Perform “Inspections” by MS4

Part IV.C.5. (Post-Construction MCM)

b(7) *[Recommendation]* Within your required long-term operation and maintenance **(O&M) program**, consider including the following: pre-construction review of BMP designs, **inspection** during construction to verify BMPs are built as designed, and penalty provisions for noncompliance.

Perform “Inspections” by MS4

Part IV.C.6. (Good Housekeeping MCM)

a(6) *[Must]* 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;

b(4) *[Recommendation]* Establish procedures for catch basin **inspections**, ... within your small MS4.

Detect, Trace, Examine, Assess by MS4

There are other more general phrases that do imply or direct the permittee to perform certain types of data collections.

These phrases have key words such as “**detect**”, “**trace**”, “**examine**” and “**assess**”.

There are other more general passages to “**evaluate** the appropriateness of” or “**evaluate** the effectiveness of” that are not requirements to perform sampling. These apply to assessing each of the 6 MCMs.

Detect, Trace, Examine, Assess by MS4

Part III.A.1 (Compliance with WQS – 303(d) Discharges)

e. 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.

Detect, Trace, Examine, Assess by MS4

Part IV.C.3 (Illicit Discharge Detection and Elimination MCM)

Part IV.C.3.a.2 *[Must]* ... implement a **dry weather field screening** plan to **detect**, **investigate**, and eliminate illicit discharges. ...**[field test kits and lab]**. Your field **screening** program must address the following, at a minimum:

- a. Procedures for **locating priority areas** within your MS4 ... or ambient **sampling** to locate impacted reaches;
...
- c. Procedures for **tracing** the source of an illicit discharge, including ... techniques you will use to **detect** the location of the source;
...
- e. Procedures for IDDE program **evaluation** and **assessment**.

Detect, Trace, Examine, Assess by MS4

Part IV.C.3.a.5

[Must] Develop (if necessary) and implement a plan to **detect** and address non-stormwater discharges, including illegal dumping to your system.

Part IV.C.3.b.2

[Recommendation] Expand your plan to **detect** and address illicit discharges to your system, including illegal dumping control, sanitary sewer overflows, on-site sewage disposal...

Detect, Trace, Examine, Assess by MS4

Part IV.C.6 (Pollution Prevention / Good Housekeeping for MS4 Operations)

Part IV.C.6.a.5 *[Must]* Implement procedures to ensure that new flood management projects are assessed for impacts on water quality;

Part V.C (Annual Reports)

b. Results of information collected and analyzed, if any, during the reporting period, including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP;

7th MCM Inspections & Monitoring

The remaining parts of OKR04 deal with the optional 7th Minimum Control Measure (**7th MCM**) for municipal construction activities (**OKR04 Part VIII**), and criteria for establishing **buffers** dealing with municipal construction projects (**OKR04 Exhibit 4**).

Consult these two parts of OKR04 if you elect to use the 7th MCM; there are numerous citations for conducting inspections and monitoring regarding runoff from construction sites.

“Quality Assurance” (QA) In OKR04

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 ... which are installed or used by you to achieve compliance Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures.

This is the only actual mention of “QA” in OKR04.

“Quality Assurance” (QA) In OKR04

PART V: MONITORING, RECORD KEEPING, AND REPORTING

V. A Monitoring

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.

“Quality Assurance” (QA) In OKR04

- There are no other direct references to QA in OKR04.
- Good data management practices require that steps be taken to insure data quality.
- INCOG recommends having a formal program of documentation of procedures (SOPs, QAPP, SWMP detailed procedures, etc.).
- Recordkeeping and training are also essential.
- More QA information will be discussed today.

Questions ??

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