

Missouri Clean Water Commission
Department of Natural Resources
Lewis and Clark State Office Building
LaCharrette/Nightingale Conference Rooms
1101 Riverside Drive
Jefferson City, Missouri 65102

September 11, 2013

**Proposed Amendment to
10 CSR 20-7.015 Effluent Regulations
Public Hearing**

Issue: Public Hearing on the Proposed Amendment to 10 CSR 20-7.015 Effluent Regulations.

The overall purpose of the Effluent Regulation is to prescribe effluent limits for permitted wastewater discharges such that water quality standards will be maintained in waters of the State.

This proposed amendment involves numerous revisions. In brief, this revision will 1) update bacteria limits and monitoring requirements, 2) clarify language regarding the definition of treatment plant bypasses to align with federal language, 3) require quarterly effluent monitoring of nutrient concentrations for large wastewater facilities, 4) provide clarification regarding whole effluent toxicity testing, 5) allow for electronic reporting, 6) include provisions for developing limits with regard to various situations like impaired waters, alternative limits during high flows, and the use of local stream data to adjust limits, 7) reduce monitoring frequency for facilities that consistently comply with effluent limits, 8) eliminate schedules to comply phosphorus limits for discharges to Table Rock and Taneycomo Lake because the dates have already passed, 9) require limits for the discharge of nitrates that may impact specific drinking water wells, 10) specify that permits may include schedules of compliance in accordance with federal regulations, and 11) reorganize and clarify several elements of the rule.

Background: This rulemaking is being undertaken in conjunction with an amendment to 10 CSR 20-7.031 Water Quality Standards, and is following the same rulemaking schedule. A Regulatory Impact Report (RIR) was prepared and was open for public comment from November 23, 2012 through January 22, 2013. A summary of comments and responses to this RIR have been posted on the Water Protection Program's "Rules in Development" web page at: <http://dnr.mo.gov/env/wpp/rules/wpp-rule-dev.htm>.

The proposed amendment to 10 CSR 20-7.015 Effluent Regulations was published in the Missouri Register on June 17, 2013, and the comment period will close at 5:00 pm. September 18, 2013.

The Department held approximately seven meetings with stakeholders to discuss rule concepts and to review specific rule language. The meetings were well attended with active participation by staff and stakeholders. Many refinements to the proposed rule language were made as a result of these meetings, and the proposed revision reflects these improvements.

Recommended Action: Hearing only. This is an opportunity for staff, and the public, to present and comment on the Proposed Amendment to 10 CSR 20-7.015 Effluent Regulations.

Suggested Motion Language: Hearing only.

List of Attachments:

- Proposed rule 10 CSR 20-7.015 Effluent Regulations published in the *Missouri Register* on June 17, 2013.
- Public and Private Fiscal Notes associated with this revision.

AUTHORITY: section 643.050, RSMo [2000] Supp. 2012. Original rule filed May 11, 1984, effective Oct. 11, 1984. Amended: Filed Jan. 5, 1988, effective April 28, 1988. Amended: Filed March 13, 2002, effective Nov. 30, 2002. Amended: Filed Sept. 24, 2009, effective May 30, 2010. Amended: Filed May 7, 2013.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m. July 24, 2013. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., July 31, 2013. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 20—Clean Water Commission
Chapter 7—Water Quality**

PROPOSED AMENDMENT

10 CSR 20-7.015 Effluent Regulations. The department is amending sections (1), (2), (3), (4), (5), (6), and subsection (7)(A), and sections (8) and (9).

PURPOSE: This amendment will 1) update bacteria limits and monitoring requirements; 2) revise language regarding "bypasses" to align with federal definition; 3) require quarterly effluent monitoring of nutrient concentrations at large wastewater treatment facilities; 4) provide clarification regarding whole effluent toxicity testing requirements; 5) allow for electronic reporting via web-based systems (once available); 6) include provisions for developing effluent limits with regard to several situations such as discharges to impaired waters, tiered limits which allow higher discharge concentrations during higher stream flow rates, and the use of local stream data to adjust effluent limits; 7) reduce monitoring frequency for facilities that consistently comply with effluent limits; 8) eliminate schedule to comply with phosphorus effluent limits for discharges to Table Rock Lake and Lake Tanycomo because the dates have already passed; 9) require limits for the discharge of nitrates that may impact specific drinking water wells; 10) specify that operating permits may include schedules of compliance in accordance with federal regulations; 11) revert to pH effluent limits that were in a previous version of the regulation; 12) allow alternate compliance points for discharges to subsurface waters; and 13) reorganize and clarify several elements of the rule.

(1) Designations of Waters of the State.

(A) For the purpose of this rule, the waters of the state are divided into the following categories:

1. The Missouri and Mississippi Rivers (section (2) of this rule);

2. Lakes and reservoirs, including natural lakes and any impoundments created by the construction of a dam across any waterway or watershed. An impoundment designed for or used as a disposal site for tailings or sediment from a mine or mill shall be considered a wastewater treatment device and not a lake or reservoir. Releases to lakes and reservoirs include discharges into streams one-

half (1/2) stream mile (.80 km) before the stream enters the lake as measured to its normal full pool (section (3) of this rule);

3. A losing stream is a stream which distributes thirty percent (30%) or more of its flow through natural processes such as through permeable geologic materials into a bedrock aquifer within two (2) miles/7 flow distance downstream of an existing or proposed discharge. Flow measurements to determine percentage of water loss must be corrected to approximate the seven (7)-day Q_{10} stream flow. If a stream bed or drainage way has an intermittent flow or a flow insufficient to measure in accordance with this rule, it may be determined to be a losing stream on the basis of channel development, valley configuration, vegetation development, dye tracing studies, bedrock characteristics, geographical data, and other geological factors. Only discharges which in the opinion of the Missouri Department of Natural Resources (department) reach the losing section and which occur within two (2) miles upstream of the losing section of the stream shall be considered releases to a losing stream. A list of known losing streams is available in the Water Quality Standards, 10 CSR 20-7.031 Table J—Losing Streams. Other streams may be determined to be losing by the department (section (4) of this rule);

4. Metropolitan no-discharge streams. These streams and the limitations on discharging to them are listed in [the commission's Water Quality Standards] Table F of 10 CSR 20-7.031 Water Quality Standards. This rule shall in no way change, amend, or be construed to allow a violation of the existing or future water quality standards (section (5) of this rule);

5. Special streams—[wild and scenic rivers, Ozark National Scenic Riverways,] Outstanding National Resource Waters and Outstanding State Resource Waters, as listed in Tables D and E of 10 CSR20-7.031(section (6) of this rule);

6. Subsurface waters in aquifers (section (7) of this rule); and

7. All other waters except as noted in paragraphs (1)(A)1.-6. of this rule (section (8) of this rule).

(B) Sections (2) through (8) of this rule establish requirements for discharges to the waters specified in these sections, and the requirements of section (9) of this rule apply to all discharges. The requirements of this rule do not apply to stormwater discharges; effluent limits for stormwater discharges are prescribed in 10 CSR 20-6.200 Storm Water Regulations.

(2) Effluent Limitations for the Missouri and Mississippi Rivers. The following limitations represent the maximum amount of pollutants which may be discharged from any point source, water contaminant source, or wastewater treatment facility.

(A) Discharges from wastewater treatment facilities which receive primarily domestic waste or from publicly-owned treatment works (POTWs) shall undergo treatment sufficient to conform to the following limitations:

1. Biochemical Oxygen Demand₅ (BOD₅) and Total Suspended Solids (TSS) equal to or less than a monthly average of thirty milligrams per liter (30 mg/L) and a weekly average of forty-five milligrams per liter (45 mg/L);

2. pH shall be maintained in the range from six [and one-half] to nine [(6.5-9.0)] (6-9) standard units;

3. Exceptions to paragraphs (2)(A)1. and 2. of this rule are as follows:

A. If the facility is a wastewater lagoon, the TSS shall be equal to or less than a monthly average of eighty milligrams per liter (80 mg/L) and a weekly average of one hundred twenty milligrams per liter (120 mg/L) and the pH shall be maintained above six [and one-half (6.5)] 6.0, and the BOD₅ shall be equal to or less than a monthly average of forty-five milligrams per liter (45 mg/L) and a weekly average of sixty-five milligrams per liter (65 mg/L);

B. If the facility is a trickling filter plant the BOD₅ and TSS shall be equal to or less than a monthly average of forty-five milligrams per liter (45 mg/L) and a weekly average of sixty-five milligrams per liter (65 mg/L);

C. Where the use of effluent limitations set *[forward]* forth in this section is known or expected to produce an effluent that will endanger or violate water quality, the department will set specific effluent limitations for individual dischargers to protect the water quality of the receiving streams. When a waste load allocation *[or a total maximum daily load study]* is conducted for a stream or stream segment, all permits for discharges in the study area shall be modified to reflect the limits established in the study;

D. The department may require more stringent limitations than authorized in *[subsection (3)(A)]* paragraphs (2)(A)1. and 2. and subparagraphs (2)(A)3.A., B., and C. of this rule under the following conditions:

(I) If the facility is an existing facility, the department may set the BOD₅ and TSS limits based upon an analysis of the past performance, rounded up to the next five milligrams per liter (5 mg/L) range; and

(II) If the facility is a new facility, the department may set the BOD₅ and TSS limits based upon the design capabilities of the plant considering geographical and climatic conditions;

(a) A design capability study has been conducted for new lagoon systems. The study reflects that the effluent limitations should be BOD₅ equal to or less than a monthly average of forty-five milligrams per liter (45 mg/L) and a weekly average of sixty-five milligrams per liter (65 mg/L) and TSS equal to or less than a monthly average of seventy milligrams per liter (70 mg/L) and a weekly average of one hundred ten milligrams per liter (110 mg/L).

(b) A design capability study has been conducted for new trickling filter systems and the study reflects that the effluent limitations should be BOD₅ and TSS equal to or less than a monthly average of forty milligrams per liter (40 mg/L) and a weekly average of sixty milligrams per liter (60 mg/L);

[4. E. coli: Discharges to segments designated as whole body contact recreational or secondary contact recreational in Table H of 10 CSR 20-7.031 shall not exceed the water quality E. coli counts established in 10 CSR 20-7.031(4)(C)2. Facilities without disinfected effluent shall comply with the implementation schedule found in subsection (9)(H) of this rule. During periods of wet weather, a temporary suspension of accountability for bacteria standards may be established through the process described in subsection (9)(I) of this rule;]

[5.]4. Sludges removed in the treatment process shall not be discharged. Sludges shall be routinely removed from the wastewater treatment facility and disposed of or used in accordance with a sludge management practice approved by the department; and

[6.]5. When the wastewater treatment process causes nitrification which affects the BOD₅ reading, the permittee can petition the department to substitute carbonaceous BOD₅ in lieu of regular BOD₅ testing. If the department concurs that nitrification is occurring, the department will set a carbonaceous BOD₅ at five milligrams per liter (5 mg/L) less than the regular BOD₅ in the operating permit.

(C) Monitoring Requirements.

1. The department will develop a wastewater and sludge sampling program based on design flow that shall require, at a minimum, one (1) wastewater sample per year for each fifty thousand (50,000) gallons per day (gpd) of effluent, or fraction thereof, except that—

A. Point sources that discharge less than twenty-five thousand (25,000) gpd may only be required to submit an annual report;

B. *[Point sources that discharge more than one (1) million gallons per day (mgd) will be required, at a minimum, to collect twenty (20) 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]* The department may establish less frequent sampling requirements for point sources that produce an effluent that does not exhibit high variability and consistently complies with the applicable effluent limit; and

C. Sludge sampling will be established in the permit~~;~~ and~~].~~

[D. A minimum of one (1) sample shall be collected for E. coli analysis each week during the recreational season from April 1 through October 31. Compliance with the E. coli water quality standard established in paragraph (4)(C)2. of 10 CSR 20-7.031 shall be determined each calendar month by calculating the geometric mean of all of the samples collected each calendar month.]

2. Sampling frequency shall be *[spread evenly throughout the discharge year. This means that a point source with a continuous discharge shall collect samples on a regular evenly spaced schedule, while point sources with seasonal discharges shall collect samples evenly spaced during the season of discharge]* representative of the discharge during the period the sampling covers (daily, weekly, monthly, seasonally, etc.).

3. Sample types shall be as follows:

A. Samples collected from lagoons may be grab samples;

B. Samples collected from mechanical plants shall be twenty-four (24)-hour composite samples, unless otherwise specified in the operating permit; and

C. Sludge samples will be grab samples unless otherwise specified in the operating permit.

4. The monitoring frequency and sample types stated in *[paragraph (2)(D)3.]* subsection (2)(C) of this rule are minimum requirements. The permit writer shall establish monitoring frequencies and sampling types to fulfill the site-specific informational needs of the department.

(3) Effluent Limitations for the Lakes and Reservoirs.

(A) The following limitations represent the maximum amount of pollutants which may be discharged from any point source, water contaminant source, or wastewater treatment facility to a lake or reservoir designated in 10 CSR 20-7.031 as L2 and L3 which is publicly owned. Releases to lakes and reservoirs include discharges into streams one-half (1/2) stream mile (.80 km) before the stream enters the lake as measured to its normal full pool.

1. Discharges from wastewater treatment facilities which receive primarily domestic waste or from POTWs shall undergo treatment sufficient to conform to the following limitations:

A. BOD₅ and TSS equal to or less than a monthly average of twenty milligrams per liter (20 mg/L) and a weekly average of thirty milligrams per liter (30 mg/L);

B. pH shall be maintained in the range from six *[and one-half]* to nine *[(6.5–9.0)]* (6–9) standard units;

[C. E. coli: Discharges to lakes designated as whole body contact recreational or secondary contact recreational in Table G of 10 CSR 20-7.031 shall not exceed the water quality E. coli counts established in paragraph (4)(C)2. of 10 CSR 20-7.031. Facilities without disinfected effluent shall comply with the implementation schedule found in subsection (9)(H) of this rule. During periods of wet weather, a temporary suspension of accountability for bacteria standards may be established through the process described in subsection (9)(I) of this rule;]

[D.]C. Where the use of effluent limitations set forth in section (3) of this rule *[is known or expected to produce an effluent that will endanger or violate water quality]* are reasonably expected to exceed applicable water quality standards, the department may either—conduct waste load allocation studies in order to arrive at a limitation which protects the water quality of the state or set specific effluent limitations for individual dischargers to protect the water quality of the receiving streams. When a waste load allocation study is conducted for a stream or stream segment, all permits for discharges in the study area shall be modified to reflect the limits established in the waste load allocation study;

[E.]D. Sludges removed in the treatment process shall not be discharged. Sludges shall be routinely removed from the wastewater

treatment facility and disposed of or used in accordance with a sludge management practice approved by the department; and

[F/E]. When the wastewater treatment process causes nitrification which affects the BOD₅ reading, the permittee can petition the department to substitute carbonaceous BOD₅ in lieu of regular BOD₅ testing. If the department concurs that nitrification is occurring, the department will set a carbonaceous BOD₅ at five milligrams per liter (5 mg/L) less than the regular BOD₅ in the operating permit.

(B) Monitoring Requirements.

1. The department will develop a wastewater and sludge sampling program based on design flow that will require, at a minimum, one (1) wastewater sample per year for each twenty-five thousand (25,000) gpd of effluent, or fraction thereof, except that—

A. Point sources that discharge less than five thousand (5,000) gpd may only be required to submit an annual report;

B. *[Point sources that discharge more than one point three (1.3) mgd will be required, at a minimum, to collect fifty-two (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]* **The department may establish less frequent sampling requirements for point sources that produce an effluent that does not exhibit high variability and consistently complies with the applicable effluent limit; and**

C. Sludge sampling will be established in the permit; *and*].

[D. A minimum of one (1) sample shall be collected for E coli analysis each week during the recreational season from April 1 through October 31. Compliance with the E coli water quality standard established in paragraph (4)(C)2. of 10 CSR 20-7.031 shall be determined each calendar month by calculating the geometric mean of all of the samples collected each calendar month.]

2. Sampling frequency shall be *[spread evenly throughout the discharge year. This means that a point source with a continuous discharge shall collect samples on a regular evenly spaced schedule, while point sources with seasonal discharges shall collect samples evenly spaced during the season of discharge]* **representative of the discharge during the period the sampling covers (daily, weekly, monthly, seasonally, etc.).**

3. Sample types shall be as follows:

A. Samples collected from lagoons may be grab samples;

B. Samples collected from mechanical plants shall be twenty-four (24)-hour composite samples, unless otherwise specified in the operating permit; and

C. Sludge samples shall be grab samples unless otherwise specified in the operating permit.

4. The monitoring frequency and sample types stated in *[paragraph (3)(B)3.]* subsection (3)(B) of this rule are minimum requirements. The permit writer shall establish monitoring frequencies and sampling types to fulfill the site-specific informational needs of the department.

(F) In addition to other requirements in this section, discharges to Table Rock Lake watershed, defined as hydrologic units numbered 11010001 and 11010002, shall not exceed five-tenths milligrams per liter (0.5 mg/L) of phosphorus as a monthly average *[according to the following schedules]* except those *[as noted in paragraph (3)(F)5. of this rule]*.

1. *Any new discharge shall comply with this new requirement upon the start of operations;*

2. *Any existing discharge, or any sum of discharges operated by a single continuing authority, with a design flow of one (1.0) mgd or greater shall comply no later than November 30, 2003;*

3. *Any existing discharge, or any sum of discharges operated by a single continuing authority, with a design flow of one-tenth (0.1) mgd or greater, but less than one (1.0)*

mgd, shall comply no later than November 30, 2007, and shall not exceed one milligram per liter (1.0 mg/L) as a monthly average as soon as possible and no later than November 30, 2003;

4. *Any existing discharge with a design flow of twenty-two thousand five hundred (22,500) gpd or greater, but less than one tenth (0.1) mgd, shall comply no later than November 30, 2007;*

5. *Any* existing discharges with *[a]* design flows of less than twenty-two thousand five hundred (22,500) gpd permitted prior to November 30, 1999, *[shall be exempt from this requirement]* unless the design flow is increased; *and*

6. *Any existing discharge in which the design flow is increased shall comply according to the schedule applicable to the final design flow].*

(4) Effluent Limitations for Losing Streams.

(B) If the department agrees to allow a *[release]* discharge from a wastewater treatment facility to a losing stream, the permit will be written using the limitations contained in subsections (4)(B) and (C) of this rule. Discharges from private wastewater treatment facilities which receive primarily domestic waste, industrial sources that treat influents containing significant amounts of organic loading, or *[from]* POTWs permitted under this section shall undergo treatment sufficient to conform to the following limitations:

1. BOD₅ equal to or less than a monthly average of ten milligrams per liter (10 mg/L) and a weekly average of fifteen milligrams per liter (15 mg/L);

2. TSS equal to or less than a monthly average of fifteen milligrams per liter (15 mg/L) and a weekly average of twenty milligrams per liter (20 mg/L);

3. pH shall be maintained in the range from six *[and one-half]* to nine *[[6.5–9.0]]* (6–9) standard units;

[4. E coli: Discharges shall not exceed the water quality E coli counts established in paragraph (4)(C)2. of 10 CSR 20-7.031;]

[5.]4. All chlorinated effluent discharges to losing streams or within two (2) stream miles flow distance upstream of a losing stream shall also be dechlorinated prior to discharge;

[6.]5. Sludges removed in the treatment process shall not be discharged. Sludges shall be routinely removed from the wastewater treatment facility and disposed of or used in accordance with a sludge management practice approved by the department; *[and]*

[7.]6. When the wastewater treatment process causes nitrification which affects the BOD₅ reading, the permittee can petition the department to substitute carbonaceous BOD₅ in lieu of regular BOD₅ testing. If the department concurs that nitrification is occurring, the department will set a carbonaceous BOD₅ at five milligrams per liter (5 mg/L) less than the regular BOD₅ in the operating permit.; *and*

7. **For situations in which nitrates in a discharge can be reasonably expected to impact specific drinking water wells, the concentration of nitrates in the discharge shall be limited to an average monthly limit of ten milligrams per liter (10 mg/L) as nitrogen and a maximum daily limit of twenty milligrams per liter (20 mg/L). Applicants may conduct a study in the same manner as the Missouri Risk-Based Corrective Action Technical Guidance published in 2006 to determine if nitrate limits are necessary to protect groundwater. In such cases, applicants shall submit a study plan for approval prior to the study, and submit all findings as part of their permit application.**

(C) Monitoring Requirements.

1. The department will develop a wastewater and sludge sampling program based on design flow that shall require, at a minimum, one (1) wastewater sample per year for each twenty-five thousand (25,000) gpd of effluent, or fraction thereof, except that—

A. Point sources that discharge less than five thousand (5,000) gpd may only be required to submit an annual report;

B. [Point sources that discharge more than one point three (1.3) mgd will be required, at a minimum, to collect fifty-two (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] The department may establish less frequent sampling requirements for point sources that produce an effluent that does not exhibit high variability and consistently complies with the applicable effluent limit; and

C. Sludge samples will be established in the permit; and].

D. A minimum of one (1) sample shall be collected for E coli analysis each week during the recreational season from April 1 through October 31. Compliance with the E coli water quality standard established in paragraph (4)(C)2. of 10 CSR 20-7.031 shall be determined each calendar month by calculating the geometric mean of all of the samples collected each calendar month.]

2. Sampling frequency shall be [spread evenly throughout the discharge year. This means that a point source with a continuous discharge shall collect samples on a regular evenly spaced schedule, while point sources with seasonal discharges shall collect samples evenly spaced during the season of discharge] representative of the discharge during the period the sampling covers (daily, weekly, monthly, seasonally, etc.).

3. Sample types shall be as follows:

A. Samples collected from lagoons and recirculating sand filters may be grab samples;

B. Samples collected from mechanical plants shall be twenty-four (24)-hour composite samples, unless otherwise specified in the operating permit; and

C. Sludge samples shall be a grab sample unless otherwise specified in the operating permit.

4. The monitoring frequency and sample types stated in [paragraph (4)(C)3.] subsection (4)(C) of this rule are minimum requirements. The permit writer shall establish monitoring frequencies and sampling types to fulfill the site-specific informational needs of the department.

(5) Effluent Limitations for Metropolitan No-Discharge Streams.

[(B) All permits for discharges to these streams shall be written to ensure compliance with the Water Quality Standards.]

[(C)](B) Monitoring Requirements.

1. The department will develop a wastewater and sludge sampling program based on design flow that shall require, at a minimum, one (1) wastewater sample per year for each twenty-five thousand (25,000) gpd of effluent, or fraction thereof, except that—

A. Point sources that discharge less than five thousand (5,000) gpd may only be required to submit an annual report;

B. Point sources that discharge more than one point three (1.3) mgd will be required, at a minimum, to collect fifty-two (52) wastewater samples per year; and

C. Sludge sampling will be established in the permit; and].

D. A minimum of one (1) sample shall be collected for E coli analysis each week during the recreational season from April 1 through October 31. Compliance with the E coli water quality standard established in paragraph (4)(C)2. of 10 CSR 20-7.031 shall be determined each calendar month by calculating the geometric mean of all of the samples collected each calendar month.]

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

period the sampling covers (daily, weekly, monthly, seasonally, etc.).

3. Sample types shall be as follows:

A. Samples collected from lagoons may be grab samples;

B. Samples collected from mechanical plants shall be twenty-four (24)-hour composite samples, unless otherwise specified in the operating permit; and

C. Sludge samples shall be a grab sample unless otherwise specified in the operating permit.

4. The monitoring frequency and sample types stated in [paragraph (5)(C)3.] subsection (5)(B) of this rule are minimum requirements. The permit writer shall establish monitoring frequencies and sampling types to fulfill the site-specific informational needs of the department.

(6) Effluent Limitations for Special Streams.

(A) Limits for [Wild and Scenic Rivers and Ozark National Scenic Riverways] Outstanding National Resource Waters as listed in Table D of 10 CSR 20-7.031 and Drainages Thereto.

1. The following limitations represent the maximum amount of pollutants which may be discharged from any point source, water contaminant source, or wastewater treatment facility to waters included in this section.

2. Discharges from wastewater treatment facilities, which receive primarily domestic waste, or from POTWs are limited as follows:

A. New releases from any source are prohibited;

B. Discharges from sources that existed before June 29, 1974, or if additional stream segments are placed in this section, discharges that were permitted at the time of the designation will be allowed.

3. Industrial, agricultural, and other non-domestic contaminant sources, point sources, or wastewater treatment facilities which are not included under subparagraph (6)(A)2.B. of this rule shall not be allowed to discharge. Agrichemical facilities shall be designed and constructed so that all bulk liquid pesticide nonmobile storage containers and all bulk liquid fertilizer nonmobile storage containers are located within a secondary containment facility. Dry bulk pesticides and dry bulk fertilizers shall be stored in a building so that they are protected from the weather. The floors of the buildings shall be constructed of an approved design and material(s). At an agrichemical facility, all transferring, loading, unloading, mixing, and repackaging of bulk agrichemicals shall be conducted in an operational area. All precipitation collected in the operational containment area or secondary containment area as well as process generated wastewater shall be stored and disposed of in a no-discharge manner.

4. Monitoring requirements.

A. The department will develop a wastewater and sludge sampling program based on design flow that will require, at a minimum, one (1) wastewater sample per year for each twenty-five thousand (25,000) gpd of effluent, or fraction thereof, except that—

(I) Point sources that discharge less than five thousand (5,000) gpd may only be required to submit an annual report;

(II) Point sources that discharge more than one point three (1.3) mgd will be required at a minimum to collect fifty-two (52) wastewater samples per year; and

(III) Sludge sampling will be established in the permit.

B. Sampling frequency shall be [spread evenly throughout the discharge year. This means that a point source with a continuous discharge shall collect samples on a regular evenly spaced schedule, while point sources with seasonal discharges shall collect samples evenly spaced during the season of discharge] representative of the discharge during the period the sampling covers (daily, weekly, monthly, seasonally, etc.).

C. Sample types shall be as follows:

(I) Samples collected from lagoons may be grab samples;

(II) Samples collected from mechanical plants shall be twenty-four (24)-hour composite samples, unless otherwise specified in the operating permit; and

(III) Sludge samples shall be a grab sample unless otherwise specified in the operating permit.

D. The monitoring frequency and sample types stated in paragraph (6)(D)3.(A)4. of this rule are minimum requirements. The permit writer shall establish monitoring frequencies and sampling types to fulfill the site-specific informational needs of the department.

(B) Limits for Outstanding State Resource Waters *[as per Water Quality Standards]* as listed in Table E of 10 CSR 20-7.031.

1. Discharges shall not cause the current water quality in the streams to be lowered.

2. Discharges will be permitted as long as the requirements of paragraph (6)(B)1. of this rule are met and the limitations in section (8) of this rule are not exceeded.

(7) Effluent Limitations for Subsurface Waters.

(A) No person shall release any water into aquifers, store or dispose of water in a way which causes or permits it to enter aquifers either directly or indirectly unless it meets the appropriate groundwater protection criteria set in 10 CSR 20-7.031, Table A at a point ten feet (10') under the release point, or other compliance point based on site specific considerations, except as provided in subsections (7)(E) and (F) of this rule. The permit writer shall review the complete application and other data to determine which parameter to include in the permit.

(8) Effluent Limitations for All Waters, Except Those in Paragraphs (1)(A)1.-6. of This Rule. The following limitations represent the maximum amount of pollutants which may be discharged from any point source, water contaminant source, or wastewater treatment facility.

(A) Discharges from wastewater treatment facilities which receive primarily domestic waste or POTWs shall undergo treatment sufficient to conform to the following limitations:

1. BOD₅ and TSS equal to or less than a monthly average of thirty milligrams per liter (30 mg/L) and a weekly average of forty-five milligrams per liter (45 mg/L);

2. pH shall be maintained in the range from six *[and one-half]* to nine *[(6.5-9.0)]* (6-9) standard units;

3. The limitations of paragraphs (8)(B)(A)1. and 2. of this rule will be effective unless *[a water quality impact study has been conducted by the department, or conducted by the permittee and approved by the department, showing that]* an alternate limitation will not cause violations of the Water Quality Standards or impairment of the uses in the standards. When *[a water quality impact study]* an Antidegradation Review has been completed *[to the satisfaction of the department]* for new or expanded discharges, the following alternate limitation may also be allowed:

A. If the facility is a wastewater lagoon, the TSS shall be equal to or less than a monthly average of eighty milligrams per liter (80 mg/L) and a weekly average of one hundred twenty milligrams per liter (120 mg/L) and the pH shall be maintained above six *[and one-half (6.5)]* (6.0) and the BOD₅ shall be equal to or less than a monthly average of forty-five milligrams per liter (45 mg/L) and a weekly average of sixty-five milligrams per liter (65 mg/L);

B. If the facility is a trickling filter plant, the BOD₅ and TSS shall be equal to or less than a monthly average of forty-five milligrams per liter (45 mg/L) and a weekly average of sixty-five milligrams per liter (65 mg/L);

C. Where the use of effluent limitations set forth in section (8) of this rule is known or expected to produce an effluent that will endanger water quality, the department will set specific effluent limitations for individual dischargers to protect the water quality of the receiving streams. When a waste load allocation study is conducted for a stream or stream segment, all permits for discharges in the

study area shall be modified to reflect the limits established in the waste load allocation study; and

D. The department may require more stringent limitations than authorized in *[subsections (3)(A) and (B)]* paragraphs (8)(A)1. and 2. and subparagraphs (8)(A)3.A., B., and C. of this rule under the following conditions:

(I) If the facility is an existing facility, the department may set the BOD₅ and TSS limits based upon an analysis of the past performance, rounded up to the next five milligrams per liter (5 mg/L) range; and

(II) If the facility is a new facility the department may set the BOD₅ and TSS limits based upon the design capabilities of the plant considering geographical and climatic conditions:

(a) A design capability study has been conducted for new lagoon systems. The study reflects that the effluent limitations should be BOD₅ equal to or less than a monthly average of forty-five milligrams per liter (45 mg/L) and a weekly average of sixty-five milligrams per liter (65 mg/L) and TSS equal to or less than a monthly average of seventy milligrams per liter (70 mg/L) and a weekly average of one hundred ten milligrams per liter (110 mg/L); or

(b) A design capability study has been conducted for new trickling filter systems and the study reflects that the effluent limitations should be BOD₅ and TSS equal to or less than a monthly average of forty milligrams per liter (40 mg/L) and a weekly average of sixty milligrams per liter (60 mg/L);

4. *E. coli*. The following water quality *E. coli* discharge limits apply to all waters, except those in paragraphs (1)(A)1.-6. of this rule:

A. Discharges to stream segments designated as whole body contact recreational or secondary contact recreational in Table H of 10 CSR 20-7.031 shall not exceed the water quality *E. coli* counts established in paragraph (4)(C)2. of 10 CSR 20-7.031;

B. Discharges to privately-owned lakes classified as L3, as defined in subsection (1)(F) of 10 CSR 20-7.031, that are designated as whole body contact recreational or secondary contact recreational in Table G of 10 CSR 20-7.031 shall not exceed the water quality *E. coli* counts established in paragraph (4)(C)2. of 10 CSR 20-7.031. Discharges include releases into streams one-half (1/2) stream mile (.80 km) before the stream enters the lake as measured to its normal full pool;

C. Discharges located within two (2) miles upstream of stream segments or lakes designated for whole body contact recreational or secondary contact recreational in Tables H and G of 10 CSR 20-7.031 shall not exceed the water quality *E. coli* counts established in paragraph (4)(C)2. of 10 CSR 20-7.031 for the receiving stream segment or lake designated for those uses. As an alternative, the department may allow permit applicants to conduct a time of travel study for use in developing water quality discharge limits calculated using the following first order decay equation:

$$C_0 = C_{(t)}e^{kt}$$

Where:

C_0 = concentration of *E. coli* at the outfall, which becomes the effluent limit;

$C_{(t)}$ = the water quality *E. coli* count established in paragraph (4)(C)2. of 10 CSR 20-7.031 for the receiving stream segment or lake that is designated as whole body contact recreational or secondary contact recreational in Tables H and G of 10 CSR 20-7.031;

e = the natural logarithmic constant;

k = decay constant for *E. coli* (use 0.75 inverse days as a default or value may be determined by sampling analysis); and

t = time required for effluent to flow from the outfall to the confluence with the closest classified receiving stream segment or lake during dry weather conditions in units of days; and

D. Facilities without disinfected effluent shall comply with the implementation schedule found in subsection (9)(H) of this rule. During periods of wet weather, a temporary suspension of accountability for bacteria standards may be established through the process described in subsection (9)(I) of this rule;

15.J4. Sludges removed in the treatment process shall not be discharged. Sludges shall be routinely removed from the wastewater treatment facility and disposed of or used in accordance with a sludge management practice approved by the department; and

16.J5. When the wastewater treatment process causes nitrification which affects the BOD₅ reading, the permittee can petition the department to substitute carbonaceous BOD₅ in lieu of regular BOD₅ testing. If the department concurs that nitrification is occurring, the department will set a carbonaceous BOD₅ at five milligrams per liter (5 mg/L) less than the regular BOD₅ in the operating permit.

(B) Monitoring Requirements.

1. The department will develop a wastewater and sludge sampling program based on design flow that will require, at a minimum, one (1) wastewater sample per year for each fifty thousand (50,000) gpd of effluent, or fraction thereof, except that—

A. Point sources that discharge less than twenty-five thousand (25,000) gpd may only be required to submit an annual report;

B. *[Point sources that discharge more than one (1) mgd will be required at a minimum to collect twenty (20) 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]* The department may establish less frequent sampling requirements for point sources that produce an effluent that does not exhibit high variability and consistently complies with the applicable effluent limit; and

C. Sludge sampling will be established in the permit; and].

[D. A minimum of one (1) sample shall be collected for E coli analysis each week during the recreational season from April 1 through October 31. Compliance with the E coli water quality standard established in paragraph (4)(C)2. of 10 CSR 20- 7.031 shall be determined each calendar month by calculating the geometric mean of all of the samples collected each calendar month].

2. Sampling frequency shall be *[spread evenly throughout the discharge year. This means that a point source with a continuous discharge shall collect samples on a regular evenly spaced schedule, while point sources with seasonal discharges shall collect samples during the season of discharge]* representative of the discharge during the period the sampling covers (daily, weekly, monthly, seasonally, etc.).

3. Sample types shall be as follows:

A. Samples collected from lagoons may be grab samples;

B. Samples collected from mechanical plants shall be twenty-four (24)-hour composite samples, unless otherwise specified in the operating permit; and

C. Sludge samples shall be a grab sample unless otherwise specified in the operating permit.

4. The monitoring frequency and sample types stated in *[paragraph (8)(C)3.] subsection (8)(B)* of this rule are minimum requirements. The permit writer shall establish monitoring frequencies and sampling types to fulfill the site-specific informational needs of the department.

(9) General Conditions.

(A) Establishing Effluent Limitations. Operating Permits as required under 10 CSR 20-6.010(5) shall include, if applicable, the most protective limits set forth as follows:

1. **Technology-based effluent limits and standards based on specific requirements under sections (2) through (8) of this rule;**

2. **Water quality-based effluent limits based on a waste load allocation in accordance with federal regulations (40 CFR 122.44(d)(1)), which would address pollutants that have a reasonable potential to cause or contribute to an excursion above Water Quality Standards established in 10 CSR 20-7.031. The director shall develop and maintain guidance and methods for determining water quality-based effluent limits.**

A. **Local effluent and receiving water data may be used to develop site specific effluent limits provided the department determines that this data is representative. Examples include in-stream hardness for the development of site specific metals limits, total dissolved metals translators, and water effects ratios.**

B. **Water quality-based effluent limitations incorporating mixing zones and zones of initial dilution as provided for in 10 CSR 20-7.031(4)(A)4.B. may be based on stream flows other than critical low-flow conditions, if the following conditions are met:**

(I) **The limits are protective of critical low-flow conditions, as well as higher flow conditions;**

(II) **In the case of existing discharges, flow-variable limits shall not allow the discharge to increase its pollutant loading from levels it has previously been able to achieve, unless supported by a waste load allocation as part of an approved Total Maximum Daily Load (TMDL); and**

(III) **The permit shall require in-stream flow measurements and methods to determine compliance;**

3. **Effluent limit guidelines or standards that have been federally promulgated under Sections 301, 304, 306, 307, 318, and 405 of the Clean Water Act;**

4. **Effluent limits prescribed for specific pollutants under a TMDL, as required under Section 303(d)(1)(C) of the Clean Water Act, necessary to achieve water quality standards, including permit limits in lieu of a TMDL. TMDL waste load allocations shall be placed in permits at renewal, and in subsequent renewals as needed, based on appropriate schedules, technological feasibility and practicability, or in accordance with the TMDL implementation plan if one has been developed. The department may reopen existing permits to implement TMDL requirements;**

5. **Effluent limits that are developed through the antidegradation review process, provided there is reasonable potential to exceed these limits, including No Degradation Effluent Limits (NDELs), Minimally Degrading Effluent Limits (MDELs), and Preferred Alternative Effluent Limits (PELs) that are associated with the selection of a preferred alternative;**

6. **Effluent limits prescribed for stormwater discharges as required under 10 CSR 20-6.200 Storm Water Regulations; and**

7. **Effluent Limits that are required as a result of legal agreements between dischargers and the department or the Clean Water Commission, or are the result of formal variances from Water Quality Standards that are approved by the Clean Water Commission, or as otherwise required or allowed by law.**

(B) Bacteria and Nutrient Limits. Operating Permits as required under 10 CSR 20-6.010(5) shall include, if applicable, the following bacteria and nutrient limits:

1. **Bacteria. The following water quality *Escherichia coli* (*E. coli*) discharge limits apply:**

A. **Discharges to stream segments designated in Table H of 10 CSR 20-7.031 for whole body contact recreation and secondary contact recreation shall not exceed the water quality *E. coli* counts established in subsection (4)(C) of 10 CSR 20-7.031;**

B. **Discharges to lakes designated as whole body contact recreational or secondary contact recreational in Table G of 10 CSR 20-7.031 shall not exceed the water quality *E. coli* counts established in subsection (4)(C) of 10 CSR 20-7.031;**

C. **Discharges to privately-owned lakes classified as L3, as defined in subsection (1)(F) of 10 CSR 20-7.031, that are designated as whole body contact recreational or secondary contact recreational in Table G of 10 CSR 20-7.031 shall not exceed the**

water quality *E. coli* counts established in subsection (4)(C) of 10 CSR 20-7.031. Discharges include releases into streams one-half (1/2) stream mile (.80 km) before the stream enters the lake as measured to its normal full pool;

D. Discharges located within two (2) miles upstream of stream segments or lakes designated for whole body contact recreational or secondary contact recreational in Tables H and G of 10 CSR 20-7.031 shall not exceed the water quality *E. coli* counts established in subsection (4)(C) of 10 CSR 20-7.031 for the receiving stream segment or lake designated for those uses;

E. Short-term *E. coli* limits. During the recreation season, discharges to waters designated for whole body contact "A" as defined in paragraph (1)(C)8. of 10 CSR 20-7.031 shall be limited to six hundred thirty (630) colony forming units per one hundred (100) milliliters (ml) expressed as a weekly geometric mean for POTWs and as a daily maximum for non-POTWs. During the recreation season, discharges to waters designated for whole body contact "B" as defined in paragraph (1)(C)8. of 10 CSR 20-7.031 shall be limited to one thousand thirty (1,030) colony forming units per one hundred (100) ml expressed as a weekly geometric mean for POTWs and as a daily maximum for non-POTWs. During the recreation season, discharges to waters designated for secondary contact recreational as defined in paragraph (1)(C)9. of 10 CSR 20-7.031 shall be limited to one thousand one hundred thirty-four (1,134) colony forming units per one hundred (100) ml expressed as a weekly geometric mean for POTWs and as a daily maximum for non-POTWs. For the entire calendar year, discharges to waters that are defined by paragraph (1)(A)3. of this rule as losing streams shall be limited to one hundred twenty-six (126) colony forming units per one hundred (100) ml expressed as a daily maximum;

F. As an alternative to the limits prescribed in subparagraphs (9)(B)2.A. through E., the department may allow permit applicants to conduct a study to develop *E. coli* limits that reflect pathogen decay. Prior to conducting this study applicants shall submit a quality assurance project plan for approval prior to the study, and submit all findings as part of their permit application; and

G. Notwithstanding the bacteria limits prescribed in paragraphs (9)(1)A. through F. of this rule, discharges to losing streams shall be considered in compliance so long as less than ten (10) percent of samples exceed one-hundred twenty-six (126) colony forming units per one hundred (100) ml daily maximum; and

2. Nutrients. Reserved for Nutrient Effluent Limits.

(C) Schedules of Compliance.

1. Compliance with new or revised National Pollutant Discharge Elimination System (NPDES) or Missouri operating permit limitations shall be achieved and in accordance with the federal regulation 40 CFR Part 122.47, "Schedules of Compliance," May 15, 2000, as published by the Office of the Federal Register, National Archives and Records Administration, Superintendent of Documents, Pittsburgh, PA 15250-7954, which is hereby incorporated by reference and does not include later amendments or additions.

2. If any permit allows a time for achieving final compliance from the date of permit issuance, the schedule of compliance in the permit shall set forth interim requirements and the dates for their achievement.

3. Within fourteen (14) days following each interim date and the final date of compliance, the permittee shall provide the department with written notice of the permittee's compliance or noncompliance with the interim or final requirement for the dates.

4. The department may modify a schedule of compliance in an issued permit. Applicants may request a modification by providing appropriate justification. In no case shall the compliance schedule be modified to extend beyond an applicable statutory

deadline.

((A))/(D) Monitoring, Analysis, and Reporting.

1. All construction and operating permit holders shall submit reports at intervals established by the permit or at any other reasonable intervals required by the department. The monitoring and analytical schedule shall be as established by the department in the operating permit.

2. The analytical and sampling methods used must conform to the following reference methods unless alternates are approved by the department:

A. *Standard Methods for the Examination of Waters and Wastewaters* (14, 15, 16, 17, 18, 19, 20, and 21st Edition), published by the Water Environment Federation, 601 Wythe Street, Alexandria, VA 22314;

B. *Water Testing Standards, Vol. II.01 and II.02*, published by American Society for Testing and Materials, West Conshohocken, PA 19428;

C. *Methods for Chemical Analysis of Water and Wastes* (EPA-600/4-79-020), published by the Environmental Protection Agency, Water Quality Office, Analytical Quality Control Laboratory, 1014 Broadway, Cincinnati, OH 54202; and

D. *NPDES Compliance Sampling Inspection Manual, [Report no. MCD-51] (EPA-305-X-04-001)*, published by Environmental Protection Agency, [Enforcement Division, Office of Water Enforcement, 401 Main Street SW, Washington, DC 20460] Office of Enforcement and Compliance Assurance 1200 Pennsylvania Avenue, N.W., Washington, DC 20460 (July 2004).

3. Sampling and analysis by the department to determine violations of this regulation will be conducted in accordance with the methods listed in paragraph (9)((A)/D)2. of this rule or any other approved by the department. Violations may be also determined by review of the permittee's self-monitoring reports. Analysis conducted by the permittee or his/her laboratory shall be conducted in such a way that the precision and accuracy of the analyzed results can be determined.

4. If, for any reason, the permittee does not comply with or will be unable to comply with any discharge limitations or standards specified in the permit, the permittee shall provide the department with the following information, with the next discharge monitoring report as required under subsection (9)((A)/D) of this rule:

A. A description of the discharge and cause of noncompliance;

B. The period of noncompliance, including exact dates and times and/or the anticipated time when the discharge will return to compliance; and

C. The steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

5. In the case of any discharge subject to any applicable toxic pollutant effluent standard under /s/Section 307(a) of the federal Clean Water Act, the information required by paragraph (9)((A)/D)4. of this rule regarding a violation of this standard shall be provided within twenty-four (24) hours from the time the owner or operator of the water contaminant source, point source, or wastewater treatment facility becomes aware of the violation or potential violation. **This information may be provided via an electronic web-based system developed by the department, provided it is available.** If this information is provided orally, a written submission covering these points shall be provided within five (5) working days of the time the owner or operator of the water contaminant source, point source, or wastewater treatment facility becomes aware of the violation.

6. Bacteria Monitoring for Disinfection.

A. For systems that have a design capacity of greater than one hundred thousand (100,000) gpd, a minimum of one (1) sample shall be collected for *E. coli* analysis each calendar week during the recreational season from April 1 through October 31. Compliance with the *E. coli* water quality standard established in subsection (4)(C) of 10-CSR 20-7.031 shall be determined each

calendar month by calculating the geometric mean of all of the samples collected each calendar month. Compliance with the short-term *E. coli* limits established in subparagraph (9)(B)2.E. of this rule shall also be determined.

B. For systems that discharge to stream segments that are defined by paragraph (1)(A)3. as losing streams and have a design capacity of greater than one hundred thousand (100,000) gpd, a minimum of one (1) sample shall be collected for *E. coli* analysis each calendar week all year. Compliance with the *E. coli* water quality standard established in subsection (4)(C) of 10 CSR 20-7.031 and with the short term *E. coli* limits established in subparagraph (9)(B)2.E. of this rule shall also be determined.

C. For systems that have a design capacity of one hundred thousand (100,000) gpd or less, the sampling frequency for *E. coli* analysis shall be in accordance with the wastewater and sludge sampling program based on the design flow which is dependent upon the receiving water category as listed in subsection (1)(A) of this rule. Compliance with the *E. coli* water quality standard established in subsection (4)(C) of 10 CSR 20-7.031 shall be determined each calendar month by calculating the geometric mean of all of the samples collected each calendar month. Compliance with the short-term *E. coli* limits established in subparagraph (9)(B)2.E. of this rule shall also be determined.

7. Monitoring for Nutrients. Point sources that have the design capacity of greater than one hundred-thousand (100,000) gpd that typically discharge nitrogen and phosphorus shall collect and analyze a minimum of one (1) effluent sample each calendar quarter for one (1) permit cycle or up to (5) five years if the first permit term is less than five (5) years. The samples shall be analyzed for total nitrogen and total phosphorus using EPA-approved test methods. The quarterly monitoring frequency for total phosphorus does not apply to dischargers that are subject to the specific lake limits and monitoring requirement specified under subsections (3)(E) and (F) of this rule.

((B))(E) Dilution Water. Dilution of treated wastewater with cooling water or other less contaminated water to lower the effluent concentration to limits required by an effluent regulation of the Clean Water Law shall not be an acceptable means of treatment.

((C)) Compliance.

1. New sources. Water contaminant sources, point sources, and wastewater treatment facilities and their tributary sewer systems on which construction begins after the effective date of the applicable effluent guidelines shall meet all requirements of this regulation and the Missouri Clean Water Law.

2. Sources for which construction and operating permits were issued prior to the effective date of this regulation shall meet all the requirements of the existing permit. Where the existing permit contains more stringent limitations than those contained in this regulation, the permittee may apply to the department for a modification of the permit to contain the new limitations. The department will notify the applicant of its decision to modify or deny the application within sixty (60) days after receiving an application.]

((D))(F) Compliance with New Source Performance Standards.

1. Except as provided in paragraph (9)(D/F)2. of this rule, any new water contaminant source, point source, or wastewater treatment facility on which construction commenced after October 18, 1972, or any new source, which meets the applicable promulgated new source performance standards before the commencement of discharge, shall not be subject to any more stringent new source performance standards or to any more stringent technology-based standards under subsection 301(b)(2) of the federal Clean Water Act for the shortest of the following periods:

- A. Ten (10) years from the date that construction is completed;
- B. Ten (10) years from the date the source begins to discharge process or other nonconstruction related wastewater; or

C. The period of depreciation or amortization of the facility for the purposes of section 167 or 169 (or both) of the *Internal Revenue Code* of 1954.

2. The protection from more stringent standards of performance afforded by paragraph (9)(D/F)1. of this rule does not apply to—

A. Additional or more stringent permit conditions which are not technology based, for example, conditions based on water quality standards or effluent standards or prohibitions under */s/*Section 307(a) of the federal Clean Water Act; and

B. Additional permit conditions controlling pollutants listed as toxic under */s/*Section 307(a) of the federal Clean Water Act or as hazardous substances under */s/*Section 311 of the federal Clean Water Act and which are not controlled by new source performance standards. This exclusion includes permit conditions controlling pollutants other than those identified as hazardous where control of those other pollutants has been specifically identified as the method to control the hazardous pollutant.

((E))(G) Bypassing].

1. Any bypass or shutdown of a wastewater treatment facility and tributary sewer system or any part of a facility and sewer system that results in a violation of permit limits or conditions is prohibited except—

A. Where unavoidable to prevent loss of life, personal injury, or property damages;

B. Where unavoidable excessive storm drainage or runoff would damage any facilities or processes necessary for compliance with the effluent limitations and conditions of this permit; and

C. Where maintenance is necessary to ensure efficient operation and alternative measures have been taken to maintain effluent quality during the period of maintenance;

2. The permittee shall notify the department by telephone within twenty-four (24) hours and follow with a written report within five (5) days of all bypasses or shutdowns that result in a violation of permit limits or conditions. POTWs that bypass during storm water infiltration events need only report on their discharge monitoring reports. This section does not excuse any person from any liability, unless this relief is otherwise provided by the statute.]

1. Bypass means the intentional diversion of waste streams from any portion of a treatment facility. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

2. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (9)(G)3. and 4. of this rule.

3. Notice.

A. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the department, if possible at least ten (10) days before the date of the bypass.

B. Unanticipated bypass. The permittee shall notify the department by telephone within twenty-four (24) hours and follow with a written report within five (5) days from the time the permittee becomes aware of the circumstances of all bypasses or shutdowns that result in a violation of permit limits or conditions and which may endanger human health or the environment. The twenty-four (24) hour and five (5) day reports may be provided via an electronic web-based system developed by the department, provided it is available, or by facsimile machine. POTWs that bypass during storm water inflow and infiltration events need only report on their discharge monitoring reports.

4. **Prohibition of bypass.** Bypass is prohibited, and the department may take enforcement action against a permittee for bypass, unless:

A. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

B. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

C. The permittee submitted notices as required under paragraph (9)(G)3. of this rule.

5. The department may approve an anticipated bypass, after considering its adverse effects, if the department determines that it will meet the three (3) conditions listed in paragraph (9)(G)4. of this rule.

(F)(H) Sludge facilities shall meet the applicable control technology for sewage sludge treatment, use, and disposal as published by the EPA in 40 CFR 503 and applicable state standards and limitations published in 10 CSR 20 and 10 CSR 80. Where there are no standards available or applicable, or when more stringent standards are appropriate to protect human health and the environment, the department shall set specific limitations in permits on a case-by-case basis using best professional judgment.

(G)(I) Industrial, agricultural, and other nondomestic water contaminant sources, point sources, or wastewater treatment facilities which are not included under subsection (2)(B), (3)(B), (4)(B), or (8)(B) of this rule—

1. These facilities shall meet the applicable control technology currently effective as published by the EPA in 40 CFR 405-471. Where there are no standards available or applicable, the department shall set specific parameter limitations using best professional judgment. pH shall be maintained in the range from six *[and one-half]* to nine *[(6.5-9.0)]* (6-9) standard units, except that discharges of uncontaminated cooling water and water treatment plant effluent may exceed nine (9) standard units, but may not exceed ten and one-half (10.5) standard units, if it can be demonstrated that the pH will not exceed nine (9) standard units beyond the regulatory mixing zone; and

2. Agrichemical facilities shall be designed and constructed so that all bulk liquid pesticide nonmobile storage containers and all bulk liquid fertilizer nonmobile storage containers are located within a secondary containment facility. Dry bulk pesticides and dry bulk fertilizers shall be stored in a building so that they are protected from the weather. The floors of the buildings shall be constructed of an approved design and material(s). At an agrichemical facility, the following procedures shall be conducted in an operational area: all transferring, loading, unloading, mixing, and repackaging of bulk agrichemicals. All precipitation collected in the operational containment area or secondary containment area as well as process generated wastewater shall be stored and disposed of in a no-discharge manner or treated to meet the applicable control technology referenced in paragraph (9)(G)1. of this rule.

(H)(J) Implementation Schedule for Protection of Whole Body Contact and Secondary Contact Recreation.

[1. For all existing wastewater discharges containing bacteria, the department shall, upon the issuance or first renewal or first significant modification of each permit, include within each permit a compliance schedule that provides up to five (5) years for the permittee to meet permit limits. Permitted facilities may present an evaluation sufficient to show that disinfection is not required to protect one (1) or both designated recreational uses. A use attainability analysis (UAA) may be conducted to demonstrate one (1) or both designated recreational uses are not attainable in the classified waters receiving the effluent.]

[2.]1. [Notwithstanding the provisions of paragraph (9)(H)1. of this rule, all] For discharges to water bodies designated for whole body contact and secondary contact recreational use prior to July 1, 2012, in 10 CSR 20-7.031, permits shall insure compliance with effluent limits to protect whole body contact and secondary contact recreation by no later than December 31, 2013, unless the permittee presents an evaluation sufficient to show that disinfection is not required to protect one (1) or both designated recreational uses, or a UAA demonstrates that one (1) or both designated recreational uses are not attainable in the classified waters receiving the effluent.

2. For discharges to water bodies designated for whole body contact and secondary contact recreational use after June 30, 2012, in 10 CSR 20-7.031, permits shall include schedules of compliance to meet bacteria limits in accordance with subsection (9)(C) of this rule.

(I)(K) Temporary Suspension of Accountability for Bacteria Standards during Wet Weather. The accountability for bacteria standards may be temporarily suspended for specific discharges when conditions contained in paragraphs (9)(I)1. through 3. of this rule are met.

1. No existing recreational uses downstream of the discharge will be impacted during the period of suspension as confirmed through a water quality review for reasonable potential for downstream impacts and a UAA performed in accordance with the *Missouri Recreational Use Attainability Analysis Protocol* approved by the Missouri Clean Water Commission.

2. The period of suspension must be restricted to the defined wet weather event that corresponds to the period when recreational uses are unattainable. The period must be determinable at any time by the discharger and the general public (such as from stream depth or flow readings or other stream conditions on which publicly accessible records are kept).

3. The suspension shall be subject to public review and comment, Missouri Clean Water Commission approval, and EPA approval before becoming effective and shall be contained as a condition in a discharge permit or other written document developed through public participation.

(L) Whole Effluent Toxicity (WET) Test. A WET test is a quantifiable method of determining the degree at which a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with the receiving water body. The following are permit requirements for acute and chronic WET tests.

1. WET tests are required under 10 CSR 20-6.010(8)(A)4. to be performed by individuals who are properly trained in conducting the test according to the methods prescribed in 40 CFR 136.3.

2. Test Types.

A. Acute WET tests shall be a multiple dilution series, static, non-renewal test to determine the degree at which acute forty-eight to ninety-six hour (48-96 hour) exposure to the effluent is acutely toxic to aquatic life expressed in species survival.

B. Chronic WET test shall be a multiple dilution series, static, renewal test to determine the degree at which chronic (sub lethal) exposure to the effluent is toxic to aquatic life or affects an alternative endpoint such as species reproduction and/or growth. Duration of chronic WET tests shall be established according to 40 CFR 136.3 Identification of test procedures, promulgated as of July 1, 2011, is hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions.

3. Applicability. WET test type and frequency shall be determined and expressed in permits by the department. At permit issuance or reissuance, the department will use valid and representative data to establish on a case-by-case basis, whether an existing discharge causes, has the reasonable potential to cause,

or contributes to an excursion from the narrative water quality criteria. Where the department concludes that a discharge has the reasonable potential to contribute to an excursion from the narrative water quality criteria, as established in 10 CSR 20-7.031 the permit will include WET limits. If the department determines the facility has no reasonable potential to violate water quality standards, WET testing may be removed, or if more information is required, WET testing may be retained at a reduced frequency. WET test applicability for NPDES permits shall be fully addressed in the permit factsheet.

4. Specifications.

A. A dilution series shall be established in the permit for WET test. The dilution series shall be a set of proportional effluent dilutions based on an Allowable Effluent Concentration (AEC).

B. All WET tests shall be performed with *Pimephales promelas* (a fathead minnow) and *Ceriodaphnia dubia* (a water flea), except facilities which discharge to receiving streams designated as cold-water sport fisheries. Facilities which discharge to receiving streams designated as cold water sport fisheries may be required to perform WET tests using *Oncorhynchus mykiss* (rainbow trout) instead of the fathead minnow. Other test species for which test methods are provided in 40 CFR 136.3 may be approved by the department on a case-by-case basis provided the species are appropriately sensitive and representative. Alternative species (not included in 40 CFR 136.3) shall be approved in accordance with the procedures in 40 CFR 136.4. Application for alternate test procedures, promulgated as of July 1, 2011, is hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions.

C. A Toxic Unit (TU) water quality based limit shall be established in the permit for WET test where the department concludes that a discharge has the reasonable potential to cause or contribute to an excursion from the narrative water quality criteria as established in 10 CSR 20-7.031(3)(D). The TU limit shall be determined in accordance with 40 CFR 122.44(d)(1)(v) and utilizing the methods established in Technical Support Document For Water Quality-based Toxics Control (March 1991, EPA/505/2-90-001) and documented in the factsheet. Exceedance of a TU limit shall be a WET test failure.

D. Upon completion of a WET test the complete lab report and department form as referenced in the permit shall be submitted by the permittee to the department within the time-frame established by the permit.

AUTHORITY: section 644.026, RSMo [2000] Supp. 2012. Original rule filed June 6, 1974, effective June 16, 1974. For intervening history, please consult the Code of State Regulations. Amended: Filed May 15, 2013.

PUBLIC COST: The proposed amendment total cost of compliance in the aggregate for Publicly-Owned Wastewater Treatment Facilities is \$1,688,100 through FY 2018. It is anticipated that the annual costs for whole effluent toxicity tests of FY 2018 of one hundred fifty-seven thousand dollars (\$157,000) will recur for the life of the rule and may vary with inflation. Nutrient monitoring costs will only be required for one (1) permit term, while nitrate monitoring costs will result in annual savings of fourteen thousand three hundred dollars (\$14,300) in FY 2018 and beyond, with reduced monitoring and on-going compliance.

PRIVATE COST: The proposed amendment total cost of compliance in the aggregate for Privately-Owned Wastewater Domestic and Industrial Treatment Facilities is one hundred two thousand six hundred dollars (\$102,600) through FY 2018. It is anticipated that the annual costs for whole effluent toxicity tests of FY 2018 of thirty-eight

thousand dollars (\$38,000) will recur for the life of the rule and may vary with inflation. Nutrient monitoring costs will only be required for one (1) permit term, while nitrate monitoring costs will result in annual savings of forty thousand three hundred dollars (\$40,300) in FY 2018 and beyond, with reduced monitoring and on-going compliance.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Natural Resources, Division of Environmental Quality, Water Protection Program, John Rustige, PO Box 176, Jefferson City, MO 65102. Comments may be sent with name and address through email to john.rustige@dnr.mo.gov. Public comments must be received by September 18, 2013. The public hearing is scheduled at a meeting of the Clean Water Commission to be held at 9 AM, on September 11, 2013, at the Department of Natural Resources, Lewis and Clark State Office Building, LaCharrette/Nightingale Conference Rooms, 1101 Riverside Drive, Jefferson City, Missouri 65010.

FISCAL NOTE

PUBLIC COST

I. RULE NUMBER

<i>Rule Number and Name:</i>	10 CSR 20-7.015 <i>Effluent Regulations</i>
<i>Type of Rulemaking:</i>	Proposed Amendment

II. SUMMARY OF FISCAL IMPACT

Affected Agency or Political Subdivision	Estimated Cost of Compliance in the Aggregate*
Publicly Owned Treatment Works (POTWs) Nutrient Monitoring required for one permit term (municipalities, sewer districts, and other public utilities)	\$891,400
Publicly Owned Treatment Works (POTW) Whole Effluent Toxicity (WET) Testing (large & medium size municipalities, sewer districts, and other public utilities)	\$876,200
Publicly Owned Treatment Works (POTW) Nitrate Monitoring	(\$79,500)
TOTAL	\$1,688,100 *Cost of Compliance in the Aggregate

*Aggregate costs of compliance is calculated by summing the annual costs in the worksheet tables in III from 2013 through 2018 for POTW, nutrient, wet test and nitrates
*3% inflation

III. Worksheet

In summary, the revisions to 10 CSR 20-7.015 *Effluent Regulations* will:

1. Update bacteria limits and monitoring requirements;
2. Revise language regarding “bypasses” to align with federal definition;
3. Require quarterly effluent monitoring of nutrient concentrations at large wastewater treatment facilities;
4. Provide clarification regarding whole effluent toxicity testing requirements;
5. Allow for electronic reporting via web-based systems (once available);
6. Include provisions for developing effluent limits with regard to several situations such as discharges to impaired waters, tiered limits which allow higher discharge concentrations during higher stream flow rates, and the use of local stream data to adjust effluent limits;
7. Reduce monitoring frequency for facilities that consistently comply with effluent limits;
8. Eliminate schedule to comply with phosphorus effluent limits for discharges to Table Rock Lake and Lake Tanycomo because the dates have already passed;

9. Require limits for the discharge of nitrates that may impact specific drinking water wells;
10. Specify that operating permits may include schedules of compliance in accordance with federal regulations;
11. Revert to pH effluent limits that were in a previous version of the regulation;
12. Allow alternate compliance points for discharges to subsurface waters; and
13. Reorganize and clarify several elements of the rule.

Summary of Costs						
Nutrient Monitoring	FY2013*	FY2014*	FY2015*	FY2016*	FY2017*	FY2018*
	\$23,000	\$71,100	\$122,000	\$175,900	\$232,900	\$266,500
FY2013 through FY2018	Nutrient Monitoring, multi-year aggregate total = \$891,400					
<p>402 Publicly-Owned Treatment Works (POTWs) will collect and analyze 4 samples each year to analyze for total nitrogen and phosphorus at a total cost of \$143 per sample = \$229,944. Operating permits are issued with 5-year terms, and the new monitoring requirements will only be incorporated into permits as they are renewed. Nutrient monitoring will only be required for one permit term, and will be discontinued in future operating permits. During the first full year it is assumed that one-fifth of the POTWs will have permits up for renewal. Only one-half of the first year falls within FY2013. Each year the analytical costs are estimated to increase by 3% for inflation.</p> <p>Therefore the FY2013 costs are estimated as: $\\$229,944 * (1/5) * (1/2) = \\$23,000$ (Results rounded to \$100)</p> <p>For FY2014, an additional one-fifth of the POTWs will have monitoring incorporated into their operating permit: $[(\\$23,000)*(1.03) + (402)*(4)*(1/5) *(\\$143)*(1.03)] = \\$71,100$</p> <p>For FY2015, an additional one-fifth of the POTWs will have monitoring incorporated into their permit: $[(\\$71,100)*(1.03) + ((402)*(4)*(1/5) *(\\$143)*(1.03)^2)] = \\$122,000$</p> <p>For FY2016, an additional one-fifth of the POTWs will have monitoring incorporated into their permit: $[(\\$122,000)*(1.03) + ((402)*(4)*(1/5) *(\\$143) * (1.03)^3)] = \\$175,900$</p> <p>For FY2017, an additional one-fifth of the POTWs will have monitoring incorporated into their permit: $[(\\$175,900)*(1.03) + ((402)*(4)*(1/5) *(\\$143)*(1.03)^4)] = \\$232,900$</p> <p>For FY2018, the remaining POTWs will have monitoring incorporated into their permit: $[(\\$232,900)*(1.03) + ((402)*(4)*(1/5) * (1/2) *(\\$143)*(1.03)^5)] = \\$266,500$</p>						
Whole Effluent Toxicity (WET) Tests	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
	\$135,500	\$139,500	\$143,700	\$148,000	\$152,500	\$157,000
FY2013 through FY2018	Whole Effluent Toxicity, multi-year aggregate total = \$876,200					
<p>142 large POTWs (annual test) and 580 medium-sized POTWs (one test every five years) will conduct WET tests at \$500 per test. Five percent additional testing is assumed because of additional tests required for facilities that have industrial customers. $[(142) + (20%)*(580)]*(1.05) *(\\$500) = \\$135,500$ per year. Each year the analytical costs are estimated to increase by 3% for inflation.</p>						
Reduced Nitrate Monitoring	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
	(\$12,300)	(\$12,700)	(\$13,000)	(\$13,400)	(\$13,800)	(\$14,300)

FY2013 through FY2018	Reduced Nitrate Monitoring, multi-year aggregate = (\$79,500)					
82 facilities are currently required to monitor for nitrates. It is assumed that monitoring at half of these facilities will no longer be required. Monthly monitoring is assumed at a cost of \$25 per analysis. Each year the analytical costs are estimated to increase by 3% for inflation. $(82) * (1/2) * (12) * (25) = \$12,300$ savings per year.						
Upgrades for disinfection and ammonia treatment: please see Additional Considerations #1 below and, Water Quality Standards, 10 CSR 20-7.031, fiscal notes	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
	—	—	—	—	—	—
Subtotal aggregates**	\$146,200	\$197,900	\$252,700	\$310,500	\$371,600	\$409,200
Multi-Year Aggregate Total = \$1,688,100						

**Rounded to the nearest hundred

Additional Considerations

1. Update bacteria limits and monitoring requirements

In a concurrent rulemaking (10 CSR 20-7.031), many new waters are being designated for whole body contact. Prior to this proposed amendment, facilities that discharge to waters that are currently designated for whole body contact (A) & (B) and secondary contact recreational are required to disinfect and to meet long-term seasonal bacteria limits. In addition, facilities that discharge to losing streams are required to disinfect and meet daily limits.

Subparagraph (9)(B)1.E. establishes short-term bacteria limits; weekly average limits for Publicly-Owned Treatment Works (POTWs) and maximum daily limits for private facilities. Short-term limits are a federal requirement. Effluent disinfection systems are typically designed for complete kill or inactivity and constructed based on the peak flow of each facility, so the Department would not expect there to be costs associated with meeting short-term bacteria limits during typical operations for facilities that are already required to disinfect.

It is important to note that the bacteria limits for losing streams is being amended to state that discharges to losing streams shall be considered in compliance so long as less than ten (10) percent of samples exceed one-hundred twenty-six (126) colony forming units per one hundred (100) ml daily maximum. This should eliminate some costs associated with continuous compliance. Even with this change the Department does expect a few of these facilities to have occasional difficulties meeting the short-term limits that may require some action. Typically these problems will arise during extreme wet weather events or during times in which a particular treatment plant experiences an upset. In some cases these problems may be addressed by improved operations. But some facilities may choose to modify their chlorination systems, add ultraviolet treatment capacity, or perhaps even build or expand basins to provide additional flow equalization. To accurately reflect any one facility's costs, an industrial engineering evaluation with

detailed estimates of several work packages, combined with the work of price analysts and cost accountants, including prescriptions to address the treatment and collection system of each facility are needed.

A major element of the concurrent rulemaking for 10 CSR 20-7.031, Water Quality Standards, is the designation of more waters as fishable and swimmable. The range of costs associated with the designation of these waters is developed in the concurrent rulemaking. The associated costs to designate these waters greatly surpasses the relatively minor costs associated with implementing short-term limits. For additional information regarding assumptions and calculations please refer to the concurrent rulemaking published June 17, 2013. In many cases associated costs have already been incurred with respect to capital costs, operations and maintenance and the upgrading of facilities to meet both ammonia and bacteria limits at appropriate locations, adding disinfection and/or, replacement or upgrade of treatment plants to meet ammonia limits. Please refer to the public fiscal note associated with the concurrent revision to 10 CSR 20-7.031.

2. Revise language regarding “bypasses” to align with federal definition

The existing rule language regarding bypasses is imprecise and includes incidents in which wastewater does not receive full treatment at the wastewater treatment plant, either because sanitary sewers overflow or because water is routed around treatment units in the wastewater treatment plant. The industry commonly refers to water that escapes sanitary sewers as Sanitary Sewer Overflows (SSOs), and in practice, these should not be referred to as “bypasses.”

The current amendment to 10 CSR 20-7.015 will serve to change the definition of bypass to align it with the federal definition. This will standardize and correct commonly used terminology, and it is intended to reduce confusion by aligning state requirements with federal. Utilizing the federal language will allow dischargers to concern themselves with meeting the existing federal requirements and eliminate concerns about how state rules may differ.

Because the rule essentially adopts existing federal requirements, there are no additional fiscal impacts to consider. Until recently, some stakeholders shared the opinion that the U.S. Environmental Protection Agency (EPA) had changed their interpretation regarding “bypassing,” and so the choice to align Missouri’s rule with the federal rule would result in implementation costs related to those changed interpretations. In particular, EPA had determined by policy that blending was considered bypassing. Blending is generally a diversion of peak wet-weather flows around biological treatment units and combining effluent from all processes prior to discharge from a permitted outfall. The discharge must still meet effluent limits. However, on March 25, 2013, the U.S. Eight Circuit Court of Appeals invalidated EPA’s policy regarding blending (*Iowa League of Cities vs. Environmental Protection Agency*). The Court found that these EPA policies were functionally binding, and as such, they were subject to the notice and comment requirements, and since EPA did not engage in notice and comment procedures prior to issuing these policies, the court vacated them.

In summary, the amendment substantially adopts the federal definition of bypass and therefore there are no cost considerations.

3. Require quarterly effluent monitoring of nutrient concentrations at large wastewater treatment facilities

One online survey of the costs for analyzing a wastewater sample for total nitrogen ranged from \$42 to \$85 and total phosphorus ranged from \$21 to \$58. The higher costs estimates (\$85 plus \$58 = \$143 per sample) are used. According to the Missouri Clean Water Information System (MoCWIS), there are approximately 402 POTWs that have a design of 100,000 gallons per day or greater. The rule will require quarterly sampling.

However, this requirement will be implemented through operating permits. Operating permit terms are five years. Nutrient monitoring will only be required for one permit term, once the facility completes the required monitoring.

4. Provide clarification regarding whole effluent toxicity testing requirements

Whole effluent toxicity (WET) testing requirements have been included in operating permits for several years; so many POTWs have already been incurring these costs. For the purposes of this fiscal note, however, the figures presented will estimate the total cost of WET testing. The current permitting approach is to require annual WET tests for all facilities that have a design flow of one million gallons per day or more (large POTWs). For facilities that have design flows less than 22,500 gallons per day, WET testing is generally not required. For medium-sized facilities (design greater than 22,500 gallons per day and less than one million gallons per day) the general permitting policy is to require one WET test per permit cycle, which is typically once every five years.

In addition to these general flow guidelines, WET tests may be required for small POTWs in which the department has toxicity concerns. An example might be a very small community that has an industrial source that discharges to the plant. Toxicity concerns from industrial sources may also indicate the need for more frequent WET testing.

According to the Missouri Clean Water Information System (MoCWIS), there are approximately 142 POTWs that have a design flow of one million gallons per day and there are 580 medium sized POTWs. For the purposes of this fiscal note it is assumed that the "one test per permit cycle" WET tests are distributed so that twenty percent of the facilities are incurring the testing expense each year because of the five-year permit cycle. In addition, the estimate for the total number of tests has been increased by five percent to account for the additional tests that may be required to address concerns that industrial sources may be contributing to toxicity.

A survey of several WET test providers in Missouri indicates that the cost of a WET test ranges from \$300 to \$600. For the purpose of this fiscal note the cost was assumed to be \$500.

$[(142 \text{ large POTWs}) + (20\%)*(580 \text{ medium POTWs})]*(1.05)*(\$500) = \$135,500 \text{ in FY 2013}$

It is expected that the testing may indicate toxicity problems at a few facilities. It is not possible to know how many facilities will discover toxicity, nor is it possible to estimate the costs associated with a toxicity identification evaluation and subsequent toxicity reduction evaluation. Although expected to be relatively rare, there is the possibility that the failure of a series of WET tests may lead to the need for a facility to develop a toxicity reduction strategy. This fiscal note does not attempt to estimate these costs.

Lastly, the number of WET tests is expected to begin to diminish in the future. The overwhelming majority of facilities are expected to show that their effluent is not causing toxicity. With enough data it can be

shown that there is no reasonable potential to expect effluent toxicity, and in those cases operating permits can include less frequent WET testing requirements.

5. Allow for electronic reporting via web-based systems (once available)

The existing regulation requires 24-hour reporting by phone followed by a five-day written report for all bypasses. POTWs are also expected to report Sanitary Sewer Overflows in a similar manner, and the standard conditions document that accompanies all operating permits is being revised to reflect this. The Department has developed an electronic reporting system, which is in the process of being improved and refined. The regulation is being amended to allow the reporting to be done electronically. This is expected to be more convenient and direct, and may save expense for some entities that report.

6. Include provisions for developing effluent limits with regard to several situations such as discharges to impaired waters, tiered limits which allow higher discharge concentrations during higher stream flow rates, and the use of local stream data to adjust effluent limits

These provisions are expected to marginally reduce costs to POTWs. The current rule requires operating permits to be modified when a TMDL is finalized; the amendment allows these changes to be done during permit renewal so long as an urgent remedy is not necessary. Flow tiered limits will allow the Department to issue operating permits that have higher effluent limits during times when there is higher flows in the stream available for mixing. The use of local stream data, such as in-stream hardness for the development of less stringent site specific metals effluent limits likely cost less to meet while still protecting the stream's uses. Again, all of these provisions tend to allow for less stringent limits, and therefore are expected to result in a minor reduction in costs to POTWs.

7. Reduce monitoring frequency for facilities that consistently comply with effluent limits

Subparagraphs (2)(C)1.B., (3)(B)1.B., (4)(C)1.B., and (8)(B)1.B. allow operating permits to be written with reduced monitoring frequency of certain pollutants for facilities that have demonstrated their ability to routinely meet permit limits. It is impossible to predict how many facilities will have monitoring results that will lead to a conclusion that less monitoring is necessary, but this should certainly result in a cost savings for dozens of facilities.

8. Eliminate schedule to comply with phosphorus effluent limits for discharges to Table Rock Lake and Lake Tanycomo because the dates have already passed

This amendment to Subsection (3)(F) will eliminate schedules that have already passed. The schedules involved complying with phosphorus limits in the effected watersheds. There are no costs or cost savings associated with this change.

9. Require limits for the discharge of nitrates that may impact specific drinking water wells

For some time some operating permit writers have been including nitrate limits at the end of pipe in all operating permits that discharge to losing streams and in cases of subsurface wastewater disposal. The purpose of these limits is to protect aquifers for use as a source of drinking water. The approach of requiring nitrate limits in all settings is not prudent because in most cases it is very unlikely that drinking water wells will be affected at a level worthy of concern. The prudent approach is for operating permit writers to include a nitrate limits only in settings in which a concern exists regarding a particular well. The

decision will be based on the size of the discharge, its proximity to the drinking water wells, and a concern that the geological conditions may allow the discharge to affect the quality of the well water.

According to the Missouri Clean Water Information System (MoCWIS), there are approximately 82 POTWs that are currently required to monitor for nitrates. Without evaluating each situation, for the purposes of this fiscal note, it is assumed that half of these facilities will not have to continue monitoring for nitrates because of this rule change. An online survey of the costs for analyzing a wastewater sample for nitrates ranged from \$24 to \$30. For the purposes of this fiscal note the analysis cost is assumed to be \$25 and the monitoring frequency is monthly.

$(82)(1/2)(\$25)(12) = \$12,300$ in savings in FY2013

10. Specify that operating permits may include schedules of compliance in accordance with federal regulations

Existing language in Section (10) of 10 CSR 20-7.031 *Water Quality Standards* references the federal regulation regarding schedule of compliance (40 CFR 122.47). This amendment will relocate the schedule of compliance language from the Water Quality Standards rule into this rule. There are no fiscal ramifications from moving the location of this provision.

11. Revert to pH effluent limits that were in a previous version of the regulation

During the previous revision to the Effluent Regulation the pH range was revised from (6 to 9) to (6.5 to 9.0). This change was made as a result of a response to a comment from the U.S. Environmental Protection Agency. The purpose of this change was to align the Effluent Regulation with the Water Quality Standards rule. However, the Regulatory Impact Report (RIR) for this previous rulemaking did not address the costs associated with this change because the change was made subsequent to the RIR process during the response to comments phase of the rulemaking. In addition, the fiscal note did not address the costs.

Department is proposing to revise the pH portions of the rule to read as it did prior to the last revision, meaning the rule will require effluent to have a pH range of 6 to 9. The Department does not expect there to be any fiscal impact to returning to the previous pH range.

12. Allow alternate compliance points for discharges to subsurface waters

The existing rule requires facilities that have subsurface discharges to meet their effluent limits at a point ten feet below the surface. The purpose of specifying the "ten foot" compliance point was to allow compliance to be determined at some point below the surface but prior to typical entry into the aquifer. The proposed amendment will allow alternative compliance depths provided it is appropriate for the setting. Although not common, it is expected that a few facilities may see a marginal savings because they may not have to treat wastewater to quite as low a concentration prior to release. Because the savings are expected to be quite marginal and relatively rare, for the purposes of this fiscal note this change is assumed to have no fiscal impact.

13. Reorganize and clarify several elements of the rule

Rule reorganization and clarification is not expected to result in any fiscal impacts.

IV. ASSUMPTIONS

The duration of the proposed rule is indefinite. There is no sunset clause. Costs imposed by the proposed rule for each monitoring and wet tests are shown on an annual basis. The total estimated cost of compliance in the aggregate for all publicly owned treatment works, POTWs, is \$1,688,100 through FY2018.

The proposed amendment will cost public entities in the aggregate \$146,200 in fiscal year 2013, \$197,900 in fiscal year 2014, \$252,700 in fiscal year 2015, \$310,500 in fiscal year 2016, \$371,600 in fiscal year 2017, and \$409,200 in fiscal year 2018. The costs associated with nutrient monitoring for nitrogen and phosphorus are expected to decrease after 2018 as facilities will have completed their monitoring obligation within their specific permit terms. The costs associated with whole effluent toxicity testing, or WET Tests, after 2018, while expected to continue, will be significantly reduced in future years as most facilities will demonstrate that their effluent is not toxic and monitoring can be reduced or eliminated. The savings for nitrate are a result of reduced monitoring frequency and, are expected to continue into future years.

Total cost aggregate savings for nitrate monitoring will result in annual savings \$14,300 in FY2018 due to reduced monitoring and, beyond with on-going compliance.

It has been assumed that these changes will not require a staffing increase for the State.

FISCAL NOTE

PRIVATE COST

I. RULE NUMBER

Rule Number and Name	<i>10 CSR 20-7.015 Effluent Regulations</i>
Type of Rulemaking	<i>Proposed Rule Amendment</i>

II. SUMMARY OF FISCAL IMPACT

Estimate of the number of entities by class which would likely be affected by the adoption of the proposed rule:	Classification by types of the business entities which would likely be affected:	Estimate in the aggregate as to the cost of compliance with the rule by the affected entities:
Approximately 300 facilities	Private domestic and industrial wastewater treatment facilities	\$102,600

Affected Agency or Political Subdivision	Estimated Cost of Compliance in the Aggregate*
Private wastewater treatment facilities, Nutrient Monitoring required for one permit term	\$115,600
Private wastewater treatment facilities, Whole Effluent Toxicity (WET) Testing (large & medium facilities)	\$212,000
Private wastewater treatment facilities, Nitrate Monitoring	(\$225,000)
TOTAL	\$102,600 *Cost of Compliance in the Aggregate

*Aggregate cost of compliance is calculated by summing the annual costs in the worksheet tables from 2013 through 2018 for private domestic and industrial wastewater treatment facilities

* 3% inflation

III. WORKSHEET

In summary, the revisions to 10 CSR 20-7.015 *Effluent Regulations* will:

1. Update bacteria limits and monitoring requirements;

2. Revise language regarding "bypasses" to align with federal definition;
3. Require quarterly effluent monitoring of nutrient concentrations at large wastewater treatment facilities;
4. Provide clarification regarding whole effluent toxicity testing requirements;
5. Allow for electronic reporting via web-based systems (once available);
6. Include provisions for developing effluent limits with regard to several situations such as discharges to impaired waters, tiered limits which allow higher discharge concentrations during higher stream flow rates, and the use of local stream data to adjust effluent limits;
7. Reduce monitoring frequency for facilities that consistently comply with effluent limits;
8. Eliminate schedule to comply with phosphorus effluent limits for discharges to Table Rock Lake and Lake Tanycomo because the dates have already passed;
9. Require limits for the discharge of nitrates that may impact specific drinking water wells;
10. Specify that operating permits may include schedules of compliance in accordance with federal regulations;
11. Revert to pH effluent limits that were in a previous version of the regulation;
12. Allow alternate compliance points for discharges to subsurface waters; and
13. Reorganize and clarify several elements of the rule.

Summary of Costs						
Nutrient Monitoring	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
	\$3,000	\$9,200	\$15,800	\$22,800	\$30,200	\$34,600
FY2013 through FY2018	Nutrient Monitoring, multi-year aggregate total = \$115,600					
<p>52 private facilities will collect and analyze 4 samples each year to analyze for total nitrogen and phosphorus at a total cost of \$143 per sample = \$29,744. Operating permits are issued with 5-year terms, and the new monitoring requirements will only be incorporated into permits as they are renewed. Nutrient monitoring will only be required for one permit term, and will be discontinued in future operating permits. During the first full year it is assumed that one-fifth of the facilities will have permits up for renewal. Only one-half of the first year season falls within FY2013. Each year the analytical costs are estimated to increase by 3% for inflation.</p> <p>Therefore the FY2013 costs are estimated as: $\\$29,744 * (1/5) * (1/2) = \\$3,000$ (Results rounded to nearest \$100)</p> <p>For FY2014, an additional one-fifth of the facilities will have monitoring incorporated into their operating permit: $\\$3,000*(1.03) + (52)*(4)*(1/5) *(\\$143)*(1.03)^1 = \\$9,200$</p> <p>For FY2015, an additional one-fifth of the facilities will have monitoring incorporated into their permit: $\\$9,200*(1.03) + (52)*(4)*(1/5) *(\\$143)*(1.03)^2 = \\$15,800$</p> <p>For FY2016, an additional one-fifth of the facilities will have monitoring incorporated into their permit: $\\$15,800*(1.03) + (52)*(4)*(1/5) *(\\$143) * (1.03)^3 = \\$22,800$</p> <p>For FY2017, an additional one-fifth of the facilities will have monitoring incorporated into their permit: $\\$22,800*(1.03) + (52)*(4)*(1/5) *(\\$143)*(1.03)^4 = \\$30,200$</p> <p>For FY2018, the remaining facilities will have monitoring incorporated into their permit: $\\$30,200*(1.03) + (52)*(4)*(1/5) *(1/2)*(\\$143)*(1.03)^5 = \\$34,600$</p>						

Whole Effluent Toxicity (WET) Tests	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
	\$32,800	\$33,700	\$34,800	\$35,800	\$36,900	\$38,000
FY2013 through FY2018	Whole Effluent Toxicity, multi-year aggregate total = \$212,000					
5 large private facilities (annual test) and 287 medium private facilities (one test every five years) will conduct WET tests at \$500 per test. Five percent additional testing is assumed because of potential industrial concerns at facilities that have industrial or commercial customers. [(5) + (20%)*(287)]*(1.05) *(\$500) = \$32,800 per year. Each year the analytical costs are estimated to increase by 3% for inflation.						
Reduced Nitrate Monitoring	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
	(\$34,800)	(\$35,800)	(\$36,900)	(\$38,000)	(\$39,200)	(\$40,300)
FY2013 through FY2018	Reduced Nitrate Monitoring, multi-year aggregate total = (\$225,000)					
232 private facilities are currently required to monitor for nitrates. It is assumed that monitoring at half of these facilities will no longer be required. Monthly monitoring is assumed at a cost of \$25 per analysis. Each year the analytical costs are estimated to increase by 3% for inflation. (232) * (1/2) * (12) * (25) = \$34,800 savings per year.						
Upgrades for disinfection and ammonia treatment: please see Additional Considerations # 1 and Water Quality Standards, 10 CSR 20-7.031, fiscal notes	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
	—	—	—	—	—	—
Subtotal aggregates**	\$1,000	\$7,100	\$13,700	\$20,600	\$27,900	\$32,300
Multi-Year Aggregate Total = \$102,600						

**Rounded to the nearest hundred

Additional Considerations

1. Update for bacteria limits and monitoring requirements

In a concurrent rulemaking (10 CSR 20-7.031), many new waters are being designated for whole body contact. Prior to this proposed amendment, facilities that discharge to waters that are currently designated for whole body contact (A) & (B) and secondary contact recreational are required to disinfect and to meet long-term seasonal bacteria limits. In addition, facilities that discharge to losing streams are required to disinfect and meet daily limits.

Subparagraph (9)(B)1.E. establishes short-term bacteria limits; weekly average limits for Publicly-Owned Treatment Works (POTWs) and maximum daily limits for private facilities. Short-term limits are a federal requirement. Effluent disinfection systems are typically designed for complete kill or inactivity and constructed based on the peak flow of each facility, so the Department would not expect there to be costs associated with meeting short-term bacteria limits during typical operations for facilities that are already required to disinfect.

It is important to note that the bacteria limits for losing streams is being amended to state that discharges to losing streams shall be considered in compliance so long as less than ten (10) percent of samples exceed one-hundred twenty-six (126) colony forming units per one hundred (100) ml daily maximum. This should eliminate some costs associated with continuous compliance. Even with this change the Department does expect a few of these facilities to have occasional difficulties meeting the short-term limits that may require some action. Typically these problems will arise during extreme wet weather events or during times in which a particular treatment plant experiences an upset. In some cases these problems may be addressed by improved operations. But some facilities may choose to modify their chlorination systems, add ultraviolet treatment capacity, or perhaps even build or expand basins to provide additional flow equalization. To accurately reflect any one facility's costs, an industrial engineering evaluation with detailed estimates of several work packages, combined with the work of price analysts and cost accountants, including prescriptions to address the treatment and collection system of each facility are needed.

A major element of the concurrent rulemaking for 10 CSR 20-7.031, Water Quality Standards, is the designation of considerably more waters as fishable and swimmable. The range of costs associated with the designation of these waters was developed in this concurrent rulemaking. Associated costs to designate these waters greatly surpasses the relatively minor costs associated with implementing short-term limits. For additional information regarding assumptions and the calculations please refer to the concurrent rulemaking published June 17, 2013. In many cases associated costs have already been incurred with respect to capital costs, operations and maintenance, upgrading facilities to meet both ammonia and bacteria limits at appropriate locations, adding disinfection and/or, replacement or upgrade of treatment plants to meet ammonia limits. Please refer to the fiscal note associated with the concurrent revision to 10 CSR 20-7.031.

2. Revise language regarding "bypasses" to align with federal definition

The existing rule language regarding bypasses is imprecise and includes incidents in which wastewater does not receive full treatment at the wastewater treatment plant, either because sanitary sewers overflow or because water is routed around treatment units in the wastewater treatment plant. The industry commonly refers to water that escapes sanitary sewers as Sanitary Sewer Overflows (SSOs), and in practice these should not be referred to as "bypasses."

The amendment will serve to change the definition of bypass to align it with the federal definition. This will standardize and correct commonly used terminology, and it is intended to reduce confusion by aligning state requirements with federal. Utilizing the federal language will allow dischargers to concern themselves with meeting the existing federal requirements and eliminate concerns about how state rules may differ.

Because the rule essentially adopts existing federal requirements, there are no additional fiscal impacts to consider. Until recently, some stakeholders shared the opinion that the U.S. Environmental Protection Agency (EPA) had changed their interpretation regarding "bypassing," and so the choice to align

Missouri's rule with the federal rule would result in implementation costs related to those changed interpretations. In particular, EPA had determined by policy that blending was considered bypassing. Blending is generally a diversion of peak wet-weather flows around biological treatment units and combining effluent from all processes prior to discharge from a permitted outfall. The discharge must still meet effluent limits. However, on March 25, 2013, the U.S. Eight Circuit Court of Appeals invalidated EPA's policy regarding blending (*Iowa League of Cities vs. Environmental Protection Agency*). The Court found that these EPA policies were functionally binding, and as such, they were subject to the notice and comment requirements, and since EPA did not engage in notice and comment procedures prior to issuing these policies, the court vacated them.

In summary, the amendment substantially adopts the federal definition of bypass and therefore there are no cost considerations.

3. Require quarterly effluent monitoring of nutrient concentrations at large wastewater treatment facilities

An online survey of costs for analyzing a wastewater sample for total nitrogen ranged from \$42 to \$85 and total phosphorus ranged from \$21 to \$58. The higher costs estimates (\$85 plus \$58 = \$143 per sample) are used. According to the *Missouri Clean Water Information System (MoCWIS)*, there are approximately 52 private wastewater treatment facilities that have a design of 100,000 gallons per day or greater. The rule will require quarterly sampling.

However, this requirement will be implemented through operating permits. Operating permit terms are five years. Please see the summary table for information on fiscal impact for future years. Nutrient monitoring are one-time costs required in the permit's term.

4. Provide clarification regarding whole effluent toxicity testing requirements

Whole effluent toxicity (WET) testing requirements have been included in operating permits for several years, so many private wastewater treatment facilities have already been incurring these costs. For the purposes of this fiscal note, however, the figures presented will estimate the total cost of WET testing. The current permitting approach is to require annual WET tests for all facilities that have a design flow of one million gallons per day or more (large facilities). For facilities that have design flows less than 22,500 gallons per day, WET testing is generally not required. For medium-sized facilities (design greater than 22,500 gallons per day and less than one million gallons per day) the general permitting policy is to require one WET test per permit cycle, which is typically once every five years.

In addition to these general flow guidelines, WET tests may be required for small private facilities in which the department has toxicity concerns. An example might be a very small community that has an industrial source that discharges to the plant. Toxicity concerns from industrial sources may also indicate the need for more frequent WET testing.

According to the *Missouri Clean Water Information System (MoCWIS)*, there are approximately 5 private wastewater treatment facilities that have a design flow of one million gallons per day and there are 287 medium sized private facilities. For the purposes of this fiscal note it is assumed that the "one test per permit cycle" WET tests are distributed so that twenty percent of the facilities are incurring the testing expense each year because of the five-year permit cycle. In addition, the estimate for the total number of tests has been increased by five percent to account for the additional tests that may be required to address concerns that industrial sources may be contributing to toxicity.

A survey of several WET test providers in Missouri indicates that the cost of a WET test ranges from \$300 to \$600. For the purpose of this fiscal note the cost was assumed to be \$500.

$[(5 \text{ large POTWs}) + (20\%)(287 \text{ medium POTWs})] * (1.05) * (\$500) = \$32,800 \text{ per year in FY2013}$

It is expected that the testing may indicate toxicity problems at a few facilities. It is not possible to know how many facilities will discover toxicity, nor is it possible to estimate the costs associated with a toxicity identification evaluation and subsequent toxicity reduction evaluation. Although expected to be relatively rare, there is the possibility that the failure of a series of WET tests may lead to the need for a facility to develop a toxicity reduction strategy. This fiscal note does not attempt to estimate these costs.

Lastly, the number of WET tests is expected to begin to diminish in the future. The overwhelming majority of facilities are expected to show that their effluent is not causing toxicity. With enough data it can be shown that there is no reasonable potential to expect effluent toxicity, and in those cases operating permits can include less frequent WET testing requirements.

5. Allow for electronic reporting via web-based systems (once available)

The existing regulation requires 24-hour reporting by phone followed by a five-day written report for all bypasses. Private wastewater systems are also expected to report Sanitary Sewer Overflows in a similar manner, and the standard conditions document that accompanies all operating permits is being revised to reflect this. The Department has developed an electronic reporting system, which is in the process of being improved and refined. The regulation is being amended to allow the reporting to be done electronically. This is expected to be more convenient and direct, and may save expense for some entities that report.

6. Include provisions for developing effluent limits with regard to several situations such as discharges to impaired waters, tiered limits which allow higher discharge concentrations during higher stream flow rates, and the use of local stream data to adjust effluent limits

These provisions are expected to marginally reduce costs to private wastewater treatment facilities. The current rule requires operating permits to be modified when a TMDL is finalized; the amendment allows these changes to be done during permit renewal so long as an urgent remedy is not necessary. Flow tiered limits will allow the Department to issue operating permits that have higher effluent limits during times when there is higher flows in the stream available for mixing. The use of local stream data, such as in-stream hardness for the development of less stringent site specific metals effluent limits likely cost less to meet while still protecting the stream's uses. Again, all of these provisions tend to allow for less stringent limits, and therefore are expected to result in a minor reduction in costs to private facilities.

7. Reduce monitoring frequency for facilities that consistently comply with effluent limits

Subparagraphs (2)(C)1.B., (3)(B)1.B., (4)(C)1.B., and (8)(B)1.B. allow operating permits to be written with reduced monitoring frequency of certain pollutants for facilities that have demonstrated their ability to routinely meet permit limits. It is impossible to predict how many facilities will have monitoring results that will lead to a conclusion that less monitoring is necessary, but this should certainly result in a cost savings for dozens of facilities.

8. Eliminate schedule to comply with phosphorus effluent limits for discharges to Table Rock Lake and Lake Tanycomo because the dates have already passed

This amendment to Subsection (3)(F) will eliminate schedules that have already passed. The schedules involved complying with phosphorus limits in the effected watersheds. There are no costs or cost savings associated with this change.

9. Require limits for the discharge of nitrates that may impact specific drinking water wells

For some time some operating permit writers have been including nitrate limits at the end of pipe in all operating permits that discharge to losing streams and in cases of subsurface wastewater disposal. The purpose of these limits is to protect aquifers for use as a source of drinking water. The approach of requiring nitrate limits in all settings is not prudent because in most cases it is very unlikely that drinking water wells will be affected at a level worthy of concern. The prudent approach is for operating permit writers to include a nitrate limits only in settings in which a concern exists regarding a particular well. The decision will be based on the size of the discharge, its proximity to the drinking water wells, and a concern that the geological conditions may allow the discharge to affect the quality of the well water.

According to the Missouri Clean Water Information System (MoCWIS), there are approximately 232 private wastewater treatment facilities or industrial facilities that are currently required to monitor for nitrates. Without evaluating each situation, for the purposes of this fiscal note, it is assumed that half of these facilities will not have to continue monitoring for nitrates because of this rule change. An online survey of the costs for analyzing a wastewater sample for nitrates ranged from \$24 to \$30. For the purposes of this fiscal note the analysis cost is assumed to be \$25 and the monitoring frequency is monthly.

$(232)(1/2)(\$25)(12) = (\$34,800)$ savings in FY2013

10. Specify that operating permits may include schedules of compliance in accordance with federal regulations

Existing language in Section (10) of 10 CSR 20-7.031 *Water Quality Standards* references the federal regulation regarding schedule of compliance (40 CFR 122.47). This amendment will relocate the schedule of compliance language from the Water Quality Standards rule into this rule. There are no fiscal ramifications from moving the location of this provision.

11. Revert to pH effluent limits that were in a previous version of the regulation

During the previous revision to the Effluent Regulation the pH range was revised from (6 to 9) to (6.5 to 9.0). This change was made as a result of a response to a comment from the U.S. Environmental Protection Agency. The purpose of this change was to align the Effluent Regulation with the Water Quality Standards rule. However, the Regulatory Impact Report (RIR) for this previous rulemaking did not address the costs associated with this change because the change was made subsequent to the RIR process during the response to comments phase of the rulemaking. In addition, the fiscal note did not address the costs.

Department is proposing to revise the pH portions of the rule to read as it did prior to the last revision, meaning the rule will require effluent to have a pH range of 6 to 9. The Department does not expect there to be any fiscal impact to returning to the previous pH range.

12. Allow alternate compliance points for discharges to subsurface waters

The existing rule requires facilities that have subsurface discharges to meet their effluent limits at a point ten feet below the surface. The purpose of specifying the “ten foot” compliance point was to allow compliance to be determined at some point below the surface but prior to typical entry into the aquifer. The proposed amendment will allow alternative compliance depths provided it is appropriate for the setting. Although not common, it is expected that a few facilities may see a marginal savings because they may not have to treat wastewater to quite as low a concentration prior to release. Because the savings are expected to be quite marginal and relatively rare, for the purposes of this fiscal note this change is assumed to have no fiscal impact.

13. Reorganize and clarify several elements of the rule

Rule reorganization and clarification is not expected to result in any fiscal impacts.

V. ASSUMPTIONS

The duration of the proposed rule is indefinite. There is no sunset clause. Costs imposed by the proposed rule for monitoring and wet tests are shown on an annual basis in the table summaries. The total estimated cost of compliance in the aggregate, for all private and domestic wastewater treatment facilities, is \$102,600 through 2018.

The proposed amendment will cost private wastewater treatment facilities (domestic and industrial) in the aggregate \$1,000 in fiscal year 2013, \$7,100 in fiscal year 2014, \$13,700 in fiscal year 2015, \$20,600 in fiscal year 2016, \$27,900 in fiscal year 2017, and \$32,300 in fiscal year 2018. The costs associated with nutrient monitoring for nitrogen and phosphorus are expected to decrease after 2018 as many facilities will have completed their monitoring obligation within their specific permit terms. The costs associated with whole effluent toxicity testing, or WET Tests, after 2018 are expected to decline significantly in future years as most facilities will demonstrate that their effluent is not toxic and monitoring can be reduced or eliminated. The savings for nitrate are a result of reduced monitoring frequency and, are expected to continue into future years.

Total aggregate cost savings for nitrate monitoring are expected to be \$40,300 in FY2018 due to reduced monitoring and, beyond with reduced monitoring and on-going compliance.