

6.1.2 Monitoring and Reporting Requirements/Monitoring Conditions/ Monitoring Frequency

Applicability:

The intent of this section is to assist the permit writer in establishing minimum requirements for frequency of monitoring. This section applies to all classified and unclassified streams, lakes, reservoirs and other waters except for:

- the Missouri and Mississippi Rivers,
- Losing streams,
- L1 drinking water lakes,
- L2 and publicly owned L3 lakes,
- Table Rock Lake,
- Lake Taneycomo,
- Metropolitan no discharge streams,
- Outstanding national resource waters,
- Outstanding state resource waters,
- or subsurface waters.

Requirements for monitoring frequency for these waters are covered in sections specifically related to those waters.

Content:

Processed Wastewater

Frequency of monitoring will depend on the design flow of the facility. Guidelines for monitoring frequency for processed wastewater outfalls are as follows:

Design Flow	Frequency
Less than 25,000 gallons/day	Once/year
25,000-1,000,000 gallons/day	Once/year for each 50,000 gal/day or fraction thereof.
Greater than 1,000,000 gallons/day (1 mgd)	A minimum of 20 samples/year unless applicant can show that wastewater has a consistent quality.

Sampling frequency will be spread evenly throughout the discharge year. This means that a point source with continuous discharge will take samples on a regular schedule, and point sources with seasonal discharge will sample during their operating seasons.

The monitoring frequency and sample types stated above are minimum requirements. The permit writer shall establish monitoring frequencies and sampling types to fulfill the site-specific informational needs of the department. Appendix U of the Permits Manual outlines suggested monitoring frequencies and sampling types for consideration by the permit writer in situations where it is believed that adequate site-specific information will not result from application of the minimum regulatory controls.

Storm Water Runoff

The maximum potential discharge through storm water outfalls is often not known. It depends on the amount and timing of precipitation, the size of the drainage area above the outfall, topography, vegetative cover, and amount of impervious surface within the drainage area. For major facilities (e.g. those with design capacities of more than 1,000,000 gallons per day [1 mgd] of processed wastewater) and for construction sites, a sample for each precipitation event that produces runoff may be required. For smaller facilities, samples taken once a month or once a quarter may be sufficient.

In-Stream Monitoring

As with process wastewater, the frequency of monitoring depends on the size of the facility. The size of the receiving stream also needs to be taken into account. As a guideline, the following in-stream monitoring frequencies should be considered based on facility size and receiving stream characteristics:

It may not be possible to establish an upstream monitoring point for facilities that are located in headwater areas of streams where usually there is no flow.

All facilities that treat domestic sewage and discharge to streams classified for whole body contact (WBC) should be required to monitor in-stream for E. Coli (or fecal coliform during the 3-year transition period that extends from April 30, 2006 to April 30, 2009). In-stream coliform monitoring should be done at the same frequency as monitoring the outfall during the recreation season (April 1 – Oct 31).

On streams that are not classified for whole body contact (WBC), smaller facilities for domestic wastewater treatment (less than 25,000 gallons per day) are not required to perform in-stream monitoring for coliform bacteria. These facilities may be required to monitor the stream for coliform bacteria or other parameters if they have a history of non-compliance with their permit conditions or if their discharge is believed to stress aquatic life.

Facilities that discharge 25,000 gallons per day or more should be required to monitor in-stream at a frequency of no less than once for every four times that the outfalls are monitored.

All facilities that discharge to streams that are on the 303(d) list should be required to monitor in-stream if their effluent includes the water contaminants causing the impairment for which the stream is listed.

Legal References:

Code of State Regulations:

[10 CSR 20-7.015\(8\)\(C\)](#)

Effluent Regulations - All Other Waters Limitations - Monitoring Requirements

Other Links:

Appendix U -

Key Words:

Monitoring, monitoring frequency, process wastewater, discharge sampling, stormwater, in-stream monitoring, sampling frequency

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