

NOTICE OF INTENT

Department of Environmental Quality
Office of the Secretary
Legal Affairs Division

Freshwater Ammonia Aquatic Life Criteria
(LAC 33:IX.1105, 1109, 1113, and 1115) (WQ112)

Under the authority of the Environmental Quality Act, R.S. 30:2001 et seq., and in accordance with the provisions of the Administrative Procedure Act, R.S. 49:950 et seq., the secretary gives notice that rulemaking procedures have been initiated to amend the Water Quality regulations, LAC 33:IX.1105, 1109, 1113, and 1115 (WQ112).

This proposed Rule will revise Chapter 11 of the Water Quality regulations to add freshwater ammonia criteria. LDEQ has the regulatory obligation to evaluate and adopt, where appropriate, federally recommended water quality criteria. This revision will adopt and clarify the applicability of freshwater ammonia criteria. The basis and rationale for this proposed Rule are to conform to Section 303 of the Clean Water Act and to maintain and protect state waters. In accordance with R.S. 49:963(B)(1), a report regarding the environmental/health benefits and social/economic costs has been prepared and can be found on [page \[page number\]](#) of the August 20, 2023, Louisiana Register.

Title 33
ENVIRONMENTAL QUALITY
Part IX. Water Quality
Subpart 1. Water Pollution Control

Chapter 11. Surface Water Quality Standards

§1105. Definitions

1Q10 Flow—the minimum 1-day average stream flow with a recurrence level of once every 10 years.

30Q10 Flow—the minimum 30-day average stream flow with a recurrence level of once every 10 years.

* * *

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 10:745 (October 1984), amended LR 15:738 (September 1989), LR 17:264 (March 1991), LR 20:883 (August 1994), amended by the Office of Environmental

Assessment, Environmental Planning Division, LR 25:2401 (December 1999), LR 26:2545 (November 2000), LR 29:557 (April 2003), LR 30:1473 (July 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 33:456 (March 2007), LR 33:827 (May 2007), LR 35:445 (March 2009), amended by the Office of the Secretary, Legal Division, LR 40:2243 (November 2014), LR 42:736 (May 2016), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Divisions, LR 46:1545 (November 2020), LR 49:

§1109. Policy

Water quality standards policies concerned with the protection and enhancement of water quality in the state are discussed in this Section. Policy statements on antidegradation, water use, water body exception classification, compliance schedules, variances, short-term activity authorization, errors, severability, revisions to standards, and sample collection and analytical procedures are described.

A. — K.4.e. ...

f. The numeric ammonia criteria found in LAC 33:IX.1113.C.7 shall not apply.

5. — 6. ...

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 10:745 (October 1984), amended LR 15:738 (September 1989), LR 17:264 (March 1991), LR 17:966 (October 1991), LR 20:883 (August 1994), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2546 (November 2000), LR 29:557 (April 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 33:457 (March 2007), LR 33:828 (May 2007), amended by the Office of the Secretary, Legal Division, LR 40:2243 (November 2014), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 46:1546 (November 2020), LR 49:

§1113. Criteria

A. — C.6.f. ...

7. Ammonia

a. Water quality criteria for ammonia are for the protection of aquatic life. Toxic effects of ammonia are dependent on pH and temperature. Ammonia is expressed in terms of total ammonia nitrogen (TAN), which includes its un-ionized (ammonia) and ionized (ammonium)

fractions. TAN is measured in units of mg/L and referenced with Chemical Abstracts Service (CAS) Registry Number 7664-41-7.

i. Freshwater criteria for ammonia are structured on the presence or absence of freshwater mussels at a site, and are expressed as formulas for both acute and chronic criteria. Due to the ubiquity of freshwater mussels of the family Unionidae in Louisiana waters, mussels present criteria formulas are considered protective of aquatic life and apply to all freshwater water bodies, except as provided below. If it can be demonstrated that Unionidae mussels are absent through a mussel survey with approval from both the administrative authority and EPA, then mussels absent criteria formulas that are protective of aquatic life in the absence of mussels may apply on a site-specific and/or water body basis.

(a). Mussels Present

(i). Freshwater Acute Criterion

$$\text{mg (TAN)/L} = 0.7249 * \left(\frac{0.0114}{1 + 10^{7.204 - \text{pH}}} + \frac{1.6181}{1 + 10^{\text{pH} - 7.204}} \right) * \text{MIN}(51.93, 23.12 * 10^{0.036 * (20 - T)})$$

(ii). Freshwater Chronic Criterion

$$\text{mg (TAN)/L} = 0.8876 * \left(\frac{0.0278}{1 + 10^{7.688 - \text{pH}}} + \frac{1.1994}{1 + 10^{\text{pH} - 7.688}} \right) * (2.126 * 10^{0.028 * (20 - \text{MAX}(T, 7))})$$

(b). Mussels Absent

(i). Freshwater Acute Criterion

$$\text{mg (TAN)/L} = 0.7249 * \left(\frac{0.0114}{1 + 10^{7.204 - \text{pH}}} + \frac{1.6181}{1 + 10^{\text{pH} - 7.204}} \right) * \text{MIN}(51.93, 62.15 * 10^{0.036 * (20 - T)})$$

(ii). Freshwater Chronic Criterion

$$\text{mg (TAN)/L} = 0.9405 * \left(\frac{0.0278}{1 + 10^{7.688 - \text{pH}}} + \frac{1.1994}{1 + 10^{\text{pH} - 7.688}} \right) * \text{MIN}(6.920, 7.547 * 10^{0.028 * (20 - \text{MAX}(T, 7))})$$

ii. Formula Calculations

- (a). All formulas require data inputs for pH and temperature to calculate a criterion. The minimum and maximum pH values used for criteria calculation are 6.5 to 9.0. The minimum and maximum temperature values used for criteria calculation are 7°C to 30°C.

Table 1. — Table 1A. ...

* * *

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 10:745 (October 1984), amended LR 15:738 (September 1989), LR 17:264 (March 1991), LR 17:967 (October 1991), repromulgated LR 17:1083 (November 1991), amended LR 20:883 (August 1994), LR 24:688 (April 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:2402 (December 1999), LR 26:2547 (November 2000), LR 27:289 (March 2001), LR 30:1474 (July 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 33:457 (March 2007), LR 33:829 (May 2007), LR 35:446 (March 2009), amended by the Office of the Secretary, Legal Division, LR 42:736 (May 2016), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:1188 (September 2019), LR 46:1550 (November 2020), LR 48:1498 (June 2022), LR 49:

§1115. Application of Standards

A. — C.7.c. ...

- d. For the application of ammonia aquatic life criteria, the following flows may be used.

i. Acute ammonia aquatic life criteria will be evaluated using the 1Q10 flow and the water body categorizations listed in Table 2a of this Section.

ii. Chronic ammonia aquatic life criteria will be evaluated using the 30Q10 flow and the water body categorizations listed in Table 2a of this Section.

8. — 13. ...

D. Ammonia Criteria Application

1. The application of the appropriate ammonia criteria formula in development of permit limitations will be determined using a performance-based approach as described in the state's

Water Quality Management Plan (WQMP), Volume 3, Permitting Guidance Document for Implementing Surface Water Quality Standards. The mussels present criteria formulas, as expressed in LAC 33:IX.1113.C.7.a.i.(a), will be the default formulas utilized in permit implementation. The mussels absent formulas, as expressed in LAC 33:IX.1113.C.7.a.i.(b), may be utilized in permit implementation after satisfactory completion of a mussels survey indicating no evidence of historical or current presence of mussels of the family Unionidae, and with approval from both the administrative authority and EPA.

Table 2a. — Table 2b. ...

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 10:745 (October 1984), amended LR 15:738 (September 1989), LR 17:264 (March 1991), LR 17:967 (October 1991), repromulgated LR 17:1083 (November 1991), amended LR 20:883 (August 1994), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:2403 (December 1999), LR 26:2548 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:831 (May 2007), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 46:1554 (November 2020), LR 49:

§1117. References

A. — A.16. ...

17. U.S. Environmental Protection Agency. April 2013. *Aquatic Life Ambient Water Quality Criteria for Ammonia-Freshwater 2013*. Office of Water. EPA 822-R-18002.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 10:745 (October 1984), amended LR 15:738 (September 1989), LR 17:264 (March 1991), LR 20:883 (August 1994), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:2403 (December 1999), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2507 (October 2005), LR 33:2163 (October 2007), amended by the Office of the Secretary, Legal Division, LR 42:737 (May 2016), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 49:

Family Impact Statement

This Rule has no known impact on family formation, stability, and autonomy as described in R.S. 49:972.

Poverty Impact Statement

This Rule has no known impact on poverty as described in R.S. 49:973.

Small Business Analysis

This Rule may have an impact on small business as described in R.S. 49:974.1 - 974.8. Directly affected permittees may incur costs associated with monitoring, treatment of wastewater prior to discharge, and reporting.

Provider Impact Statement

This Rule has no known impact on providers as described in HCR 170 of 2014.

Public Comments

All interested persons are invited to submit written comments on the proposed regulation. Persons commenting should reference this proposed regulation by WQ112. Comments must be received no later than October 5, 2023, at 4:30 p.m., and should be sent to William Little, Attorney Supervisor, Office of the Secretary, Legal Affairs Division, P.O. Box 4302, Baton Rouge, LA 70821-4302, by FAX (225) 219-4068, or E-mail to DEQ.Reg.Dev.Comments@la.gov. Copies of the proposed regulation can be purchased by contacting the LDEQ Public Records Center at (225) 219-3168. Check or money order is required in advance for each copy of WQ112. The proposed regulation is available on the internet at www.deq.louisiana.gov/portal/tabid/1669/default.aspx.

Public Hearing

A public hearing will be held via Zoom on September 28, 2023, at 1:30 p.m. Interested persons are invited to attend and submit oral comments via PC, Mac, Linux, iOS or Android at <https://deqlouisiana.zoom.us/j/89588076475?pwd=S2JpWXVvYUVVVFN2c2VLeEdQUHI4Zz09>, password 436469, or by telephone by dialing (636) 651-3182 using conference code 725573. Should individuals with a disability need an accommodation in order to participate, contact William Little at the address given below or at (225) 219-3985.

The proposed regulation is available for inspection at the following LDEQ office locations from 8 a.m. until 4:30 p.m.: 602 N. Fifth Street, Baton Rouge, LA 70802; 1823 Highway 546, West Monroe, LA 71292; State Office Building, 1525 Fairfield Avenue, Shreveport, LA 71101; 1301 Gadwall Street, Lake Charles, LA 70615; 111 New Center Drive, Lafayette, LA 70508; 110 Baratavia Street, Lockport, LA 70374; 201 Evans Road, Bldg. 4, Suite 420, New Orleans, LA 70123.

Courtney J. Burdette
Executive Counsel

FISCAL AND ECONOMIC IMPACT STATEMENT FOR ADMINISTRATIVE RULES

Person
Preparing Christy Clark

Statement:	<u>Christy.Clark@la.gov</u> <u>Jamie Phillippe</u> <u>Jamie.phillippe@la.gov</u>	Dept.:	<u>Environmental Quality</u>
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Return Address:	<u>602 North Fifth Street</u> <u>Baton Rouge, LA 70802</u>	Rule Title:	<u>Freshwater Ammonia Aquatic Life Criteria</u> <u>LAC 33:IX.1105, 1109, 1113, and 1115</u>
		Date Rule Takes Effect:	<u>Upon promulgation</u>

SUMMARY
(Use complete sentences)

In accordance with Section 961 of Title 49 of the Louisiana Revised Statutes, there is hereby submitted a fiscal and economic impact statement on the rule proposed for adoption, repeal or amendment. THE FOLLOWING STATEMENTS SUMMARIZE ATTACHED WORKSHEETS, I THROUGH IV AND WILL BE PUBLISHED IN THE LOUISIANA REGISTER WITH THE PROPOSED AGENCY RULE.

I. ESTIMATED IMPLEMENTATION COSTS (SAVINGS) TO STATE OR LOCAL GOVERNMENTAL UNITS (Summary)

There are no estimated implementation costs or savings to the state as a result of the proposed rule. Local governments who operate a publicly owned treatment works may incur costs associated with monitoring, treatment of wastewater prior to discharge, and reporting. Although data is not available for every potentially affected facility, LDEQ has received information that indicates the costs for installing new treatment technology would be significant. Local governments may also be subject to additional testing costs to demonstrate compliance with ammonia-nitrogen limits.

The proposed rule will revise Chapter 11 of the Water Quality regulations to add freshwater ammonia criteria recommended by EPA to protect aquatic species present in freshwater water bodies of Louisiana. The proposed rule changes will adopt and clarify the applicability of freshwater ammonia criteria.

II. ESTIMATED EFFECT ON REVENUE COLLECTIONS OF STATE OR LOCAL GOVERNMENTAL UNITS (Summary)

The proposed rule is not anticipated to have any impact on the revenues of state or local governmental units.

III. ESTIMATED COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS, SMALL BUSINESSES, OR NON-GOVERNMENTAL GROUPS (Summary)

Directly affected permittees may incur costs associated with monitoring, treatment of wastewater prior to discharge, and reporting. LDEQ expects costs to be incurred by publicly and privately owned treatment works that discharge 100,000 gallons per day (GPD) of treated wastewater or more and some industrial facilities with a Louisiana Pollutant Discharge Elimination System (LPDES) permit. Although data is not available for every potentially affected facility, LDEQ has received information that indicates the costs for installing new treatment technology would be significant. Facilities may also be subject to additional testing costs to demonstrate compliance with ammonia-nitrogen limits.

IV. ESTIMATED EFFECT ON COMPETITION AND EMPLOYMENT (Summary)

There is no estimated effect on competition and employment as a result of the rule change.

Signature of Agency Head or Designee

Courtney J. Burdette, Executive Counsel
Typed Name & Title of Agency Head or Designee

Date of Signature

Legislative Fiscal Officer or Designee

Date of Signature

**FISCAL AND ECONOMIC IMPACT STATEMENT
FOR ADMINISTRATIVE RULES**

The following information is required in order to assist the Legislative Fiscal Office in its review of the fiscal and economic impact statement and to assist the appropriate legislative oversight subcommittee in its deliberation on the proposed rule.

- A. Provide a brief summary of the content of the rule (if proposed for adoption, or repeal) or a brief summary of the change in the rule (if proposed for amendment). Attach a copy of the notice of intent and a copy of the rule proposed for initial adoption or repeal (or, in the case of a rule change, copies of both the current and proposed rules with amended portions indicated).

The proposed rule will revise Chapter 11 of the Water Quality regulations to add freshwater ammonia criteria recommended by EPA to protect aquatic species present in freshwater water bodies of Louisiana. The proposed rule changes will adopt and clarify the applicability of freshwater ammonia criteria.

- B. Summarize the circumstances, which require this action. If the Action is required by federal regulation, attach a copy of the applicable regulation.

LDEQ has the regulatory obligation to evaluate and adopt federally recommended water quality criteria where those criteria are warranted for the protection of water quality in the state. In this case, freshwater ammonia toxicity criteria recommended by EPA have been determined to be warranted to protect aquatic species present in freshwater water bodies of Louisiana. This rule change will adopt and clarify the applicability of freshwater ammonia criteria.

- C. Compliance with Act 11 of the 1986 First Extraordinary Session

- (1) Will the proposed rule change result in any increase in the expenditure of funds? If so, specify amount and source of funding.

The proposed rule change will not result in any increase in the expenditure of funds.

- (2) If the answer to (1) above is yes, has the Legislature specifically appropriated the funds necessary for the associated expenditure increase?

(a) _____ Yes. If yes, attach documentation.

(b) _____ NO. If no, provide justification as to why this rule change should be published at this time

**FISCAL AND ECONOMIC IMPACT STATEMENT
WORKSHEET**

I. A. COSTS OR SAVINGS TO STATE AGENCIES RESULTING FROM THE ACTION PROPOSED

1. What is the anticipated increase (decrease) in costs to implement the proposed action?

COSTS	FY 24	FY 25	FY 26
Personal Services	0	0	0
Operating Expenses	0	0	0
Professional Services	0	0	0
Other Charges	0	0	0
Equipment	0	0	0
Major Repairs & Constr.	0	0	0
TOTAL	0	0	0

POSITIONS (#)

2. Provide a narrative explanation of the costs or savings shown in "A. 1.", including the increase or reduction in workload or additional paperwork (number of new forms, additional documentation, etc.) anticipated as a result of the implementation of the proposed action. Describe all data, assumptions, and methods used in calculating these costs.

There are no estimated implementation costs or savings to state or local governmental units as a result of the rule.

3. Sources of funding for implementing the proposed rule or rule change.

SOURCE	FY 24	FY 25	FY 26
State General Fund	0	0	0
Agency Self-Generated	0	0	0
Dedicated	0	0	0
Federal Funds	0	0	0
Other (Specify)	0	0	0
TOTAL	0	0	0

4. Does your agency currently have sufficient funds to implement the proposed action? If not, how and when do you anticipate obtaining such funds?

No additional funds are required to implement the proposed rule change.

B. COST OR SAVINGS TO LOCAL GOVERNMENTAL UNITS RESULTING FROM THE ACTION PROPOSED.

1. Provide an estimate of the anticipated impact of the proposed action on local governmental units, including adjustments in workload and paperwork requirements. Describe all data, assumptions and methods used in calculating this impact.

There may be some impact on local governmental units, including adjustments in workload and paperwork requirements because of additional monitoring and reporting. Some

municipalities may be required to upgrade existing wastewater treatment plants. Although data is not available for every potentially affected facility, LDEQ has received information that indicates the costs for installing new treatment technology would be significant. Local governments may also be subject to additional testing costs to demonstrate compliance with ammonia-nitrogen limits. Please see Section III.A of the FEIS worksheet for a discussion of anticipated impacts to local governmental units and additional discussion in the Small Business Analysis form.

2. Indicate the sources of funding of the local governmental unit, which will be affected by these costs or savings.

The above statement is not applicable.

**FISCAL AND ECONOMIC IMPACT STATEMENT
WORKSHEET**

II. EFFECT ON REVENUE COLLECTIONS OF STATE AND LOCAL GOVERNMENTAL UNITS

A. What increase (decrease) in revenues can be anticipated from the proposed action?

REVENUE INCREASE/DECREASE	FY 24	FY 25	FY 26
State General Fund	0	0	0
Agency Self-Generated	0	0	0
Dedicated Funds*	0	0	0
Federal Funds	0	0	0
Local Funds	0	0	0
TOTAL	0	0	0

*Specify the particular fund being impacted.

B. Provide a narrative explanation of each increase or decrease in revenues shown in "A." Describe all data, assumptions, and methods used in calculating these increases or decreases.

The proposed rule is not anticipated to have any impact on the revenues of state or local governmental units.

**FISCAL AND ECONOMIC IMPACT STATEMENT
WORKSHEET**

III. COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS, SMALL BUSINESSES, OR NONGOVERNMENTAL GROUPS

- A. What persons, small businesses, or non-governmental groups would be directly affected by the proposed action? For each, provide an estimate and a narrative description of any effect on costs, including workload adjustments and additional paperwork (number of new forms, additional documentation, etc.), they may have to incur as a result of the proposed action.

LDEQ expects costs to be incurred by publicly and privately owned treatment works that discharge 100,000 gallons per day (GPD) of treated wastewater or more and some industrial facilities with a Louisiana Pollutant Discharge Elimination System (LPDES) permit. Industrial facilities affected are those that utilize or produce nitrogen, such as fertilizer manufacturers and facilities subject to ammonia-nitrogen effluent limit guidelines (ELGs), such as meat and seafood processors and petroleum refineries. Other industrial facilities (not yet identified) may also require ammonia-nitrogen limitations based on LDEQ's review of the actual discharge data supplied with each permit application. Certain facilities will be subject to more stringent ammonia-nitrogen limits, depending on the characteristics of their specific discharge and of the receiving water body, which may require changes to current operations and/or significant upgrades to existing treatment technology.

LDEQ has identified approximately 500 sanitary treatment plants (publicly and privately owned), 18 major industrial and 130 minor industrial facilities, which have the potential to be affected. However, not all of those potentially affected will have ammonia-nitrogen limits that are more stringent than the existing permit limits or have limits where no ammonia-nitrogen limits are included in the existing permit. Water quality based limits for ammonia-nitrogen are calculated using receiving stream flow, effluent data, and ambient pH and temperature data. The information is not available to conduct a full analysis, as LDEQ requires data from each individual facility to complete the analysis. LDEQ requested interested stakeholders to provide information regarding treatment options and cost estimate data through Potpourri Notice 2203Pot1, published on March 20, 2022 and stakeholder meetings. Potpourri Notice 2203Pot1 requested interested parties to submit information and comments concerning costs to directly affected persons, together with the environmental and/or human health risks and benefits, including information regarding treatment options and costs by May 31, 2022. No comments were received. LDEQ subsequently held a stakeholder meeting on July 21, 2022, requesting information to be submitted by August 30, 2022. Three sets of comments were received. A second stakeholder meeting was held on October 24, 2022. No further comments were received. The information received was taken into consideration in this rule development and are presented in the following paragraphs.

Although data is not available for every potentially affected facility, LDEQ has received information that indicates the costs for installing new treatment technology would be significant. Information submitted by Foster Poultry Farms, LLC (a chicken processing facility) indicated the cost to upgrade the treatment system to meet limits between 2 and 4 mg/L ammonia-nitrogen would require \$11.5 to \$14 million of capital investment. LDEQ anticipates this estimate is the highest possible cost to a major industrial facility. Information submitted by St. Tammany Parish Government did not include a numeric cost estimate for improved treatment; however, St. Tammany Parish Government anticipated that advanced tertiary treatment technology would be required for most sanitary wastewater treatment facilities in St. Tammany Parish, which would be "unimaginably costly for redesign, construction, operations and rates to customers."

The proposed rule may also require additional effluent testing to demonstrate compliance with ammonia-nitrogen limits, which will be included in reissued and new LPDES permits. Facilities

may be subject to additional testing costs to demonstrate compliance with ammonia-nitrogen limits. The estimated costs per test are:

- Ammonia-Nitrogen Effluent Concentration (Methods 350.1; 4500): \$12 to \$18 per test
- Temperature - \$5 per test
- pH - \$5 per test

The frequency of testing varies among permits and is dependent on permit type and the volume of wastewater discharged in gallons per day (GPD). Currently, LDEQ utilizes a standardized schedule for the monitoring of conventional pollutants in LPDES permits. The estimates presented below are based on this schedule. All minor facilities, which are classified as small businesses, already test for pH on a regular basis. All industrial facilities with a heat component in the process are already required to test for temperature. Therefore, the monitoring of pH and temperature is not expected to incur any additional cost.

Most publicly-owned treatment works (POTWs) and privately owned treatment works are already required to test for ammonia-nitrogen in the effluent in current permits, as most already have ammonia-nitrogen limitations based on the existing Water Quality Management Plan (WQMP). No additional costs are expected for these facilities with respect to monitoring. For the few facilities that currently do not have an ammonia-nitrogen limit in their permit or are not required to test for ammonia-nitrogen on a regular basis are expected to incur the following additional costs on an annual basis:

- POTWs/Privately-owned Treatment Works \geq 100,000 GPD < 500,000 GPD: \$288 to \$432/year
- POTWs/Privately-owned Treatment Works \geq 500,000 GPD < 1,000,000 GPD: \$624 to \$936/year
- Minor Industrial Facilities: \$624 to \$936/year

Because of the cost information received, LDEQ has included provisions and options in the proposed revisions to the *Water Quality Management Plan, Volume 3: Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards* to minimize costs to affected facilities in the form of extended compliance schedules and alternative representative stream flow calculations. The proposed revisions to this document are being public noticed in conjunction with this proposed rule. Please see the Small Business Analysis form for more details. Based on the regulatory provisions as proposed taken together with the implementation guidance revisions, LDEQ anticipates that ammonia limitations developed for individual permits will be fully protective of aquatic life, while avoiding the imposition of overly conservative limits that would incur undue economic burdens. Nonetheless, the costs to implement the proposed rule changes would be significant.

- B. Also provide an estimate and a narrative description of any impact on receipts and/or income resulting from this rule or rule change to these groups.

LDEQ does not anticipate any impact on receipts or income because of this proposed action.

IV. EFFECTS ON COMPETITION AND EMPLOYMENT

Identify and provide estimates of the impact of the proposed action on competition and employment in the public and private sectors. Include a summary of any data, assumptions and methods used in making these estimates.

LDEQ does not anticipate any impact on competition and employment in the public and private

sectors because of this proposed action.