

6.1.6.2 Monitoring and Reporting Requirements/Monitoring Conditions/ Requirements for Specific Waters/Losing Streams

Applicability:

The intent of this topic is to assist the permit writer in establishing minimum requirements for monitoring programs for discharges to losing streams. The permit writer shall establish monitoring frequencies, locations, and sample types that fulfill the site-specific informational needs of the department.

Content:

A losing stream is a stream which distributes 30% or more of its flow during low flow conditions through natural processes such as through permeable geologic materials into a bedrock aquifer within two miles flow distance downstream of an existing or proposed discharge (10 CSR 20-7.015(1)(A)3). Losing streams are listed in Table J of 10 CSR 20-7.031. Additional streams may be determined to be losing by the Division of Geology and Land Survey.

In accord with 10 CSR 20-7.015(4)(C), the department will develop a wastewater and sludge sampling program based on design flow that shall require at a minimum one wastewater sample per year for each 25,000 gallons per day (gpd) of effluent or fraction thereof, except that:

- Point sources that discharge less than 5000 gpd may only be required to submit an annual report;
- Point sources that discharge more than 1.3 million gallons per day (mgd) will be required at a minimum to collect 52 wastewater samples per year unless the applicant can show that the wastewater has a consistent quality, such as once through cooling water or mine dewatering, then the department may set less frequent sampling requirements.; and
- Sludge samples will be established in the permit.

Sampling frequency shall be spread evenly throughout the discharge year. This means that a point source with a continuous discharge shall take samples on a regular schedule, while point sources with seasonal discharges shall collect samples during the season of discharge.

Sample types shall be as follows:

- Samples collected from lagoons may be grab samples;
- Samples collected from mechanical plants shall be twenty-four (24)-hour composite samples unless otherwise specified in the operating permit; and
- Sludge samples shall be a grab sample unless otherwise specified in the operating permit.

The monitoring frequency and sample types described above are minimum requirements. The permit writer shall establish monitoring frequencies, locations, and sample types that fulfill the site-specific informational needs of the department.

To establish an appropriate site-specific monitoring program for discharges to losing streams, the permit writer should take into account:

- nature of the effluent

- variability of the effluent
- design capacity of the treatment facility
- size of the receiving stream
- treatment method used
- past compliance history
- frequency of discharge
- seasonality of discharge
- tiered limits

The site-specific monitoring program should also address the possibility of in-stream monitoring to determine the natural concentrations of the parameters of interest and any possible impact of the discharge on the receiving stream.

Legal References:

Code of State Regulations:

<u>10 CSR 20-7.015 (4)(C)</u>	Effluent Regulations - Losing Streams Limitations - Monitoring Requirements
<u>10 CSR 20-7.031 (1)(L) and Table J</u>	Water Quality Standards - (1)(L) Definitions Table J - Losing Streams

Other Links:

[Geological Survey & Resource Assessment Division](#)

[Appendix U -](#)

Key Words:

Monitoring, monitoring requirements, losing stream, monitoring frequency, sampling, sampling frequency, in-stream monitoring, WQBELs

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