

RESPONSE TO COMMENTS
AND FINAL PERMIT DECISION

This is the Department's response to comments received on the subject draft permit and final permit decision in accordance with regulations promulgated at 40 CFR § 124.17.

OPDES Permit Number: OKS000201 City of Tulsa Municipal Separate Storm Sewer System (MS4) Permit

Issuing Office: Oklahoma Department of Environmental Quality (DEQ)
Water Quality Division (WQD)
P.O. Box 1677 Oklahoma City, OK 73101-1677

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Municipal Discharge and Stormwater Permits Section
Water Quality Division

Date Prepared: December 5, 2023

Permit Action: Response to comments received on the proposed permit publicly noticed on May 12, 2023, by DEQ, and by the City of Tulsa on June 15, 2023; and final permit decision to reissue OPDES Permit No. OKS000201.

FINAL PERMIT DECISION

The City of Tulsa published a notice in the Tulsa World, a daily newspaper, on June 15, 2023, regarding the draft Permit No. OKS000201 for the City of Tulsa Municipal Separate Storm Sewer System (MS4) Permit, pursuant to the Oklahoma Pollutant Discharge Elimination System (OPDES) Act, Title 27A Oklahoma Statutes (O.S.) § 2-6-201, et seq., the Oklahoma Administrative Code (OAC) 252:606, and the policies and procedures of DEQ. DEQ also published notice on DEQ's website at <https://www.deq.ok.gov/permits-for-public-review/> on May 12, 2023. The public review period ended at 4:30 p.m. on September 7, 2023. During the public review period, DEQ received written and verbal comments concerning the draft permit, as detailed below.

DEQ reviewed the comments, prepared the following responses, and made changes in the final permit as listed below. DEQ's response to comments document was sent to all persons/entities who submitted comments during the public review period. The final permit will become effective on February 1, 2023. This will be DEQ's final permit decision.

CHANGES FROM DRAFT PERMIT AS A RESULT OF PUBLIC COMMENTS

1. Part II.F.1.viii.(b) of the permit has been revised to indicate that BMPs must address "on-site sewage facilities by responding to complaints regarding private on-site sewage facilities that impact the MS4 and referring to the appropriate state agency, as necessary."

OTHER CHANGES FROM DRAFT PERMIT

1. Table I-1. Existing Approved TMDLs Affected by Permittee(s)' Stormwater Discharges has been corrected to reference the "Lower Bird Creek Watershed Bacteria TMDLs – 2011" TMDL report, rather than the Bird Creek Bacteria TMDLs – 2010" TMDL report. The applicable stream segments, Lower Bird Creek and Coal Creek, listed in Table I-1 were correct and remain unchanged.

2. After further consideration, DEQ has revised Part II.5.b. Municipal Construction Activities to restrict the authorization to discharge stormwater and certain non-stormwater from municipal construction activities to projects where Tulsa is the construction site operator, and not to extend that authorization to Tulsa’s contractors. Municipal construction activities where contractors are the operators shall be required to obtain coverage under the latest OKR10 stormwater construction general permit.

COMMENTS RECEIVED ON DRAFT PERMIT

The following comments were received on the draft permit:

1. Email from Mr. Fred Storer to Mr. Michael Moe, DEQ, dated May 19, 2023. Subject: When Zink Lake is not a lake.

Mr. Moe, the city is setting on the draft permit, can they be "forced" to publish it?

Wednesday, at the Public Works Committee meeting Blake Ewing, GTB’s Chief of Staff, said the city would compare [water quality of] Zink Lake with area lakes. Good move, but ODEQ does this every two years.

The attachment tabulates the Primary Body Contact Recreation status of familiar lakes, rivers, and creeks. This is taken directly from Appendix B of ODEQ’s 2022 semiannual Integrated Report to EPA, required by the Clean Water Act. Year to year, it does not change much.

[Attachment: Comparison of PBCR status for selected rivers and creeks with selected lakes compiled from 2022 Integrated Report, Appendix B – 2022 Comprehensive Waterbody Assessment]

Zink Lake will not pass the PBCR test, “No Swimming” signs will be required.

Please contact me if you have questions such as: why does 7.32 miles of our river have “Insufficient Information”?

Can Zink Lake ever pass the PBCR test? Probably not, but the Fecal Indicator Bacteria count can be improved. Want to start a discussion about how?

A similar note has been sent to several interested Tulsans’.

2. Email from Mr. Fred Storer to Ms. Cailyn Prather, DEQ, with cc to Mr. Michael Moe and Mr. Patrick Rosch, DEQ, Ms. Kelsey Royce, Mr. Charles Pratt, Mr. Blake Ewing, Mr. Jeff Edwards, and Mr. Grant Miller, Tulsa City Council; dated May 22, 2023. Subject: Tulsa’s draft MS4 permit – Public Meeting.

The Fact Sheet, in 8. PUBLIC NOTICE, states: “A request for a public meeting shall be in writing and shall be in writing and **shall state the nature of the issues proposed to be raised.**”

Oklahoma Statutes, Title 27A. Environment and Natural Resources, §27A-2-14-303. Public meeting – Procedure, says “The Department shall expeditiously schedule and hold a formal public meeting if the Department receives written timely request for such meeting, pursuant to the provisions of Section

2-14-302 of this title, and determines there is a significant degree of public interest in the draft denial or draft permit.”

Title 27A does not require a written statement of the nature of the issues proposed to be raised.

I assure you there is significant degree of public interest in this permit, it has been discussed by the City Council (Council Public Works Committee (granicus.com)), covered on the front page of the Tulsa World (City's plans for recreation in the new Zink Lake questioned (tulsaworld.com)), and reported on by Tulsa’s television stations (How safe is the water in the Arkansas river? | KTUL.).

I believe there will be requests for a public meeting submitted during the comment period. However, the stated requirement that a written statement of the issues proposed to be raised will be off-putting for some Tulsan’s not familiar with your processes, discouraging requests for a public meeting.

Please acknowledge and correct the error.

3. Email from Mr. Fred Storer to Mr. Terry Ball, City of Tulsa; with cc to Mr. Michael Moe and Mr. Patrick Rosch, DEQ; Mr. Blake Ewing; Mr. Jack Blair; and Mr. Jeff Edwards; dated May 31, 2023. Subject: Tulsa’s draft MS4 permit?

Oklahoma DEQ sent you by Certified Mail, May 5, 2023, notice that the City should publish notice of the draft MS4 permit.

To the best of my knowledge this notice has not been published. Where is it?

This is not a trivial issue to those Tulsan’s interested in the river and Zink Lake. Your notice starts the 30-day public comment period.

4. Comment submitted through DEQ website from Mr. Bob Jackman; dated May 31, 2023.

Testing standards by OEDQ [sic] and City of Tulsa are obsolete and not reflective to toxicants flowing downstream Arkansas River to Tulsa 11 street texting [sic] site.

5. Emails from Mr. Robert Jackman to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated May 31, 2023, and June 1, 2023 (duplicate of May 31st email). Subject: Additional Comments Re: MS4 Pending Permit.

Tulsa’s draft MS4 should not be acted on until the section of Arkansas River adjoining but not within Tulsa City limits and shared with HF-Sinclair polluting properties issues are resolved. The MS4 new permit should be delayed. The HF Sinclair’s 1,018 acres plus is adjoining but legally not within Tulsa City limits, but within Tulsa County. However HF-Sinclair and previous refinery owners have for years and will continuously be seeping / releasing their refineries subsurface toxic polluting petrol-sludge upstream from and below the 11st section of the AR River. This major issue must be resolved and agreed on by EPA, ODEQ and concerned Tulsans and made public prior to any draft MS4 Permit approval.

HF-Sinclair’s current, est. fifteen million dollars, attempts by their concrete Band-Aids to stop described river banks’ seepage hasn’t sufficient independent expert time-testing results to merit their attempts recognized as successful. Quite the contrary individual recent reported observations are negative.

6. Email from Mr. Dalton Wortham to Ms. Cailyn Prather, DEQ; dated June 1, 2023. Subject: Draft MS4 permit Arkansas river water quality.

I would like to request a public meeting to comment on the draft MS4 permit and the absence of water quality testing.

I am an interested stake holder as a frequent inhabitant of the river.

7. Email from Mr. Bill Everett to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated June 1, 2023. Subject: Proposed MS4 permit for Zink lake comments, request for a public meeting.

I believe the public needs to understand better who is responsible for the water quality and how they will measure the water quality and what standards will be used to assure safe water. Please let me know when a meeting will be held.

8. Email from Mr. Scott Hood to Ms. Cailyn Prather, DEQ; dated June 1, 2023. Subject: MS4 comments and public meeting request.

This is important and should be discussed in a public meeting. Please plan accordingly and host a public meeting.

9. Email from Mr. Blake A. Johnson, Esq. CPA, to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated June 8, 2023. Subject: Request for Public Meeting – MS4

As a Tulsa city resident I do want the City to substantiate and address how it intends to meet the goal of the swimmable goal of the Clean Water Act for the Zink lake and Arkansas. I request that this be set for a public meeting. Please place me on your list to send notice and updates to.

10. Email from Mr. Charles Pratt, P.E., Quadrelec Engineering Corp., to Ms. Cailyn Prather, DEQ; dated June 8, 2023. Subject: MS4 Public Meeting Request.

It is very important that public involvement and presence be provided for subject meeting for the City of Tulsa permit. The city is planning to have the public in the river in a contaminated lake that is impacted by the requirements of this permit. It is critical for public protection that the permit either clean up the river water or the city forbid PBCR in the river. I plan to be there if at all possible.

11. Email from Mr. Fred Storer to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated June 8, 2023. Subject: Request for a Public Meeting and Comments regarding proposed MS4 permit. Follow-up email to Ms. Cailyn Prather, Mr. Michael Moe, and Ms. Hillary Young, DEQ, and Mr. Terry Ball, City of Tulsa, dated June 11, 2023. Subject: MS4 Permit comments error correction.

I am a Tulsa resident submitting comments and a request for a public meeting to Cailyn Prather, DEQ, and Terry Ball, City of Tulsa, regarding DEQ Pollutant Discharge Application No. OKS000201.

Text in italics are direct quotes from DEQ publications related to the proposed MS4 permit.

Public Notice of Draft Permit

The Public Notice says:

Pursuant to 27A OS § 2-14-302, persons wishing to make comments concerning the draft permit may do so by sending the comments in writing to the Contact Person for DEQ, at the address listed below, within 30 days after the date of publication or mailing. Comments should include: (1) name and address of the interested person, (2) the application name to which the request relates, (3) the nature and basis

of the interest of the person affected, and (4) a statement of the objection or comment, the basis of the objection or comment, and any requested action by DEQ.

27A OS § 2-14-302 says:

Title 27A. Environment and Natural Resources, §27A-2-14-303. Public meeting – Procedure, says: “The Department shall expeditiously schedule and hold a formal public meeting if the Department receives written timely request for such meeting, pursuant to the provisions of Section 2-14-302 of this title, and determines there is a significant degree of public interest in the draft denial or draft permit.”

DEQ has taken liberties with the Oklahoma Statute in adding “a statement of the objection or comment, the basis of the objection or comment, and any requested action by DEQ”. The only criteria DEQ can apply to a decision to hold a public meeting is the degree of public interest.

B. 2. Authorized non-stormwater discharges are...

m. landscape irrigation and lawn watering, provided all pesticides, herbicides, and fertilizers have been applied in accordance with the approved manufacturers' instructions and/or labeling.

Landscape irrigation that delivers Fecal Indicator Bacteria (FIB) to the stormwater system should not be granted blanket authorization.

C. Limitations on Coverage

5. Discharges exceeding WQS are unauthorized. *The SWMP must include a description of all necessary Best Management Practices (BMPs) and other measures that the permittee(s) will be using to ensure that discharges will not cause, have the reasonable potential to cause, or contribute to an exceedance of WQS. DEQ may require corrective action if the MS4 is determined to cause, have the reasonable potential to cause, or contribute to an exceedance of WQS.*

Since the entire watershed exceeds the WQS for FIB all discharges that contain FIB are unauthorized? All the outfalls for the Tulsa MS4 system are unauthorized?

6. Discharges not consistent with a TMDL are unauthorized.

Discharge of a pollutant into any water for which a TMDL, or watershed plan in lieu of a TMDL, for that pollutant has been either established or approved by DEQ or U.S. Environmental Protection Agency (EPA) is prohibited, ...

Does a watershed plan exist for any of the receiving waters?

G. Established TMDL Allocations

In *Table I-1. Existing Approved TMDLs Affected by Permittee(s)' Stormwater Discharges* (Page12), the footnote regarding *Arkansas River and Verdigris River Area – Bacteria and Turbidity TMDLs – 2012 footnote 3* says “Both the 2008 and 2012 TMDLs address bacteria impairments in *WBID OK120420010010_00*. For this *WBID*, the bacteria reduction goals and requirements of the more recent 2012 TMDL shall be implemented.”

There are no bacteria reduction goals for the stream segment *OK120420010010_10* which is a part of *OK120420010010_00* because the 2012 TMDL omitted the 7.32-miles of the Arkansas River from Berryhill Creek to Mooser Creek including the entire new Zink Lake. This TMDL was prepared by ODEQ and nowhere in the narrative is the omission explained. See *Figure I-1, Arkansas-Verdigris*

River Area (upper) Not Supporting Primary Body Contact Recreation or Fish and Wildlife Propagation, FINAL BACTERIAL AND TURBIDITY TOTAL MAXIMUM DAILY LOADS FOR THE ARKANSAS-VERDIGRIS RIVER STUDY AREA, OKLAHOMA (OK120400, OK120410, OK120420, OK121500, OK121600), DEQ, Sept. 2012 which shows the segments above and below. The missing segment should have appeared where the word “Tulsa” appears on the map. Why was OK120420010010_10 omitted? What are the consequences of this omission relative to the requirements of the permit?

PART II. STORMWATER MANAGEMENT PROGRAM (SWMP)

The permit’s SWMP emphasis on the sanitary sewer system and other sources of FIB is important and essential. However, the city will need to pull out all the stops to make a significant improvement in FIB numbers in WBID OK120420010010_10.

Living in the Downtown watershed (which terminates at the 11th Street and S. Indian Ave. outfalls), for the last 5 years has altered my perspective regarding sources of FIB.

1) There are many dogs downtown, some owners pick up after their dog, many don’t. Inspect Centennial Green Park if you are not convinced. The SWMP should commit the city to enforcement of a dog feces rule. [photos inserted]

2) Homelessness contributes to FIB. No one should be expected to walk a half a mile from where they spent the night when nature calls. The SWMP should commit the city to providing public sanitary facilities and support of Housing Solutions Tulsa, <https://www.housingsolutionstulsa.org/>.

Resident Canada Geese are uniquely prolific producers of FIB. The tabulation of *Non-Permitted Agricultural Activities and Domesticated Animals* (page 3-21 in the 2012 TMDL) reports a goose produces 4.7 times the FIB as a cow. Tulsa has the equivalent of a flying cattle herd making direct deposits to the river, near shore, and tributaries. The Geese population appears to have increased dramatically in the last ten years. The SWMP should commit the city to removal of resident geese from the watershed.

Although Tulsa County has arranged funding for sending Berryhill Schools wastewater to the Sand Springs STP the balance of the community remains dependent on old failing septic tanks. The degree to which Berryhill Creek, OK120420010120_00, contributes FIB to Dog Poo at Centennial Green Park and its fate, the outfall to the river near S. Indian Ave. OK120420010010_10 is not known, like OK120420010010_10 it is described in the 2022 Integrated Report to the EPA as “Insufficient Information”.

Should sanitary sewers for Berryhill be part of the SWMP?

In the proposed permit see Page 8, F. *Discharges, 1.a.viii (b) on-site facilities.*

PART IV. MONITORING AND REPORTING REQUIREMENTS

E coli testing, the permit’s preferred FIB method is included in *Table IV.1 - Analytical Monitoring Requirements* (Page 44). The sampling method and frequency as described in the draft permit is not sufficient to determine if the discharges from Tulsa’s stormwater system result in violations of the Oklahoma Water Quality Standards for the beneficial use, Primary Body Contact Recreation (PBCR).

Sampling for E coli for PBCR compliance must be done between May 1 and September 30, a minimum of five samples must be taken in a 30-day period to compute the geometric mean which must not exceed 126 colony forming units per 100 ml.

The only practical way to determine compliance is to sample the water in the lake where a person might be exposed. In the 90's the City-County Health Department sampled from the 11th Street and 21st Street bridges and at Zink Dam.

On the left bank the city is responsible for discharges to the river beginning at the mouth of Bigheart Creek (11 miles downstream of Keystone Dam). I have counted 103 large and small outfalls just between Bigheart Creek and East 61st Street.

The city's responsibilities extend to Fry Ditch Creek near South Mingo, past the Bixby bridge and well past the proposed Jenks dam. The city's MS4 responsibilities on the left bank extend for over 20 miles. The permit should clearly state that the city is required to perform sampling necessary to determine compliance with the PBCR standard.

The permit should require the city to post the results of sampling on a website and on social media such that a citizen contemplating water contact can make an informed decision. Until the city has demonstrated consistent compliance with the PBCR standard cautionary signs with a QR code should be posted to inform visitors.

From Oklahoma Water Quality Standards (emphasis added)

”785:45-5-16. Primary Body Contact Recreation

(a) Primary Body Contact Recreation involves direct body contact with the water where a possibility of ingestion exists. In these cases **the water shall not contain chemical, physical or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings.**

(b) In waters designated for Primary Body Contact Recreation the following limits for bacteria set forth in (c) of this section shall apply only during the recreation period of May 1 to September 30. The criteria for Secondary Body Contact Recreation will apply during the remainder of the year.

(c) Compliance with 785:45-5-16 shall be based upon meeting the requirements of one of the options specified in (1) or (2) of this subsection (c) for bacteria. Upon selection of one (1) group or test method, said method shall be used exclusively over the time period prescribed herefore. Provided, where concurrent data exist for multiple bacterial indicators on the same waterbody or waterbody segment, no criteria exceedances shall be allowed for any indicator group. [The draft permit's selected indicator group is E. coli.]

(1) Escherichia coli (E. coli): The E. coli geometric mean criterion is 126/100 ml. **For swimming advisory and permitting purposes, E. coli shall not exceed a monthly geometric mean of 126/100 ml based upon a minimum of not less than five (5) samples collected over a period of not more than thirty (30) days. For swimming advisory and permitting purposes, no sample shall exceed a 75% one-sided confidence level of 235/100 ml in lakes and high use waterbodies and the 90% one-sided confidence level of 406/100 ml in all other Primary Body Contact Recreation beneficial use areas. These values are based upon all samples collected over the recreation period. For purposes of sections 303(d) and 305(b) of the federal Clean Water Act as amended, beneficial use support status shall be assessed using only the geometric mean**

criterion of 126/100 milliliters compared to the geometric mean of all samples collected over the recreation period.”

To support PBCR the water must be free of “**chemical, physical or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings**”.

There are reports of oil on the water and reports of skin irritations from fishermen and ODWC survey crews. Even if the lake met FIB it may fail to meet PBCR criteria due to skin irritations.

The refineries have NPDES regulated discharges and RCRA permits administrated by DEQ. Toxic chemicals and oil are carried by the groundwater to the river and are described in semiannual RCRA reports required by DEQ. However, monitoring of the resulting impact on water quality is not yet required but within DEQ’s authority.

How will DEQ and the city respond to the “must be free of” requirement?

A. SWMP Requirements

vii. promote, publicize, and facilitate opportunities for public involvement and participation in the implementation of the SWMP, including opportunities for public participation in updating the SWMP. This shall include a process by which public comments on the SWMP are received and reviewed by the person(s) responsible for the SWMP. Permittees must comply with state and local public notice requirements when implementing their program; and

viii. assess changes in public awareness and behavior resulting from implementation of the program using mechanisms such as surveys, direct evaluations, interviews, or other mechanisms the permittee determines appropriate. Adjust educational materials and delivery of such materials as necessary to address any shortcomings found as a result of this assessment.

These responsibilities should be coordinated with the City-County Health Department and the River Parks Authority.

PART VII. DEFINITIONS

AB. Total Maximum Daily Load (TMDL) – *the sum of the individual wasteload allocations (WLAs) for point sources, margin of safety, reserves, and load allocations for nonpoint sources and natural background. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet WQS, and an allocation of that amount to the pollutant’s source.*

From the 2008 TMDL, page 5-14, 5.7 Reasonable Assurances

“The reduction rates called for in this TMDL report are as high as 81 percent. The ODEQ recognizes that achieving such high reductions may not be realistic, especially since unregulated nonpoint sources are a major cause of the impairment. The high reduction rates are not uncommon for pathogen impaired waters. Similar reduction rates are often found in other pathogen TMDLs around the nation. The suitability of the current criteria for pathogens and the beneficial uses of the receiving stream should be reviewed.”

From the 2012 TMDL (which did not include Zink Lake and the most important 7.32 miles of the river), page 5-81, 5.9.2 Non-Point Sources

The reduction rates called for in this TMDL report are as high as 96.5%. The DEQ recognizes that achieving such high reductions will be a challenge, especially since unregulated nonpoint sources are a

major cause of both bacterial and TSS loading. The high reduction rates are not uncommon for pathogen- or TSS-impaired waters. Similar reduction rates are often found in other pathogen and TSS TMDLs around the nation.

- “Called for reduction rates” does not appear to be feasible. Nevertheless, water quality monitoring followed by a new TMDL is necessary and the city must protect the public from exposure to river water.

In Summary:

- **The only criteria DEQ can apply to a decision to hold a public meeting is the degree of public interest.**
- **Does a watershed plan exist for any of the receiving waters?**
- **Why was OK120420010010_10 omitted (from the 2012 TMDL)?**
- **What are the consequences of this omission relative to the requirements of the permit?**
- **The SWMP should commit the city to enforcement of a dog feces rule.**
- **The SWMP should commit the city to providing public sanitary facilities and support of Housing Solutions Tulsa, <https://www.housingsolutionstulsa.org/> .**
- **The SWMP should commit the city to the removal of resident geese from the watershed. • Should sanitary sewers for Berryhill be part of the SWMP?**
- **The permit should clearly state that the city is required to perform sampling necessary to determine compliance with the PBCR standard.**
- **The permit should require the city to post the results of sampling on a website and on social media such that a citizen contemplating water contact can make an informed decision. Cautionary signs with a QR code should be posted to inform visitors.**
- **How will DEQ and the city respond to the “must be free of” (skin irritations) requirement?**
- **These responsibilities (public involvement and behavior) should be coordinated with the City-County Health Department and the River Parks Authority.**
- **Water quality monitoring followed by a new TMDL is necessary and the city must protect the public from exposure to river water.**

[Follow-up email dated June 11, 2023 – MS4 Permit comments error correction]

The attachment corrects an error comparing E. coli production of geese with beef cattle. A calculation added as an appendix shows the ability of a single goose to increase the E. coli content of 20 acre feet of sterile water to the PBCR limit in one day.

My apologies for any inconvenience.

[Duplicate of the attachment to the June 10 email, with the following Appendix:]

Appendix

2012 TMDL (ASAE 1999)

Beef cattle release approximately $1.04E+11$ fecal coliform counts per animal per day

Geese release approximately $4.90E+10$ per animal per day

Beef cattle / Geese = 2.12

The US EPA recommended conversion factor between fecal coliform and E. coli is 126/200, which results in an E. coli/Fecal Coliform (EC/FC) ratio of 0.63.

Geese release $3.09E+10$ per animal per day

PBCR WQS geometric mean = 126 cfu/100 ml

ml of water contaminated per one animal.

$3.09E+10 / (126 \text{ cfu}/100 \text{ ml}) = 2.45E+10 \text{ ml} = 2.45E+7 \text{ liters} = 24,500,000 \text{ liters} = 865,113 \text{ cubic feet} = 19.9 \text{ acre feet}$

One goose could bring 19.9-acre feet of sterile water to the PBCR in one day.

12. Email from Mr. Michael Christopher to Ms. Cailyn Prather, DEQ; dated June 9, 2023. Subject: Request for public meeting.

The proposed MS4 permit offers an opportunity for public involvement in the critical discussion of the safety of the Arkansas River, Zinc Lake, and related waters. I am requesting a public meeting on these issues and the proposed MS4 permit.

13. Email from Ms. Annie H. Hartzog to Ms. Cailyn Prather, DEQ; dated June 9, 2023. Subject: MS4 public meeting request.

Please add my name to the list of folks requesting a public meeting on the proposed MS4 permit related to the Arkansas River and Zink Lake.

14. Email from Mr. Fred Storer to Ms. Cailyn Prather, Mr. Michael Moe, and Ms. Hillary Young, DEQ; Mr. Terry Ball, City of Tulsa; and Ms. Jennifer Sanchez, HollyFrontier Tulsa Refinery – East Facility; dated June 10, 2023. Subject: Supplemental Comments regarding Tulsa’s proposed MS4 permit.

Please accept these comments as a supplement to my comments regarding DEQ Pollutant Discharge Application No. OKS000201 which I submitted on June 8, 2023.

On June 9, 2023, I received by email a copy of a letter from Hillary Young, P.E., Chief Engineer, Land Protection Division, addressed to Jennifer Sanchez, Environmental Manager, HollyFrontier Tulsa Refinery LLC – East Facility (HFTRE) regarding:

Class 2 Permit Modification Request;

HollyFrontier Tulsa Refinery LLC – East Facility (HFTRE);

EPA ID # OKD990750960; RCRA Permit No. 990750960

Engineer Young’s letter transmitted DEQ’s response to written comments received from the public regarding HFTRE’s (aka HF Sinclair) application to modify their RCRA permit to allow installation of a “Containment Cap and Collection System” for the intended purpose of capturing Light Non-Aqueous Phase Liquid (LNAPL aka oil) which seeps from HFTRE’s property to Zink Lake.

Importantly, DEQ's response provides additional confirmation that the Containment Cap and Collection system can only effect LNAPL and does not remove pollutants of concern (Benzene, 1-Methylnaphthalene, Naphthalene, MTBE, etc.) which have become dissolved in the groundwater as it passes west to east before entering Zink Lake. DEQ acknowledges removal of dissolved phase contaminants will be a separate future action. The timing of the future action was not provided.

Although the composition of the ground water is variously monitored while under the refinery surface no attempt is made to determine the resulting river/lake water quality.

The City of Tulsa and HF Sinclair share responsibility for their contributions to the impairment of beneficial use goals especially Primary Body Contact Recreation (PBCR) which in addition to stormwater system delivered viruses and pathogens "*includes chemical, physical or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings*".

The Clean Water Act, 2022 INTEGRATED REPORT – 303(D) & 305(B), submitted by DEQ to the U.S. EPA reports stream segment OK120420010010_10, the 7.32 miles which includes Zink Lake, as lacking sufficient information to determine if the beneficial use PBCR is supported.

DEQ's Land Protection and Water Quality Divisions must make a joint statement regarding responsibility for determining the water quality of the river/lake. If not you, who?

15. Email from Ms. Lisa Brown to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated June 11, 2023. Subject MS4 Public Meeting request.

There absolutely must be a meeting for ODEQ and city of tulsa to explain MS4 report on draft permit and address public questions.

16. Email from Mr. Robert Jackman to Ms. Cailyn Prather, Mr. Michael Moe, and Mr. Patrick Rosch, DEQ; dated June 12, 2023. Subject: Psychedelic Frogs & Swimmers Itch!

After you read published August 2022 attachment [article by Bob Jackman titled "Psychedelic Frogs and Swimmers' Itch" appearing in the August 22, 2022, edition of The Oklahoma Observer] know ODEQ never responded to my request on what caused the Lake Eufaula 2022 detailed swimmer's itch [sic], which could have been similar to Josh Johnson 2015 reported Tulsa Arkansas River serious rash. Again please send ODEQ tests results of last summer's Lake Eufaula swimmers' Itch. Was it *Cercarial Dermatitis*? Or one of the following water borne diseases: *Dysentery*, *Giardia*, *E. coli*, *Hepatitis A-Virus* and *Salmonella*?

The explanation of Oklahoma's critical water quality improvement testing is requested and explained in last two paragraphs of attached "Psychedelic Frogs & Swimmer's Itch." The suggested Oklahoma modernizing its water quality tests standards has failed to be implemented in the current multi-million dollar taxpayers funded in progress 2025 "Oklahoma Comprehensive Water Plan." This costly plan by law is required ever [sic] 10 yeas [sic] by OWRB with assistance by ODEQ. And will it included ODEQ's long overdue but not forgotten **Mercury in [eatable] Fish Warnings** in forty plus public recreation lakes in Oklahoma?

Note below my first inquiry of record Oct. 1, 2022 on when Tulsa's MS4 Permit public comment is to be scheduled!

[Attachment: Email from Mr. Robert Jackman to Mr. Patrick Rosch, DEQ, deq-eqb@deq.ok.gov, and Mr. Kevin Canfield, Tulsa World, dated October 1, 2022. Subject: FW: Psychedelic Frogs & Swimmers Itch!]

Like many Tulsa area environment activists, we also want to know when Tulsa's MS4 permit is ready for public comment? The attached reprinted in several Oklahoma newspapers can be taken as – One such public comment! The attached message is clear on why ODEQ now needs to accelerate critical water quality testing on all public-use recreational Oklahoma major rivers and lakes!

17. Email from Mr. Walt Kosty to Ms. Cailyn Prather, DEQ; dated June 12, 2023, and follow-up email from Mr. Walt Kosty to Ms. Cailyn Prather, DEQ, dated June 12, 2023, providing mailing address; Subject: MS4 Public Meeting Request.

I am a Tulsa resident submitting comments and am requesting a public meeting regarding DEQ Pollutant Discharge Application No. OKS000201.

The proposed MS4 permit offers an opportunity for public involvement in the critical discussion of the safety of the Arkansas River, Zinc Lake, and related waters, and I believe that the people of our community should have an opportunity to discuss this permit prior to it being approved.

Please give consideration to my request.

18. Comment submitted through DEQ website from Mr. Evan Inman; dated June 14, 2023.

I am a resident of Tulsa and I am concerned about the Arkansas River. I request a public meeting to explain the pollution and the permit.

19. Email from Mr. Robert Jackman to Ms. Jennifer Lewis, Oklahoma Office of the Attorney General (OAG); dated June 14, 2023; forwarded to DEQ by Ms. Lewis on June 14, 2023. Subject: Today's Tulsa AR River Discoveries!

As a conservationist this interesting evidence supports Charles Pratts & my allegations Tulsa's new Zink Dam and Lake is a botched design... more ways than one.

Subject: Today's Tulsa AR River Discoveries (Correcting Copy Previously Sent 6/12/2023)

Today's River Park Trail Walk discovered more evidence New Zink Dam and Lake water may never be free of refinery gunk.

On 6/11/ 2023 Sunday's first route / 8- 9:15 AM I walked River Parks Trail started at 41st on north to new William Bridge site and returned. Observations; Due to river's slow low-flow [official site / Arkansas River Tulsa flow recorded 766 cfc. @ 7:30AM] The water was so low that from new River Bridge's west landing all the way up to 23rd St. Bridge, you could see clearly as if some giant painted with dark black paint on the entire west bank's bottom edge a continuous black strip as far as you can see up to 23rd St. Bridge. Caused by seeping subsurface refinery oily gunk or sludge.

Next drove up Riverside and west across 23rd St. Bridge, parked car on old cement plant large lot on bridge's west end north side, then walked to bridges' south side elevated walk-way for bikers and walkers to cross over Arkansas River to Riverside Drive. Standing there allows clear view of east bank of the Arkansas River all the way down to new Williams Bridge. Not surprised, but there isn't any dark black strips along the entire East Bank's lower water edge.

Standing on 23rd St. Bridge looking down into the flowing river for some time at the river's slow low-flowing waters running shallow over sharp fractured [Geologists' Nowata Formation] bedrock... something wasn't right! It was the flowing river's narrow western most side's perfectly too smooth and calm, unusually straight water flow bordered by West bank on one side and straight line separating it from normal river shallow rippled flow on other side: A straight lane of off-dark-orange colored semi-clear water 10-15 ft wide, one or more feet deep - an unending wet ribbon?

Then it hit me...oils of many types -they incredible can calm oceans, rivers and lakes waves and ripples. So how long will this slow continuous subsurface oily drip-drops from HF-Sinclair et.al. subsurface deposits, keep on keeping on calming along the west bank's small narrow river strip? While at same time this oily sheen-film keeps polluting, harming Tulsa's Arkansas River and new Zink Dam and Lake waters. The question of how long, is similar to Tar Creek Superfund Site - that can't be answered at this time!

Linked:

1. Watch and see how the shadow put a tablespoon of oil in water causes calming effect similar to results I observed at Tulsa's 23rd Bridge.
2. Excellent science video live color impactive of oil calming ripples.

For More on how Nowata Formation - river's bedrock could cause problems for more Sinclair Band-Aids... contact me. This geo-evidentiary explanations could end up in court!

1. https://www.youtube.com/watch?v=00PPPt7EJqo&ab_channel=psidot
2. <https://www.dailymail.co.uk/sciencetech/article-4032412/Incredible-video-shows-just-one-tablespoon-olive-oil-calm-half-acre-waves-lake-minutes.html>

20. Comment submitted through DEQ website from Mr. Scott Carter; dated June 15, 2023.

I am a resident of Tulsa concerned about the Arkansas River and the impact of pollution and pathogens from stormwater discharged into the River under the City of Tulsa's MS4 permit.

The Oklahoma State Constitution recognizes that all political power is inherent in the people and, for this reason among others, it is in the best interest of the public for ODEQ to honor this request and require that the City of Tulsa hold a public meeting on its MS4 draft permit so that we may be informed about its contents, make suggestions, and hold our municipality accountable for the proposed expenditure of our taxes.

21. Comment submitted through DEQ website from Mr. Gary Blackburn; dated June 15, 2023.

I am a resident of Tulsa/Tulsa Area and I'm concerned about the Arkansas River. I am requesting ODEQ and the City of Tulsa hold a public meeting to explain the permit.

22. Email from Mr. Hunt Hawkins, Hawkins Oil, LLC, to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated June 15, 2023. Subject: MS4 Public Meeting Request.

Hey guys, I had an interesting conversation with Shane Matson. I'd like to see this meeting occur, if anything, to ensure these waters are safe before my own family enjoys them. Thanks so much.

23. Comment submitted through DEQ website from Ms. Lynda Jacobs; dated June 16, 2023.

As a Tulsa resident affected by the proposed MS4 permit, I request ODEQ and The City of Tulsa hold a public meeting to discuss and explain the proposed draft permit so that I may be educated on its contents and contribute any and all suggestions I may have.

24. Email from Guy de Verges, de Verges & Associates; to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated June 16, 2023. Subject: MS4 Public Meeting Request for City of Tulsa

I would like to request a public meeting for the new proposed MS4 for the City of Tulsa.

25. Email from Mr. Robert Jackman to Mr. Charles Pratt, P.E., Quadrelec Engineering Corp.; Mr. Fred Storer; Ms. Kelsey Royce; Ms. Barbara VanHanken; Mr. Burt Mummolo, SBG TV; Mr. Kevin Canfield, Tulsa World; Ms. Gabriela Fernande; Ms. Hillary Young, DEQ; Mr. Jamie Dukes, Department of Health; Mr. Jake Miller, Heirloom Rusticales; Ms. Jennifer Lewis, OAG; and Ms. Lisa J Morris; with cc to Cailyn Prather, DEQ; dated June 17, 2023. Subject: Gunk-Ugly.

“Today’s Report ” –

5/17/2023 8:30 AM walked East River Park Trail to highest observation point approximately 150 yards north from new Williams Way Bridge under construction on-ramp. Then step off trail onto lush green grassed clearing called The Gathering Place’s “Great Lawn .” Then I continue up-grade to Great Lawn’s the highest elevation point along entire River Parks Authority East Trail.... which is against a low post iron fence.

From this vantage point looking downward & west, you will see as I did, the New Zink Dam and Lake and Kayak Canal - Construction Cofferdam abutting the east bank goes westward -- has a newly coated fresh refinery (?) Gunk band all the way till the cofferdam bends south under the new bridge’s two spans [sic] prior to it connecting with AR River West Bank. There, the construction cofferdam runs on south past PSO Power Plant. This new Gunk coating siting requires immediate inspections and answers!

This fresh, call it Gunk is est. a 4 plus feet high black band that coats all along the Construction Cofferdam’s north facing lower water contact edge; I did not recall seeing it in my 6/11/ 2023 Sunday report to all. What caused this? Possibly –

(A) A RR Tank Car spill on 11th Street I-244 RR Bridge?

(B) HF-Sinclair refinery’s one of its many subsurface Gunk deposits suddenly emptied into upstream AR River ?

(C) One of many HF-Sinclair connecting storage tanks pipes burst? (drone surveys needed !)

If the described were to occur again after this 2023 Fall’s completion of Tulsa new Zink Dam, and Lake - then everything currently protected and behind the temporary construction cofferdam will be black gunk-coated: The new Williams Way Bridge piers, kayak canal, new Zink Dam & gates! All Gunk-Ugly! This so-called Gunk can be residues of benzene, toluene, methyl ethyl ketone, liquid lead and crude oil. This tract has continuously been emitting since 1916 refinery men-made health harming toxication by its various owners. (Remember such refineries did help win WW I & II.)

Copy this report sent to ODEQ for additional investigation in conjunction with their current review -- will the future new Zink Lake’s Arkansas River waters be quality clean-water sustainable? That’s

required for ODEQ's approval of requested MS4 permit recently submitted by City of Tulsa... Eight or more years late I submit!

26. Email from Mr. Robert Jackman to Ms. Cailyn Prather, DEQ; Mr. Terry Ball, City of Tulsa; and Ms. Jennifer Lewis, OAG; with cc to Mr. Fred Storer; Mr. Charles Platt, Quadrelec Engineering Corp.; Ms. Kelsey Royce; Mr. Burt Mummolo, SBG TV; Mr. Kevin Canfield, Tulsa World; Mr. Chuck Garrett; Charles B. Davis Law; Mr. Arnold Hamilton, Oklahoma Observer; Ms. Barbara VanHanken; Mr. Gerard A. (Tony) Clyde, U.S. Army Corps of Engineers; Mr. Tony Clyde, U.S. Army Corps of Engineers; Ms. Hillary Young, DEQ; Mr. Jake Miller, Heirloom Rusticales; kelly@okecology.org; and Mr. Randy Krehbiel, Tulsa World; dated June 19, 2023. Forwarded to DEQ by Ms. Jennifer Lewis, OAG on June 19, 2023. Subject: Request for ODEQ's Public Meeting & Comments Re.: City of Tulsa Requested Permit.

Dear OK State Attorney General – G.T. Drummond

Suggest after reading this --- Do not allow your children or grandchildren to swim in most of Oklahoma Lakes until you straighten out DEQ and for sure never-never swim in the soon to be finished / Tulsa's Arkansas River new Zink Lake.

Thanks for Doing a Great Job

Subject: Request for ODEQ Public Meeting and my previously emailed (1.) 6/11/2023 & (2.) 6/17/2023 evidence based comments on proposed City of Tulsa MS4 Permit Public Comment Hearing.

I'm [name and address omitted] a Tulsa resident submitting these emailed comments and request for an objective public meeting to Caily Prather, Contact Person DEQ, and to Terry Ball, City of Tulsa, regarding Refinery Pollutants Discharging into Tulsa's new Zink Dam & Lake & Kayak Canal's – Arkansas River water and subject air zone. Please review and expeditiously reply!

Application No. OKS000201. Text in italics are direct quotes from DEQ publications related to the proposed MS4 permit. *Public Notice of Draft Permit*

Pursuant to 27A OS § 2-14-302, persons wishing to make comments concerning the draft permit may do so by sending the comments in writing to the Contact Person for DEQ, at the address listed below, within 30 days after the date of publication or mailing. Comments should include: (1) name and address of the interested person, (2) the application name to which the request relates, (3) the nature and basis of the interest of the person affected, and (4) a statement of the objection or comments, the basis of the objection or comment, and any requested action by DEQ.

27A OS § 2-14-302 says:

Title 27A. Environment and Natural Resources, §27A-2-14-303. Public meeting – Procedure, says: “The Department shall expeditiously schedule and hold a formal public meeting if the Department receives written timely request for such meeting, pursuant to the provisions of Section 2-14-302 of this title, and determines there is a significant degree of public interest in the draft denial or draft permit.” DEQ has taken liberties with the Oklahoma Statute in adding “a statement of the objection or comment, the basis of the objection or comment, and any requested action by DEQ.” The only criteria DEQ can apply to a decision to hold a public meeting is the degree of public interest.

- (1.) **From** Bob Jackman emailed to ODEQ & Tulsa Section Arkansas River conservation supporters: 6/11/2023 Today's River Park Trail Walk discovered more evidence proving New Zink Dam and Lake water may never be clean free from refinery Gunk.

[Text substantively duplicates text from Comment # 19.]

- (2.) **From:** Robert Jackman also emailed to supporters.

Cc: Cailyn Prather

Subject: Gunk Ugly – Today's Report

6/17/2023 8:30 AM

[Text substantively duplicates text from Comment # 25 above, with noted additions.]

[First paragraph after "Today's Report" – date updated from 5/17/2023 to 6/17/2023.]

[Addition to lettered list.] (D) River Flow Chart past week show no major ups or down spikes which could theoretically trigger more subsurface Gunk discharging into this section of AR River.

[Insertion of revised text into paragraph that begins 'If the described...' immediately after the sentence 'All Gunk Ugly!'] This refinery so-called "Gunk" residues contains according to – Google: Wilma Subra Nationally Recognized Expert - **benzene, toluene, methyl ethyl ketone, liquid lead and crude oil.** / Note in City of Tulsa proposed MS4 permit – Subra's listed harmful refinery contaminates in 'Gunk' components are omitted! Where Bacterial / E. coli the only listed harmful subjects in City of Tulsa's proposed MS4 permit! The Tulsa Arkansas River section of 1,200 plus acre tracts now titled HF-Sinclair East and West refinery tracts; Has spilled, dumped and emitted since 1916, all listed harmful man-made refineries' health harming toxicants by its current and past various owners. (Remember such refineries did help win WW I & II.)

[Insertion of revised paragraph beginning 'Copy this report...'] Send this report for additional investigation regards [sic]: Will all future new Zink Lake's activities in & on Arkansas River waters have quality clean-water sustainable? That's what's required for ODEQ's approval of requested MS4 permit recently submitted by City of Tulsa. **Eight or more years late I submit!**

[Insertion of additional follow-on text.] Respectfully submit the above discovered evidentiary facts alone justify proposed Public Comment / Hearing on MS4 Subject Matters.

Post Script: The BJ first 10/1/22 unanswered so far – request to P. Roach -ODEQ and T. Ball-Tulsa regards Tulsa MS4 Public Comment Hearing. Add Oklahoma public harmed-health to August 2022's – 47 Lake Eucha swimmers infected- the cause questioned in BJ Published *Psychedelic Frogs & Swimmer's Itch*, first emailed Aug 2022 to ODEQ and again recently to C. Prather & T. Ball. All this has never been acknowledged or answered. Realizing those in higher grades may be the responsible delinquent parties – but the end results without corrective action measures possibly leaves ODEQ & City of Tulsa – **Guilty of Creating and Maintaining Serious Public Health Nuisances.** (Ask attorneys – criminal or civil?)

27. Comment submitted through DEQ website from Ms. Kelsey Royce; dated June 23, 2023.

I am a resident of Tulsa living in a 100yr floodplain by the Arkansas River who has concerns about the 303(d) impairment of the Arkansas River in Tulsa.

After having attended several stormwater/storm sewer/Infrastructure Update meetings and not having adequate address of my concerns about runoff pollution prevention and water quality assessment, I ask that ODEQ and The City of Tulsa honor the right of the citizens of Oklahoma to be informed and to participate in our own governance by holding a public meeting to explain the draft MS4 permit, hear any input I may have and incorporate my suggestions as necessary.

28. Comment submitted through DEQ website from Ms. Marianne Haddad; dated June 23, 2023.

I am a resident of Tulsa living in a 100yr floodplain by the Arkansas River who has concerns about the 303(d) impairment of the Arkansas River in Tulsa.

After having attended several stormwater/storm sewer/Infrastructure Update meetings and not having adequate address of my concerns about runoff pollution prevention and water quality assessment, I ask that ODEQ and The City of Tulsa honor the right of the citizens of Oklahoma to be informed and to participate in our own governance by holding a public meeting to explain the draft MS4 permit, hear any input I may have and incorporate my suggestions as necessary.

Note: Due to the weather catastrophe on 6/18/23 requesting a public hearing by mail is not possible due to lack of mail service – again, because of the 6/18/23 storm and resulting power outages.

29. Comment submitted through DEQ website from Mr. Gary Haddad; dated June 23, 2023.

I am a resident of Tulsa living in a 100yr floodplain by the Arkansas River who has concerns about the 303(d) impairment of the Arkansas River in Tulsa.

After having attended several stormwater/storm sewer/Infrastructure Update meetings and not having adequate address of my concerns about runoff pollution prevention and water quality assessment, I ask that ODEQ and The City of Tulsa honor the right of the citizens of Oklahoma to be informed and to participate in our own governance by holding a public meeting to explain the draft MS4 permit, hear any input I may have and incorporate my suggestions as necessary.

30. Comment submitted through DEQ website from Ms. Ann Marie Beer; dated June 23, 2023.

I am a resident of Tulsa living very near the 100yr floodplain by the Arkansas River who has many concerns about the 303(d) impairment of the Arkansas River in Tulsa.

After having attended several stormwater/storm sewer/Infrastructure Update meetings and not having adequate representation to address my concerns about runoff pollution prevention, preventative maintenance and water quality assessments, I ask that ODEQ and The City of Tulsa honor the right of the citizens of Tulsa and the State of Oklahoma to be informed and to participate in our own governance by holding public meeting(s) to explain the draft MS4 permit in detail, hear any input I may have and incorporate my suggestions as necessary. Currently, it appears that our city government cares very little if any about our input.

31. Comment submitted through DEQ website from Ms. Nancy Moran and email from Ms. Nancy Moran, RN; to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated June 25, 2023. Subject: Hold public meeting on MS4 permit for Zink Lake.

As a Tulsa resident affected by the proposed MS4 permit for Zink Lake on the Arkansas River, I request ODEQ and The City of Tulsa hold a public meeting to discuss and explain the proposed draft permit so that I may be educated on its contents and contribute any and all suggestions I may have.

As a public health nurse I am concerned about the safety of recreational water use in Zink Lake. What is the City of Tulsa planning to do in order to safeguard public health, measure contaminants, prevent pollution, manage parasite exposure that leads to swimmer's itch.

Thank you.

32. Comment submitted through DEQ website from Mr. Brendan O'Brien; dated June 25, 2023.

I'm concerned that zinc lake will not benefit the city of tulsa and cause more harm than good and will pose an expensive public health hazard. Several species of fish will no longer be able to live in the Arkansas as a result of this proposal: A very bad idea poorly executed, with no safeguards to public health. We need public hearings of said proposal and a correction or priorities.

33. Email from Ms. Emily Vickers to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated June 26, 2023. Subject: Zinc Lake Public Comments.

I am the acting chair of the Green Country Sierra Club, a local environmental organization. I'm writing to request a public meeting regarding Zinc Lake. The water quality standards for human activities and accidental ingestion have not been met. I would love to discuss this in person and in more detail. The public deserves this opportunity.

I'd also like to request that the time period for public input gets extended by at least one more week from today, due to the climate-induced natural disaster Oklahoma is experiencing. This is another reason I am requesting a public meeting for this topic. More people need to have an opportunity to not only learn about the topic, but also give their input.

34. Comment submitted through DEQ's website from Ms. Gabrielle Vickers; dated June 27, 2023.

There are substantial reasons for the citizens of Tulsa to be concerned about the claims of the potential benefits (and complete lack of downsides) of this project. Please open yourself to public comments and a thorough environmental review. You will likely face mounting legal issues in the absence of such transparency. Please remember who you serve – the people of Tulsa.

35. Email from Ms. Kara Lynch to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated June 27, 2023. Subject: MS4 Permit public meeting.

I am a resident of Tulsa living in District 3. I am writing to request that you all hold a public meeting to explain the permit and answer questions from the public about the new permit as it will affect the river and our community for the next 15years.

36. Email from Ms. Barbara VanHanken, Tulsa Area Arkansas River Advocates; to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated June 27, 2023. Subject: Request for a Public Meeting and Comments regarding proposed MS4 permit.

I was born in Tulsa and have been a resident for over 70 years. I want to share with you about my concerns for the quality of the Arkansas River today and about the renewal of the MS4 permit for Tulsa. I also request a public meeting about this permit. I know many people would like to know more about the quality and health of our river water. The public input should be prioritized on all permit renewals.

At one time there was a requirement to use public signage to tell the public where it was safe, if at all, to recreate in the Arkansas River water. Many years ago these signs were removed for unknown reasons. I request that if the city of Tulsa plans on encouraging public interaction with the river water,

these warning signs must be in place and easily read and understood. International symbols should be used.

We know that pollution is entering the river by federal permit and I think this indicates how serious the federal agency and the city leaders considers the presence of pollution from the refineries waste water and many seepage sites. Bacteria levels are considered too high coming from most tributaries into the Arkansas. These two pollution sources should be permanently cleaned up and independently test regularly the river water that is open to bodily contact. This information should be boldly posted publicly.

I have recently learned about the Berryhill community is still relying on septic tanks that are submerged in flood water every few years. This is a grave health problem for the citizens of Berryhill and for the public that enters the river below Berryhill. This is a blight on the entire county to allow this to continue.

I urge you to host a public meeting about the Arkansas River quality and announce this to all media methods to ensure the public is notified. One ad in the legal section of the Tulsa World is very inadequate.

We should not be treating this river like it was the depository for every toxic molecule and compound that is considered “common” waste when it is very toxic to humans and the natural wildlife. We are not being good stewards of the beautiful land we call home!

37. Email from Mr. Fred Storer to unknown recipients, with cc to Mr. Michael Moe, DEQ; dated June 29, 2023. Subject: Requests for a MS4 Formal Public Meeting.

On June 15, 2023, notice was republished in the Tulsa World regarding the City of Tulsa’s proposed MS4 permit.

The reason for republishing the notice was probably to correct the instructions for sending comments to Oklahoma DEQ. (If you have already submitted comments there is no need to resend.)

Oklahoma law (27A OS 2-14-302) provides an opportunity for citizens to request a Formal Public Meeting which is needed in this case for DEQ and the City to explain the 56-page permit and justify the failure to require tests of the river/lake water and prompt reporting of the results. River/lake sampling will determine what recreational uses should be controlled to protect public health.

27A OS 2-14-302, in part says: “...shall provide for a set time period for public comment and for the opportunity to request a formal public meeting on the respective draft denial or draft permit.”

However, the published notice says:

“Requests for the public meeting should include: (1) name and address of the interested person, (2) the application name to which the request relates, (3) **the nature and basis of the interest of the person affected, and (4) a statement of the objection or comment, the basis of the objection or comment, and any requested action by DEQ.**”

(Emphasis added)

DEQ’s expansion of the statute language is inappropriate and can be ignored. If DEQ fails to respond to citizen requests for a Formal Public Meeting expect vigorous objections to the Attorney General and EPA.

38. Email from Mr. Robert Jackman to Ms. Jennifer Lewis, OAG; dated July 6, 2023. Forwarded to DEQ by Ms. Lewis on July 6, 2023. Subject: FW: Gunk-Ugly!

Latest interesting development.

Regards ...

[Includes forwarded email from Mr. Robert Jackman to Mr. Fred Storer; dated July 5, 2023. Subject: FW: Gunk-Ugly!

Recall the below **“Today’s Report”** was also sent to ODEQ’s Cailyn Prather who acting its *last paragraph* ordered one of ODEQ’s Environment Specialist (Field Investigative Inspector) Adrian Sherman to conduct preliminary review of my *described complaint*. Mr. Sherman called and we met at the New Zink Dam and Lake Project 6/ 29/2023 2:45 PM observing together from inside the construction zone, the questioned gunk stripe running along the construction cofferdam’s water edge. Sherman will at a later day actually gather samples when AR River flow is favorable for ODEQ to obtain my complaint’s alleged gunk samples. Samples for lab testing to determine their actual composition; If originated from seeping refinery subsurface gunk, thus carried by AR River waters and potentially coating alleged gunk coatings on Tulsa’s new near future Zink Dam & Lake and Kayak Canal!

Ms. Prather received my emailed complaint 6/17/2023 and on 6/29/2023 upon her orders had an ODEQ Inspector join me entering restricted New Zink Dam & Lake Project property.

[Includes forwarded email from Mr. Robert Jackman to Mr. Charles Pratt, P.E., Quadrelec Engineering Corp.; Mr. Fred Storer; Ms. Kelsey Royce; Ms. Barbara VanHanken; Mr. Burt Mummolo, SBG TV; Mr. Kevin Canfield, Tulsa World; Ms. Gabriela Fernande; Ms. Hillary Young, DEQ; Mr. Jamie Dukes, Department of Health; Mr. Jake Miller, Heirloom Rusticales; Ms. Jennifer Lewis, OAG; and Ms. Lisa J. Morris; with cc to Cailyn Prather, DEQ; dated June 17, 2023. Subject: Gunk-Ugly.]

[Text substantively duplicates text from Comment # 25 above, with noted additions.]

[First paragraph after “Today’s Report ” – date updated from 5/17/2023 to 6/17/2023.]

39. Email from Ms. Judy Wyatt Trickey to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated July 7, 2023. Subject: FW: ALERT: Comments on MS4 Permit changes due Monday, June 26!

I would like to request a public meeting to discuss the proposed MS4 Permit. In talking with many friends and neighbors, there is a general concern about the full extent and understanding of the Proposed MS4 Permit. As citizens taking interest in our local government operations, having a public meeting that is well publicized, allowing people to arrange childcare, etc., would be very beneficial. Do you support a public meeting with our citizens? It unfortunate I’ve been unable to respond within the timeframe of June 26th. Thank you for your time and consideration of this request.

[Includes forwarded email from Ms. Barbara Vanhanken to herself and unknown recipients; dated June 24, 2023. Subject: ALERT: Comments on MS4 Permit changes due Monday, June 26!]

Please take a few minutes to read the following message and make a comment about the MS4 Permit for Tulsa. Fred Storer put together this information to help with making comments. We really need to request a public meeting about this. If you already commented, thank you very much. Barbara

MS4 Permit is key to safe uses of Zink Lake

This email is distributed as a public service by the Arkansas River Rights Coalition, please forward it to friends and family. Today, May 25, 2023, the City of Tulsa published notice that a 56 page draft MS4 permit is available for comment. The draft permit is available here: <https://www.deq.ok.gov/permits-for-publicreview/> (go to Tulsa, 5/12/2023, Click to View)

MS4 stands for Municipal Separate Storm Sewer System, an EPA permit that is administered by the Oklahoma Department of Environmental Quality. The new permit will replace the original 2003, 35-page permit that has been in administrative limbo since it expired on October 15, 2016.

Tulsa, like most cities, has two sewer systems, the sanitary system delivers sewage to one of four treatment plants which treat and disinfect water before releasing to the Arkansas River or Bird Creek.

The storm sewer system delivers rainwater runoff to the river via hundreds of outfalls, some large, such as the 22' x 15' conveyance just south of the 21st Street bridge on the left bank. Some creeks within the city limit discharge directly to the river such as Crow Creek. Many more are small, some only 15 inches in diameter. Stormwater entering the river contains pathogens and viruses (including Covid) from many sources. These contaminants are measured by counting E. coli bacteria, a convenient surrogate for pathogens and viruses in the feces of warm-blooded animals.

E. coli, Fecal Indicator Bacteria (FIB), are key to determining safe exposure to Zink Lake water. Sources of FIB include leaks from the sanitary sewer that infiltrate the stormwater system, animals (wild and domestic), people including the homeless (which have few alternatives), failing septic systems e.g., the Berryhill community, and resident Canada Geese.

The major issue, although not adequately expressed, in the draft MS4 permit is public health. Oklahoma's Water Quality Standards, which are consistent with national practice, establish limits and measurement criteria that, if met, assure that the frequency of illness resulting from water contact is tolerable.

Measurements by the Tulsa City-County Health Department preceded the construction of the first Zink Lake and continued through 1994. The Health Department's work consistently showed the stormwater system (starting at the 11th Street outfall) was the most important source of FIB.

FIB measurements ended sometime before voters' approval of funding for the new Zink Lake on April 5, 2016. The Arkansas River, including Zink Lake, has not met Water Quality Standards for swimming and other activities that involve facial contact with the water since the standards were established in the 70's.

The premises on which the New Zink Lake were sold to voters were at best problematic and the new MS4 permit can be the vehicle for delivering realistic results. It is not necessary to study the draft MS4 permit. However, it is important to realize that the permit once approved by ODEQ and the EPA will guide the operation of Zink Lake and the proposed Jenks Lake for the next fifteen years.

A public meeting to explain the permit and answer questions will be called by ODEQ if, in their opinion, there is adequate interest.

To comment on the proposed MS4 permit and make a request for a public meeting sent emails to:

Terry Ball, City of Tulsa, TBALL@cityoftulsa.org AND Cailyn Prather, Oklahoma DEQ, Cailyn.prather@deq.ok.gov

The final comment day is, Monday, June 26, 2023, at 5pm.

40. Email from Mr. Fred Storer to Mr. Bruce Dart, Ph.D.; Mayor G.T. Bynum; Ms. Karen Keith; Ms. Jeannie Cue; Ms. Laura Bellis; Mr. Jeff Edwards; with blind cc to Mr. Michael Moe, DEQ; dated July 10, 2023. Subject: Fwd: River Baptisms near the Boat House, Ark. River, Tulsa 7.9.2023.

I doubt that the participants (as evidenced by the license plates on the cars) had any knowledge of the river water quality which incorporates the west refinery groundwater seeps (oil, benzene, and other chemicals of concern) and pathogens and viruses from Berryhill creek and the Tulsa stormwater system.

[Includes forwarded email from Mr. Robert Jackman to Mayor G.T. Bynum, City of Tulsa; with cc to Mr. Charles Pratt, P.E., Quadrelec Engineering Corp.; Ms. Kelsey Royce; Ms. Barbara VanHanken; farmers@threespringsfarm.com; Mr. Jake Miller, Heirloom Rusticales; Mr. Ty Jackman; Mr. Fred Storer; Mr. Randy Krehbiel, Tulsa World; rcox723480@aol.com; Alphie; Mr. Kevin Canfield, Tulsa World; Mr. Mike Ray; and Mr. Burt Mummolo, SBG TV; dated July 9, 2023. Subject: River Baptisms near the Boat House, Ark. River, Tulsa 7.9.2023.

“Baptisms Down By Tulsa’s Boat House “

Good Lord The Benzene Ghost
We Dunk Thee in These Unholy Refinery Waters
Flowing on to Arkansas - Blessed by Bob & Fred
May The River’s Toxicant Waters Not Make Thee Forever Brain Dead!

Up Arkansas River from Mayor Bynum Imploded Costly Dam Dream
They Come From A-Far To Sing...
“May Pollutants From Up-Stream Superfund Sites
Not Give Thee The-Runs Tonight!”

See Pics Story -- True Poem! **by Bob Jackman** (Will Tulsa Mayor Bynum post nation’s 1st river sign “ Warning: Bad Water-No River Baptisms Here “)

[Includes forwarded email from Mr. Robert Jackman to himself and unknown recipients; dated July 9, 2023. Subject: River Baptisms near the Boat House, Ark. River, Tulsa 7.9.2023.

[Forwarded email consists of two inserted photographs.]

[Photo caption:] Bob, about 1pm today, cars (and two passenger vans) parked at the Boat House had plates from all over the country. Iowa (several), CO, Washington, Calif., Illinois, etc. I did not notice a single car from Oklahoma.

41. Letter from Ms. Kelsey Royce to Ms. Cailyn Prather, DEQ; and Mr. Terry Ball, City of Tulsa; dated July 12, 2023, and received July 14, 2023. Re: Request for Public Meeting, Draft Pollutant Discharge (MS4) Application No. OKS000201.

I am a resident of Tulsa living near the Arkansas River and am requesting a public meeting (hearing) to address concerns regarding The City of Tulsa’s failure to acknowledge ongoing water quality and stormwater pollution issues. After having attended several stormwater/Infrastructure Update meetings and not receiving adequate address of my concerns about runoff pollution prevention and water quality assessment, I ask that ODEQ and The City of Tulsa honor the right of citizens to be informed about and to participate in our own governance by holding a public meeting on the draft MS4 permit

(OKS000201), hear any input concerned citizens like myself may have, and to incorporate our suggestions as necessary.

Pursuant to the notice published on June 15, 2023 in the Tulsa World, receipt of this letter constitutes acknowledgement that a formal and proper request for a public hearing in accordance with 27A OS 2-14-302 has been made on the draft permit issued to The City of Tulsa by the Oklahoma Department of Environmental Quality “based on a Tier II application filed on April 21, 2016, for a renewal permit with DEQ Draft Pollutant Discharge Application No. OKS000201, City of Tulsa Municipal Separate Sewer System [MS4], Tulsa County, Oklahoma.”

Please find questions and comments enclosed. I look forward to attending the public hearing when it is scheduled.

Encl: Questions/Comments Regarding Application No. OKS000201

1. Public health should be the highest priority for the City of Tulsa yet no dedicated and specific testing schedules are named or outline in this permit. This should be a mandatory part of this Phase II permit and test results/data freely available and transparently posted online or onsite. What is incorporated in this permit reflective and supportive of prioritizing public health?
2. Rip-rap and concrete aren't long term solutions which comport with the reality of climate change and often contribute to or exacerbate existing runoff loads. How are green, low-impact erosion control and management techniques incorporated into this permit at the design stage of a project? This should be a top priority for scoring and awarding RFPs/RFBs.
3. How will public access points for data and information be specifically described for members of the public to make informed decisions about whether we can safely have contact with water bodies overseen in this permit?
4. How will the City of Tulsa measure the impact from pollution and pathogens in tributaries leading to the Arkansas River?
5. How will we know when stormwater discharges contributing to the pollution of the Arkansas River in Tulsa have been observed?
6. What steps in the MS4 permit dictate actions to be taken if chemicals of concern, pathogens, and nonpoint source pollution loads exceed allowable levels and expose the public to potential harm?
7. What penalties will be imposed or enforcement actions take by ODEQ should the City of Tulsa be found in violation of this permit?
8. What actions can citizens take if The City of Tulsa fails to observe or act in accordance with its own permit? If we make a complaint to ODEQ, what will ODEQ do to right the situation? And if the offense is repeated or perpetual, what will ODEQ do to escalate?
9. Will ODEQ insist that the City of Tulsa use pollution booms or any other methods of pollution prevention to stop detritus from entering the Arkansas River via its tributaries?
10. The City of Tulsa must adequately fund its MS4 program and part of this permit should be a reasonable accounting of costs and expenses proportional to the goals the City state it is capable of realizing. Please insist that this is done. Otherwise, we just have words on paper and unobtainable, lofty goals.
11. Because we have a situation here in Tulsa where recreational use of a 303(d) listed waterbody (Arkansas River for 7.32 miles in Tulsa) is being encouraged by the City of Tulsa, how will the MS4 permit minimize public exposure to pollution in Zinc Lake?

Submitted on July 12, 2023 by Kelsey Royce as enclosure sent via certified mail to Cailyn Prather, Oklahoma Department of Environmental Quality and Mr. Terry Ball, Department of Public Works,

City of Tulsa; CC: Mr. Nicolas Scott, Physical Scientist, Water Quality Protection Section, U.S. Environmental Protection Agency, Region 6 via email Scott.Nicholas@epa.gov.

42. Email from Mr. Robert Jackman to Ms. Jennifer Lewis, OAG; dated July 12, 2023. Forwarded to DEQ by Ms. Lewis on July 12, 2023. Subject: FW: River Baptisms near the Boat House, Ark. River, Tulsa 7.9.2023.

[Includes forwarded email from Mr. Robert Jackman to Mr. Jared B. Ward, Holly-Frontier Sinclair Refinery; Ms. Hillary Young and Ms. Cailyn Praither, DEQ; Mr Burt Mummolo, SBG TV; Mr. Terry Ball, City of Tulsa; Ms. Barbara Van Hanken; with cc to pwheeler@earthjustice.org; dated July 12, 2023. Subject: FW: River Baptisms near the Boat House, Ark. River, Tulsa 7.9.2023.

[Text substantively duplicates text from Comment # 40, including inserted photographs with revised caption.]

[Photo caption:] Bob, about 1pm today, cars (and two passenger vans) parked at the Boat House had plates from all over the country. Iowa (several), CO, Washington, Calif., Illinois, etc. I did not notice a single car from Oklahoma. I doubt that the participants (as evidenced by the license plates on the cars) had any knowledge of the river water quality which incorporates the west refinery groundwater seeps (oil, benzene, and other chemicals of concern) and pathogens and viruses from Berryhill creek and the Tulsa stormwater system.

43. Comment submitted through DEQ website from Mr. Evan Inman; dated June 15, 2023.

Because the City of Tulsa has appropriated municipal sales taxes to construct a recreational impoundment of water (Zink “Lake”) by constructing a low head dam (replicating the failed one of the 1980s) in the Arkansas River where hydrocarbons and other chemicals of concern have seeped and are seeping into the River, the MS4 permit under review must include testing for chemicals that the public will potentially be exposed to through contact with the water. It is a matter of public record that HF Sinclair is seeping benzene, naphthalene, 1-methyl naphthalene, 2-methyl naphthalene, bis(2-ethylhexyl)phthalate, MTBE, and arsenic into the Arkansas River where the impoundment dam meets the west bank of the River and The City of Tulsa knows or should know this. Please see the recent news story: Is the water in the Arkansas River safe? [https://www.fox23.com/news/fox23-investigates/fox23-investigates-is-the-water-in-the-arkansas-river-safe/article_3538671a-21af-11ee-ab30-77066c81404e.html]

Currently, there are no provisions outlined in the City of Tulsa’s draft MS4 permit describing the chemicals of concern which will be tested for; this is dereliction and ODEQ must require testing of the River for the aforementioned chemicals of concern to determine the risk posed to public. Particularly since the multiplicative effect of exposure to combinations of these chemicals could affect children, elderly, and particularly sensitive people in deleterious ways.

Will ODEQ mandate the testing of benzene, naphthalene, 1-methyl naphthalene, 2-methyl naphthalene, bis(2-ethylhexyl)phthalate, MTBE, and arsenic in the City of Tulsa’s permit?

Considering the news report mentioned above and the failure of INCOG to regularly test the water in the River (dissolved oxygen, pH, temperature notwithstanding), it should be required that the city use a third party to sample and test the water. And I don't mean INCOG.

It is in the best interest of the public that ODEQ require the city to hold a public meeting without undue delay and undue burden. The last week of July/first of week of August is a good time for this hearing

since many members of the public have been patient and ODEQ should have expected this meeting as early as June 12 and planned accordingly <https://ktul.com/news/local/residents-want-public-meeting-to-discuss-water-permit>. Another reason for holding this meeting during the timeframe named above is that it falls within 45 days of the issuance of the public notice for the draft permit and changes can be made before any final draft is approved or submitted to the EPA.

44. Email from Mr. Fred Storer to Ms. Hillary Young and Mr. Michael Moe, DEQ; dated July 28, 2023. Subject: Water Testing Plan for Zink Lake.

As you can tell from Joe Long's reply, he is not the "appropriate contact". The appropriate contacts are Michael Moe for the city's MS4 permit and for the refinery leaks to the river, Hillary Young.

It appears the only hope of getting water quality data to determine if beneficial uses are not impaired is through sampling requirements written into the MS4 and RCRA permits.

[Includes forwarded email from Mr. Joe Long, DEQ, to unknown recipients; dated July 27, 2023. No Subject.]

DEQ Water Quality Division representatives met with representatives from the City of Tulsa – Water and Sewer Department on May 31, 2023 to discuss the Zink Lake area of the Arkansas River. DEQ is only serving in an advisory role for the Arkansas River monitoring effort. Parameters, monitoring frequency, and monitoring locations have yet to be determined. The monitoring plan decisions will be made by City of Tulsa personnel. DEQ will not be involved in sample collection and testing.

DEQ does not make any determinations or certifications regarding the safety of primary body contact recreation in any waterbodies. Waterbody assessments performed by DEQ for the Integrated Report are based on analysis of data (when available) collected over a five-year period. Integrated Report assessments should not be used to determine the current state of the waterbody with regard to body contact recreation. These assessments are a long-term trend analysis and not an indicator of current status.

Please let me know if you have any questions or need any additional information.

[Includes forwarded email from Ms. Hillary Young, DEQ, to Mr. Charles Pratt, P.E., Quadrelec Engineering Corp.; with cc to Mr. Fred Storer; Ms. Kelsey Royce; Ms. Barbara Van Hanken; and Mr. Joe Long, DEQ; dated July 27, 2023. Subject: RE: Water Testing Plan for Zink Lake.]

The Oklahoma Department of Environmental Quality's Water Quality Division is working with the city on that project. Joe Long, Environmental Programs Manager of the Watershed Planning Section, is the appropriate contact and will respond. I have also cc'd him on this email.

Thank you.

[Includes forwarded email from Mr. Charles Pratt, P.E., Quadrelec Engineering Corp., to Ms. Hillary Young, DEQ; with cc to Mr. Fred Storer; Ms. Kelsey Royce; and Ms. Barbara Van Hanken; dated July 25, 2023. Subject: Water Testing Plan for Zink Lake.]

The city engineer briefed the Tulsa city councilors a short time ago that they are working on a comprehensive water testing plan with ODEQ input for certifying the Zink Lake area of the river as

safe for primary body contact next year. The city has also posted that bit of information on their website for the new lake.

I have the following questions.

1. Have they started that process with your agency?
2. Are they including testing for industrial and refinery chemicals both soluble and insoluble?
3. How often will they be testing?
4. Where will they be testing?
5. Will ODEQ be involved in the sample collection and testing?

45. Comment submitted through DEQ website from Ms. Helen King; dated August 1, 2023.

What department oversees monitoring? Who actually conducts the testing? How often is it conducted, Is testing conducted by a certified lab?

46. Email from Mr. Fred Storer to Mr. Michael Moe, DEQ; dated August 1, 2023. Subject: Fwd: MS4 Permit Public Meeting, 1pm, Sept. 7.

FYI.

[Includes forwarded email from Mr. Fred Storer to Ms. Kelsey Royce; Mr. Charles Pratt, P.E., Quadrelec Engineering Corp.; Ms. Barbara Van Hanken; Ms. Susan Arkeketa; Mr. Robert Jackman; Ms. Neera Singh; Mr. Walt Kosty, Ms. Kelly Bostian, Mr. Jake Miller, Heirloom Rusticales; Mr. Bryon Helm; Ms. Molly Bullock; Ms. Helen King; Mr. Michael Koster; Mr. Shane Matson; Mr. Chip Gaberino; Mr. Matthew Newman; Mr. Freeman Culver; Mr. Blake A. Johnson, Tulsa Tax Law; Mr. Scott Carter; Mr. Charles Maguire, EPA; Mr. Bruce Dart, Ph.D., Tulsa Health Department; Ms. Laura Bellis, Tulsa City Council; Mr. Zac Carman; Mr. Scott Hood; Mr. John D. Olivier; Mr. Robert Lee; Mr. James Rea, Tulsa County; Ms. Karen Keith, Tulsa County; tulsafeedback@hfsinclair.com; with cc to Ms. Janna Clark, Fox23 TV; Mr. Burt Mummolo, SBG TV; Mr. Randy Kehbiel, Tulsa World; and Mr. Kevin Canfield, Tulsa World; dated August 1, 2023. Subject: MS4 Permit Public Meeting, 1pm, Sept. 7.]

This is the long-awaited announcement of the public meeting requested by most of you.

It will be at the **Centennial Center at 1028 E 6th, 1 pm, September 7.**

The **draft** MS4 permit does not require the city to sample the river for Fecal Indicator Bacteria using the sampling protocol specified in the Oklahoma Water Quality Standards.

Sampling frequency and locations must be specified in the permit to determine if Zink Lake meets the Water Quality Standard for Primary Body Contact Recreation.

The results of the sampling should be posted on a city website as soon as it is available.

The city should be required to make the geometric mean calculation required by the Water Quality Standards and report the pass-fail results.

Please distribute this to your email and social media contacts.

47. Email from Mr. Fred Storer to Mr. Michael Moe and Mr. Patrick Rosch, DEQ; dated August 10, 2023. Subject: Fwd: HF Sinclair's public meeting, Wednesday, August 9, 6 pm.

Mr. Moe, I should have copied you, my apologies.

[Includes forwarded email from Mr. Fred Storer to Mr. Scott Carter; Mr. Bruce Dart, Tulsa Health Department; Mr. Shane Matson; Mr. Jake Miller, Heirloom Rusticales; Mr. Charles Pratt, P.E., Quadrelec Engineering Inc.; Mr. Kevin Canfield, Tulsa World; Arkansas River Rights Coalition; Mr. Scott Hood; Mr. Robert Jackman; Ms. Nancy Moran; Ms. Barbara Van Hanken; Ms. Susan Arkeketa; Mr. Burt Mummolo, SBG TV; Ms. Janna Clark, Fox23 TV; Mr. Robert Lee; Mr. James Rea, Tulsa County; John Dawson (Amelia); Ms. Neera Singh; Mr. Randy Krehbiel, Tulsa World; Mr. Jim Mathewson; Mr. Blake A. Johnson, Tulsa Tax Law; Mr. Guy de Verges; Ms. Kelly Bostian; Mr. Charles Maguire, EPA; Ms. Molly Bullock; Ms. Cheryl Cheadle Oklahoma Department of Conservation (ODC); Mr. Matthew Newman; Mr. Walt Kosty; Mr. Michael Koster; Safer Tulsa; with cc to Ms. Hillary Young, DEQ; Ms. Jeannie Cue, Tulsa City Council; Ms. Laura Bellis, Tulsa City Council; Mr. Jake Miller, Heirloom Rusticales; Ms. Karen Keith, Tulsa County; Mr. Blake Ewing, City of Tulsa; and tulsafeedback@hfsinclair.com; dated August 10, 2023. Subject: HF Sinclair's public meeting, Wednesday, August 9, 6 pm.

My takeaways from the HF Sinclair Public Meeting Aug. 9.

HF Sinclair's presentation:

- It was entirely about work inside the East Refinery and on the second containment cap (located on the shore leased by the Refinery to the River Parks Authority, upstream from the dam).
- HF S did not even mention the releases from the West Refinery (which will have a greater impact on Lake water quality than the East Refinery).
- Hillary Young was introduced as ODEQ's RCRA representative.

Responses to audience questions:

- HF S accepts no responsibility for river/lake water quality.
- Ms. Young said she would refer river water quality questions to the appropriate office in ODEQ.
- Blake Ewing, City of Tulsa, speaking from the audience, said the City was working on a sampling and reporting protocol that would assure the citizenry is informed about Zink Lake water quality.
- In response to my question about the effects of refinery releases to the river, Mr. Sanba, HF S, did not appear to know the refinery held NPDES permits for wastewater piped directly to the river.

My editorial comments:

- HF S is morally and legally responsible for violations of Water Quality Standards that result from their releases to the river.
- HF S wants to kick the can down the road attempting to postpone recognition of the large cost of cleaning up the refinery sites until their current leadership is pensioned off.
- Oil on the water, even a sheen, is a violation of Oklahoma's Water Quality Standards.

- Sheen visibility will increase when the water velocity slows as the lake fills.
- Observed sheens are required to be reported to the National Response Center.
- It does not appear that ODEQ's designated experts on semiannual reports on water quality required by the Clean Water Act and NPDES, MS4, RCRA, TMDL, and OWQS enforcement can join as a team and respond to the challenges presented by the 7.32-mile segment of the Arkansas River in the heart of Tulsa. Help from EPA Region 6 is needed (ODEQ is effectively an employee of EPA.).
- The City's recent acceptance of responsibility for protecting the public from exposure to the water of Zink Lake has been a long time coming. However, it must be incorporated in the MS4 permit (subject of the 1pm, September 7, meeting at Centennial Center). If enforceable requirements are not included in the MS4 permit all we have is Blake Ewing's intentions.

[Includes forwarded email from Mr. Fred Storer to unknown recipients; dated August 7, 2023. No Subject.]

HF Sinclair will present a report on their efforts to deal with refinery environmental issues at the meeting they are hosting at the Chandler Park Community Center, Wednesday, August 9, at 6 pm.

Opportunities for questions and criticisms are expected to be deliberately limited. However, the audience should be prepared. For example:

- Are the refineries' semiannual RCRA reports (expect six hundred pages) for the first half of 2023 available? (These will be at the Central Library and by request from centralrecords@deq.ok.gov)
- Has oil on the river - three times per week - observations (required by RCRA permits) been reported to the National Response Center?
- Oil on the river observations - which are sensitive to river flow - should be made every day.
- Please describe measures planned for control of groundwater carried pollutants (oil, benzene, and other chemicals of concern) from the west refinery which will be accumulating on and in Zink Lake.
- HF Sinclair is responsible if pollutant seeps and point source discharges result in violations of Oklahoma's Water Quality Standards. We request ODEQ make sampling of the river immediately downstream of the mixing zones of each refinery a requirement of the RCRA permits.
- What do the EPA Fenceline Benzene monitors tell you about sources of airborne benzene? Do they point to refineries' wastewater treatment facilities?

48. Email from Mr. Fred Storer to Ms. Nicole Newcomer and Mr. Michael Moe, DEQ; with cc to Mr. Scott Carter; Mr. Bruce Dart, Ph.D., Tulsa Health Department; Mr. Shane Matson; Mr. Jake Miller, Heirloom Rusticales; Mr. Charles Platt, Quadrelec Engineering Corp.; Mr. Kevin Canfield, Tulsa World; Arkansas River Rights Commission; Mr. Scott Hood; Mr. Robert Jackman; Ms. Nancy Moran; Ms. Barbara VanHanken; Ms. Susan Arkeketta; Mr. Burt Mummolo, SBG TV; Ms. Janna Clark, Fox23 TV; Mr. Robert Lee; Mr. James Rea, Tulsa County; Ms. Kelsey Royce; Mr. John Dawson (Amelia); Ms. Neera Sing; Mr. Randy Krehbiel, Tulsa World; Mr. Jim Matthewson; Mr. Blake A. Johnson; Mr.

Guy de Verges; Ms. Kelly Bostian; Mr. Charles Maguire, EPA; Ms. Molly Bullock; Ms. Cheryl Cheadle, ODC; Mr. Matt B. Newman; Mr. Walt Kosty; Mr. Michael Koster; Safer Tulsa; Mr. Blake Ewing, City of Tulsa; and Mr. Scott Nicholas, EPA; dated August 11, 2023. Subject: 2024 Water Quality Report required by the Clean Water Act.

Ms. Newcomer, I have received your “Public Solicitation for Water Quality Information for the *Water Quality in Oklahoma 2024 Integrated Report*”. (I have attached a copy for the benefit of those who will receive a copy of this email.)

I am sure you are aware that stream segment OK120420010010_10 , 7.32 miles of the Arkansas River in the heart of Tulsa, was reported in the 2022 Integrated Report as lacking information for the beneficial use Primary Body Contact Recreation.

Although this stream segment, like other urban rivers, is assuredly impaired for PBCR, there are no water quality measurements for fecal indicator bacteria (FIB) reported by a qualified authority in the last five years. The logically responsible authority to perform tests that meet the requirements of the Water Quality Standards is the city of Tulsa. As you should know, testing to determine PBCR status is not simple and requires repeated testing during five warm weather months.

ODEQ is processing an MS4 permit for the city of Tulsa, and the draft permit prepared by ODEQ fails to include requirements necessary to confirm that OK120420010010_10 is impaired for PBCR.

Confirmed impairment would result in a Total Maximum Daily Load report needed to provide guidance to the city of Tulsa regarding measures to reduce FIB in the river and Zink Lake.

Failure of ODEQ to provide or cause FIB measurements to be made perpetuates this Catch 22.

[Includes email attachment: Public Solicitation for Water Quality Information for the *Water Quality in Oklahoma 2024 Integrated Report*, DEQ; dated August 1, 2023.]

49. Email from Mr. Fred Storer to Mr. Scott Carter; Mr. Bruce Dart, Ph.D., Tulsa Department of Health; Mr. Shane Matson; Mr. Jake Miller, Heirloom Rusticales; Mr. Charles Platt, Quadrelec Engineering Corp.; Mr. Kevin Canfield, Tulsa World; Arkansas River Rights Coalition; Mr. Scott Hood; Mr. Robert Jackman; Ms. Nancy Moran; Ms. Barbara VanHanken; Ms. Susan Arkeketta; Mr. Burt Mummolo, SBG TV; Ms. Janna Clark, Fox23 TV; Mr. Robert Lee; Mr. James Rea, Tulsa County; Ms. Kelsey Royce; Mr. John Dawson (Amelia); Ms. Neera Sing; Mr. Randy Krehbiel, Tulsa World; Mr. Jim Matthewson; Mr. Blake A. Johnson; Mr. Guy de Verges; Ms. Kelly Bostian; Mr. Charles Maguire, EPA; Ms. Molly Bullock; Ms. Cheryl Cheadle, ODC; Mr. Matt B. Newman; Mr. Mike Stout; Mr. Walt Kosty; Mr. Michael Koster; and Safer Tulsa; with cc to Mr. Blake Ewing, City of Tulsa; and Mr. Michael Moe and Mr. Patrick Rosch, DEQ; dated August 12, 2023. Subject: Blake Ewing and MS4 Permit Requirements.

Because Mr. Ewing (copied on this email) has weighed in, “*I’ve been told by some of our folks that they’re hoping to have a plan in place by end of year this year.*” Hope springs eternal. Others and I will argue at the Sept. 7, MS4 Public Meeting, that PBCR related water sampling requirements must be a stated requirement of the final MS4 permit.

From Oklahoma Water Quality Standards (annotated)

252:730-5-16. **Primary Body Contact Recreation** (a) Primary Body Contact Recreation involves direct body contact with the water where a possibility of ingestion exists. In these cases **the water shall not contain chemical, physical or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings.**

(b) In waters designated for Primary Body Contact Recreation the following limits for bacteria set forth in (c) of this section shall apply only during the recreation period of **May 1 to September 30**. The criteria for Secondary Body Contact Recreation will apply during the remainder of the year.

(c) Compliance with 252:730-5-16 shall be based upon meeting the requirements of one of the options specified in (1) or (2) of this subsection (c) for bacteria. Upon selection of one (1) group or test method, said method shall be used exclusively over the time period prescribed therefore. Provided, where concurrent data exist for multiple bacterial indicators on the same waterbody or waterbody segment, **no criteria exceedances shall be allowed for any indicator group.** (1) **Escherichia coli** (E. coli): The **E. coli geometric mean criterion is 126/100 ml**. For swimming advisory and permitting purposes, E. coli shall not exceed a **monthly geometric mean of 126/100 ml based upon a minimum of not less than five (5) samples collected over a period of not more than thirty (30) days. For swimming advisory and permitting purposes, no sample shall exceed a 75% one-sided confidence level of 235/100 ml in lakes and high use waterbodies** and the 90% one-sided confidence level of 406/100 ml in all other Primary Body Contact Recreation beneficial use areas. These values are based upon all samples collected over the recreation period. **For purposes of sections 303(d) and 305(b) of the federal Clean Water Act as amended, beneficial use support status shall be assessed using only the geometric mean criterion of 126/100 milliliters compared to the geometric mean of all samples collected over the recreation period.**

The Oklahoma WQS reflect the EPA's *Recreational Water Quality Criteria*, OFFICE OF WATER 820-F-12-058 (2012), attached.

A hypothetical tabulation of sampling results is also attached including geometric mean calculation results and swimming advisory examples.

Geometric mean is the n^{th} root of the product of n numbers. It has (unfortunately) been used by the EPA since 1968 for determining when the risk of contact with natural waters is acceptable e.g., 126 cfu/100 for an acceptable estimated illness rate of 36 per 1,000 primary contact recreators (Wymer and Wade, EPA, in *Statistical Framework for Recreational Water Quality Criteria and Monitoring*, 2007 John Wiley & Sons)

Because determining the geometric mean of samples taken over 30 days requires at least 30 days, a swimming advisory is required (asap) if any sample exceeds 235 cfu/100 ml in a high use waterbody. See attachment.

[Includes email attachments: "Recreational Water Quality Criteria," EPA Office of Water, Publication No. 820-F-12-058; and table "Hypothetical Example of E. coli measurements at one* Zink Lake sampling point," which follows.]

Hypothetical Example of E. coli measurements at one* Zink Lake sampling point
 Attachment to Fred Storer’s comments, September 7, 2023, MS4 Public Meeting

Date	cfu/100 ml	Geo. Mean	Action
1-May-24	200		Not required
5-May-24	100		Not required
10-May-24	500		Over 235 Swim Adv.
22-May-24	600		Over 235 Swim Adv.
29-May-24	50	197.4	May exceeds 126 WQS
1-Jun-24	10		Not required
5-Jun-24	800		Over 235 Swim Adv.
10-Jun-24	1000		Over 235 Swim Adv.
22-Jun-24	50		Not required
29-Jun-24	130	139.1	235 Swim Adv. & 126 WQS
1-Jul-24	125		Not required
5-Jul-24	75		Not required
10-Jul-24	127		Not required
22-Jul-24	300		Over 235 Swim Adv.
29-Jul-24	50	112.3	Not required
1-Aug-24	700		Over 235 Swim Adv.
5-Aug-24	1000		Over 235 Swim Adv.
10-Aug-24	25		Not required
22-Aug-24	124		Not required
29-Aug-24	7000	432.8	235 Swim Adv. & 126 WQS
1-Sep-24	65		Not required
5-Sep-24	100		Not required
10-Sep-24	500		Over 235 Swim Adv
22-Sep-24	115		Not required
30-Sep-24	40	108.4	Not required
2024 Recreation Period Geo. Mean		170.6	Over 126 requires CWA 303(d), 305(b) reporting and starts Total Maximum Daily Load study.

*Sampling locations should be selected corresponding to anticipated public exposure.

50. Email from Mr. Robert Jackman to Ms. Cailyn Prather, DEQ; dated August 15, 2023. Subject: FW: FW: Gunk-Ugly.

In case we don’t connect vis phone I wanted to help you stay current on below issue. Since the targeted temporary construction cofferdam has been totally removed, suggest if possible ODEQ Field Inspector Adrian Sherman could obtain requested samples at a more convenient location. Will send another email, if requested, detailing an easy accessible location in subject area to obtain requested samples of the black (refinery) coated AR River bank rocks.

(Sharing this part of today’s email sent to Environment Reporter 😊)” Fred, Charles and myself and now you...we all want and tried and tried for now years to have one or more legally responsible department in City, ODEQ, HF-Sinclair and EPA to run multi (they are expensive) tests on AR River waters’ percentages of chemicals listed below. Same for West RPA Air tests. Will send you emails covering this in case your copies got hacked up.“

6/ 2023 To All

[Text substantively duplicates text from Comment # 38 above.]

[Includes forwarded email from Mr. Robert Jackman to Ms. Cailyn Prather, DEQ; dated June 17, 2023. Subject: Gunk-Ugly.]

[Text substantively duplicates text from Comment # 25 above, with noted additions.]

[First paragraph after “Today’s Report ” – date updated from 5/17/2023 to 6/17/2023.]

51. Email from Mr. Fred Storer to Ms. Janna Clark, Fox23 TV; with cc to Mr. Grant Miller; Ms. Barbara Van Hanken; Ms. Kelsey Royce; Mr. Michael Moe and Ms. Hillary Young, DEQ; and Mr. Charles Pratt, P.E., Quadrelec Engineering Corp.; dated August 22, 2023. Subject: The River – What else?

Jana, yesterday’s river report (https://www.fox23.com/news/fox23-investigates/fox23-investigates-what-is-in-the-arkansas-river/article_02c89ac2-405c-11ee-a6bd-1fd6cf060.html) was excellent, thank you for the heads up.

I think it is important to understand the leverage for forcing river sampling.

The refineries are subject to RCRA (leaking oil, benzene, and other chemicals of concern) and NPDES (refinery wastewater discharged via pipes to the river) permits. ODEQ has not used the leverage available with these permits to force the refineries to sample the river downstream of the mixing zones.

The city’s stormwater system is regulated by its MS4 permit. MS4 is the source of pathogens and viruses that make swimming hazardous. The pathogens and viruses are regulated by sampling for fecal indicator bacteria, E. coli. This is the subject of the public meeting set for September 7. The city’s failure to sample and the need for enforceable permit conditions is explained in the attachment.

The attachment is the comments I plan to make at the September 7 meeting. It is still a work in progress subject to minor changes.

In addition, the city has a broad interest in the river water quality, but E. coli is the main problem. For example, oil on the water makes it unsuitable for primary body contact.

There is no need or justification for waiting until the lake is full of water. However, the city’s statement that it will sample for a year before allowing public exposure is a big improvement. Look where you started! You made this happen and the community should applaud your work.

We can **perhaps** forgive politicians for failing to understand this from the get-go but environmental professionals (INCOG, City, ODEQ) who watched this happen over the last ten plus years should be more than embarrassed.

[Includes Attachment: 8.20.2023 Draft comments Sept 7 MS4.pdf]

Comments to be presented to the MS4 Public Meeting, September 7, 2023.

I am commenting on the proposed MS4, Municipal Separate Stormwater System, permit. MS4 is the system of conduits and creeks that deliver to the river pathogens and viruses contained in the feces of humans and other warm-blooded animals. The role of MS4 is essential to understanding and potentially improving the new Zink Lake’s water quality.

Tulsa's first MS4 permit was granted on October 16, 2011, and expired October 15, 2016. For the last seven years it has been in administrative limbo. Under the terms of the 2011 MS4 permit the city of Tulsa has sampled twenty-four MS4 tributaries to the Arkansas River for the fecal indicator bacteria, *E. coli*.

The city's 2022 Annual Report by the Streets and Stormwater Department reported *E. coli* sampling results for seven creeks that are direct tributaries to the Arkansas River. All exceeded the water quality standard for Primary Body Contact Recreation. The reported *E. coli* geometric mean for Crow Creek which enters the river at the end of the whitewater flume was six times the standard, 740 colony forming units (cfu)/100 ml vs. the standard, 126 cfu/100 ml.

The 2011 MS4 permit is ambiguous regarding required sampling of the Arkansas River and has conveniently allowed the city to avoid sampling the river and focus on the twenty-four named tributaries.

River sampling has been avoided for over ten years. Undoubtedly, sampling results would have diminished expectations for the recreational benefits promised for the new Zink Lake.

Water quality monitoring is essential for the functioning of the Clean Water Act's regulatory process:

- Water Quality Standards are established to protect "beneficial uses". Beneficial uses may be aspirational and not necessarily supported by existing water quality.
- Recognition of problems requires water quality information.
- In alternate years, ODEQ is required by the Clean Water Act to make a beneficial use assessment for each water body - fully supporting, not supporting, insufficient information, or, not assessed.
- EPA rules then require Total Maximum Daily Load studies be performed by ODEQ for those water bodies where beneficial uses are not supported.
- The TMDL study can reveal strategies that could potentially correct problems.

Without water quality monitoring data for the important stream segment, OK120420010010_10, 7.32-miles of the Arkansas River that encompasses Zink Lake (old and new), every two years ODEQ reports "insufficient information" rather than "not supported" and regulatory progress is deferred for another two years.

The new permit should not leave any opportunity for the city of Tulsa to continue to avoid the sampling necessary to determine if Zink Lake meets the Water Quality Standard for Primary Body Contact Recreation.

Further, those members of the public anticipating recreational use of Zink Lake must be informed of the water quality as soon as possible.

I am including in my comments the Oklahoma Water Quality Standards (annotated) from Oklahoma Statutes.

- 252:730-5-16. **Primary Body Contact Recreation** (a) Primary Body Contact Recreation involves direct body contact with the water where a possibility of ingestion exists. In these cases **the water shall not contain chemical, physical or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings.** (b) In waters designated for Primary Body Contact Recreation the following limits for bacteria set

forth in (c) of this section shall apply only during the recreation period of **May 1 to September 30**. The criteria for Secondary Body Contact Recreation will apply during the remainder of the year. (c) Compliance with 252:730-5-16 shall be based upon meeting the requirements of one of the options specified in (1) or (2) of this subsection (c) for bacteria. Upon selection of one (1) group or test method, said method shall be used exclusively over the time period prescribed therefore. Provided, where concurrent data exist for multiple bacterial indicators on the same waterbody or waterbody segment, **no criteria exceedances shall be allowed for any indicator group.** (1) **Escherichia coli** (E. coli): The **E. coli geometric mean criterion is 126/100 ml**. For swimming advisory and permitting purposes, E. coli shall not exceed **a monthly geometric mean of 126/100 ml based upon a minimum of not less than five (5) samples collected over a period of not more than thirty (30) days. For swimming advisory and permitting purposes, no sample shall exceed a 75% one-sided confidence level of 235/100 ml in lakes and high use waterbodies and the 90% one-sided confidence level of 406/100 ml in all other Primary Body Contact Recreation beneficial use areas. These values are based upon all samples collected over the recreation period. For purposes of sections 303(d) and 305(b) of the federal Clean Water Act as amended, beneficial use support status shall be assessed using only the geometric mean criterion of 126/100 milliliters compared to the geometric mean of all samples collected over the recreation period.**

I have also included a hypothetical example of E. coli water quality results which illustrates how individual sample results are incorporated into the geometric mean calculations required by Oklahoma law.

[Includes table “Hypothetical Example of E. coli measurements at one* Zink Lake sampling point” which duplicates the table in Comment # 49 above.]

The Water Quality Standards provide criteria for a swimming advisory. If a swimming advisory is announced, it should not be changed until subsequent evidence is available that the water’s E. coli level is below 235 cfu/100 ml. In the provided hypothetical example, a swim advisory would have existed for 84 days of the 122-day recreational period. However, the volume of water flowing through the lake, rain events in the MS4 watersheds, and sample turnaround time (over 24 hours) further complicate administration of swim advisories.

Keeping public exposures within the Water Quality Standards does not entirely prevent gastrointestinal illnesses. However, the resulting estimated illness rate is acceptable to public health officials and accurate records and enforcement are a protection against attractive nuisance litigation.

52. Email from Mr. Walt Kosty to Mr. Fred Storer; with cc to Ms. Janna Clark, Fox23 TV; Mr. Grant Miller; Ms. Barbara Van Hanken; Ms. Kelsey Royce; Mr. Michael Moe and Ms. Hillary Young, DEQ; and Mr. Charles Pratt, Quadrelec Engineering Corp; dated August 22, 2023. Subject: Re: The River – What else?

I second Fred's response with a high five, a fist bump and a thank you. I appreciate that Councilor Miller was willing to go on camera with you, perhaps the various candidates lining up for "good news" Bynum's job will go on record with you (or even meet with you) and understand that investigative journalism is an essential part of a community and of a democracy.

[Includes forwarded email from Mr. Fred Storer to Ms. Janna Clark, Fox23 TV; et al.; which substantively duplicates the email in Comment # 51 above, minus the attachment.]

53. Email from Mr. Walt Kosty to Mr. Fred Storer; with cc to Ms. Janna Clark, Fox23 TV; Mr. Grant Miller; Ms. Barbara Van Hanken; Ms. Kelsey Royce; Mr. Michael Moe and Ms. Hillary Young, DEQ; and Mr. Charles Pratt, Quadrelec Engineering Corp; dated August 22, 2023. Subject: Re: The River – What else?

To share the story three options below.

[Includes two hyperlinks and a QR code.]

[Includes forwarded email from Mr. Walt Kosty to Mr. Fred Storer, et al.; which substantively duplicates the email in Comment #51 above, minus the attachment.]

54. Email from Mr. Robert Jackman to Ms. Janna Clark, Fox23 TV; with cc to Mr. Burt Mummolo, SBG TV; Mr. Randy Kehbiel, Tulsa World; Mr. Fred Storer; Mr. Charles Pratt, P.E., Quadrelec Engineering Corp.; Ms. Jennifer Lewis, OAG; mdodson@sai.ok.gov; Ms. Barbara VanHanken; and Ms. Kelsey Royce; dated August 22, 2023. Forwarded to DEQ by Ms. Jennifer Lewis, OAG, on August 22, 2023. Subject: FW: FW: New Zink – Flume Algae Ponds & Fraud!

This whole Zink Dam & Lake TV story is not just about bad oily waters never tested, it's the too slow uncovering a major **Fraud** of Tulsa taxpayers funding by the deceit of false info used by G.T. Bynum et.al. to pass the April 2016 Vision 25 Bond Package on River Amenities – Voters financing the new Zink Dam & Lake & Kayak Plume Projects! Plus possible collusion by his enablers for example; ODEQ and OWRB's Directors, former elected City of Tulsa High Officials, and gross negligence by Oklahoma Professional Engineers Licensure Agency to uphold its high standards !

Remember I am not just an angry independent concerned citizen, but a former US & International oil and gas Exploration Operator – Geologist / Jackman Inc. / OSU 57 & Un. Alaska turned Anti –Fossil Fuel Protagonist. Who in the past was subject of Wall St. Journal front page coverage plus other major newspaper articles on my oil and gas exploration and humanitarian involvement in Somalia.

What I bring to the new Zink Projects' many issues is as a highly experienced earth scientist whose credentials and evidence will stand up in to be expected future savage court proceedings. The last 3-4 months I have made numerous contacts & exchanges of info on these matters with OK St. Atty General Drummond's Asst. AGs and with OK St. Auditor & Inspector Cyndy Byrd's Office. We will see! (Charles Pratt will confirm.)

Thanks for your most recent Tulsa Fox 23 TV coverage on these soiled issues.

[Includes forwarded email from Mr. Robert Jackman to Mayor G.T. Bynum, City of Tulsa; Mr. Blake Ewing, City of Tulsa; Mr. Charles Pratt, P.E., Quadrelec Engineering Corp.; Mr. Fred Storer; Ms. Kelsey Royce; Mr. Burt Mummolo, SBG TV; Ms. Barbara VanHanken; and Mr. Randy Krehbiel, Tulsa World; dated August 21, 2023. Subject: FW: New Zink – Flume Algae Ponds & Fraud!

On one of Charles photos shows next to the middle three bridge piers sandy sediments newly exposed between bridge piers and new dam structures. That's beginning of new Zink Lake again silting up as new sand bars are forever being created by the AR River. Then look further upstream at number of exposed sand bars as far up stream as you can see even past 23rd St Bridge. The AR River's deposited mobile sand bars that will continue to move down stream during mid to high waters which again will sand & silt-fill-up Zink Lake II.

Amazing how fast algae grows, yesterday / Sunday early AM Kayak flume waters were just turning green at the location Charles photos today show taxpayers's new Zink “ **Flume Algae Ponds!**”

No one builds a second attempted Arkansas River Dam and Lake river recreation facilities next to large continuous 24 hours refinery! “Insanity is doing same thing over and over expecting different results” - Einstein’s definition of Insanity--- Tulsa Mayor Bynum’s Insanity ... his Arkansas River new Zink Projects.

Charles ...Thanks for the photos and observations.

[Includes forwarded email from Mr. Charles Pratt, P.E., Quadrelec Engineering Corp.; to Ms. Kelsey Royce; Ms. Barbara VanHanken; Mr. Robert Jackman; and Mr. Fred Storer; dated August 21, 2023.
Subject: Algae in Flume

This is how fast algae can build up in the flume in warm weather with no flow in flume (photo 7). I did not go up to the most northern pool but it should also have algae in it. They are going to have to have some water moving through the flumes as I expected just to keep algae and debris out and keep fish alive in the two upper pools.

You cannot see it in the photo 9 but there were some nozzles putting out some barely visible spray in the downstream pool. They fanned back and forth. Hardly any water coming out. I have no idea if these are the "hydrants" Zachary and others referred to to keep fish alive. I will investigate further because they would need much more water than that.

[Photos not included in forwarded email.]

55. Email from Mr. Robert Jackman to Ms. Jennifer Lewis, OAG; with cc to Mr. Fred Storer; and Mr. Charles Pratt, P.E., Quadrelec Engineering Corp.; dated September 6, 2023. Forwarded to DEQ by Ms. Lewis, OAG, on September 7, 2023. Subject: FW: Please attend the September 7 MS4 Permit meeting.

Jennifer Lewis – State of Oklahoma Assistant Attorney General

The below announcement and attachment detail additional evidence disclosures for your review and consideration supporting allegations of “ Fraud” by intentional failure to disclose by City of Tulsa Officials - regards the millions spent on the new Zink Dam & Lake and Kayak plume flawed projects.

All paid for by Tulsa’s taxpayers obligated indebted monetary funding!

[Includes forwarded email from Mr. Fred Storer to unknown recipients; dated August 30, 2023. Subject: Please attend the September 7 MS4 Permit meeting.]

The meeting will be held at Centennial Center in Veterans Park (west of 6th and Peoria) at 1pm on Thursday, September 7.

From the notice published by DEQ on August 1:

“The purpose of the public meeting is for DEQ to take comments from the public concerning the draft permit issued to the city of Tulsa”

“A final permit, if issued would allow the City of Tulsa to discharge stormwater from the City of Tulsa Municipal Separate Stormwater Sewer System (MS4), Tulsa County, Oklahoma.”

The MS4 is the source of pathogens and viruses that are expected to compromise the use of Zink Lake for its advertised recreational uses. The **draft permit fails** to require the city to measure fecal indicator bacteria (E. coli) in the river and lake according to the method described in Oklahoma Statute, TITLE

252. DEPARTMENT OF ENVIRONMENTAL QUALITY CHAPTER 730. OKLAHOMA WATER QUALITY STANDARDS.

Be prepared to present an oral or written comment such as:

The MS4 permit must contain requirements that the City of Tulsa make measurements of E. coli in the river and Zink Lake in accordance with Oklahoma law. The City's measurement results should be reported to the public by electronic media as soon as possible.

A detailed comment is attached.

[Includes attachment "Detailed Comments MS4 Meeting.pdf," which substantively duplicates the Attachment to Comment # 51 above.]

56. Verbal comments submitted by Mr. Fred Storer at public meeting held on September 7, 2023.

The MS4 delivers pathogens and viruses to the river.

Tulsa's first MS4 permit was granted on October 16, 2011, and expired October 15, 2016. For the last seven years it has been in regulatory limbo. Under the terms of the 2011 MS4 permit the city of Tulsa has sampled twenty-four MS4 tributaries to the Arkansas River for the fecal indicator bacteria, E. coli.

The city's 2022 Annual Report by the Streets and Stormwater Department reported E. coli sampling results for seven creeks that are direct tributaries to the Arkansas River. All exceeded the water quality standard for Primary Body Contact Recreation. The reported E. coli geometric mean for Crow Creek which enters the river at the end of the whitewater flume was six times the standard.

The 2011 MS4 permit and the new draft permit are ambiguous regarding required sampling of the river. They conveniently allow the city to avoid sampling the river and focus on the twenty-four named tributaries.

River sampling has been avoided for over ten years. Undoubtedly, sampling results would have diminished expectations for the recreational benefits promised by the new Zink Lake.

Without water quality monitoring data for the important 7.32-mile stream segment that encompasses Zink Lake (old and new), studies required by the Clean Water Act won't happen.

The new permit should not leave any opportunity for the city of Tulsa to continue to avoid the sampling necessary to determine if Zink Lake meets the Water Quality Standards for Primary Body Contact Recreation.

Keeping public exposures within the Water Quality Standard does not entirely prevent gastrointestinal illnesses. However, the resulting estimated illness rate is acceptable to public health officials and accurate records and enforcement are a protection against attractive nuisance litigation.

57. Written comments submitted by Mr. Fred Storer at public meeting on September 7, 2023.

[Written comments substantively duplicate "Comments to be presented to the MS4 Public Meeting, September 7, 2023," in Comment #51 above, including duplicate of table "Hypothetical Example of E. coli measurements at one* Zink Lake sampling point" in Comment #49 above.]

58. Verbal comments submitted by Mr. Guy Burgess at public meeting on September 7, 2023.

I am an environmental consultant in Tulsa and have a lot of experience with this type of permitting situation. I think that, as I mentioned before, if all the data that is collected by the city from the illicit discharge monitoring program and dry weather discharge was searchable by the watershed, the waterbody, the location of the sample, and the results of all the analytes that could be easily monitored and modeled so that we could actually have some answers to these questions and that what you, I think, are feeling from these folks is that there's no data and they feel like they're left in the dark and the city's hiding something. I don't know that the city is really hiding anything but the city permit is based on this and they only are going to do what's in the DEQ permit, but if we have data maybe by the time this is published again we could actually make changes, but it's hard to make suppositions without data. And there is no data, there's no data from the city, or very good data from the city, and nothing on the Arkansas River and I think that the DEQ should be more involved in monitoring the Arkansas River because the city isn't going to because they're not required to, but I know that's separate, but I... what my comment is please provide searchable online results for all the water quality data that's collected by the city and put it in a format that's easily searchable and I'd be happy to model that for you.

59. Verbal comments submitted by Mr. Matt Alison at public meeting on September 7, 2023.

I've got the good fortune to live in the southeast corner of downtown Tulsa, but have the unfortunate reality to have the mobile batch plant that's servicing the highway construction as my neighbor for the last three years. And, not only my concerned neighbor happened to be an environmental professional as well, but this has raised a lot of concerns to me, and specifically about BMPs. We've heard a lot today about DEQ being about BMPs, Best Management Practices, and roughly familiar with these supposed Best Management Practices, I sought a little more detail on this. So I filed a 301 complaint with the City of Tulsa, but it was summarily closed by 301 saying they don't have jurisdiction, so that didn't sound right—it's your MS4. And so I filed another one and we went through this time after time. I kept escalating up, 'cause it's gotten personal 'cause--Scott in the house, nice to meet you—but I went all the way up and everybody at City of Tulsa said we don't have jurisdiction, DOT or DEQ has jurisdiction. I went all the way up the chain of command at DEQ and DOT, and everyone says we don't have jurisdiction, everybody. It wasn't that they weren't violating, it was that they don't have jurisdiction, but the concrete batch plant has a general permit under DEQ which requires BMPs. The MS4 for the City of Tulsa requires BMPs. I don't particularly care who's enforcing BMPs, I just care that they're being enforced. And for DEQ to come here today and say you've made the determination that this permit, if issued, won't lead to degradation, I question what the basis of that is. Is it over the last seven years where there's no permit in place, where you guys have closed your eyes off to violations? Or are you determining that really you guys are going to protect the streams with this permit because both the City of Tulsa and DEQ and DOT who's a co-permittee here have three years of pictures and complaints from me showing unpermitted discharges of concrete slurry into Tulsa's MS4. From me. And this is what I do for a job. If it takes me three years to get nowhere, I question what faith the public has in this. When they don't have the full data. So there's a lot of people here that mean well, everyone means well, some people are employed by this, some people just live here and care about it. And I also understand that the position that the regulator is in, you get squawked at no matter what you do, I don't take that lightly. I appreciate what you do, but I think that at the end of the day there's gotta be somebody who regulates, who enforces against these unpermitted, illegal discharges. It matters, it really matters, otherwise none of you guys would do your job, do you know? And so I would really encourage a re-evaluation of this permit to ensure, and look at this fact sheet page 9, that's the last two lines says quote, "Each permittee shall prevent (or require that the operator of sanitary sewer to

eliminate) unpermitted discharges of dry and wet weather overflows and the infiltration of sewage from sanitary sewers into the MS4.” So DEQ, if you want to require your other permittees like concrete plants to do it, fine, go for it, but so long as you’re going to require the City of Tulsa to do it, but they’re going to say they don’t have jurisdiction, you can’t just rely on this empty promise, so I think you’ve got to put some heft to it and to that end, what happens if the permittee the City of Tulsa is falling short of its permit obligations? If I file a complaint with DEQ, are you guys gonna go talk to the concrete plant or are you going to come back to the City of Tulsa and make sure that they’re both complying with their permit? And that’s what we want, we want to know that these BMPs are meaningful and they’re being enforced and applied in a reliable manner, in an enforceable manner, and that’s what everybody in this room wants and I appreciate the work you’re doing. It’s...I’m sure most days it’s thankless, but it is appreciated, it really is appreciated work that everybody’s doing in this part. Thank you so much.

60. Verbal and written comments submitted by Ms. Barbara VanHanken at public meeting on September 7, 2023.

My comments today are about the proposed MS4 permit.

This is a very important document that sets the standards for operations affecting the water quality of the Arkansas River including the new Zink Lake.

It is very troubling to me that the City of Tulsa, Tulsa County and the River Parks Authority, co-managers of the new Zink Dam and Zink Lake, have not addressed this permit since October 15, 2016, when the first and latest MS4 permit EXPIRED! The plans for constructing these structures in the Arkansas River had been discussed well over 10 years ago. Why was there not concern about maintaining the water quality back then?

I recently learned that the only testing done for E. coli as reported in the 2022 Annual Report by the Streets and Stormwater Dept., was completed in only seven of twenty-four tributaries that feed water into the Arkansas River. There still is NO testing in any areas in the Arkansas River itself. There was practical noncompliance with the existing standards for Primary Body Contact Recreation in the Arkansas River.

How can the City, County and River Parks feel the river is safe for Human interaction? They should be held accountable for not informing the safety level of the Arkansas River to the public. Avoiding testing or ignoring an “insufficient information” report is not saying the water is safe!

My nonprofit group, Tulsa Area Arkansas River Advocates, has been advocating for complete, regular testing including E. coli, hydrocarbons and toxic chemicals from the refineries that are seeping pollution into the river right now in the Arkansas 7.32 miles of untested river water since we organized in 2021.

There must be a very good reason that the City has not tested the water completely in a long time and that is to protect the polluters including HF Sinclair refineries along this industrial water body. This must stop now!

We can demand stricter language into the permit now that will make this happen and restore the public trust!

61. Verbal comments submitted by Ms. Kelsey Royce at public meeting held on September 7, 2023.

Before the initial comment period started, I mentioned that you guys know what we want, we want you guys to test the river, the river water, the water in Zink Lake. You can say whatever you want about

how it's not in the permit, you don't test it because it's not a water of the state. But the run-around that we've been describing to you is absolutely unacceptable and ODEQ I think you need you to make a note of that. You cannot enable this behavior toward us anymore. We're the public and we're saying, "Test that water. Hold yourself accountable." And I would also mention that it's really important to consider what the other folks mentioned about antidegradation, I believe, and the 303(d) impairment status, and impermeable surfaces. Seriously, I had a very bad experience with the City of Tulsa's Department of [unclear] and it would be very important for you guys to actually get in there and see what you can do, because I don't see how you're going to get them to accomplish, you know, unless you do this, enter in this permit the goals and objectives of making it swimmable, fishable in the lake, Arkansas River, or any of the tributaries. I mean, I really hold you guys to that and, yeah, I think that's all I wanted to—Oh wait, there's one more thing. If you guys go to page 52, it's Part 5 of your permit, there's a section that's been reserved for archeological and historic resources, but it's empty. Could you tell me what that's about, 'cause we're done with the answer part, but I would really like to know and who you're consulting with regard to it.

62. Verbal comments submitted by Mr. Aaron Griffith at public meeting on September 7, 2023.

My comments are basically that, you know, kind of back again to what we've said earlier but also that, you know, when you look at a lot of these decisions that are made in the city, they put the cart before the horse in terms of, like, zoning, they do the infrastructure impacts and things after the zoning question's already been considered. And zoning people, it's kind of the same issue where you have finger-pointing as well as deniability and passing the buck, because they don't have to consider infrastructure matters collapse, they've already got the zoning for something. And it causes a lot of problems...so again, it's just another example. But I just wanted to get up here today to express my appreciation for those of you who do work on these issues. I don't want it to sound like I'm coming down on you, I know you serve people who are elected and they don't always, they're politicians and they don't always listen to you or, you know, exactly follow through on the ideas and the recommendations you give them, so I just wanted to acknowledge that and say that I do understand that and I do appreciate the work you do in spite of that. That being said, I wanted to say that I am extremely and excessively disappointed in the fact that none of them are here today. Where's the mayor? Where's my city councilor? Where's county commissioner Keith who wants to be our next mayor? Where are any of the candidates for mayor today? They're elected officials, a lot of them are, where are they? They need to answer to that because the position they put you in as employees of the City of Tulsa is quite frankly unfair to you when they are too unwilling to sit here with you and engage on boring topics like infrastructure, like this, but they're all too willing to run off and play partisan games to pander to their base on issues that they have no control over, like education for instance, OK? They love to speak out and, yeah, be outspoken on things that they don't actually have to deal with. And that's a problem. And when they are things they actually should be dealing with, they're AWOL. So, that's my comments, that's what I wanted to share with you today. Thank you, I'm eternally grateful for the work you do, but shame on them for not being here. Thank you.

63. Verbal comments submitted by Mr. Scott Carter at public meeting on September 7, 2023.

I just want to echo what was said before, I would encourage the regulatory agencies to endeavor to uphold the regulations as much as possible, look out for us as much as you can, even if there's, like, you know, an endeavor to maybe cut corners or do something, like, that's already decided, try to understand that the public is here, we are very concerned that decisions in our name are being made with our money, that are being made without our input, this public input that's so... We said this to the Holly Frontier folks too, what are you doing for us? If you do think it's a good idea to have a river on

the shore of your power plant, they didn't want to answer that question and they shouldn't and I thought they were actually relatively honest, so I would encourage regulatory agencies to do that due diligence, to double down and understand that regulations are our protection, they're not something to do to be just an impediment to get away from, to somehow be a burden upon the free market, and I'm an economics professor for Tulsa, OK? I can tell you right now that this idea the free markets are the only way in which society can blossom is false. OK, we do not need to believe that, that is not how the system has to operate here. So regulations need to be enforced, because it's what needs to be done for our city and our community, so don't cut corners is what I'm trying to say to the regulatory agencies. Double down, do the due diligence and go and ask the city, especially, and anyone, Holly Frontier and all these agencies and these polluters to, you know, look out for what's best for us, OK? Because we're not big enough to [unclear] the officials, I'm afraid. Many of us don't believe that they are, so we need you to be who should be held accountable, because you are us, we're all in Tulsa, and I do think that we can do this, so thank you very much.

64. Verbal comments submitted by Mr. Walt [no last name given] at public meeting held on September 7, 2023.

You know I appreciate that we are all human and we're all here and we care about these regulations and all of this, but I think of Ecuador and I think of the Ponca tribe, and I think of the rights of the river, and it's a concept I think we need to explore more as a people. I care about the river, I believe all of you care about the river, but are we protecting the river? I don't think so.

65. Written comments submitted by Ms. Nancy Moran at public meeting held on September 7, 2023.

My husband was hospitalized twice with sepsis due to antibiotic resistant E. coli and required 10 days of IV antibiotics to treat.

In Oklahoma, 11% of E. coli infections detected in hospitals were found to be antibiotic resistant (CDC).

Diseases acquired from contact with contaminated water can cause **gastrointestinal illness, skin, ear, respiratory, eye, neurologic, and wound infections**. The most commonly reported symptoms are stomach cramps, diarrhea, nausea, vomiting, and low-grade fever.

I am concerned not only about the presence of E. coli in the Arkansas River but also the genetic diversity of E. coli which render some strain resistant to antibiotics.

According to the research conducted by Wolny-Koladka and Lenart-Boron [55], 10% of E. coli strains isolated from the water reservoir were resistant to five antibiotics, 12% presented resistance to two or three antibiotics at the same time [55]. What is more, 4% of isolates were resistant to twelve antibiotics and 7% to nine antibiotics. Even though it does not seem to be a high percentage, it can pose a serious threat, causing infection of recreational water users. Furthermore, reported cases usually present drug resistance to different antimicrobials, including the most popular antibiotics such as β -lactams.

We need to sample the types of E. coli strain found in our creeks and the Arkansas River.

As a nurse I am guided by the precautionary principle which advises that if an action or policy has a suspected risk of causing harm to the public or to the environment and where there is the absence of scientific proof that there is not, then the burden of proof falls upon those entities which are causing and/or allowing the risk of harm to occur. In the case of the Zink Lake and soon to be open recreational

water park, the burden of proof fall on the City of Tulsa. Since conditions can vary, testing should be frequent, if not daily.

DEQ RESPONSE TO COMMENTS

Rather than respond to each of the above comments individually, DEQ has sorted the comments into various categories and prepared a response for each category of comments as laid out below.

1. Irregularities in Public Notice of Draft Permit.

Comment Nos. 1, 2, 3, 26, and 37 asserted that there were certain irregularities in the public notice of draft permit published in the *Tulsa World*.

Comment Nos. 1 and 3 alleged that the City of Tulsa was delaying publication of the public notice of the draft permit and asked if Tulsa could be forced to publish it. DEQ sent the draft permit and associated public notice to Tulsa by certified mail on May 5, 2023, for publication in the *Tulsa World*. DEQ posted the draft permit on its public notice web page and also mailed notification to its public notice mailing list on May 12, 2023. While there were some delays in Tulsa's arranging for publication of the public notice in the *Tulsa World*, these were due to logistical issues associated with Tulsa's need to have their legal department conduct a final review of the draft permit and to work through an outside vendor/contractor used by the *Tulsa World* for public/legal notices. The City submitted the public notice for publication in the *Tulsa World* on May 25, 2023; however, Tulsa subsequently learned that the vendor/contractor had only posted the public notice on the *Tulsa World's* website and had not actually published the notice in the newspaper. DEQ was in regular contact with Tulsa during this timeframe to monitor the status of the publication of the public notice, and Tulsa worked with the *Tulsa World's* vendor/contractor to have the public notice published in the newspaper on June 15, 2023, and submitted the proof/affidavit of publication to DEQ on June 21, 2023.

Comment Nos. 2, 26, and 37 asserted that DEQ had taken liberties with the statutory requirements of Title 27A OS § 2-14-303 for public meeting requests. Title 27A OS § 2-14-303 states: "Public meeting - Procedure. The Department shall expeditiously schedule and hold a formal public meeting if the Department receives written timely request for such meeting, pursuant to the provisions of Section 2-14-302 of this title, and determines there is a significant degree of public interest in the draft denial or draft permit." DEQ's public notice of the draft permit stated: "Requests for the public meeting should include: (1) name and address of the interested person, (2) the application name to which the request relates, (3) the nature and basis of the interest of the person affected, and (4) a statement of the objection or comment, the basis of the objection or comment, and any requested action by DEQ." The commenters asserted that DEQ's expansion of the statutory language to include items (3) and (4) was inappropriate.

DEQ believes it is self-evident that the most efficient and logical way to assess whether there is sufficient public interest to justify a public meeting is through written comments. This is a reason DEQ's rules anticipate written comments where they address "filed" comments. Moreover, OAC 252:4-7-20(c)(2) expressly requires the administrative record to include "all written comments." See below:

252:4-7-20. Agency review of final permit decision

(a) Agency review. Unless a specific permit review process is otherwise provided in rules promulgated by the Board, an applicant who filed comments on the draft permit or participated in

the public hearing, if any, may use the declaratory ruling procedure described in this Chapter to initiate agency review of a final permit decision.

(b) Failure to file comments. Any person who failed to file comments or participate in the public hearing on the draft permit may petition for declaratory ruling only to the extent of changes from the draft to the final permit decision.

(c) Administrative record. The administrative record for agency review of a final permit decision shall consist of:

- (1) the permit application on file with the DEQ, as amended;
- (2) all written comments received during the public comment period;
- (3) the tape or transcript of the public meeting, if any;
- (4) documents resulting from the DEQ's review of the permit application and public comments;
- (5) the draft permit, fact sheet and response to comments, if any, issued by the DEQ;
- (6) all published notices;
- (7) the tape or transcript of the administrative hearing(s) held on a proposed Tier III permit, if any;
- (8) the written materials submitted at an administrative hearing held on a proposed Tier III permit, if any;
- (9) the final environmental impact statement and supplements, if any; and
- (10) the final permit or denial.

On this basis, DEQ believes it is reasonable to expect written comments to include the nature of the issues to be raised. Without specifics on what the public wishes to comment on, there is no real way to assess the need for a public meeting.

In any event, these comments are somewhat moot. As discussed in Response No. 2 below, acting on the many requests for a public meeting received by DEQ, DEQ determined that there was a significant degree of public interest and scheduled a public meeting. No changes were made to the permit as a result of these comments.

2. Request for Public Meeting.

Comment Nos. 6-13, 15-18, 20-24, 26-37, 39, 41, 43, 46, and 55 requested that a public meeting be held on the draft permit. Based on these comments, DEQ determined that there was a significant degree of public interest in the draft permit and scheduled a public meeting which was held on September 7, 2023, in Tulsa. As noted elsewhere, additional comments were received at this public meeting and were entered into the administrative record for this permit. Any changes made to the permit as a result of comments received at the public meeting are noted below.

3. Monitoring of Zink Lake, the Arkansas River, and its Tributaries for Pollutants of Concern.

Comments 4, 11, 14, 16, 20, 36, 41, 43, 44-49, 51-53, 55-57, 60, 61, and 65 requested that DEQ include requirements in the permit for the City of Tulsa to monitor water quality in Zink Lake, the Arkansas River, and its tributaries. Comment No. 4 stated that testing standards used by DEQ and the City of Tulsa were obsolete and not reflective of toxicants in the Arkansas River. Comment No. 16 echoed this concern and stated that DEQ needed to accelerate critical water quality testing on all public-use recreational Oklahoma major rivers and lakes.

Comment No. 11 stated that the sampling method and frequency for *E. coli* in the permit was not sufficient to determine if the MS4 discharges to the Arkansas River resulted in violations of WQS for the Primary Body Contact Recreation (PBCR) beneficial use, and that the permit should clearly require

Tulsa to perform sampling of the Arkansas River to determine compliance with the PBCR standard. Comment No. 46 expanded on this concern, stating that the draft permit did not require the city to sample the river for Fecal Indicator Bacteria (FIB) using the sampling protocol specified in Oklahoma's WQS, that sampling frequency and locations must be specified in the permit to determine if Zink Lake meets WQS for the PBCR beneficial use, and that the city should be required to make the geometric mean calculation required by the WQS and report the pass-fail results. Comment Nos. 49 and 51 reiterated these concerns and stated that the final MS4 permit must include a stated requirement for PBCR-related water sampling and should not leave any opportunity for the City of Tulsa to continue to avoid the sampling necessary to determine if Zink Lake meets WQS for PBCR. These comments were substantively duplicated in Comment Nos. 51, 52, 53, 55, 56, and 57. In addition, Comment Nos. 61 and 65 also stated the need to test the river and Zink Lake for *E. coli*, with Comment No. 65 expressing the need to test for various strains of *E. coli* due to concerns regarding antibiotic-resistant *E. coli*.

Comment No. 14 expressed concern that, in addition to bacteria or viruses, pollutants of concern such as Benzene, 1-Methylnaphthalene, Naphthalene, MTBE which could be present in groundwater seepage from HollyFrontier Refinery, could also contribute to impairment of the PBCR beneficial use of Zink Lake and the Arkansas River (OAC 252:730-5-16(a) for the PBCR beneficial use states that "...the water shall not contain chemical, physical or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings."). Comments No. 20 and 43 expressed similar concerns, stating that, because the City of Tulsa appropriated municipal sales taxes to construct a recreational impoundment of water, Zink Lake, by constructing a low head dam in the Arkansas River, the permit must mandate testing for chemicals that the public would potentially be exposed to through contact with the water, including benzene, naphthalene, 1-methyl naphthalene, 2-methyl naphthalene, bis(2-ethylhexyl)phthalate, MTBE, and arsenic coming from contaminated groundwater seepage from the HollyFrontier Refinery. This comment further stated that Tulsa should be required to use a third party to sample and test the river water. Comment No. 36 echoed the statement that the river water that is open to bodily contact should be independently tested regularly. Comment No. 60 also called for complete, regular testing including *E. coli*, hydrocarbons, and toxic chemicals from the refineries that were seeping pollution into the river and that the permit should include stricter language to make this happen.

Comment No. 14 also expressed concern that the 2022 Integrated Report reported that stream segment OK120420010010_10, the 7.32 miles stretch of the Arkansas River which includes Zink Lake, lacked sufficient information to determine if the PBCR beneficial use is supported, and that DEQ's Land Protection and Water Quality Divisions must make a joint statement regarding responsibility for determining the water quality of the river/lake. Comment No. 48 reiterated that this segment was reported in the 2022 Integrated Report as lacking information to determine if the PBCR beneficial use was impaired, asserted that this segment was assuredly impaired for PBCR but that there were no water quality measurements for FIB reported in the last five years, stated that the logically responsible authority to perform tests that met the requirements of the WQS was the City of Tulsa, and stated that the draft permit failed to include requirements necessary to confirm that this segment was impaired for PBCR which, if confirmed, would result in a Total Maximum Daily Load report needed to provide guidance to the City of Tulsa regarding measures to reduce FIB in the river and Zink Lake.

Comment No. 41 asked how the City of Tulsa would measure the impact from pollution and pathogens in tributaries leading to the Arkansas River. Comment No. 45 asked what Department oversees

monitoring, who actually conducted the tests, how often tests were conducted, and was testing conducted by a certified lab.

Comment No. 44 stated that it appeared the only hope of getting water quality data to determine if beneficial uses are not impaired was through sampling requirements written into the MS4 and RCRA permits. This comment included a forwarded email to DEQ stating that Tulsa's city engineer had briefed the Tulsa city councilors that they were working on a comprehensive water testing plan with DEQ input for certifying the Zink Lake area of the river as safe for primary body contact recreation, and asked if Tulsa had started that process with DEQ, if they were including testing for industrial and refinery chemicals both soluble and insoluble, how often they would be testing, where they would be testing, and whether DEQ would be involved in the sample collection and testing. In addition, the comment included an email response from DEQ Water Quality Division's Watershed Planning Section which stated that DEQ had met with representatives from Tulsa's Water and Sewer Department to discuss the Zink Lake area of the Arkansas River; that DEQ was serving only in an advisory role for the Arkansas River monitoring effort; that parameters, monitoring frequency, and monitoring locations had yet to be determined; that monitoring plan decisions would be made by City of Tulsa personnel; and that DEQ would not be involved in sample collection and testing. Comment No. 47 similarly stated that Blake Ewing of the City of Tulsa had stated at a public meeting on the HollyFrontier Refinery that Tulsa was working on a sampling and reporting protocol that would assure the citizenry is informed about Zink Lake water quality. This comment went on to state that this needed to be incorporated into the permit as an enforceable requirement.

The scope of Tulsa's MS4 permit is to regulate discharges from the City's municipal separate stormwater sewer system. The permit covers all areas located within the corporate boundaries of the City of Tulsa that are served by or otherwise contribute to the MS4 owned and operated by the permittee(s). The permit uses a Best Management Practices (BMPs)-based approach, establishing a framework under which Tulsa must implement BMPs, control techniques, system, design and engineering methods, and other such provisions to address pollutants as close to the source as possible in order to meet measurable goals, reduce pollutants in discharges from the MS4 to the Maximum Extent Practicable (MEP), and meet water quality standards.

The permit requires the permittee(s) to monitor the MS4 to provide data necessary to assess the effectiveness and adequacy of BMPs and SWMP control measures, to characterize the quality of the stormwater discharged from the MS4, and to identify water quality improvements or degradation. The permit requires the following monitoring programs to be implemented:

- *Dry Weather Field Screening Program.* This program requires the permittee(s) to conduct field screening to detect the presence of illicit connection and improper discharges to the MS4.
- *Watershed Characterization Program.* This program includes analytical and biological monitoring components, and requires the permittee(s) to identify, investigate, and address areas that may be contributing excess levels of pollutants to the MS4. Table IV.1 of the permit specifies parameters that must be monitored, sample types, and reporting. Parameters to be monitored include dissolved oxygen, chemical and biochemical oxygen demand, oil and grease, suspended and dissolved solids, nutrients, metals, *E. coli*, hardness, turbidity, conductivity, temperature, and pH. Oil and grease serves as an indicator for other hydrocarbons, while *E. coli* serves as an indicator for other pathogens. Part IV.A.1.a. requires analytical monitoring to be conducted at least one (1) time per month each permit year, with the exception of bacteria samples which should be collected in sufficient quantity and season to make a determination of Water Quality Standard

support/impairment. Samples must be collected to meet appropriate holding times and analytical procedures in accordance with EPA-approved test procedures specified in 40 C.F.R. Part 136.

- *Industrial Stormwater Runoff Monitoring Program.* This program requires the permittee(s) to monitor for pollutants in stormwater discharges to the MS4 from municipal landfills; other treatment, storage, or disposal facilities for municipal waste; hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to section 313 of EPCRA (Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986); and other industrial or commercial discharges the permittee(s) determine are contributing a substantial pollutant loading to the MS4.

The goal of these monitoring programs is to provide a comprehensive assessment of the appropriateness of the permittee(s)' BMPs and stormwater management practices, progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and progress towards achieving the measurable goals for each control measure. Due to the variability of stormwater discharges, the cost of the monitoring programs needs to be balanced with the monitoring objectives and the more important goal of implementing controls that will directly affect the quality of the stormwater discharged. For this reason, DEQ does not prescribe specific monitoring locations in the MS4 permit itself, but instead leaves it to the City to select the most appropriate monitoring locations to allow a comprehensive assessment of each of the 30 identified watersheds within or adjacent to the Tulsa MS4 on a rotating basis. Monitoring shall be conducted on representative outfalls, internal sampling stations, and/or in-stream monitoring locations to characterize the water quality of receiving streams from the MS4. DEQ obviously reserves the right to comment on or require changes to the City's monitoring strategy if it appears insufficient to accomplish its stated goals.

In addition to discharges from Tulsa's MS4, the stretch of the Arkansas River, which flows through Tulsa, receives discharges from numerous other point sources such as upstream municipal wastewater treatment plants and MS4s; industrial facilities including a refinery, power plant, manufacturing facilities, and sand and gravel plants; as well as non-point sources such as stormwater and agricultural runoff. As a result, monitoring of the Arkansas River is outside the scope of this or any other single permit. In addition, Oklahoma Statutes (OS) Title 27A, Environmental and Natural Resources, does not grant DEQ the legal authority to require the City of Tulsa to monitor the Arkansas River when there are multiple sources of potential impact to the water quality of the river.

However, the City of Tulsa has voluntarily agreed to develop a monitoring program for the Arkansas River. The City has engaged a contractor and has formed committees made up of experts in various fields to assist in developing such a plan. The City has stated that its goal is to provide the public with high-quality, easily accessible, real-time water quality information that allows the public to make determinations on whether or not to recreate in the Arkansas River. As noted in Comment No. 44 above, DEQ will serve in an advisory role in developing this plan; specific parameters, monitoring frequency, and monitoring locations have yet to be determined; monitoring plan decisions will be made by the City of Tulsa; and DEQ will not be involved in sample collection and testing.

With regard to which agency oversees stream monitoring, 27A O.S. § 1-3-101(Version 2)(C)(13). assigns the Oklahoma Water Resources Board (OWRB) the primary responsibility for establishing and implementing a statewide beneficial use monitoring program (BUMP) for Oklahoma lakes and streams. DEQ has no authority to decide which lakes and stream segments will be monitored each year; DEQ's role is to compile water quality data collected by OWRB and other agencies every two years and apply the appropriate water quality standards to determine the health of the surface waters of the state. The

assessment results are provided in the biennial Integrated Report, which includes the 303(d) list of impaired waters. OWRB's BUMP does not currently have a monitoring station on the Arkansas River in Tulsa. Concerned citizens are encouraged to petition the OWRB to include Zink Lake and the Arkansas River in its BUMP monitoring.

No changes were made to the permit as a result of these comments.

4. Protecting Water Quality Standards and Beneficial Uses of Zink Lake and the Arkansas River and Public Health.

Comments 1, 9-11, 25, 26, 31-34, 36, 38-42, 49, 50, 51, 54, 55, 57, 61, and 64 expressed concerns about how the permit would protect water quality standards and beneficial uses of Zink Lake, as well as public health.

Comment No. 1 stated that, at a Public Works Committee meeting, Blake Ewing of the City of Tulsa had stated that the City would compare the water quality of Zink Lake with area lakes and that, while this was a good move, it was something DEQ did every two years. The attachment included a tabulation of the PBCR status of various lakes, rivers, and creeks, based on information taken from the 2022 Integrated Report. This comment asserted that Zink Lake would not pass the PBCR test and thus "No Swimming" signs would be required, and further asserted that Zink Lake could probably never pass the PBCR test but that FIB counts could be improved.

Comment No. 9 asked the City to substantiate and address how it intended to meet the swimmable goal of the Clean Water Act for Zink Lake and the Arkansas River. Comment No. 10 expressed similar concerns, asserting that Zink Lake was contaminated and that it was critical for public protection that the permit either clean up the river water or the city forbid PBCR in the river. Comment Nos. 25, 26, and 50 also asked whether the waters of Zink Lake and the Arkansas River would be "quality clean-water sustainable," with Comment No. 26 also asking whether the end results without corrective action measures would possibly leave DEQ and the City of Tulsa guilty of creating and maintaining serious public health nuisances. Comments 31, 32, 33, 34, 38, and 39 expressed similar concerns about the safety of the PBCR use in Zink Lake, with Comment No. 32 specifically expressing concern that the lake would not benefit the City, would cause more harm than good, and would pose an expensive public health hazard. Comment Nos. 40 and 42 expressed similar public health concerns regarding use of the river for baptisms. Comment No. 41 asked how the permit would minimize public exposure to pollution in Zink Lake. Comment No. 61 stated that the permit should include the goals and objectives of making Zink Lake, the Arkansas River, and any of its tributaries swimmable and fishable. Comment No. 64 raised the concept of the "rights of the river."

Comment No. 11 cited Part I.C.5. of the permit which states that discharges exceeding WQS are unauthorized and asking if, since the entire watershed exceeds WQS for FIB, did this mean that all discharges containing FIB and that all outfalls for the Tulsa MS4 system were unauthorized. This comment also cited Oklahoma WQS, OAC 252:730-5-16(a), which states, "[PBCR waters] shall not contain chemical, physical or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings." The comment then stated that there were reports of oil on the water and of skin irritations from fishermen and ODWC survey crews; that the refinery had NPDES regulated discharges and RCRA permits administered by DEQ; that toxic chemicals and oil were carried by groundwater to the river as described in RCRA reports required by DEQ; that monitoring of the resulting impact on water quality was not yet required but was within DEQ's authority; and asked how DEQ and the City would respond to the "must be free of" requirement.

Comment Nos. 49, 51, 55, and 57 discussed WQS criteria for swimming advisories, stating that, because determining the geometric mean of *E. coli* samples requires at least 30 days, a swimming advisory was required if any sample exceeds 235 CFU/100 mL in a high-use waterbody, and that if a swimming advisory was announced it should not be changed until subsequent evidence is available that the water's *E. coli* level is below 235 CFU/100 mL. Comment No. 51 included a hypothetical example of data and calculations for determining whether a swimming advisory would be triggered.

Comment No. 54 expressed concerns that sand and sediments in the river would cause Zink Lake to fill up with sand and silt, and that algae could grow rapidly in the Zink Lake Kayak Flume.

DEQ developed Tulsa's MS4 permit to establish permit conditions and requirements based on section 402(p)(3)(B) of the Clean Water Act (CWA), which mandates that a permit for discharges from MS4s must: effectively prohibit the discharge of non-stormwater to the MS4; and require controls to reduce pollutants in discharges from the MS4 to the MEP. This includes BMPs, control techniques, system, design and engineering methods, and other such provisions determined to be appropriate. MS4s are not exempt from compliance with WQS. Section 301(b)(1)(C) of the Act requiring that OPDES permits include limitations, including those necessary to meet WQS (which incorporate the basic goals of ensuring streams and lakes are fishable and swimmable), applies. The intent of the permit conditions is to meet the statutory mandate of the CWA, as well as federal and state regulations implementing the CWA.

The permit lays out extensive requirements for Tulsa's MS4 program that are intended to ensure that discharges from the MS4 will not cause, have the reasonable potential to cause, or contribute to exceedances of WQS; to maintain beneficial uses (including the PBCR use) of the receiving waters; and to protect public health. Part I.C. of the permit establishes limitations on coverage of the permit, including that discharges exceeding WQS are unauthorized (Part I.C.5.) and that discharges not consistent with a Total Maximum Daily Load (TMDL) are unauthorized (Part I.C.6.). Part I.D. lays out the responsibilities of the permittee(s), including compliance with permit conditions, SWMP implementation, compliance with annual reporting requirements, and collection of representative monitoring data. Part I.E. lays out discharge requirements, including no discharge of toxic pollutants in toxic amounts; no discharge of pollutants in quantities that would cause, have reasonable potential to cause, or contribute to violation of WQS; no discharge of floatable debris, oils, scum, foam, or grease in other than trace amounts; no impairment or loss of beneficial uses of receiving waters as a result of stormwater discharges from the MS4; and reduction of pollutants to the MEP. Parts I.F. and I.G. establish additional requirements for discharges to impaired waters and waters with established TMDL allocations.

As discussed in Response No. 3 above, the permit implements these requirements using a BMP-based approach, establishing a framework under which Tulsa must implement BMPs, control techniques, system, design and engineering methods, and other such provisions to address pollutants as close to the source as possible in order to meet measurable goals, reduce pollutants (including sediments, nutrients, bacteria, and other pollutants) in discharges from the MS4 to the MEP, and meet water quality standards. The permit also includes a monitoring program intended to provide a comprehensive assessment of the appropriateness of the permittee(s)' BMPs and stormwater management practices, progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and progress towards achieving the measurable goals for each control measure.

MS4 discharges containing pollutant loads exceeding allowable levels, violating WQS, or exposing the public to potential harm will be considered unauthorized and thus a violation of the permit, and will be

subject to corrective action as described in Response Nos. 12 and 16 below, including potential enforcement and penalties.

However, as discussed in Response No. 3 above, in addition to discharges from Tulsa's MS4, the stretch of the Arkansas River (including Zink Lake), which flows through Tulsa, receives discharges from numerous other point and non-point sources. Water quality impacts (including siltation/sedimentation or algae growth), WQS violations, beneficial use (including PBCR) impairments, or public health impacts that can be traced to these other sources are outside the scope of this permit. Impacts from such other sources must be addressed through other regulatory or voluntary mechanisms, including separate individual or general permits, TMDLs, watershed plans, or CWA Section 319 non-point source grants.

With regard to swimming advisories, 27A O.S. § 2-6-103(A)(9) authorizes DEQ to "issue swimming and fishing advisories related to human and animal health hazards for waters of the state, *based on available data* [emphasis added]." Since the authority to issue swimming advisories rests with DEQ, it is outside the scope of this or any other single permit. As noted by several commenters, data is not currently available to make swimming advisory determinations for this stretch of the Arkansas River (including Zink Lake). However, as noted in Response No. 3 above, the City of Tulsa is currently developing a monitoring plan for the Arkansas River. In its advisory role, DEQ will ensure that this monitoring plan includes collection of *E. coli* samples at appropriate locations, times, and frequencies to enable DEQ to make swimming advisory determinations in accordance with the swimming advisory criteria in WQS at OAC 252:730-5-16(c). In addition, DEQ offers safety tips for recreating in lakes, rivers, and stream, which can be found on DEQ's website at <https://www.deq.ok.gov/2023-news-releases/deq-offers-tips-to-keep-you-safe-at-lakes-rivers-and-streams-23/>.

No changes were made to the permit as a result of these comments.

5. Contaminated Groundwater Seepage and Other Potential Pollutant Sources from HollyFrontier Refinery.

Comment Nos. 5, 8, 19, 20, 25, 26, 36, 38, 47, and 50 discussed seepage of contaminated groundwater, discharges of wastewater, and potential releases of "gunk," sludge, or other pollutants from the HollyFrontier refinery into the Arkansas River and their potential to impact public health and recreation in the Zink Lake and Kayak Canal. Comment No. 5 stated that this issue must be resolved by EPA, DEQ, and concerned Tulsans and the resolution made public prior to issuance of Tulsa's MS4 permit. Comment No. 36 stated that this pollution source must be permanently cleaned up and the river water tested regularly, and this information posted publicly.

DEQ acknowledges that groundwater under the HollyFrontier refinery property is contaminated with various hydrocarbons due to historical activity at the refinery dating back over a century. Clean-up of this contaminated groundwater has also been ongoing and will continue for years to come. However, since any potential pollutants from the refinery are not conveyed to the river through Tulsa's MS4, this issue is outside the scope of Tulsa's MS4 permit.

Discharges of treated wastewater from HollyFrontier's East refinery and West refinery operations, including groundwater monitoring and recovery projects, are regulated under OPDES Permit Nos. OK0001309 (East refinery) and OK0000876 (West refinery), which were issued by DEQ WQD's Industrial Permits Section on February 19, 2020, and November 13, 2020, respectively. These permits establish water quality-based effluent limitations that are protective of the beneficial uses of the Arkansas River. OPDES Permit No. OK0001309 (East refinery) also contains requirements for weekly inspections along the entire length of riverbank property owned by HollyFrontier and additional

inspections south of the HollyFrontier refinery property boundary going as far south as the River Parks Kayak Access area along the River Parks trail south of the HollyFrontier property. If a sheen is identified, the following inspection/reporting/mitigation procedure must be followed:

- Inspections will go to three times a week (generally, M-W-F).
- HollyFrontier will file an initial report to DEQ, both Land Protection Division (LPD) and WQD, via e-mail within 24 hours of finding a sheen.
- HollyFrontier will take remediation activities, as appropriate, including the use of booms, etc.
- HollyFrontier will file monthly reports to DEQ until the sheen ceases, which will be followed by a closing report.

In addition, certain refinery operations, including efforts to clean up contaminated groundwater and prevent seepage of contaminated groundwater into the Arkansas River, are regulated under RCRA permits issued by DEQ LPD. Concerned citizens are encouraged to avail themselves of public comment activities related to these permits. No changes were made to the permit as a result of these comments.

6. Sharing Environmental Data with the Public.

Comment Nos. 11, 36, 41, 46, 51, 52, 53, 55, 57, and 58 raised concerns related to availability and accessibility of environmental data and information collected under this permit to the public. Comments 36, 41, 46, 51, 52, 53, 55, 57, and 58 stated that such information on water quality, particularly for Zink Lake, should be made available to the public as soon as possible, such as through a city website. Comments No. 11 and 36 stated that cautionary “swimming advisory” signs should be posted to inform the public whether waterbodies, particularly Zink Lake, are safe for recreation.

40 C.F.R. § 122.34(d), which establishes recordkeeping requirements for MS4s and is adopted by reference at OAC 252:606-1-3(b)(3)(T), states, “The permit must require that the permittee keep records required by the NPDES permit for at least 3 years and submit such records to the NPDES permitting authority when specifically asked to do so. The permit must require the permittee to make records, including a written description of the storm water management program, available to the public at reasonable times during regular business hours...” These requirements are implemented in Part II.G. of the permit. However, neither EPA nor DEQ rules speak to the format in which these records must be made available to the public. Thus, DEQ does not have a regulatory basis to require Tulsa to post environmental data and information on a city website; nor does DEQ have a regulatory basis to require Tulsa to post swimming advisory signs.

No changes were made to the permit as a result of these comments.

7. Bacterial Source Control.

Comment Nos. 11 and 36 expressed concerns with various potential sources of fecal indicator bacteria (FIB) and requested that the permit include additional controls for these potential sources. Comment No. 11 expressed concerns with landscape irrigation, waste from dogs and geese, the homeless population, and failing septic tanks in the Berryhill community as potential sources of FIB. Regarding Part I.B.2.m. of the permit, which authorizes landscape irrigation and lawn watering as authorized non-stormwater discharges, Comment No. 11 stated that landscape irrigation that delivers FIB to the stormwater system should not be granted blanket authorization. Regarding Part II of the permit, the SWMP, Comment No. 11 stated that the SWMP should commit the city to enforcement of a dog feces rule, to removal of resident geese from the watershed, and to providing public sanitary facilities and support of Housing Solutions Tulsa.

In addition, Comment No. 11 stated that the community of Berryhill remains dependent of old failing septic tanks and asked if sanitary sewers for Berryhill should be part of the SWMP, with reference to Part II.F.1.a.viii.(b). of the permit regarding on-site sewage systems. Comment No. 36 expressed concerns with high bacteria levels coming from most tributaries into the Arkansas River and with septic tanks in the Berryhill community that are submerged in flood water every few years.

With regard to landscape irrigation and lawn watering, the permit does not grant blanket authorization to these discharges. Part I.B.3 contains provisions authorizing this (and other authorized non-stormwater discharges) only if they are determined to be insignificant sources of pollutants because of the nature of the discharges or because of the conditions the permittee(s) have established for allowing these discharges to occur, requiring any local controls or conditions placed on such discharges to be documented in the SWMP, and requiring that a provision prohibiting any individual non-stormwater discharge that is determined to be contributing significant amounts of pollutant in the SWMP. In addition, Part I.C.5. limits permit coverage by stating that discharges exceeding water quality standards (WQS) are unauthorized (even if it is a discharge that would otherwise be authorized under Part I.B.), and provides that DEQ may require corrective action if the MS4 is determined to cause, have reasonable potential to cause, or contribute to an exceedance of WQS. In addition, where the receiving stream is impaired for bacteria, Part I.F.1.a.viii.(e) requires Tulsa to implement BMPs that address “residential education programs by increasing focus on (1) bacteria discharging from residential sites either directly or during runoff events,” which would include bacteria from landscape irrigation and lawn watering. No changes were made to the permit as a result of this comment.

With regard to management of wastes from dogs/pets, geese/wildlife, and the homeless population, the MS4 program, mandated by EPA, is designed to transfer specific responsibilities of pollution prevention from the federal and state governments to local municipalities, counties, and other non-traditional entities such as universities, departments of transportation, military bases, and prisons. The MS4 program is predicated on the idea that local authorities are better positioned to understand and successfully manage pollution prevention and mitigation efforts. Tulsa has addressed these responsibilities through Tulsa Code of Ordinances Title 11-A (Stormwater Hazard and Mitigation Program), Chapter 5 (Pollution), which gives the City the authority to address any pollutant, including animal waste, that has the potential to or has entered the MS4. This includes BMP requirements; prohibitions for disposing of waste into the MS4; prohibitions against placing, storing, or locating waste in a manner that has the potential to enter the MS4; and compliance and enforcement abilities for any pollutant intentionally or unintentionally released into the MS4. Title 24 (Nuisances) gives Tulsa the authority to require a property owner to abate a public nuisance such as allowing water to carry waste, including manure, to the storm sewer. Tulsa also uses this ordinance to address wastes from the homeless population. Title 2 (Animals) requires pet owners to remove their pets’ waste from public or private property (with the exception of the owners’ property). These ordinances also include penalties and fines for failure to comply.

DEQ also notes that such general waste sources are also addressed in Tulsa’s MS4 permit. Part I.C. Limitations on Coverage prohibits discharges exceeding WQS (Part I.C.5.). Part I.E. Discharge Requirements also requires no discharge of pollutants in quantities that would cause, have the reasonable potential to cause, or contribute to a violation of WQS (Part I.E.2.), and no impairment or loss of state-designated beneficial uses of receiving waters as a result of stormwater discharges from the MS4 (Part I.E.5.). The SWMP must include a description of all necessary BMPs and other measures that the permittee(s) will use to ensure that discharges will not cause, have the reasonable potential to

cause, or contribute to an exceedance of WQS. DEQ may require corrective action if the MS4 is determined to cause, have the reasonable potential to cause, or contribute to an exceedance of WQS.

Animal wastes are specifically addressed in Part II.A.4.g. of the permit which states, "...intentional disposal of collected quantities of...animal wastes into storm sewers shall continue to be prohibited." In addition, Part II.A.9.1.d. requires Tulsa to "promote the proper disposal of...animal wastes through utility bill inserts and youth-related education events." In addition, Part II.D. Legal Authority requires Tulsa to continue to ensure it has legal authority (through a combination of statute, ordinance, permit, contract, order, or inter-jurisdictional agreements) to "control the discharge of spills and the dumping or disposal of materials other than stormwater (e.g.,...animal wastes, etc.) into the MS4" (Part II.D.4.). Finally, if a receiving stream is impaired for bacteria, Part I.F.1.a.viii. requires Tulsa to implement BMPs to address "animal sources by expanding existing programs to identify and target potential sources (e.g., zoos, pet waste, horse stables, and livestock sale barns)" (Part I.F.1.a.viii.(d)) and "residential education programs by increasing focus on...(4) pet waste" (Part I.F.1.a.viii.(e)). No changes were made to the permit as a result of these comments.

With regard to bacteria coming from tributaries into the Arkansas River, please see the discussion under Response No. 3 above.

With regard to whether old, failing, or flooded septic tanks in Berryhill are potential sources of bacteria and whether sanitary sewers for Berryhill should be addressed in the SWMP, DEQ notes that Berryhill is an unincorporated community located outside of Tulsa's current corporate boundaries and thus is outside the scope of this permit. Were Berryhill to become incorporated into Tulsa's corporate boundaries in the future, it would become subject to the requirements of this permit, including those related to on-site septic systems. However, DEQ notes that OAC 252:641, which is administered by DEQ's Environmental Complaints and Local Services (ECLS) Division, establishes requirements for the design, construction, installation, and operation of individual and small public on-site sewage treatment systems (e.g., septic tanks, aerobic treatment systems, lagoons, etc.) and that municipalities have either limited or no legal authority in this area. Where such systems are found or suspected to be sources of pollutants due to failure or flooding, this is best addressed through DEQ's complaints system as described in Response No. 12 below. To clarify this expectation, Part II.F.1.viii.(b) of the permit has been revised to indicate that BMPs must address "on-site sewage facilities by responding to complaints regarding private on-site sewage facilities that impact the MS4 and referring to the appropriate state agency, as necessary."

8. Low Impact Development and Green Design.

Comment No. 41 asked how green, low-impact erosion and sediment control and management techniques are incorporated into the permit at the design state of projects, and stated that this should be a top priority for scoring and awarding Requests for Proposals (RFPs) and Requests for Bids (RFBs).

DEQ strongly encourages MS4s to incorporate Low Impact Development (LID) and other green design strategies into their development and construction programs. This is reflected in the permit in several ways. Part II.A.1.a.iv. requires Tulsa's public education and involvement program to promote, publicize, and facilitate an education program to make developers and the public aware of project designs that minimize water quality impacts, including LID strategies. Part II.A.6. requires Tulsa to implement and enforce ordinances or other regulatory mechanisms to require the use of BMPs, with highest preference given to LID and other green design strategies, to address post-construction runoff from new development and redevelopment projects; to review local ordinances, regulations, and engineering plans or specifications to identify any legal/regulatory barriers or impediments to LID as

well as opportunities to promote LID; to maintain and update a schedule to remove those barriers and implement identified opportunities; and to assess current street design, parking lot guidelines, and other requirements that affect creation of impervious cover and implement additional guidelines or design standards to support LID design options. In addition, Part III.A.3. requires Tulsa to create and implement an LID Design Criteria Manual within 24 months after the effective date of the permit, and develop an incentive program to promote LID within 36 months after the effective date of the permit.

No changes were made to the permit as a result of this comment.

9. Total Maximum Daily Load (TMDL) Implementation.

Comment No. 11 cited the language in Part I.C.6. of the permit which states that “Discharge of a pollutant into any water for which a TMDL, or watershed plan in lieu of a TMDL, for that pollutant has been either established or approved by DEQ or U.S. Environmental Protection Agency (EPA) is prohibited...” and questioned whether a watershed plan existed for any of the receiving waters. Comment No. 11 also cited Part I.G. of the permit regarding established TMDL allocations and questioned why Waterbody ID (WBID) OK120420010010_10, the 7.32-mile stretch of the Arkansas River from Berryhill Creek to Mooser Creek (including the entire new Zink Lake), was omitted from the 2012 TMDL report, “Bacteria and Turbidity Total Maximum Daily Loads for the Arkansas-Verdigris River Study Area, Oklahoma (OK120400, OK120410, OKR102420, OK121500, OK121600).” Comment No. 11 also questioned what the consequences of this omission were relative to the requirements of the permit.

Regarding watershed plans, such plans address non-point sources, are voluntary, and in Oklahoma are developed and overseen by the Oklahoma Conservation Commission. The language “...or watershed plan in lieu of a TMDL...” was included in the permit for completeness based on comments on the draft permit received from EPA. According to the Conservation Commission’s website at <https://conservation.ok.gov/wq-water-quality-planning-reports/>, a watershed plan for *E. coli* and the PBCR beneficial use has been developed and approved for Crow Creek (WBID OK120420010090_00) in the Arkansas River Basin.

Regarding the omission of WBID OK120420010010_10 from the 2012 TMDL report, this was because the 2008 305(b) Comprehensive Waterbody Assessment, upon which this TMDL was based, indicated that there was insufficient information to determine whether Primary Body Contact Recreation beneficial use was supported or non-supported in this segment. Thus, this segment was not listed on the 2008 303(d) List of Impaired Waters and the requirement to develop a TMDL for bacteria for this segment was not triggered. DEQ notes that, as of the latest (2022) 305(b) Comprehensive Waterbody Assessment, WBID OK120420010010_10 continues to show that there is insufficient information to determine support or non-support for the PBCR beneficial use for this WBID. As noted in Response No. 3 above, the OWRB’s BUMP does not currently have a monitoring station on the Arkansas River in Tulsa and thus has not collected information to allow assessment of WBID OK120420010010_10. However, as also noted in Response No. 3, the City is currently developing a monitoring program for the Arkansas River; in its advisory role, DEQ will ensure that this program includes appropriate data collection to assess the PBCR beneficial use and make impairment determinations.

The consequence of this for the permit is that WBID OK120420010010_10 is not currently subject to the additional permit requirements of Parts I.F. and I.G. for discharges to impaired waters and established TMDL allocations, respectively, for bacteria. DEQ notes, however, that the immediate downstream segment of the Arkansas River, WBID OK1204200010010_00 is covered by the 2012 TMDL. Thus, in order to meet the requirements of Part I.G. of the permit for bacteria for this

downstream segment, Tulsa may also find it necessary to implement similar measures for the upstream WBID OK120420010010_10. In addition, DEQ notes that WBID OK120420010010_10 is listed on the 2022 303(d) list as impaired for cadmium, and thus is subject to the requirements of Part I.F. for this parameter.

No changes were made to the permit as a result of this comment.

10. Alleged Fraud in Funding Zink Dam and Lake and Kayak Flume Projects.

Comments No. 54 and 55 alleged the possibility of fraud and collusion in funding the construction of Zink Dam and Lake and the Kayak Flume projects. As no DEQ-administered funds were expended in the construction of these projects, these allegations are outside the scope of DEQ's authority and thus outside the scope of this permit. No changes were made to the permit as a result of this comment.

11. Antidegradation.

Comment Nos. 59 and 61 raised concerns about how the draft permit met antidegradation requirements and how DEQ had determined that issuance of the permit would not lead to degradation of the receiving waters.

The State of Oklahoma has adopted an antidegradation policy as part of the WQS in OAC 252:730-3-1 *et seq.* OAC 252:730-3-1(b) states, "It is the policy of the State of Oklahoma to protect all waters of the state from degradation of water quality, as provided in OAC 252:730-3-2 and Subchapter 13 of OAC 252:740." OAC 252:730-3-2(d) states, "Application to beneficial uses. Except as provided in 27A O.S. § 1-3-101(B), and subject to the provisions of 85 O.S. § 1085.30, no water quality degradation which will interfere with the attainment or maintenance of an existing or designated beneficial use shall be allowed." The receiving waters for Tulsa's MS4 are subject to Tier 1 protection under OAC 252:740 "Implementation of Oklahoma's Water Quality Standards," and Subchapter 13 "Implementation of Antidegradation Policy." OAC 252:740-13-3(a)(1) states that, for Tier 1 protection, "Beneficial uses which are existing or designated shall be maintained and protected."

The permit was drafted by DEQ in accordance with federal and state rules for MS4s and permitting processes which, as stated in OAC 252:740-13-3(a)(2), "...also implement Tier 1 of the antidegradation policy." In addition, the permit has gone through review by EPA and the public, and DEQ has gone to great efforts to address and incorporate EPA's and the public's comments. Part I.E.5. of the permit implements the antidegradation policy by prohibiting impairment or loss of state-designated beneficial uses and degradation of receiving waters as a result of stormwater discharges from the MS4. Should receiving waters become impaired/degraded, Parts I.F. Discharges to Impaired Waters and I.G. Established TMDL Allocations establish additional permit requirements that Tulsa must bring these receiving waters into attainment. Thus, DEQ believes that permit compliance will meet federal and state MS4 regulations, result in the reduction of pollutants to the Maximum Extent Practicable, and maintain and protect beneficial uses of the receiving waters in accordance with Oklahoma's antidegradation policy.

No changes were made to the permit as a result of this comment.

12. Citizen Actions, Complaints, and Enforcement.

Comment Nos. 41, 59, and 60 raised questions about what actions citizens could take if the City of Tulsa failed to observe or act in accordance with its permit, how DEQ would deal with citizen

complaints, and what enforcement actions would be taken if Tulsa was found to be in violation of its permit.

Citizens have several options for how they can influence the implementation and enforcement of the permit requirements. Part II.A.1. of the permit requires Tulsa to conduct a number of public education and involvement activities, including public education on how the public can report the presence of illicit discharges, improper disposal of materials, or water quality impacts associated with the MS4, as well as how the public can become involved and participate in updating the Stormwater Management Program (SWMP) and in other stormwater-related activities. These opportunities are further stated in Part II.A.9. of the permit, which also requires Tulsa to publicize a hotline or have a mechanism in place for reporting illicit connections, improper disposal of waste, and water quality impacts due to MS4 discharges.

In addition to using the Tulsa-maintained hotline, citizens may also file complaints with DEQ by using the DEQ Online Complaint Form (found at <https://www.deq.ok.gov/envrionmental-complaints/>) by calling the DEQ Environmental Complaints Hotline at (800) 522-0206. Complaints may be filed with DEQ confidentially or anonymously, if desired.

As one of DEQ's highest priorities, the Environmental Complaints Program is a customer-oriented process designed to address citizens' environmental complaints. The program's two main goals are to

- provide rapid response to each environmental complaint; and
- bring about regulatory compliance through a consistent and structured process.

DEQ's Environmental Complaints Program is unlike any other state's complaint program in that specific timelines for communication with the complainant have been established within DEQ's regulations. The program has a uniform investigation process, a central repository for all complaint records, and direct, continuous involvement with each citizen who lodges a complaint.

When permit violations are identified through DEQ inspections or file reviews, citizen complaints, self-reporting by Tulsa, or other information sources, DEQ will take appropriate enforcement action against any and all responsible parties. DEQ has a robust enforcement program, which includes detailed policies and procedures. The following goals underlie DEQ's enforcement procedures:

- Deployment of DEQ resources to the most significant problems within its jurisdiction;
- Consistent responses to violations;
- Constant movement of enforcement actions toward resolution;
- Efficient tracking of enforcement actions; and
- Effective internal communication regarding enforcement actions.

DEQ enforcement actions typically begin with issuance of a Notice of Violation (NOV)/Warning letter, notifying the responsible party of the violation(s) and specifying a time period within which compliance is expected. If compliance is not achieved in a timely manner, enforcement will be escalated through mutually-agreed Consent Orders, unilateral Administrative Compliance Orders, Penalty Assessments, up to and potentially including criminal prosecution or civil enforcement action depending on the nature of the violations. Administrative penalties may be assessed which reflect the magnitude and frequency of violations, extent of environmental impact, and compliance history.

No changes were made to the permit as a result of these comments.

13. Archeological and Historic Resources.

Comment No. 61 mentioned Part V.X of the permit, Archeological and Historic Sites, and asked why it was reserved.

DEQ sends public notices of draft permits to various federal and state agencies upon posting the draft permit on DEQ's webpage. DEQ reserved Part V.X. Archeological and Historic Sites in the permit in case comments were received from the Oklahoma Archeological Survey or State Historic Preservation Act that needed to be incorporated into the permit. Since no comments were received from these agencies, Part V.X. remains in reserve. No changes were made to the permit as a result of this comment.

14. Best Management Practices, Pollution Controls, and Pollution Prevention.

Comment No. 41 asked if DEQ would require the City of Tulsa to use pollution booms or any other methods of pollution prevention to stop detritus from entering the Arkansas River via its tributaries.

The MS4 permit uses a Best Management Practices (BMPs) approach, establishing a framework under which Tulsa must implement BMPs and pollution controls to address pollutants at the source to meet measurable goals, reduce pollutants to the Maximum Extent Practicable, and meet water quality standards. DEQ does not prescribe specific BMPs or pollution controls, but instead leaves it to Tulsa to identify the most effective BMPs and pollution controls and determine the most effective locations for those controls through field screening activities, public input and complaints, or other local knowledge, and then to monitor and assess the ongoing effectiveness of those BMPs and pollution controls. If during review of Tulsa's MS4 program, DEQ at any point determines that BMPs being employed by the city are not effective, it will require an augmentation of such BMPs in order to accomplish the goals of the MS4 program and associated permit. No changes were made to the permit as a result of this comment.

15. Construction of Zink Dam and Lake.

Comment No. 60 stated that construction of Zink Lake dam had been discussed well over 10 years ago and asked why there was no concern about maintaining the water quality back then.

Construction of dams (and other structures) within jurisdictional waters of the United States is outside the scope of this permit. Instead, such construction would be subject to permitting by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act (also known as a 404 permit). Water quality concerns would be addressed through DEQ's Section 401 water quality certification of the Corps' permit. No changes were made to the permit as a result of this comment.

16. Corrective Actions.

Comment No. 41 asked what steps in the MS4 permit dictate actions to be taken if chemicals of concern, pathogens, and nonpoint source pollution loads exceed allowable levels and expose the public to potential harm.

The permit lays out extensive requirements that Tulsa's MS4 program must meet, as well as provisions regarding corrective actions to be taken in the event of pollutant loads exceeding allowable levels, violating WQS, or exposing the public to potential harm. Part I.D. lays out the responsibilities of the permittee(s), including compliance with permit conditions, SWMP implementation, compliance with annual reporting requirements, and collection of representative monitoring data. Part I.E. lays out discharge requirements, including no discharge of toxic pollutants in toxic amounts; no discharge of pollutants in quantities that would cause, have reasonable potential to cause, or contribute to violation

of WQS; no discharge of floatable debris, oils, scum, foam, or grease in other than trace amounts; no impairment or loss of beneficial uses of receiving waters as a result of stormwater discharges from the MS4; and reduction of pollutants to the Maximum Extent Practicable. Parts I.F. and I.G. establish additional requirements for discharges to impaired waters and waters with established TMDL allocations.

Part II of the permit requires Tulsa to implement and revise as necessary a comprehensive SWMP, including descriptions of pollution prevention measures, treatment or removal techniques, monitoring, use of legal authority, and other appropriate means to control the quality of stormwater discharged from the MS4. Tulsa must review the SWMP annually to evaluate program compliance, the appropriateness of the BMPs, and progress towards achieving the measurable goals. If this review identifies program noncompliance or other deficiencies, Tulsa must revise and update existing and/or develop new BMPs and measurable goals in the SWMP within two years to meet the requirements of the permit.

Part II.F.3. of the permit requires that any BMPs that are determined to be ineffective or infeasible must be replaced with one or more alternative BMPs. In addition, Part II.F.4. of the permit allows DEQ to require changes to the SWMP when it is determined necessary to do the following:

- a. Address impacts on receiving water to ensure that stormwater discharges will not cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality;
- b. Include more stringent requirements necessary to comply with new state or federal statutory or regulatory requirements;
- c. Include such other conditions deemed necessary by DEQ to comply with the goals and requirements of the CWA;
- d. Update and implement changes required by any approved TMDL that addresses stormwater pollutants; or
- e. Include requirements based on information obtained by DEQ during routine MS4 evaluations, annual report reviews, or as otherwise determined by DEQ

Part IV.C. of the permit requires Tulsa to submit an annual report, including a comprehensive assessment of its watershed characterization program, to DEQ. This report must summarize information on all aspects of the SWMP, including an assessment of compliance with permit conditions and any schedules established under the permit, including an assessment of the progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP.

Finally, if all of the above prove insufficient to bring Tulsa back into compliance with the permit, DEQ may take enforcement action as described under Response No. 12 above. No changes were made to the permit as a result of this comment.

17. Delays in Permit Issuance.

Comment No. 60 expressed concern that the City of Tulsa, Tulsa County and the River Parks Authority, co-managers of the new Zink Dam and Zink Lake, have not addressed this permit since October 15, 2016, when the first and latest MS4 permit expired.

DEQ acknowledges and regrets that renewal of this MS4 permit has been long delayed. However, DEQ notes that the City of Tulsa filed its application for renewal of the previous permit on April 21, 2016, and that the delays in permit renewal were outside of Tulsa's control. DEQ also notes that Tulsa County and the River Parks Authority are not co-permittees on this permit.

There were a number of factors which contributed to the delay in renewing this permit, which included the sheer complexity of this individual permit, limitations on DEQ staff and resources, the need to address extensive EPA comments and heavily revise the draft permit, and changes in MS4 regulations. An additional factor contributing to the delay was DEQ's decision to put processing of Tulsa's (as well as Oklahoma City's) individual MS4 permit on hold pending renewal of DEQ's OKR04 Small MS4 General Permit in 2021, in order to take advantage of the opportunity to take a holistic approach to the MS4 program and these permits to ensure they were as consistent as possible. This holistic approach will result in faster processing of future MS4 permit renewals. No changes were made to the permit as a result of this comment.

18. Elected Officials Not in Attendance at Public Meeting.

Comment No. 62 included a complaint that none of Tulsa's elected officials attended the public meeting on the draft permit. This issue is outside the scope of DEQ's authority and thus outside the scope of this permit. No changes were made to the permit as a result of this comment.

19. Funding/Accounting.

Comment No. 41 stated that Tulsa must adequately fund its MS4 program and that part of the permit should be a reasonable accounting of its costs and expenses proportional to the goals Tulsa states that it is capable of realizing. Such requirements are included in the permit. Part II.E. of the permit requires each permittee to provide adequate finances, staff, equipment, and support capabilities to implement their activities under the SWMP. Part IV.C.10. of the permit requires the permittee to include in the annual report it submits to DEQ its annual expenditures for the reporting period, with a breakdown for the major elements of the SWMP, and the budget for the year following each annual report. No changes were made to the permit as a result of this comment.

20. Public Involvement in Implementing the Stormwater Management Program.

Comment No. 11 addressed the SWMP's public education and involvement program requirements to promote, publicize, and facilitate opportunities for public involvement in updating the SWMP (Part II.A.1.a.vii.) and to assess changes in public awareness and behavior resulting from implementation of the program (Part II.A.1.a.viii.). The commenter stated that these responsibilities should be coordinated with the City-County Health Department and the River Parks Authority.

DEQ strongly encourages MS4s to engage in cooperative agreements with other entities to implement their SWMPs and meet their permit requirements. In fact, paragraph 4 under Part II of the permit specifically states that, "Implementation of the SWMP may be achieved through participation with other permittees, public agencies, or private entities in cooperative efforts to satisfy the requirements of Part II in lieu of creating duplicate program elements for each individual permittee." However, since the City-County Health Department, the River Parks Authority, and similar entities are not subject to DEQ's authority under this permit, DEQ cannot require them to enter into cooperative agreements or share permit responsibilities with the City of Tulsa. No changes were made to the permit as a result of this comment.

21. Regulatory Due Diligence.

Comment No. 63 exhorted DEQ to exercise due diligence in upholding the regulations as much as possible and look out for the public as much as possible.

DEQ has dedicated significant staff time and resources into development of this MS4 permit. DEQ has also conducted extensive discussions and negotiations with the City of Tulsa to define the scope and elements of Tulsa's SWMP and expand the boundaries of Tulsa's program. In addition, the permit has gone through extensive review internally at DEQ, by EPA, and by the public, and DEQ has gone to great efforts to address and incorporate EPA's and the public's comments. Thus, DEQ believes it has exercised due diligence to ensure that the permit, if complied with, will meet federal and state MS4 regulations, result in the reduction of pollutants to the Maximum Extent Practicable, and be protective of state WQS, public health and the environment. DEQ will exercise its regulatory authority in ensuring proper implementation of permit requirements and conditions and will take appropriate enforcement action to address any deficiencies identified in Tulsa's MS4 program. To this end, DEQ conducted an extensive evaluation of Tulsa's MS4 in 2023, the report for which is currently being drafted and will be available to the public once complete. No changes were made to the permit as a result of this comment.

22. Unpermitted Discharges.

Comment No. 59 expressed concern about the statement in Part 11.d. of the fact sheet, "Each permittee shall prevent (or require the operator of the sanitary sewer to eliminate) unpermitted discharges of dry and wet weather overflows and the infiltration of seepage from sanitary sewers into the MS4," and how that would be enforced on the City of Tulsa and other permittees, mentioning concrete batch plants as a specific example.

27A O.S. § 2-6-205 provides that it shall be unlawful for any facility, activity or entity regulated by the DEQ pursuant to the OPDES Act to discharge any pollutant into waters of the state without first obtaining a permit from DEQ. Tulsa's MS4 permit contains extensive provisions addressing unpermitted discharges, beginning with Part I.B. which authorizes only certain non-stormwater discharges and Part I.C. which limits coverage for various categories of discharge. Part II.A.1.a.ii. of the permit requires Tulsa to "promote, publicize, and facilitate public education on the hazards associated with illicit discharges and improper disposal of waste, as well as public reporting of the presence of illicit discharges or improper disposal of materials, including floatables, into the MS4, or water quality impacts associated with discharges from the MS4." Part II.A.4. of the permit contains requirements for the City to maintain an Illicit Discharge Detection and Elimination (IDDE) program to detect and eliminate non-stormwater discharges. Part II.A.8.a. requires Tulsa to maintain a Dry Weather Field Screening program to detect the presence of illicit connections and improper discharges to the MS4. Part II.A.9. establishes various BMP actions and measurable goals for this program. The permit also requires the City to implement ordinances or other regulatory mechanisms to enforce these programs. In addition, DEQ may take its own separate enforcement actions against unpermitted dischargers; see Response No. 14 above for additional discussion. No changes were made to the permit as a result of this comment.

23. Zoning.

Comment No. 62 expressed concern about zoning and its potential impact on infrastructure. Zoning is outside the scope of DEQ's authority and thus outside the scope of this permit. No changes were made to the permit as a result of this comment.