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Subject: Comments on Draft LPDES for Magnolia Utilities Operating Company; The Meadows Sewage Treatment Plant. **A.I.#19208**

Members of the Public Participation Group,

Please consider the following comments relating to Magnolia Utilities Operating Company; The Meadows Sewage Treatment Plant. **A.I.#19208**, Permit Number **LA0066567**, and Activity Number **PER20210001**. We are submitting these comments for the record in a timely manner for Northshore Riverwatch.[1] We reserve the right to rely upon all public comments submitted in this matter. We request a written response to these comments and notification of any action on the final permit.

We request a public hearing on this draft permit.

After careful review, Northshore Riverwatch opposes the issuance of this Draft permit as written because it (1) violates state water quality standards, (2) Does not address the Scenic River designation, increasing mass loadings arbitrarily without justification, (3) allows the facility to discharge above both TDML limits and its design capacity, (4) does not control for Total Nitrogen nor Total Phosphorous.

For the following reasons, Northshore Riverwatch request the draft permit be denied and re-public noticed after revisions and required studies are completed.

I. The Draft Permit violates Louisiana Water Quality Criteria for both pH and Dissolved Oxygen (DO).

A. The permit limit of must require Dissolved Oxygen Limit. A Dissolved Oxygen limit of 5.0 mg/L must be included ensuring alignment with Louisiana Water Quality Criteria for Subsegment 040802.

1. **LAC 33: IX§1123, Table 3 sets** minimum DO limits for subsegment 040802 at **5.0 mg/L**. To prevent the Greenbriar Facility from violating state standards, the Draft Permit must control for DO with a minimum instantaneous value, not average, of 5.0 mg/L.[2]

[1] Northshore Riverwatch is a 501(c)(3) non-corporation registered with the State of Louisiana dedicated to the protection and restoration of rivers in the Florida Parishes

[2] Although **LAC 33:IX§1123, Table 3 sets** minimum DO limits for subsegment 040915 as 2.3 Mar.-Nov.; 5.0 Dec.-Feb., the 2.3 Mar.-Nov., this is in error based upon the **Use Attainability Analysis of Inland Rivers and**

2. **DO limits must be included with a minimum allowable test result, not average, of 5.0mg/L.**

   LAC 33: IX§1113. C.3 Dissolved Oxygen. *The statewide dissolved oxygen (DO) values represent minimum criteria for the types of water specified. (That is. a level below the criterion, as opposed to above the criterion, may indicate potential impairment.)… However**. no waste discharge or human activity shall lower the DO concentration below the specified minimum.*** (emphasis supplied)

   A single day of low dissolved oxygen discharge can have a major negative impact on the environment. Using an average allows for a low D.O. flow to devastate the benthic and nepik population downstream and is not protective of the environment. The permit must require every sample to exceed the D.O. Criteria of 5.0 mg/L for subsegment 040915.

B. The permit must require more stringent pH limits. The pH limits must be adjusted to 6.0-8.5 to align with Louisiana Water Quality Criteria for Subsegment 040915.

The draft permit contains discharge limits for pH that exceed the allowable limits for Subsection 040802.. **LAC 33: IX §l123, Table 3** sets pH limits for subsegment 040802 at **6.0-8.5**. The Draft Permit exceeds the upper range using 9.0 as upper limit for pH. To prevent the Greenbriar Facility from violating state standards, **the pH limits must be adjusted to 6.0-8.5.**

C. LAC 33: IX§1109. (C)(1)(e) requires a discharge to not cause exceedance of site-specific criteria.

A wastewater discharge may be proposed into an approved, designated intermittent stream only if ***the discharge will not by itself or in conjunction with other discharges cause impairment of the applicable designated uses nor cause exceedance of any applicable general and site-specific criteria in the receiving water body,*** *as determined in the exception approval process, nor cause exceedance of any applicable general and site-specific criteria in LAC 33: IX.1113 and 1123 in any water body which receives water from the intermittent stream.* (emphasis supplied)

Streams in the Eastern Lower Mississippi River Alluvial Plains Ecoregion for Review of Dissolved Oxygen Water Quality Criteria June 7th, 2013. To the best of our knowledge, this UAA was remanded on order rendered against the USEPA, et al. in Federal District Court on February 25, 2019 concerning DO criteria in 31 subsegments, and has not been approved by the EPA.

1. **The record indicates Flower Bayou at the Outfall location has the characteristics of an intermittent stream.**

   Appendix A-1: Stream Flow Characteristics Report of the Draft Permit Package states the "Due to Outfall 001's proximity to the headwaters for Flowers (sic) Bayou and the hydrology of the stream….", the Draft Permit uses default 7Q10 low flow of 0.1 *cfs* and QAH of 1.0 *cfs*, the defaults for intermittent streams. [3]

II. Enforceable limits for ***Flow* must be included to ensure compliance with the Lower Tchefuncte TDML For Biological Oxygen-Demanding Substances.** This permit must only allow **0.64 MGD**, based on the Modeled Flow for this STP used in the development of this permit.[4]

To avoid loopholes which would allow violations of State Water Quality Standards, a numerical flow limit must be applied to the permit for both Monthly Average and Daily Maximum Flow Limitations. These limits must be consistent with the TDML.

A. The Permit Application and Draft Permit Statement of Basis has a confusing analysis of Flow for this STP.

1. The Design Capacity is listed as 1,000,000 GPD (1.0MGD).[5]
   A flow of 0.729 MGD is used in the Renewal Application.[6]
   The Flow used for Permit Development is 0.64 MGD.[7]

A. As per Greenbriar STP Permit Renewal Application, the design of the plant is 1.0 MGP (400,000 gpd). [8]

The design of the plant exceeds flow required to comply with the TDML and flow value used to develop this permit. Any discharges of effluent greater than 0.64 MGD with the BOD limits in the Draft Permit of 10 mg/L monthly average, 15 mg/L daily max and Nitrogen Total Ammonia 2.2 mg/L monthly average and 4.3 mg/L daily max, has a real possibility of violating the TDML.

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[3] Draft Permit Package EDMS Document # **13891635**, p. 47. Appendix A-1
[4] *Id.* Statement of Basis p. 33
[5] LPDES Permit Application, LDEQ EDMS Document # **12758872**, p. 21
[6] Draft Permit Application Section II Treatment Information. EDMS Doc.# **12758872,** pg. 22
[7] *Supra.* **Draft Permit Package** p. 33
[8] *Supra***.** Permit Renewal Application, p. 21 (LDEQ Document **13294903)**

B. A review of DMR submissions from the past 12 months (August 2022-July 2023) indicates this plant **exceeded its Design Capacity for reported Daily Maximum for January 2023.**

1. Any daily flow above design capacity indicates the probable release of partially treated on untreated effluent from this facility.

2. Any daily flow above design capacity indicates a probable violation the Total Daily Maximum Load allotment for this facility.

C. The Draft Permit only requires a Report of Monthly Average and Daily Max Flow. The Flow from this facility must be controlled with an expressed limit of 0.64 MGD to ensure Flower Bayou is not further overloaded with BOD substances.

1. The LDEQ has the authority to apply discharge limits to the flow in order to ensure achievement of the Flower Bayou Water Quality Standard for B.O.D. substances

LAC 33: IX. 2707. D Water Quality Standards and State Requirements.

Any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards under Sections 301, 304, 306, 307, 318 and 405 of the CWA necessary to:

1. *achieve water quality standards established under Section 303 of the CWA, including state narrative criteria for water quality:*

a. *limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the state administrative authority determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for watering quality…", et seq.*

D. As per <u>Greenbriar STP Permit Renewal Application</u> and the <u>Draft Permit Package Statement of Basis</u>, the Expected Flow from all users is 1.0 MGP (1,000,000 gpd).

1. The expected flow exceeds the flow used for permit development. The only way to ensure the Draft Permit is protective of the receiving waters is to limit the flow with numeric criteria based on mass loading calculations for the **Lower Tchefuncte TDML For Biological Oxygen-Demanding Substances.**

2. Currently, the facility regularly discharges a flow well above the 0.64 MGD permit limit which forms the basis of all other calculations. A review of DMR submissions from August 2022 to July 2023 shows this plant exceeded its Permitted Flow for reported Daily Maximum Flow 9 of the last 12 months.

3. Permit Limits based upon 0.64 MGD are meaningless when the facility discharges a volume greater than this required maximum flow. Limits on Flow must be established and enforced within the permit.

E. LDEQ must also note that this is a developing area with more properties being opened for development as the Ochsner Blvd. Extension is completed. LDEQ has already processed a Water Quality Certification for STOA Group "The Waters of Covington, which has plans to tie into this facility, further increasing the burden on a 40-year-old facility that already exceeds its design capacity.[9]

Neither the instant Draft Permit Package not the Permit Renewal Application indicate the addition of these homes. This is the first of many developments expected to infill the remaining open space along the new Ochsner Blvd. Extension.

III. The permit must contain limits, not just report, for Nitrogen and phosphorous.

Excess of Nitrogen and Phosphorous causes eutrophication of slow-moving waterways by driving increased algae and plant production. In fact, Lake Pontchartrain recently had an algae bloom. When excessive algae die, the decomposition depletes the dissolved oxygen, causing fish die-offs and other water quality issues. For the LDEQ to ensure the water quality is not compromised, **numerical limits** for these pollutants, which are discharged from the STP, must be implemented in the Permit Requirements.

A. In 2015, LDEQ produced "Nitrogen and Phosphorus Trends of Long-Term Ambient Water Quality Monitoring Sites in Louisiana" which showed a steady and relatively low baseline for Nitrogen and phosphorus for major watershed basins in Louisiana including several related rivers in the Pontchartrain Basin. This included the Tchefuncte River. [10]

B. "Table 1. Minimum, median, maximum, and Kendall trend results for all nutrients and sites" shows the minimum, medium, maximum, and trends for Total Kendall

[9] **WQC 220323-01, AI 237999**

[10] Louisiana Department of Environmental Quality (LDEQ). 2015. Nitrogen and Phosphorus Trends of Long-Term Ambient Water Quality Monitoring Sites in Louisiana. Office of Environmental Services, Louisiana Department of Environmental Quality, Baton Rouge, LA.

Nitrogen, NO_x, and total Phosphorus. For the Tchefuncte watershed, these trends are downward or static. The maximum Total Kjeldahl Nitrogen is listed as 2.60 mg-N/L, The maximum Total Phosphorous is listed as 0.80 mg-P/L.[11]

C. The document further analyzes the trends and finds

> ***4.1.6 Trends for Pontchartrain Watershed Basin***
> *Total Kjeldahl N values for the Lake Pontchartrain, Tangipahoa River,* ***Tchefuncte River****, and Tickfaw River sites range from < 0.50 to 1.72, < 0.50 to 2.08****, < 0.50 to 2.60****, and < 0.50 to 1.73 mg N- TKN L-1, respectively. Nitrite + nitrate values range from < 0.10 to 1.30, < 0.10 to 0.82,* ***< 0.10 to 0.65****, and < 0.10 to 0.82 mg N-NOx L-1 for the sites, respectively. Total P values range from < 0.10 to 0.73, < 0.10 to 0.72****, < 0.10 to 0.80****, and < 0.10 to 0.78 mg P L-1 for the sites. The TKN trend for all the sites in the Pontchartrain basin is significantly decreasing (Table 1, Figure 11). Lake Pontchartrain and the Tangipahoa and Tickfaw Rivers have significantly decreasing NOx and TP trends, while these trends show no significant change for the Tchefuncte River. There has been a steady drop in TKN over time. The drops seen for TP and NOx are slight. In comparison to the other sites, Lake Pontchartrain ranks at the bottom for TP, NOx, and TKN. Tangipahoa and Tickfaw rank near the bottom for TKN, while Tchefuncte is near the middle. Tangipahoa, Tchefuncte, and Tickfaw rank toward the bottom of the middle for TP. Tangipahoa Ranks near the top for NOx (excluding the Mississippi River and receiving rivers), while Tickfaw ranks near the middle, and Tchefuncte near the bottom (Figure 11).*[12] (emphasis supplied for the Tchefuncte Basin)

D. A review of Greenbriar STP's Quarterly DMR reports for total nitrogen and total phosphorous show the discharge values are many times greater than the maximums found in the report.

E. Considering the negative impacts excessive nutrients have on Louisiana Waterways, LDEQ must include limits, not just reporting for nutrients. LDEQ has the documentation and studies needed to place appropriate limits on nutrients that are protective of Subsegment 040802.

IV. Conclusion

Greenbriar STP is an aging facility that is overburdened by the number of current connections. The current draft permit is not protective of the water quality in the basin

[11] *Id.* p. 10
[12] *Id.* p. 18.

an allows for unfettered violations of the TDML for Dissolved Oxygen, exceeding the facility's allocation of Oxygen Demanding Substances through discharges greater than both the 0.64 MGD used for the Draft Permit development and discharges greater than the STP's Design Capacity of 1.0 MGD. By not limiting the flow with a permit requirement of 0.64 MGD maximum discharge, LDEQ fails in its requirement to protect and improve an impaired waterway.

The permit must also control for total nitrogen and phosphorous as well as change the pH requirements to ensure no degradation to this Louisiana Scenic River.

In 2012, 11 years ago, LDEQ Promulgated the **Lower Tchefuncte River TDML For Biological Oxygen-Demanding Substances** which limits pollutant discharges into the watershed. Despite the limitations imposed by the TDML, new connections and increased flow has been the norm. One of the conclusions found within the TDML Document states

"*Numerous individual commercial package plants and individual residential treatment units discharging directly or indirectly within the watershed are suspected of having a major impact on the Lower Tchefuncte River. This includes facilities in Subsegments 040801 and 040804.* ***For St. Tammany Parish, LDEQ recommends incorporating such dischargers into a regional collection and treatment system.*** *"* [13] (emphasis supplied)

The issues observed in the Draft Permit show the problematic sewerage collection system of Greenbriar STP. St. Tammany has plans to develop hundreds of acres near this plant into commercial, single residential homes, and apartments. There are currently 3 STPs within this area, yet St. Tammany shows no indications of promoting necessary regionalization of wastewater treatment. Allowing continued increases to discharges violates not only the TDML, threatening further degradation of an ONRW.

St. Tammany Parish Government has been on notice for nearly 40 years of the need for regionalization of sewerage treatment, yet has done nothing to improve treatment in the watershed. St. Tammany Parish has taken the stance that Sewerage Treatment is the responsibility of LDEQ, yet LDEQ appears to leave the decision making to the Parish. This untenable relationship has led to further degradation of St. Tammany's ONRWs.

We ask that LDEQ begin enforcing the implementation plan for the TDML and not allow increases to discharges unless they remove old facilities and begin treating currently unsewered areas.

Matthew Allen

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[13] *Supra,* **Lower Tchefuncte River TDML for Biochemical Oxygen-Demanding Substances Phase 1**, Executive Summary p. lxxvii

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