

6.1.1 Monitoring and Reporting Requirements/Monitoring Conditions/ Monitoring Locations

Applicability:

This section is to assist the permit writer to specify the locations from which wastewater and surface water samples are to be taken by the permittee.

Content:

Wastewater samples are to be taken at each outfall that is listed on the title page of the permit. This includes outfalls that discharge processed wastewater, those that discharge storm water runoff, and those that discharge any combination of the two.

As defined at 10 CSR 20-2.010(54), the outfall is the point source, which is any discernible, confined and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, separate storm sewer or vessel or other floating craft from which pollutants are, or may be, discharged.

The permit writer may also require samples to be taken from the receiving water to which the facility discharges. Recommended locations for in-stream monitoring are:

- a. upstream of the outfall far enough not to be influenced by it, and
- b. one quarter ($\frac{1}{4}$) mile downstream from the outfall.

For classified streams, $\frac{1}{4}$ mile downstream is typically the location of the end of the mixing zone. The mixing zone is the area of dilution of effluent in the receiving water beyond which chronic toxicity criteria must be met. In cases when there are more than one discharge to the same stream, mixing zones may have to be made shorter to prevent overlap, and instream sampling points should be located accordingly (see 10 CSR 20-7.031(1)(N) and (4)(A)5).

In unclassified streams, there is no mixing zone allowed. Unclassified streams are not required to meet specific criteria spelled out in 10 CSR 20-7.031(4), but they do need to conform with the general criteria described in 10 CSR 20-7.031(3). If the permit writer determines that instream monitoring would be appropriate, wider discretion can be applied in selecting locations for instream monitoring for facilities that discharge to them. Often, there will be no flow to draw from upstream of facilities that discharge to these streams.

If the permit writer deems it appropriate to require in-lake monitoring for facilities that discharge to lakes, the mixing zone for lakes is 100 feet from the point of discharge, or $\frac{1}{4}$ of the width of the lake, whichever is less (10 CSR 20-7.031(4)(A)5B(IV)).

When selecting a location for in-stream monitoring, consideration should be given to accessibility to the site. This may require that the permittee develop agreements with landowners on whose property the desired sampling point is located. If a site located $\frac{1}{4}$ mile downstream from the outfall is not accessible, then the nearest accessible point downstream should be selected.

Bridge crossings of streams are often convenient locations for instream samples. Samples should be taken upstream from the bridge. This way, the chance of contamination of the sample by runoff from the bridge is minimal.

Legal References:

Code of State Regulations:

<u>10 CSR 20-2.010(54)</u>	Definitions - Point Source
<u>10 CSR 20-7.015(8)(C)</u>	Effluent Regulations - All Other Waters Limitations - Monitoring Requirements
<u>10 CSR 20-7.031(1)(N) & (4)(A)5.</u>	Water Quality Standards - (1)(N) Mixing Zones (4)(A)5 - Specific Criteria - Chronic Toxicity

Other Links:

Key Words:

Monitoring, sampling, wastewater samples, in-stream sampling, processed wastewater, stormwater runoff, mixing zone, point source, outfall

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