

5.5.2 Effluent Limits/Water Quality Based Effluent Limits/ Effluent Limitations for Specific Waters/Losing Streams

Applicability:

This information summarizes regulatory provisions related to discharges to losing streams. The key regulatory citation is 10 CSR 20-7.015(4). As defined at both 10 CSR 20-2.010(36) and 10 CSR 20-7.015(1)(A)3, a losing stream is one that discharges 30% or more of its flow through natural processes such as through permeable geologic materials into a bedrock aquifer within 2 miles flow distance of an existing or proposed discharge.

Content:

Discharges to losing streams are allowed only after other alternatives including land application, discharge to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental or economic reasons.

If the department allows a release to a losing stream, for discharges from wastewater treatment facilities that receive primarily domestic waste or from publicly owned treatment works (POTWs), the maximum effluent limits are:

- BOD5 - monthly average equal to or less than 10 mg/l
 - weekly average equal to or less than 15 mg/l
- NFR - monthly average equal to or less than 15 mg/l
 - weekly average equal to or less than 20 mg/l
- pH - maintained in the range of 6.0 to 9.0 standard units

Carbonaceous BOD5 (CBOD5)

When the wastewater treatment process causes nitrification, CBOD5 can be substituted for BOD5 at 5 mg/l less than the regular BOD5 limit in the operating permit.

Fecal Coliform

Discharges to losing streams shall not contain more than:

- a monthly geometric mean of 400 colonies/100 ml, and
- a daily maximum of 1000 colonies/100 ml.

These limits are in effect year-round. All chlorinated effluent discharges to losing streams or within 2 stream miles flow distance upstream of a losing stream shall be dechlorinated prior to discharge.

- an unclassified stream at least one mile upstream of a water quality standards classified stream, or
- a flowing stream with a 7-day Q10 low flow equal to or greater than 50 times the effluent flow.

POTW Storm Water Facilities with Noncontinuous Discharge

BOD5 - weekly average equal to or less than 45 mg/l

NFR - weekly average equal to or less than 45 mg/l

pH - maintained in the range of 6.0 to 9.0 standard units

Sludge

Sludge removed in the treatment process is not to be discharged. It is to be used or disposed in accord with the approved sludge management practices.

Legal References:

Missouri Clean Water Law, Chapter 644

[644.026\(8\), \(13\) and \(17\)](#) Powers and duties of commission--rules, procedure.

[644.051.1\(3\) and .2](#) Prohibited acts--permits required, when, fee--bond required of permit holders, when--perm application procedures--rulemaking--limitation on use of permit fee moneys.

Code of State Regulations:

[10 CSR 20-6.010\(1\)\(A\) and \(5\)\(A\)](#) Construction and Operating Permits -
(1)(A) General - Permits Required for Point Sources
(5)(A) Operating Permits (OP) - Required

[10 CSR 20-7.015\(4\)](#) Effluent Regulations - Effluent Limitations for Losing Streams.

[10 CSR 20-7.031\(4\) and \(10\)](#) Water Quality Standards
(4) Specific Criteria
(10) Permittee Compliance Timeframes

Other Links:

[5.1 Overview – Effluent Limits](#)

[6.1.5.3 Analytical Detection Levels-Total Residual Chlorine](#)

[6.1.6.2 Losing Streams - Monitoring Requirements](#)

Key Words:

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