

Please find additional information on Zink Lake below.

The first section addresses common themes, and the second section answers every question that was asked at the February 27, 2024 public meeting on Zink Lake.

For further questions or to provide feedback on the project, please contact [emorris@cityoftulsa.org](mailto:emorris@cityoftulsa.org). Neighborhood associations and other organizations that would like to schedule additional meetings, pop-up events, or other opportunities should contact [emorris@cityoftulsa.org](mailto:emorris@cityoftulsa.org).

## Frequently Asked Questions:

1. **What amenities can we expect at Zink Lake? How can people use the area?**
  - a. The initial phase of Tulsa's investment in Zink Lake will include amenities like parking and a kayak launch and will open on Labor Day of 2024.
  - b. Tulsans will be able to engage in on-water activities like kayaking and canoeing (in the flume) and rowing (in the Lake). There will be green space for things like play, picnics, and other fun activities. Activities that will be part of the Labor Day opening are being planned and will be communicated soon!
  - c. Future amenities will likely depend on future funding packages. In the meantime, we are encouraging people to propose design ideas for the next phase of investments.
2. **Will swimming be allowed in the lake?**
  - a. No swimming will be allowed in Zink Lake.
3. **Will the City incorporate native landscaping into the project?**
  - a. Landscaping plans are not finalized but will be part of the design process. River Parks Authority will finalize landscaping plans to comply with the River Design Overlay plan.
4. **How will the project address environmental concerns, such as damage to the riparian zone?**
  - a. The riparian zone along the boundaries of Zink Lake has been highly urbanized as the community balanced green space, access to the river, and ecological needs. The jurisdictional boundary of the mainstem Arkansas River has been set at the top of the historic high banks, which is also called the Ordinary High Water Mark (OHWM). If the question is related to the protection of streambanks, the 404 permit requires the permittee to monitor riverbank stability per Special Condition 7. River Parks will continue to operate and maintain the Zink Lake system, as directed by their Board, as codified by Tulsa Ordinance and as funded by public and private entities.
5. **Will there be follow-up on the least turn habitat?**

- a. A new Least Tern island was constructed with the Zink Dam project. It is just downstream of the recreational flume.
  - b. On a related note, due to successful actions along the river corridor, the USFWS removed the Interior least tern from the Federal List of Endangered and Threatened Wildlife, effective February 12, 2021.
- 6. How will these modifications impact fish in the river?**
- a. The current 404 permit does not specifically mandate fish passage.
  - b. The dam will be generally operated to maintain a consistent lake level throughout the year. When Keystone Dam is releasing water, or sufficient water is incoming into the lake via tributaries, one or more gates on the main dam will be operated to maintain lake level and send water downstream. Per Public Notice NO. SWT 2012-123, dated July 11, 2012, "The replacement and installation of new gates at the dam would also provide for improved fish and egg passage during high flow conditions."
- 7. How will these modifications impact flood risk?**
- a. The results of the hydraulic modeling indicate the development does not cause a rise in the water surface elevation. In general, the developments include modification of Zink Dam, construction of a recreational flume along the east bank of the river, replacement of the pedestrian bridge upstream of the dam, and construction of a Least Tern Island.
  - b. There is no rise in water surface elevation at any cross section compared to the Corrected Effective model and the floodplain remains fully contained within the banks of the channel in most areas. Minimal changes to the floodway were made within the limits of the study.
  - c. A full hydraulic report and signed engineering certification of no-rise are available upon request.
- 8. What safety measures will be in place to protect users?**
- a. Safety protocols are still being developed, and they will be communicated as soon as possible. To protect people from unreleased dam releases, there will be siren and flashing light alarms at the lake and social media updates from the City of Tulsa and River Parks. All safety messaging will be communicated across publicly-accessible channels, including social media.
- 9. What is the maintenance plan for this project?**
- a. River Parks will maintain the amenities in and around Zink Lake. There will be an annual maintenance budget of \$1 million.
- 10. What will be tested and reported on the water quality dashboard?**
- a. We will test the water's pH, temperature, turbidity, and electrical conductivity. We will also test for levels of dissolved oxygen, e. coli, dissolved cadmium, and total petroleum hydrocarbons.
- 11. In addition to the current testing, can other parameters be tested for?**

- a. The City of Tulsa will consider testing for new or additional parameters in the future. We will consider real-time water quality monitoring stations in the future as well.
- 12. Who will run the water quality tests?**
- a. Water quality testing will be done in City of Tulsa labs because of the quicker turnaround time that is available with internal testing. Reporting on streamflow and water surface elevation will come from USGS stations, and air temperature, wind speed and direction, and recent precipitation will come from new or existing weather stations in the area.

## **All Questions from the February 27, 2024 Public Meeting about Zink Lake**

*Note: The following questions were asked directly by public meeting participants. While the City of Tulsa may not agree with the premise of certain questions, the following answers are an attempt to best answer each.*

### **Amenities:**

- 1. Will there be a company providing small watercraft rentals? Or will users need to provide their own craft?**
  - a. In Phase 1 (to open by Labor Day), users will likely need to provide their own craft. Future phases may include an opportunity for rentals. Additional answers to Kayak-related questions are below.
- 2. Can we bring back the Floating Amphitheater and catfish sanctuary?**
  - a. The amenities that will be open on Labor Day are the initial phase of Tulsa's investment in Zink Lake. Though an amphitheater and fish sanctuary were not funded in previous capital programs, we are encouraging people to proposed design ideas for the next phase of investments.
- 3. Will personal kayaks be allowed in the flume?**
  - a. Yes, personal kayaks will be allowed in Zink Lake and in the flume.
- 4. Will the Zink Dam provide more consistent water for rowing opportunities with the Tulsa Rowing Club?**
  - a. The new dam will provide a deeper, longer, and more suitable pool for rowing activities. The water in Zink Lake will depend on four factors: 1) Mother Nature; 2) Releases from Keystone Lake; 3) The extent to which the Kayak Flume is operated (water flowing through the kayak flume will be drawn from Zink Lake); and 4) Meeting the requirements of our operating agreement with the US Army Corp of Engineers. The intent is to maintain a certain lake level elevation so consistent water activity can take place.

5. **How do the kayaks get back to the top after going through the flume?**
  - a. The flume will have a wide range of flow capabilities, ranging from a steady trickle to extreme white-water rapids. Depending on the scheduled programming of the flume, certain kayaks may not be desirable to float the flume from top to bottom over and over. This flume is designed to "play within a pool" so that the water flow creates an eddy that will circulate the paddle sport vessel back to the wave. During periods of lower flow, and in the last 3-4 drops or pools, kayaks will be able to float from start to the end and then will need to use the adjoining sidewalks to return to their entry point.
6. **What happens to the area where the amphitheater was on the West Bank?**
  - a. At this time, that area will remain as is. Consideration for future development at this site will remain on the table.
7. **Explain how the water rafting access and return works.**
  - a. See answer under table 7. In addition, here is how you can access the flume area: There is an exit ramp on the east side of the river near the Gathering Place within Zink Lake that will give you access to the flume area. Once there, a sidewalk parallels the flume from the top to the bottom. Depending on the flow levels, the user will decide which drop or pool where they would like to put in and, once complete, they will walk back to the staging area via a sidewalk.
8. **Can there be a spot added for hammocks? And what other amenities are being considered?**
  - a. We will look into the feasibility of hammocks. This is very likely accommodatable. Other amenities include kayak rental on the east bank, parking and a trailer area for launching your own kayak on the west bank, a docking station for paddle crafts near the restaurant (Sandbar / Yardbar location), restrooms, and play areas. Hammocks are currently allowed at River Parks, including a hammock hang up area at 56<sup>th</sup> Street.

## **Environmental Impacts:**

1. **Any plans to add landscaping in the white riprap that has been installed along the new river bank by the dam/bridge?**
  - a. Landscaping decisions will be part of the design of the entire area. The design will maximize both green space and parking.
  - b. The landscape architect utilized for the dam/bridge east bank is MVVA, the landscape architect of A Gathering Place. After the damage of the 2019 Arkansas River flood, it was decided to elevate plantings above 623'.
2. **Your new parking is ripping out the riparian zone. Riparian area are one of the most ecologically important ecosystems.**
  - a. Riparian areas are an ecologically important part of our ecosystems. However, parking is necessary for people to access the features being added, and this was selected as the most appropriate site. People are

more willing to protect and preserve the places they enjoy and, by getting people to the river, we hope they will take an active role in keeping it clean and protecting the river for generations to come. Balancing the natural and built environment is important, and we are evaluating the feasibility of Low Impact Development standards as we approach final design for the new parking facilities. New parking on the east bank is located immediately adjacent to Riverside, versus the lake.

3. **Have you taken into account how this new attraction will impact our ecosystem in any way?**
  - a. City personnel have spent a considerable amount of time in all planning aspects of this project. When compared to the length of the Arkansas River, this is a very small portion, but will provide many people (especially those with limited means of transportation) with an opportunity to come out and enjoy nature, whether by fishing, bird watching, wildlife photography, boating, or just walking the trails and taking in the sights. The remainder of the river will remain as it is and the vast majority of it will still be undeveloped.
4. **The river is a braided stream - how will the City honor the character of the river without destroying it? Can it even be done?**
  - a. Zink Lake has been a lake since the original dam was built in 1982. A lake, by nature, has water from shore to shore and isn't braided. The reconstruction of Zink Dam will make it easier to maintain the lake, regulate water quality and depth, provide fish passage, and increase recreational opportunities for all residents in the Tulsa metropolitan area. The river above and below the lake will still maintain its braided channel as nature and man allow.
5. **With all the new parking being added, are there plans for any native landscaping, tree canopies, etc. to be included in the new parking lots?**
  - a. Landscaping plans for the east bank parking lots are not finalized. River Parks Authority will finalize landscaping plans to comply with the River Design Overlay plan. Sustainable design solutions, such as capturing surface runoff, are being explored and will be finalized in April.
6. **Once the water is impounded are you planning for potential problems with harmful algal blooms (cyanobacteria)?**
  - a. If there are algal blooms, operation of the dams will be adjusted to move more water through the lake.
7. **What is the permanent depth of the new lake behind the dam? Any plans to clean up trash in the riverbed before filling up the lake?**
  - a. The operational objective is to maintain a minimum of 620.0 ft elevation in Zink Lake within a control of 0.4 feet, corresponding to a lake elevation range of 619.8 to 620.2 ft. This operational control will help prevent excessive modulation and operation of the gates as the river flow changes.

- b. The City of Tulsa tasked Crossland Construction to clean up the riverbed while the river flows were minimal. Crossland Construction removed construction debris as far upstream as the I-244 bridge.
- 8. **The City is likely to rediscover what the Health Department found long ago: chronic & prohibitive bacterial contamination. Why did Tulsa build the flume despite extensive knowledge of this problem?**
  - a. The City of Tulsa is aware the Arkansas River is impaired for bacteria, as an urban waterway. Tulsa is actively investigating, preventing and eliminating many sources of bacteria into the waterway. If there is additional information from the Tulsa Health Department, please share it with City staff. Water quality sampling, displayed on a public dashboard, will continue to monitor these issues.
- 9. **Is there a conservation plan for the Zink Lake and broader river upstream and downstream?**
  - a. Conservation plan has multiple meanings, from land conservation to ecological conservation to water supply conservation. There are multiple conservation practices in place including preservation of plants, grasses, animals and other species, as described in the revised Tulsa Code of Ordinances, Title 26. The Water Quality Monitoring Plan, Stormwater Management Program, ongoing stakeholder engagement, and volunteer opportunities are other key elements to the conservation efforts around Zink Lake.
- 10. **What are the plans for reducing further environmental impact through development in mind along the lake?**
  - a. City personnel have given this much thought and made it a priority when Section 20.050. - RDO, River Design overlays were created for the Arkansas River. These regulations govern "form, function, design and use for properties located with the boundaries of the River Design overlay district. The regulations are generally intended to maintain and promote the Arkansas River corridor as a valuable asset to the City and region in terms of economic development and quality of life." This can be found in the Tulsa, Oklahoma - Code of Ordinances, Title 42 - Zoning Code, Chapter 20, Overlay Districts. Low Impact Development (LID) practices are also encouraged, and the City will provide information about incorporating LID via the Partners for A Clean Environment program.
- 11. **Who is going to monitor the air pollution from HF Sinclair that people recreating will be breathing?**
  - a. The Oklahoma Department of Environmental Quality has primacy from EPA for managing and monitoring air quality in the State of Oklahoma.

## **Fish and Wildlife:**

1. **40,000+ cfs is decent flow, what is the velocity at higher flows? If fish passage is only mandated at high flow, will many species of fish be capable at these flows?**
  - a. The current 404 permit does not specifically mandate fish passage.
2. **What happened to save the habitat for the endangered Least tern?**
  - a. A new Least Tern island was constructed with the Zink Dam project. It is just downstream of the recreational flume.
  - b. On a related note, due to successful actions along the river corridor, the USFWS removed the Interior least tern from the Federal List of Endangered and Threatened Wildlife, effective February 12, 2021.
3. **Have we explored the possibility of supplementing existing fish populations with stocking efforts like what the wildlife department does with Striped Bass statewide?**
  - a. The City of Tulsa does not stock waters with fish. The Fish and Wildlife Department may be contacted to make this request.
4. **Will you do sampling of fish tissue to test for various contaminants that have biomagnified?**
  - a. At this time the emphasis is on testing the water for contaminants that can impact the health of recreational users. DEQ manages the fish advisory program for the state and focuses on mercury (Hg) only.
5. **Why is the present ops plan effectively preventing fish spawning violating expectations of the 404 permit?**
  - a. The City of Tulsa is not in violation of the 404 permit. The current 404 permit does not specifically require fish passage.
6. **What are the primary sources of bacterial contamination (e.g. wildlife vs outfalls, etc.)?**
  - a. The City of Tulsa stormwater program tries to identify sources through their source tracking program and will continue to do so. Bacteria sources include humans (wastewater), agricultural animals, wildlife (including urban wildlife, birds, waterfowl, etc.), domestic pets, and the replication of enteric bacteria in the environment and they all contribute to the loading. It can be difficult to parse out sources once mixed in the river and talks continue regarding the best way to pursue this in the future. Diagnostic methods are improving, and it is becoming more economically feasible to identify sources down to the species level.
7. **Will Zink Lake be safe for Bald Eagles who are particularly sensitive to heavy metals?**
  - a. Heavy metals have a tendency to accumulate in sediments and bioaccumulate in higher organisms. With the added ability to sluice sediments from the lake through the new gates it may be possible to

reduce the sediment load of heavy metals within the lake by preventing the build up of sediment.

## **Flooding:**

1. **The proposed parking lot will displace a significant amount of water when it rains. How will the City/River Parks mitigate the increased runoff?**
  - a. The proposed parking drains directly to the Arkansas River, but is above the Ordinary High Water Mark (OHWM) and outside of the 100-year Floodway/Floodplain.
  - b. The parking lot project will not impact jurisdictional wetlands.
  - c. The parking lot increase in impervious area will cause a rise to the Arkansas River 100-year water surface elevation.
  - d. Sustainable mitigation strategies, such as capturing runoff, are being explored as this project reaches final design.
2. **What will happen in the event of another severe flooding event? Are there mechanisms to control flooding potential currently in place? If so, what are they?**
  - a. The results of the hydraulic modeling indicate the development does not cause a rise in the water surface elevation. In general, the developments include modification of Zink Dam, construction of a recreational flume along the east bank of the river, replacement of the pedestrian bridge upstream of the dam, and construction of a Least Tern Island.
  - b. There is no rise in water surface elevation at any cross section compared to the Corrected Effective model and the floodplain remains fully contained within the banks of the channel in most areas. Minimal changes to the floodway were made within the limits of the study.
  - c. A full hydraulic report and signed engineering certification of no-rise are available upon request.

## **General:**

1. **Based off of Public works meeting, \$27MM for bridge, \$40MM for dams, 11MM for studies. Overview states \$48MM. Where's the missing \$1MM?**
  - a. \$48M was in the bond package for the dam. City spending to date includes a \$39.5M contract with Crossland Construction Company and a \$7.3M contract with Obermeyer Hydro, Inc. The \$11M in studies is the contract with CH2M HILL to provide studies, design and construction oversight. The remainder of the \$48M (after CCC and OHI) has been a funding source for a consulting contract with Jacobs.
2. **Where can I find a copy of the 404 permit, any USFWS coordination, and any other environmental mitigation commitments that the project has?**
  - a. Tulsans can find all relevant documentation at <https://riverprojectstulsa.info/>.



3. **The new dam will still have the hydraulic roller unless gates are fully down. Why hide that?**
  - a. The full-height gates will be closed in their full “up” position or half to fully open in their “down” position, to avoid potential safety concerns. In their closed “up” position, flow greater than 5 inches over the top of the gate will be avoided, per CH2M HILL Basis of Design Report, 2019.
  - b. Operation criteria is being confirmed for operational scenarios that were modeled vs. Actual.
  - c. Gates can be 25-50% open with water overtopping, this is how the lake level is maintained.
4. **On what grounds does the City of Tulsa have claim to damming the river and defining what “enhancement” of the Arkansas is?**
  - a. Zink Lake is a public amenity that voters approved through several ballot initiatives. The creation of the lake is reflective of these votes and will provide a new, accessible amenity for all types of recreational users. Urban waterfronts nationwide provide examples of integration between the natural and built environment. This investment will increase engagement with and stewardship of Tulsa’s waterfront.
5. **What is the designated use/beneficial use for this reach?**
  - a. The designated beneficial uses for river reach OK120420010010\_10 according to the 2022 Integrated Report are: Aesthetic, Agriculture, Warm Water Aquatic Community, Fish Consumption, Navigation, Primary Body Contact Recreation, and Emergency Water Supply.
6. **Who will bear legal liability for the kayak concession?**
  - a. This is yet to be fully determined and will depend on whether a third-party concessionaire is hired. The land surrounding this project is owned by the City of Tulsa and leased to the River Parks Authority. The River Parks Authority is expected to be the manager of operations for any third-party operators.
7. **Who is actually legally responsible for testing the Arkansas River?**
  - a. The US government, through the Environmental Protection Agency (EPA), is responsible for permitting discharges into waters of the United States under the National Pollution Discharge Elimination System. The EPA gives primacy to ODEQ to manage this system for the state of Oklahoma.

## **Maintenance:**

1. **What’s the plan and funding source for ongoing maintenance, upkeep, and repairs to these new amenities. Particularly near 15th and Riverside, not Gathering Place area.**
  - b. The funding source is the same funding source that fuels the rest of municipal operations – sales tax dollars. A budget of \$1 million has been established to fund a comprehensive work team to manage the amenities

in and around Zink Lake. There will be a dedicated staff to maintain not only the dam, flume, and bridge, but the crews will also manage the east and west banks along the Arkansas River within the Zink Lake corridor.

2. **What is the annual maintenance budget for Zink Lake?**
  - a. The annual maintenance budget is \$1 million.

## **Mentimeter:**

1. **Why were questions on the menti app skipped when shown on slideshow? Were upvoted questions purposely disregarded?**
  - a. Questions were selected based on a combination of upvotes and topic variation. Our intent was to balance answering the most popular questions with answering a wide variety.
2. **How much are the taxpayers paying for www.menti.com? Who approved this purchase?**
  - a. The mentimeter tool is provided by PartnerTulsa, which has an annual budget for subscriptions such as this. PartnerTulsa's purchasing policies allow them to purchase this tool, as the cost does not trigger any procurement requirements and their Bylaws allow for expenses at this level with approval of the Executive Director.

## **Safety:**

1. **What safety measures will be in place to ensure rescue efforts in the event of accidents on the water, such as lifeguards, rescue vehicles, etc., and are there plans for training personnel in place?**
  - a. Safety protocols are still being developed in conjunction with relevant entities. When the safety measures are confirmed, we will communicate those out to the public, so everyone is informed.
2. **Dam releases, especially unannounced releases, are a major potential hazard to people wad fishing, and in kayaks & small boats. What will the process for informing users be like for a dam release?**
  - a. Information will be available via siren alarms at the lake as well as social media updates via City of Tulsa and River Parks.

## **Water Quality Testing & Dashboard:**

1. **Will there be tests for anti-biotic resistant E. coli**
  - a. Not at this time.
2. **Since geometric mean skews data to minimize high levels how will dashboard handle**
  - a. Data will be published according to OK Department of Environmental Quality requirements. Oklahoma Water Quality Standards require the use and reporting of geometric means. Geometric means better indicate the central tendency of a number set.

- 3. We have had some dry years recently, with reservoirs holding back releases, not just at Keystone due to construction. What are the plans for low flow inputs to the lake? Especially water quality?**
  - a. Water quality testing will continue during low and high flows.
- 4. When will water testing reports be made available to the public?**
  - a. In March 2024.
- 5. We know there is many more contaminants in the water than just cadmium. Who made the call/decided to only test for cadmium? What lead to that decision?**
  - a. This segment of the Arkansas River is impaired for cadmium, which is why this parameter is being tested.
- 6. How quickly can the water quality change? Specifically with t bacteria, heavy metals, and hydrocarbons?**
  - a. Water quality is ever changing. The City of Tulsa will consider testing for new or additional parameters in the future.
- 7. Will adaptive testing plans be available for potential new testing needs? Such as accounting for PFAS?**
  - a. The City of Tulsa will consider testing for new or additional parameters in the future.
- 8. Patrons of water sports will need to get their crafts into the water and will come into contact with contaminated water.**
  - a. All outdoor water is subject to contamination. The current testing parameters were determined to build a water quality model that predicts water quality based on changes in the parameters with real time results.
- 9. Oil refinery operations often involve the use of PFAs, aka “forever chemicals” There needs to be testing for these carcinogens**
  - a. Currently, there are no rules for testing for PFAS in waters of the United States.
- 10. Fast flowing water can be a hazard to navigation especially in small unpowered craft. Is there any way to model the average surface velocity of Zink Lake based on the flow rate of the river?**
  - a. The standard for 1-dimensional modeling on river systems is the U.S. Army Corps of Engineers River Analysis System (HEC-RAS) developed by the Hydrologic Engineering Center.
  - b. The designers used HEC-RAS to model river impacts at various flow rates.
  - c. Average velocities are available as an output of the model.
- 11. There is historical contamination in the sediment from the refinery. Are you going to expand test to sediment testing?**
  - a. We will not be testing the sediment as part of the Zink Lake water quality monitoring.
- 12. Will there be any water quality monitoring done by a third party (I.e. not done by City of Tulsa labs)?**
  - a. Water quality testing will be done in City of Tulsa labs because of the quicker turnaround time that is available with internal testing. Reporting

on streamflow and water surface elevation will come from USGS stations, and air temperature, wind speed and direction, and recent precipitation will come from new or existing weather stations in the area. Water testing parameters (I.e. what to test) was determined by 3<sup>rd</sup> party entities.

- b. The City of Tulsa labs do not test for TPH, these tests are run by an outside entity.
- 13. What WQ standards apply to TPH? If detected, will you try to ID source and type of petroleum , thereby to identify constituents of concern to users / wildlife?**
  - a. Total Petroleum Hydrocarbons (TPH) includes Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Oil Range Organics (ORO). Any detection of hydrocarbons will be reported to ODEQ.
- 14. Instead of grab samples, could a real time continuous water quality monitoring station be considered?**
  - a. Real time water quality monitoring stations have been and will continue to be considered.
- 15. Will there be regular sampling of the substrate?**
  - a. Not at this time.
- 16. With HF Sinclair refinery known to seep hydrocarbons into the river is monthly testing for hydrocarbons appropriate? Why not test more frequently?**
  - a. The frequency of testing was developed by two external consultants (AquaStrategies and A&M Engineering and Environmental Services) with experience in water quality and sampling. The monthly testing will help set a trend baseline, and frequency of testing can increase if trends show that it is necessary.
- 17. Will there be specific water quality testing during high flow events when bacteria and other contaminate levels can increase? Especially if the water will be impounded downstream?**
  - a. Water quality monitoring will be performed in all conditions and during special conditions to help calibrate the water quality modeling.
- 18. How will adequately up to date data be provided with limitations on how quickly test can be performed?**
  - a. Water quality data will be published soon after test results are complete.
- 19. What do preliminary water quality tests of the river indicate regarding the levels of heavy metals?**
  - a. We are only testing for cadmium, and it is below detectable limits.
- 20. How do bacteria levels in the Arkansas River near Tulsa compare to bacteria levels in other Oklahoma rivers such as the Illinois River?**
  - a. We do not have the comparison information at this time, but Tulsa is sharing our water quality data in an effort to better understand water quality across the state.
- 21. Is there test data for a broader range of contaminants? Like VOCs, SVOCs. PCBs, a long list of metals, etc.**
  - a. This segment of the Arkansas River is impaired for bacteria and cadmium, which is why these parameters are being tested and modeled.

Other parameters may be considered if future phases of the project as the budget allows.

- 22. What plan do you have to address water quality issues that arise from the monitoring results?**
  - a. Water quality information will be published on the dashboard. It will be reviewed by internal teams, and consultants, if necessary, to identify trends or any water quality concerns.
- 23. What is the expected amount of animal waste, feces and urine, in the Zink Lake and storm water runoff from downtown?**
  - a. Neither City officials nor their consultants have estimated the amount of these items carried into Zink Lake from the river or by stormwater runoff. Loadings vary by rainfall and location.
- 24. Prosecutor is an herbicide applied to green areas at the Gathering Place & runs-off into Zink Lake.**
  - a. There are no plans to sample for this chemical. This is a broad leaf, post emergent herbicide that can only be used by state/federal chemical licensed applicators, which include the applicators at the Gathering Place. All applicators must follow the label, or they could face severe penalties.
- 25. The HF Sinclair containment cap is a temporary solution to stop hydrocarbon seepage from the refinery from entering the River - what will be the permanent solution?**
  - a. The City of Tulsa defers to Holly Frontier Sinclair Tulsa Refinery (HFSTR) and the Oklahoma Department of Environmental Quality (ODEQ) regarding HFSTR's practices and plans.
- 26. What are you doing about the Sand Springs chemical plant leaching toxic sludge into the river just north of the new attraction?**
  - a. Any facility discharging directly into the Arkansas River must have an Oklahoma Pollutant Discharge Elimination System (OPDES) permit from the Oklahoma Department of Environmental Quality.